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Topic #1: Cooperation among small farms

Q 1.1 - What are different experiences of small farms' cooperation in your regions? How has this changed over the past 10 years?

Participant	Country	Aggregate	Comment
M. Chander	India	Q1.1/1	<p>When we say "Small farm cooperation", do we include in this cooperative farming? Small farmers may not be part of formal cooperative structure yet often cooperate with each other in many farming operations. Cooperative farming totally failed in India though once envisioned as good for agricultural development especially to improve efficiency of small farms.</p> <p>I guess we will be discussing here about how small farmers help each others by sharing resources on mutual basis - and over the years whether it has improved or weakened, and future prospects of such interdependent cooperation among small farmers.</p>
M.Chander	India	Q1.1/2	<p>Small farmers in India used to cooperate in each others' farming operations like ploughing (along with bullocks shared), harvesting, transplanting, farm yard manuring and several other activities requiring labour in bulk. This system used to be named as "alta" in my region (Uttarakhand) and by different names in other parts too.</p> <p>But over the years, it has weakened, possibly due to mechanization and increased household incomes, people want to be independent of each other and interdependence is significantly reduced.</p> <p>People are relying now more on hired labour and mechanized devices to perform the operations faster without looking towards other farmers. Of late, small farmers are coming closer in different ways, in the form of "Farmer Producer Organizations/companies" (FPOs) which are helping in jointly buying inputs and collectively marketing farm produce by negotiating better prices for their produce. The custom hiring of farm implements, shared use of farm inputs and collective sale of farm products are new arrangements in the area of small farms' cooperation assisted by formation of FPOs.</p>
E.S. Njieassam	Cameroon	Q1.1/1	<p>Small farm cooperation experience over the years has been carried out through family relationships or friendships between two or more households. It mostly take place during the summer holiday periods where children are on holidays and which is the cultivation season. Here each household is mostly represented by mother and adult children who get into an "njangi" with either a next-door neighbour or family friend or relative where they jointly work in each others' farm at a stipulated number of hours. The idea is to put a labour force that can work in each person's farm. The activities carried out in the farm could include either clearing of bush, hoeing, planting, harvesting, weeding and the benefiting household provide just food and occasionally drinks for the labour.</p> <p>Today cooperation has emerged into "societies" youth groups and big meeting groups in rural communities, some made of only females or males and other made of mixed sex but of individuals of similar age range, whose objective is to provide</p>

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			labour in exchange for money in order to run their activities in the group and to be able to celebrate the end of year/cultural festivals with money raised through such activities. This has helped to increase the size of farm and reduce stress and cost to farmers who wants to extend the size of their farms and has also help to transform peasants farming into plantation agriculture
Solomon Elorm Allavi	Ghana	Q1.1/1	<p>My observation is that small farm owners tend to collaborate a lot in most rural communities in Ghana. Most small farm owners are members of community farmer unions and tend to share information on training and financing opportunities. However, I have also realised some prevalent elite capture (editor: “the momentum?”) thus preventing the full development of small farms.</p> <p>Numerous cooperatives have been set up in Ghana over the past decade. Due to ease of registering Farmer Cooperatives and interest by development actors and Government of Ghana's agricultural policies, lot more small farm cooperatives have sprung up to derive union benefits. However, most are structurally weak and (the) majority are now dormant in the absence of any external technical and/or financial support.</p> <p>Additionally, some large commercial farm operators have taken it upon themselves to set up small farms cooperation so they can easily establish a better supply chain for their products. This seem more sustainable than donor-driven small farm cooperatives.</p> <p>(In the bigger picture): Not much has changed over the past 10 years with regards small farms in Ghana. Even with numerous donor support, there is marginal impact and small farms remain stagnant.</p>
El Hadji Ousmane Ka	Senegal	Q1.1/1	<p>In the zone of Niayes (Ed: North-West region of Senegal) the exploitations are organized around an organization named AUMN (Ed: AUMN: Association des Unions Maraîchères des Niayes- see https://www.upadi-agri.org/association-des-unions-maraicheres-des-niayes-aumn). This organization brings together more than 300 farms. This organization helps farms on a lot of things:</p> <ul style="list-style-type: none"> - Find subsidized inputs of quality and quantity - Find financial and technical partners - Facilitate the flow of products before and after harvest - Defend the interest of producers <p>This organization made it possible to have several partners like PADEN (Ed: PADEN: Programme d'Aménagement et de Développement - see http://www.paden-senegal.org) — It trained and sensitized many producers on the misuse of pesticides but also the importance of local products for food security.</p>

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			<p>Humanity needs more production and avoid waste to feed itself in order to cope with food insecurity. Exploitation must play first and foremost the biggest role.</p> <p>AUMN is a cooperative created by the growers themselves to help farmers grow more and better, to achieve self-sufficiency. It is legally recognized, it has a (national) president and presidents in each union. Each union includes several operators of the same area. It has above all helped to achieve self-efficiency in onions and very soon in potatoes in Senegal. It is very likely that other sectors will follow.</p> <p>The government must not create cooperatives. Farmers must create these and then seek partners to support them in their approach with new production techniques and the use of organic inputs (e.g.).</p>
Daniel Nkomboni	Zimbabwe	Q1.1/2	<p>In Zimbabwe the land reform programme (of the 1980s and year 2000), released more land for livestock production resulting in some wards (a ward comprises of >100 households) having their own grazing areas. Though this brought relief, there are conflicts (especially during droughts) when animals from other wards cross boundaries (that are not demarcated by fences).</p> <p>Some villages/ wards are now practising "holistic grazing management" (refer to as "Allan Savoury Grazing systems"), where herders are contributed by the community. This has increased livestock security and land rejuvenation as the system involves rotational grazing.</p> <p>In the past when the traditional systems involving the chieftainship were in place, villagers used to contribute crop produce to the Chief that was used to support the orphans and used as relief during droughts but now there is more individualism as farmers are commercialising their agricultural produce. Services or produce is sold for individual household.</p> <p>Overall, there have been changes towards intensification of small farms (a shift from subsistence production) and therefore segregation of land units into informal individual land holdings although the land is still communally owned.</p>
Ghulam Qadir Arbab	Pakistan	Q1.1/2	<p>As such, there is no any successful formal system of cooperation among small or medium size farms in Sindh province of Pakistan. I have been part of evaluation team for a FSL (Food Security & Livelihood) project that focused mainly on small farms (Project facilitated organization and registration of Cooperatives) but the concept did not work at all due to several factors. The most important one is that small farmers have little surplus of crop produce to sell. The project facilitated farmers by paying transportation cost. Due to support of the project, the farmers could get extra income of around US \$ 3,000/- But (...) the project spent more than US \$ 100,000 for this activity. Moreover, neither cooperatives nor the collective selling of farm produce sustained (the activity) after the closure of project.</p>

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			In Sindh province, normally we see informal ways of cooperation among small farmers such as sharing irrigation water, volunteering to take responsibility of the irrigation (...), harvesting and threshing, and de-silting of water courses. Mostly, small farmers (male only) offer their free services and in return other farmers also provide same services whenever needed by others.
Bala Gambo Jahun	Nigeria	Q1.1/2	<p>In Nigeria since the inception of the agricultural development project (ADP) in 1979, small farmers were the target audience. Through the World Bank funding a lot of activities have been done in establishing various departments within the ADP set up. These departments are Agriculture, Extension, Rural Infrastructural development, Engineering and Monitoring and Evaluation. These departments identified the small farmers and formed them into village extension farmers with the apex body within the larger community.</p> <p>There is more cooperation (amongst) the farmers in terms of input acquisition, access feeder roads to transport their produce, extension services on new technology and innovations, market information.</p> <p>The extension agents, in collaboration with the small farmers identify major setbacks and report (them) to the government for implementation. Fortnight training received by the extension workers are (focused on) small farmers.</p> <p>The SG2000 (Nigeria country programme) trained many farmers in maize and rice production through the programme on doubling maize and rice. The African Development Bank used these structures and also extended their programmes easily.</p> <p>The small farmers are very cooperative when it comes to assisting each other during land preparation, sharing of information on new innovative.</p>
Sylvester Kwame Osei	Ghana	Q1.1/2	<p>Wienco Ghana Limited is an agricultural marketing solutions company (which) operates with about 3 smallholder farming groups or associations in Ghana. The smallholder farmers include Masara N'arziki (Northern region), Cocoa Abrabopa Association (all cocoa regions in Ghana) and COPA Connect (Volta region).</p> <p>Farmers have continually bonded together to tap into the benefits the company provides to them: inputs supply support, technical support, marketing, pension scheme for cocoa farmers etc.</p> <p>It is evident that due to the services being provided in the win-win interest of every party, smallholder farmers are able to work effectively in increasing yield.</p>
George Madoda	Tanzania	Q1.1/3	For the past 10 years small farms were facing challenges in terms of manure, urea and pesticides, the products were expensive in such that (the farmers) were not able to purchase them, as days goes on the government decided to remove tax

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			<p>on urea and machines so that they may be able to produce as much as they can and find markets</p> <p>Now they are encouraged to form local organizations such as cooperatives that are now working to help them increases crop production at village level. These small organizations represent them to defend their rights and negotiate with companies that buy their products and this has now causing changes and transforms their system of farming, we learn from cases from cashew nuts in Mtwara.</p>
Mayank Jain	India	Q1.1/3	<p>I have worked with farmers in South Bihar as well as in Jalpaiguri, Northern part of state of West Bengal. Irrespective of the geography, I think we should be very clear with the fact that agriculture apart from being a lifestyle also happens to be a business and there are many people who are dependent upon it entirely for their livelihoods. Until the time a cooperation among farmers [formal or informal] does not result in economic value creation (particularly in case of formal) or savings (both in case of formal/informal)); it would never be fruitful.</p> <p>Formally, Small farm cooperation have transitioned from being a cooperative to Farmer's Interest Groups to Self-Help Groups to Farmer Producer Organisations (as facilitator pointed out in the first post giving example from Bihar).</p> <p>Cooperatives</p> <p>Sadly cooperative model failed in India or let us say it did not get much gestation period it was required. It could be attributed to following reasons:</p> <ol style="list-style-type: none"> Appeasement to all No economic value creation Capacity building was not done the way it should have been (wide gap between policy and implementation/execution) <p>SHG's (Self-Help Groups) mostly focused on women. Both government as well as non-government organisations worked on this concept.</p> <p>SHGs in most of the cases became source of saving monthly a little bit amount that could be credited to any of the member at time of need to sustain their livelihoods. I found it very innovative tool personally. But it also failed barring few who started some income generation through small ventures like animal rearing, mushroom etc. Probable reasons:</p> <ol style="list-style-type: none"> As a group, communities never came together. They remained individualistic. Enterprise creation was never a vision or economic value creation was seldom an emphasis. Most of the loans that were disbursed they were taken in lieu of clear the farm debt or as a credit for farm inputs. It became a source of an alternate way of taking a loan. SHGs mostly focused on women but they were mere puppets and worked according to wishes of the family. Entrepreneurial mindset was not nurtured.

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			<p>6. Market access and quality check remained a bigger question even if ventures were started.</p> <p>7. enables gathering of women; but platform seldom results in anything apart from discussing credit/savings etc.</p> <p>Farmer Interest Groups (I have seen most of the FIGs made by government institutions). It was a moderate success on information sharing and pooling of resources but suffered due to lack of economic value creation</p> <ul style="list-style-type: none"> - trainings were facilitated through these - but adherence to trainings were never checked, hence the flaw - marketing issues were not sorted out <p>FPOs also suffer through capacity building of institution. Professionalism has not been achieved in the working. I would also attribute it to the corruption that prevailed at end of local partner level, which totally ignored developing capacity. While they were able to save a little bit on bulk purchases but the glorious goal of economic value creation still remained a distant reality.</p> <p>Informal Cooperation</p> <p>Here cast system and gender also plays very pivotal role, as per my observation.</p> <p>In Kurmi cast (traditional hindu agricultural caste) - one can see it as a family farm as well as there is healthy competition among the members/neighbors. They also follow barter system and contribute in each other farm by voluntary labor thus saving on direct labor cost.</p> <p>In case of Bihar upper caste women (Bhumihars) will seldom go out to work in the fields, though they may help with tasks that can be done in the family compound (winnowing, seed selection) or around the homestead (looking after kitchen gardens). In contrast, it is generally acknowledged that women from poor peasant households (Kurmis etc.) spend between 12 to 16 hours a day on work</p> <p>Also, where women farmers are running the show. I have seen more harmony and cooperation in the farm work.</p>
Innocent Azih	Nigeria	Q1.1/3	<p>In Nigeria, small farms cooperation is largely insignificant if at all existing. The era of World Bank/ADPs (ed: ADP: Agricultural Development Programs) actually gave an impression or false hope as farmers believed they build enough capacity by gaining access to extension. The inability of state governments to sustain the scheme, without a replacement, has not excited in farmers the need to congregate.</p>

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			So associations in the sector are largely seen among bigger farms who can influence the market through, and not small/ family farm operators. So in the last 10 years, farmers still remain price takers in the weak market facilitated by traditional offtake mechanism and the benevolence of intermediaries (such as development interventions) for capacity.
Mare Addis	Ethiopia	Q1.1/3	<p>Small farm holder farmers have their own mechanism to do their farm activities. The small farm holder farmers can cooperate with each other.</p> <p>Their mechanisms are one is getting help from their neighbor, from their own kids, from their relatives, and the main means they use is exchanging their (labour). For example: The whole working group in one village assembles and works together one farmer's farm activity and the next day for the other farmer's farm activity in their group member and then continues like this to the every next farmer.</p> <p>First, they arrange their turn in sequences before they start to (work) together. Then they continue according to their turn or sequence.</p> <p>Actually they treat oldest farmer's activity first. When they are working together, they can get high motivation to do every activity within a short period of time but if they tried to do it alone, it takes so much time.</p> <p>They can also cooperate with each other in economic ways. For example, most of the farmers here (have) problems in the rainy season: During rainy season (June to Sept) farmers will get food shortages then during this time, the farmers who have some surplus produce can lend to the poor(er) farmers to pass the hunger time and even they also lend them seeds during the seeding time.</p> <p>So, small farmers have a good cooperation. They can also cooperate with each other when they construct their houses. Even they can lend money (to each other so that) the poorest farmers get a better property.</p>
Sergiu Didicescu	Romania	Q1.1/3	<p>Many of the farming areas of the EU suffer from disadvantages of fragmentation where economies of scale are harder to achieve. Especially in poorer regions with high unemployment and ageing farming populations where other economic opportunities are pulling people off the land and out of rural communities' small farms are in rapid decline.</p> <p>Significant "knowledge gaps" still exist in our understanding of the agronomic and socioeconomic dynamics of small farms. Compared to high intensity farming systems relatively little research has, for example, been undertaken on improving the performance of the small-scale farming systems and certainly insufficient attention has been given in the past to the fostering of cooperation and innovation as a process to enhance their productivity, profitability and sustainability. In addition, in Eastern Europe many farmers reject cooperation, due to a lack of true cooperative tradition and negative</p>

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			<p>experiences with forced cooperation during socialism.</p> <p>The EU's rural development policy tries to overcome these challenges through specific support. For example, the co-operation support measure offers opportunities to bring farmers and a broad range of other people together by covering the organisational costs of the cooperation.</p>
Dixon Olaleye	Nigeria	Q1.1/3	<p>Basic points of our experiences of small farms and how this has changed over the past 10 years. The points are:</p> <p>1. EVERYBODY WANTS TO EAT BUT NOBODY WANTS TO FARM Its alarming... Nobody wants to farm. Small farms and farmers cooperation is disappearing. Seldomly, we find households having a small garden at back of their house. Putting together over 100 young farmers some years back and engaging them in farming production, now we have less than 30 of them on the farm. Lack of access to agricultural funding and loans is disenchanting farmers from farming. We want the food on the table (food security) but we do not want our hands on deck to do the farming.</p> <p>2. LAND IS CHEAP, LABOUR IS NOT Hiring labour is quite expensive. Despite the availability of cheap land for cultivation, the labour involved is not cheap. Taking care of the labour is expensive. It is discouraging (to the) establishment of small farms and food security.</p> <p>3. MODERN CENTURY, CRUDE PRACTICES (The use) of crude implements and lack of modern techniques has brought great limitation to small farms operation and growth. We can therefore do more to make small farm sustainable by:</p> <ol style="list-style-type: none"> 1. Empowering small farm holders 2. Look after every worker 3. Make crops more efficient 4. Rescue more farmland
Janaajeet Adhikari	Nepal	Q1.1/4	<p>Developing countries like Nepal are full of small farms. Nepal, a small country with small population as well, possesses plenty of small farms and people are highly dependent on them join their hand to mouth. Due to modern enhancement in agriculture, the small farms are being kicked out from agriculture. The farmers are compelled to be involved in alternative works instead of farming.</p> <p>Yes, the supply of inputs have become more easy to buy but the dependency on the supply corporation have also increased which have resulted more chances of their farms being fallow in times of shortage and delay in supply. Back then, before 10</p>

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			<p>years, farmers were their boss but the situation has changed now. The then farmers are either been kicked out or compelled to become a slave.</p> <p>I have to say, farming have been a difficult profession back then and now. Many things changed with the course of time but not the fate of the small farmers.</p>
Denu L. Tsegaye	Ethiopia	Q1.1/4	<p>The small farms' cooperation started in Ethiopia through the "illagization" program during the mid 1980's when smallholder farmers were advocated to establish cooperatives. These farmers' cooperatives were mainly serving their members through provision of agricultural inputs (seeds, fertilizer, and chemicals among others) and purchase of outputs. Through this, the cooperatives have been playing a vital role in providing access to agricultural inputs to small and marginalized farmers. Various agricultural technologies were also introduced to smallholder farmers through these farmers' cooperatives.</p> <p>Furthermore, the cooperatives have benefited their members by stabilizing prices, both during surplus and deficit production periods. This is through purchase of outputs at a floor price when the market price falls below breakeven point.</p> <p>However, the roles of cooperatives have been constrained with various factors. Among these factors: lack of capital and skills are the major ones, which have limited the cooperatives capacity to provide services to satisfy the multifaceted needs of their members.</p> <p>Efforts have been made by government and non-government bodies during the past one two decades to tackle these constraints and changes have been somehow realized. But, there is still gap in capacity and governance among these farmer's cooperatives.</p>
Loupa Pius	Uganda	Q1.1/4	<p>How do the pastoralists and small crop growers cooperate? In Kaabong district, looking at my experience for three years of interaction, during the dry season the pastoralists or the crop farming pastoralists allow the livestock to graze over the cultivated field to allow crushing and manuring of the crop field with cow dung for a period of 3 months. Sometimes the crop residue is used to feed the small ruminants like goats and pigs, chicken etc.</p> <p>During the wet season, the livestock keepers move further away from the crop farmers to mountain areas for grazing, as more land gets devoted for crop farming. However, the livestock keepers select good heifers for draught power. So normally the crop farmer provides cereals and some small resource support to the livestock keeper meanwhile the pastoralists or livestock keeper provides the draught power inform of oxen.</p> <p>The pastoralists provide milk and meat to the crop farming households, the crop farmer provides cereals. In the time of</p>

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			droughts, the crop farmer and pastoralists do perform barter trade. 100kgs of cereals for five goats, 100kg of maize or sorghum for 1 bull or a cow.
Mohamed Osman Abdulkadir	Somalia	Q1.1/5	<p>Agricultural cooperatives play an important role in enhancing food security and creating sustainable employment for youth, women and marginalized small-scale farmers. Small and medium scale farmers gain tangible benefits from agricultural cooperatives that lead to food security and poverty alleviation for hundreds of thousands of urban population.</p> <p>In Somalia, particularly the southern regions, the communal areas along Shabelle River made their own cooperative with the aim of utilizing the water flow of the river. There are no other collaborations like collective purchasing power, buying farm machineries from abroad, building local markets for their products and repairing the damaged roads and transportations shared by these cooperatives.</p> <p>In some areas, some small group of farmers sting together to support each other for example by lending money and machinery to each other or even land to one another.</p> <p>Although In the past (prior to 1990), COOPs operated in many locations in Somalia, including both irrigated and rainfed areas. The government through its COOPs agency and run by hired government officers controlled the cooperatives. All cooperatives seized functioning when the Somalia central government collapsed in 1991. Members of COOPs disappeared and those remaining have been engaged in private fields since all properties of the government, including their communal lands, were looted or usurped by gun militias</p>
Adodo Abalo	Togo	Q1.1/5	<p>I want to share with the group the experience of maize small farms in Togo.</p> <p>Before the project, the small maize farmers were mainly producing for their subsistence and in small quantity for the market. Most often, they sold their maize in small quantities after harvesting when they faced a need. They were producing as individual farmers with very low control on access to input. The project has started with over 1000 farmers in 2006 and was an incubator of agribusiness initiatives in the area of intervention. It based on the use of an approach called the CASE: "Competitive Agriculture Systems and Enterprises".</p> <p>With this approach, the interveners looked for formation of agribusiness clusters (working on collaboration between groups of farmers, input dealers, banks, traders/processors and business technical services), developing agribusiness value chains and enabling business environment for them. Then, the project identified the production and commercialization of yellow maize to poultry farmers as business initiative. It supported some of the small maize farmers to become a cooperative and to produce for the identified market.</p>

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			<p>Two districts of the South-Est of the country has started to work the project from 2007. This group has been extended to another 5 districts with 9 other small farmer cooperatives. The number of small maize farmers has changed from 67 in 2007 to + 2,000 in 2014. These farmers have gained enough money today from their yellow maize production to poultry farmers to take care of timely input supplying to their members and their training on good agriculture practices (GAP) with their own recruited technical staff, in addition to the public extension service officers.</p> <p>They have a very good governance structure, which is useful for them to temper at time emerging tensions.</p>
Mayank Jain	India	Q1.1/5	<p>Actually, I have couple of questions/comments on which I would like to seek fellow participant's views. When I talk about cooperation among small farms, I also get reminded of iCOOP Korea.</p> <p>iCOOP is a network where independent organizations - consumer co-operative organizations, producer co-operative organizations, and cluster partners - cooperate to realize the common goal of realizing the needs of members. It becomes more like a "consortium, which is an interesting formula, keeping in consumers and producers interests in mind.</p> <p>I prefer demand driven approach to economic value creation even in crop planning for small farms, can someone share consumer cooperative examples that has helped the cause of small farmers.</p>
Viviane Crosa	Italy/France	Q1.1/5	<p>The Antola Park started a programme to find farmers in 1995 and put them together, we were from different villages.</p> <p>A famous pastry and candy shop was looking for an old traditional recipe done with old roses. We started to grow this flower, but we had a big problem: it did not easily multiply, we waited 3 years before having a production. We live in the Appenini Mounts 600m high, behind the fantastic Riviera (close) by the Mediterranean Sea with tourism...</p> <p>7 farmers had the idea to (form) an association. Quickly we became important because an institution talks to an institution: an institution does not talk to a private farmer. Something strange happened before in our zone: there was no agriculture after we created the association; the political institutions such as the region or the province considered our zone as an agricultural zone!</p> <p>In the meantime we wrote a protocol of organic practice to grow the same roses, then a protocol (to have all of us use) the same recipe.</p> <p>As the production started, we chose a day after the harvest where we could sell our crop and our rose beverage in the most important village because of the presence of the train and the good road (infrastructure) and you (could) find a lot of people just passing by. We chose the name of the new market. And we invited all the growers and farmers of our zone.</p>

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			<p>For 4 or 5 years it was difficult (for) people (to) remember the beverage, (so) would they would buy it or not?</p> <p>You have to make it taste... We went from one market to the other at weekends. It took two or three times of going to the same place (to have people interested and) discover our product.</p> <p>Our beverage is (now) a very popular and traditional recipe for Gottino and we brought it back.</p> <p>The harvest and the transformation of the roses is concentrated in 20 days more or less. We have (to take) the time to take care of other things.</p>
Diana Naikoba	Uganda/Germany	Q1.1/5	<p>On the topic of "cooperation" over the past ten years in rural Uganda:</p> <p>Cooperative groups existed in the coffee growing regions and they were predominantly aimed at marketing the coffee. The women cooperated too but mainly as a source of social capital, especially in rural Uganda. These raised funds that were used to solve emerging problems in households such as raise school fees for their children.</p> <p>Women later tended to join the booming microfinance sector in the country that provided small sized loans that were collateral free and the group members were each others' guarantors. Other groups existed and still exist such as Heifer international aided groups where farmers got heifers that they raised to improve own income situations.</p> <p>With the closure of most cooperatives, both genders now actively now engaged especially in the group loan schemes provided by the different institutions in Uganda. The goals of joining groups and cooperating are however diverse.</p>
Francisco Gurri	Mexico	Q1.1/5	<p>I work with small farmers from the Yucatan Peninsula who farm tropical forests. Type of within and between farm cooperation will depend largely on the "purpose for farming". We have found two basic models. Those that do agriculture as part of a subsistence strategy, and those for which agriculture is a business. Each category will respond differently to stress and opportunities presented by the outside world. Their households will also be organized in different ways and their demographic structures will vary. As globalization advances household (I prefer it to small farm) cooperation change but, as long as the models persist, these changes will also differ according to the model. What I found surprising is that inter-household cooperation is greater between households that practice agriculture as a business. They are bound by kinship ties and establish unequal reciprocal exchanges. For example, a son's household may exchange labor for access to his father's grazing land, or they may cooperate to buy a tractor or a pickup truck that will belong to the largest household. Cooperation also extends to the market place where kin related individuals may have stores or sell the produce in the market or street.</p>

Participant	Country	Aggregate	Comment
			<p>Subsistence farmer's cooperation is stronger within households than between households and it involves the organization and distribution of income from different sources including labor in the cities.</p> <p>Our results and views on household cooperation may be found in: *** Gurri FD (2010) Smallholder land-use in the southern Yucatán: How culture and history matter; Regional Environmental Change; Vol. 10(3): 219- 231; DOI:10.1007/s10113-010-0114-8. *** Gurri, F. D. and Ortega-Muñoz, A. (2015), Impact of commercial farming on household reproductive strategies in Calakmul, Campeche, Mexico. Am. J. Hum. Biol. doi: 10.1002/ajhb.22753.</p>
Teresa Pinto Correia	Portugal	Q1.1/6	I would like to raise a question related to this topic. In Southern European countries there are soft skills required for a fruitful collaboration among small farmers, which is an issue. Small farmers, as many other groups in society, do not have the soft skills which are needed for cooperation to be established with a larger group, in the long run. Is this an issue in other countries and how is the issue tackled, to enhance the cooperation skills?
Mahesh Chander	India	Q1.1/7	<p>In response to Teresa's question on tacking "soft skills".</p> <p>It is interesting to me: "to establish cooperation, farmers need soft skills", says Teresa Pinto Correia in context of Southern European countries. Though not addressed much in formal documents, soft skills matter elsewhere too! Many a time groups fail due to misunderstandings, conflicts, lack of empathy or simply poor communication ability and lack of common sense & trust deficit including inability to see things from larger perspectives.</p> <p>The Self Help Groups (SHGs) & cooperatives in India often fail due to lack of soft skills though many other reasons are highlighted for their failure. This interesting dimension need attention of researchers and policy makers.</p>
Yakubu Musah	Ghana	Q1.1/6	<p>Cooperation between small farmers have not been very successful in Ghana, with the exception of a few, the popular Kuapa Kokoo farmers cooperatives and the new Masara N'arziki Maize Farmers association, who have given a new breath to farmer cooperation.</p> <p>Masara N'Arziki Farmers Association (MAFA) is farmer owned and governed association formed in Northern Ghana in 2010, a joint venture between maize farmers and the inputs suppliers Wience Ghana and Yara Ghana. Wience and Yara are input distribution companies and use this arrangement to reach out to farmers to sell their inputs and have built 16000MT and 8000MT capacity warehouses in Tamale and Tumu respectively to aggregate and store produce from the program. Masara N'arziki (in Hausa literally means "Maize is wealth") is incorporated as a company limited by guarantee and has its headquarters in Tamale. To qualify and be registered as a farmer for the program, one has to be</p>

Participant	Country	Aggregate	Comment
			<p>1. Willing to belong to a group of between 5 to 12 farmers</p> <p>2. Willing to sign the farmer's resolution and the MAFA contract forms (agreeing to sell all produce to MAFA).</p> <p>3. Willing to co-guarantee other farmers for the cost of the inputs and</p> <p>4. Willing to cultivate a minimum of two hectares individually and en-block (with each farmer cultivating two or more hectares of the 10-20 hectares).</p> <p>The package to the farmers includes inputs (seeds, herbicides, fertilizers, insecticides, and optional use of a planting dibbler and sprayer), agronomic training, and extension and business development services. The program has already reached some 15000 farmers cultivating on average 4.5ha of maize.</p> <p>The main merits of the program are:</p> <ol style="list-style-type: none"> The high yielding varieties of maize introduced together with the training and extension ensures optimum yields. Inputs are delivered on time because Wienco is able to plan ahead for the program. There is a guaranteed market for the produce from the farmer. <p>The down side of the program includes</p> <ol style="list-style-type: none"> The MAFA contract bind farmers to sell all their produce to MAFA, However, farmers typically keep a subsistence percentage without permission from MAFA. The nonnegotiable nature of the package leaves farmers with no say, MAFA sets the prices of inputs and produce and even the harvest dates. (This may lead to side selling by farmers and late harvesting could also lead to pre harvest losses). Farms have to be adjacent each other and this excludes a lot of farmers who would want to join. <p>Wienco also intends to invest in a maize mill with MAFA as a shareholder in order to increase the farmers' revenue.</p> <p>Beside these two examples one can hardly find any other successful cooperation between farmers that have worked in Ghana and the success of these two seem to have been hinged on the scale/size of their operation. Their large size seem to give them economies of scale that contributed to their success.</p>
Ellison Musimuko	Zambia	Q1.1/7	<p>Over the past 10 years small scale dairy farmers have changed towards a more organised and coordinated way of doing their business. Some of the cooperatives are able to save money in SACORD accounts. The money raised has been use to buy simple milk processing equipment. A case study is the FISENGE dairy, Mpima and Choma Dairy cooperatives.</p> <p>However, we have challenges in establishing a well organised groups in fodder production. Farmers have a conflict interest during the time (of creating the cooperative). They have choose whether to plant fodder or maize crops. As result, we have</p>

Participant	Country	Aggregate	Comment
			difficulties to organise them, with a few exceptions, e.g. one cooperative in Maka, the western province of Zambia, which is able to market their fodder.
Pedro Cerrada Serra	Spain	Q1.1/7	<p>I would like to share two innovative (at least it is in my region) cooperation experiences.</p> <p>Formal cooperation: Citrus is one of the main crops cultivated in Valencia (Spain) and neighbouring areas. It is mainly an export-oriented culture that traditionally has provided part-time farmers with a high economic return while not demanding a labour-intensive work. However, in the last decades, an important fall in sales prices together with risen production costs has meant that field abandonment is not unusual. The lack of profit also compromises the generational renewal. Small-scale farmers usually gather in their towns cooperatives. Field abandonment and lack of innovation (usually innovation comes hand in hand with younger farmers) makes cooperatives to lose competitiveness and members. Most recently an initiative is being developed (where the UPV is collaborating) to boost social innovation in land management. Cooperative members are asked to transfer their land rights to the cooperative for an appropriate period of time and in turn the cooperative put in production abandoned fields, or make the required investments to change to new varieties of higher commercial value or put in place any other appropriate changes. Managing larger production may lead for instance to diversify varieties and extend the productive period adapting to market requirements. It is expected that this kind of social innovation will help the cooperative (and their members) to be competitive again and hopefully to survive. Here I leave a video explaining the experience (in Spanish, I am afraid) https://www.youtube.com/watch?v=jWIFRSs_ERk</p> <p>Informal cooperation: In the peri-urban area of the city of Valencia (Spain), very small fruit and veg agro-ecological producers engage in informal cooperation. Similarly to other examples already mentioned in other countries, there exist frequent relations of mutual assistance. Some examples include to exchange products or seedlings or to place a grouped order for obtaining better prices. Also it is not unusual sharing experiences and knowledge or that more veteran producer help novel producers. A very interesting cooperation develops between these agroecological/organic producers and local social movements championing land protection and shorter food supply from sustainable local producers. These organizations are helping to build-up higher-scale platforms where small producers can meet with other actors and increase their advocacy capacity.</p>
Manuela Bucciarelli	Italy/France	Q1.1/8	<p>This is a reply to the input from Mahesh, and the question from Teresa.</p> <p>Teresa asked: "Small farmers, as many other groups in society, do not have the soft skills which are needed for cooperation to be established with a larger group, in the long run. Is this an issue in other countries and how is the issue tackled, to enhance the cooperation skills?"</p>

Participant	Country	Aggregate	Comment
			<p>Mahesh answered (excerpt): "(...) Though not addressed much in formal documents, soft skills matter elsewhere too! Many a time groups fail due to misunderstandings, conflicts, lack of empathy or simply poor communication ability and lack of common sense & trust deficit including inability to see things from larger perspectives. (...)"</p> <p>Manuela's input:</p> <p>We agree with Mahesh that soft skills are often neglected in formal documents. Regional studies conducted in 2013 by FAO, highlighted that capacity development interventions are frequently not coordinated and do not address key institutional and organizational dimensions. At this regard, the Tropical Agriculture Platform (TAP) developed a framework (on Capacity Development for Agricultural Innovation Systems) which addresses specifically soft skills, defined as functional capacities, needed for an individual or groups to work effectively in an innovation system. Functional capacities include strategic planning and implementation, ability to formulate and implement relevant policies and norms, capacity to manage knowledge, the ability to build and maintain partnerships, or the ability to navigate the political dimensions of organizations. The TAP framework includes approaches and methodologies to address gaps in these capacities and identified 4 fundamental functional capacities:</p> <ul style="list-style-type: none"> · Capacity to Navigate Complexity · Capacity to Collaborate · Capacity to Reflect and Learn · Capacity to Engage in Strategic and Political Processes <p>These capacities lead to an overarching Capacity to Adapt and Respond in order to Realize the Potential of Innovation.</p> <p>Under the TAP initiative, the project CDAIS (Capacity development for agricultural innovation system) supports the development of functional capacities of organizations and individuals, including smallholder farmers, working through innovation partnerships and supports them to identify and strengthen their capacities needs.</p>
Mayank Jain	India	Q1.1/8	<p>(Mayank answers to the same request for input, from Teresa :)</p> <p>In response to the question on soft skills:</p> <p>I think, as a prerequisite, having soft skills is required when one is engaged in any thing which demands/seeks support of other people/stakeholder. So, it becomes an essential characteristic which is sector-agnostic.</p> <p>Second, I would like to share couple of points (experiences) in light of the same:</p> <p>a. As I engage myself with local communities, as a strategy and need; I have to seek their support and it requires a trust building also. The work eases when you get someone from the community who empathize with you and bridges the gap by facilitating communication. So one has to identify these people and hone them, and encourage them taking care of their</p>

Participant	Country	Aggregate	Comment
			<p>inhibitions that makes thing much easier to proceed. For me this strategy has particularly work out well, but yes, it requires scouting and nurturing.</p> <p>b. There are natural & reluctant leaders everywhere, crux lies in finding them and making them part of the ecosystem. That is the mantra I follow.</p>
Mahesh Chander	India	Q1.1/9	<p>Thanks Manuela, for her response/inputs on soft skills and links on TAP & CDAIS (Q1.1/8). The TAP and CDAIS look quite promising, wish India too becomes a part of it in future.</p> <p>Apart from soft skills, another challenge is that youth are not attracted to agriculture, given the opportunity they would like to sell the land and enjoy their life until they are left with no money. The older generations of small scale farmers in my place had some kind of attachment with land, livestock and farming, discouraging them to sell it off but now the young ones of farm families have no such attachment with farming which doesn't look attractive to them.</p> <p>In India, The Indian Council of Agricultural Research (ICAR) launched a programme by the name of ATTRACTING AND RETAINING YOUTH IN AGRICULTURE (ARYA), apart from the focus of KVKs on skill training of rural youth, but it seems such measures are not good enough. Even we at our institute initiated a small programme on pilot basis on Youth mentoring. The rural youth need to be trained, engaged and retained in agriculture in order to secure the sustainable future of farming.</p> <p>Are there any connections the participants see, of youth with small scale farming sustainability?</p>
Vivian CdV	Italy	Q1.1/9	<p>This is a reply to Teresa's earlier question: "Small farmers, as many other groups in society, do not have the soft skills which are needed for cooperation to be established with a larger group, in the long run. Is this an issue in other countries and how is the issue tackled, to enhance the cooperation skills?"</p> <p>Vivian elaborates: Well, you will obtain cooperation in one minute if you give a salary. :-)</p> <ul style="list-style-type: none"> - "Cooperation" depends a lot on how you look at the group: If you only look at the way you look at benefits for you, and how to exploit the group, you will fail. - Think how you will benefit from the people outside the group: by selling, by going to markets, by advertising, promoting, designing projects... The way you do your work, will inspire other farmers: they will want/wish to follow you - Another idea: people on a farm have to farm what they know with great quality: when you introduce your idea, your crop, your recipe... then show people the result... This approach will inspire others, and enhance collaboration
Nasreen Sultana	Bangladesh	Q1.1/10	<p>Let me share with you some early experiences of small farmers' cooperative in one region of Bangladesh. In 1959, a cooperative rural development program was launched by the Bangladesh Academy for Rural Development (http://www.bard.gov.bd/) in Comilla, a South Eastern district of Bangladesh. Which was later known as Comilla Model of cooperative (https://en.wikipedia.org/wiki/Comilla_Model).</p>

Participant	Country	Aggregate	Comment
			<p>The model was implemented in four sub-districts of Comilla with four distinct components:</p> <ol style="list-style-type: none"> 1. Two tier Cooperatives - Krishak Samabaya Samity (KSS, i.e. farmers' cooperative association) and Sub-district (Thana/Upazila) Central Cooperatives Association (TCCA) 2. Rural Works Program (RWP) 3. Sub-district (Thana /Upazila) Irrigation Program (TIP) 4. Sub-district (Thana /Upazila) Training and Development Centre (TTDC) <p>Considerable emphasis was placed on distribution of agricultural inputs and extension services.</p> <p>The main features of the Comilla Model were:</p> <ul style="list-style-type: none"> • The promotion of development and refining of various public and private institutions, and establishing a system of interrelationships between them; • Involvement of both public and private sectors in the process of rural development; • Development of leadership in every village, including managers, model farmers, women organizers, youth leaders, and village accountants, to manage and sustain the development efforts; • Development of three basic infrastructures (administrative, physical and organizational); • Priority on decentralized and coordinated rural administration in co-ordination with officials of various government departments and the representatives of public organizations; • Integration and co-ordination of the various developing services, institutions and projects; • Education, organization and discipline; • Economic planning and technology; • Development of a stable and progressive agriculture to improve the conditions of the farmers and provide employment to rural labor force. <p>For various reasons the Comilla Model was unable to achieve its goal. A report on 1979 showed that 339 of the 400 cooperatives were non-functioning. Four factors were pointed out as the reason, such as fraud/lack of internal controls, stagnation, diversion of funds, and ineffective external supervision.</p> <p>While working for CDAIS project we observed that, sustainability of small holders' cooperation is very much challenging in Bangladesh. Most of the smallholders' groups are project bound and activities become slow or dormant after completion of the project.</p> <p>The major reasons for the unsustainability of these groups are:</p> <ol style="list-style-type: none"> 1. The benefit of working together is not properly understood by the smallholder farmers 2. Members lack of adequate leadership quality to lead the group

Participant	Country	Aggregate	Comment
			<p>3. Collaboration attitude is limited, and 4. There is a lack of trust and confidence</p> <p>All these indicate that for sustainability of groups/cooperatives, there are no other alternatives than improving or strengthening soft skills of smallholder farmers.</p> <p>Five commodity-based niches/clusters, such as Mango, Fish, Pineapple, Summer Tomato and poultry were identified to work with our project. Each niche is composed of several stakeholders such as; a producer group (mostly smallholder farmer), input suppliers (fertilizers, pesticides, vet medicine, feed etc.), transporters, extension service providers, researchers, marketing department, processors, consumers, etc. With the objective to develop their capacities, first of all their capacity needs were identified during Capacity needs assessment workshops using several facilitation tools/methods such as visioning, net mapping, problem/solution tree and timeline analysis and questionnaire. This process has been support by national innovation facilitators trained to support the niches. After a marketplace event bringing their needs to the attention of service providers and the introduction of coaching plan niche stakeholders showed much interest in group formation. As a result, the Shibganj Mango Growers' Association (for Mango niche) has been formed and a tomato processing group was formed by the female stakeholders of the summer tomato niche. The project supports the groups in developing skills they have identified they need to collaborate with other stakeholders to produce and access markets.</p> <p>With our new CDAIS project, local stakeholders are not just recipients but play an active role in what they want to achieve, what they feel they need to develop to achieve their desired change. We hope that this approach will lead to more sustainable smallholder groups.</p>
Richard Hawkins	The Netherlands	Q1.1/11	<p>The mixed history of cooperative and group development for small holders is long and well documented. We have seen in these discussions the need to develop inclusive business models for small holders, which I believe can only be done if farmers are better organized, and also the need to develop "soft skills", or "functional capacities", to enable these farmer organizations to function effectively. There are any number of organizations which exist to help strengthen farmer organizations to that they can better participate in commercial agriculture (e.g. Agriterro, AMEA).</p> <p>My argument here is that not only cooperation among smallholder farmers is needed (as implied by the wording of topic 1). We also need to strengthen cooperation between smallholder farmer organizations and others. These others include the services farmers require (companies or organizations providing inputs; technical, financial, business advice), those who buy their produce (off-takers, including traders, aggregators, SMEs, etc.), and also those who determine regulations, policies, etc. In other words, it is important to strengthen the functional capacity of local innovation networks or partnerships, and not just farmer groups or cooperatives per se. At ICRA, we have developed a number of capacity strengthening modules for this</p>

Participant	Country	Aggregate	Comment
			purpose as used in a number of value chain partnerships across Africa, within the 2SCALE Project. These modules, and many success stories from the project, are available here.
Ghulam Qadir Arbab	Pakistan	Q1.1/11	<p>This is reply on input shared by Ms Nasreen Sultana on Q1.1/10</p> <p>I am very much impressed of your input as it not only highlights the past problem but also gives us a practical solution. While discussing the sustainability you have also given great idea from your project wherein 5 groups have been identified/organized. The practical involvement of all stakeholders is most important to achieve desired goals for betterment of small farms.</p> <p>Small farmers are struggling since centuries for their survival as they face discrimination on many fronts such as lack of access to loan, bad quality inputs, price discrimination and market knowledge etc.</p> <p>Top of all I am happy to see in your input that your project has organized, "a tomato processing group was formed by the female stakeholders of the summer tomato niche."</p> <p>I am very much sure that this female group might be performing comparatively well as compared to other groups because I have witnessed in so many projects that if women are given chance to collaborate, they not achieve desired results but also exceed beyond expectations.</p> <p>This is also one my suggestion to focus more on involving and organizing women from smallholder families in agricultural practices from cultivation to marketing.</p>
Sylvester Ayambila	Ghana	Q1.1/11	<p>Cooperation among small-scale farmers in the region is very weak. Very few farmers belong to farmer groups and cooperatives.</p> <p>This phenomenon has exposed farmers to exploitation by market intermediaries. More than 90% of the farmers sell their crop produce individually. There is virtually no formal contracts between farmers and off-takers.</p> <p>The situation has improved over the past 10 years. In the Gushegu District (SALSA region in Ghana), Non-governmental Organisations (NGO) such as Savannah Farmers Marketing Company (SFMC) has been working closely with farmers in establishing a kind of value chain to ensure the production and supply of quality produce. There were attempts to enforce contracts with farmers to supply farm produce but this has been difficult. Linking farmers to industry in the marketing of farm produce has been difficult due to issues about quality and pricing. The absence of quality standards and market premium have further worsen the desire for farmers' cooperatives. Many farmer groups believe they have not really</p>

Participant	Country	Aggregate	Comment
			benefited from farmer groups and cooperatives and are therefore reluctant to join. The few farmer cooperatives existing are not active. Farmers are not able to take advantage of the opportunities in the market in terms of prices of inputs and outputs. They are often excluded from decision-making due to less visibility in the policy arena. They have very little influence on markets and the political space.
Victor David Martinez Gomez	Spain	Q1.1/12	<p>Several of the previous interventions to topics 3 and 4 (I think Winonna raised the issue) have put under the spotlight the lack of cooperation, the side-selling (Yakubu), etc.</p> <p>In my region the collective action used to group small farmers through cooperatives but currently is, at best, stagnated, with similar problems as the ones referred by the previous replies. We are participating in a series of farmers' cooperatives initiatives aiming at bringing back to cultivation some abandoned land. And we have noticed that two elements are crucial for the success of these initiatives, at least in their early stages: Thorough explanation and external trust.</p> <p>First, all the meetings to explain the initiatives were small meetings (less than 20 people) where everyone could raise their remarks, doubts,... so they eventually felt actors of the initiative, not only reactive agents. Besides, there were meetings organized for every interest group (local administration, cooperative workers, farmers, other coops, non-farming land owners). At the end of the day, lots and lots of meetings to carefully explain the initiative.</p> <p>Second, usually these initiatives came from a "bandwagon person" well known in the village/county, with previous successful records. However, people have told us later that the external support provided by the university and by a rural bank also involved gave plenty of credibility to the initiatives and made them more trustworthy.</p>
Richard Yeboah	Ghana	Q1.1/12	<p>My comment is a reaction to Solomon Elorm Allavi's contribution on Q1.1 /1</p> <p>It is very difficult to generalise for cooperatives in Ghana. There are a lot of differences from area to area. Official Large scale cooperative societies in the 70s to late 90s are all collapsed e.g. Food Distribution Cooperation. What is emerging for about 14 years now is the 'Project-led' groups formed along commodity lines at local levels. These are not strong and are unable to get to the levels of Association, Unions or Federations, which most of the projects plan to achieve.</p> <p>All the other types of cooperatives mentioned by the other contributors also exist in Ghana. Government adopting the "Value Chain Approach" as an agricultural policy created by FBO/CBO Desk officers in the Ministry of Food and Agriculture offices in all the Districts (FBO – Farmer Based Organisation: CBO Community Based Organisation). They have facilitated the formation of several FBOs but they have not been sustainable. They do not last long, they may be there but not functional. Groups which the farmers form themselves, are still functioning, but they have periodic activity.</p>

Participant	Country	Aggregate	Comment
Martz Czekaj	Poland	Q1.1/13	<p>Polish Reference Regions taken into consideration within SALSA Project represent different experiences in cooperation. Multidirectional production, lack of specialization, small farm area, land fragmentation, self-consumption of significant part of agriculture production in small farms, lack of trust among farmers, past experiences – there are only selected factors, which do not foster cooperation.</p> <p>On the other hand, when farmers focus on one specific group of products, they can effectively collaborate to produce, process and sell together their production (for instance fruit production in Nowosądecki Region or dairy cooperatives in Nowotarski Region).</p> <p>So what is the secret of fruitful cooperation? Maybe one person, leader, who can show that collaboration is good, is necessary, is profitable, or just... is possible.</p>
David Talmor	Israel	Q1.1/14	<p>Cooperation among small farmers is particularly effective when there is a focus of activity and an organizing agent. A great example of this is with pest control, and in particular against wide-area challenges such as fruit flies. Biofeed (http://biofeed.co.il) offers a strong, safe (no spraying), easy to use solution to fruit fly infestations that is most effective when utilized across a group of small farmers rather than on individual farms. In India (through farmers' cooperatives) and Africa (through regional authorities), implementing Biofeed is the focus of small farmer cooperative activity, and Biofeed is the organizing agent to define and guide the cooperative activities. With reductions of fruit fly infestation of over 95% such cooperation is financial very beneficial to farmers, and all parties "win" through the highly effective multi-farmer cooperation that a wide-area pest control project entails.</p>
Lily Kisaka	Kenya	Q1.1/14	<p>I would like to share an example of successful dairy farmers cooperative in Kenya called the "Lessoss Dairy Farmers Cooperative". They have survived through all the challenges that have been discussed here and have been running since the 1960's falling and rising a few times. They now have a successful marketing cooperative. The cooperative bulks, cools and sells milk for its member as its primary objective. However as they grew they expanded the services they provide to their members to include extension in proper dairy management, artificial insemination, pasture management. At the milk-bulking center they have also provided an input shop where their members can buy what they need for their farms without having to go to larger town centers that are far away. They have also provided a saving and credit facility at the buying centers where members are encouraged to save and borrow to cover their financial needs.</p> <p>I believe their success can be attributed to the diversity of services they provide to their members, which address member's needs. They have built trust and confidence in their members through good leadership, and provision of information to their members. They have also tried to encourage communication and participation by all members by providing smaller forums of peers for discussions to enable all members give their views freely, and a farmer-to-farmer learning experience that</p>

Participant	Country	Aggregate	Comment
			fosters improved communication as well. They also invite facilitators to train their members in technical as well as soft skills covering issues of governance, communication and group dynamics.
Richard Yeboah	Nigeria	Q1.1/14	<p>This is a reply to the question from Teresa Pinto Correia <mtpc@uevora.pt> (Portugal), who said: I would like to raise a question related to this topic. In Southern European countries there are soft skills required for a fruitful collaboration among small farmers, which is an issue. Small farmers, as many other groups in society, do not have the soft skills which are needed for cooperation to be established with a larger group, in the long run. Is this an issue in other countries and how is the issue tackled, to enhance the cooperation skills?</p> <p>To which Richard replied:</p> <p>Lack of soft skills is an issue in cooperatives in Ghana as a whole and the SALSA reference region in particular. The attempts at cooperation are all facilitated by people outside the SALSA reference region. They try to build the capacity of the farmers to manage the cooperatives but in many cases illiteracy is high and the few literates try to hijack the whole cooperative. This brings about mistrust and soon they disintegrate. Leadership of the cooperative is not a paid job in most cases in Ghana. As a result, it is difficult to get a volunteer to devote time to lead the cooperative to success. There is a Department of Cooperative in Ghana. In the past the staff were giving training both home and abroad to facilitate and assist registered cooperatives to survive. The department is now neglected and about to collapse hence the source of soft skills is almost dead. Most of the officers left in the department are very old and out of touch with the current realities. In fact, cooperatives scholars are now scarce.</p> <p>To the input from Mahesh Chander <drmahesh.chander@gmail.com> (India), who asked: Are there any connections the participants see, of youth with small scale farming sustainability?</p> <p>To which Richard replied:</p> <p>Most farmers in Ghana are very old and the youth are not interested in farming. There is the fear that if nothing is done soon we may have to increase our food imports. As a result, 'Youth in Agriculture and Agribusiness' programmes are rolled out to encourage and entice the youth into agriculture. This is gaining some results. If it is sustained there could be some sustainability.</p>
Yoanna Ivanova	Bulgaria	Q1.1/15	The process of co-operation of small farms in Bulgaria is extremely difficult, despite the EU's financial support, as the totalitarian regime still connects the cooperatives with the violent withdrawal of their lands after the 2nd world war.
Boyko Doychinov	Bulgaria	Q1.1/15	<p>90% of the farms in Bulgaria are small farms. By 1990, there was a state coercive co-operation in Bulgaria, which led to a lack of economic initiative.</p> <p>In recent years, there have been difficulties in co-operating between small producers since the country's changes.</p>

Participant	Country	Aggregate	Comment
Florence Egal	France/Italy	Q1.1/15	I think there has been limited reference to the increasing role of, and opportunities for, small farmers in "social and solidarity economies" (Brazil, Bolivia, Cuba, Ecuador, India, Philippines...), including Community Supported Agriculture. This should be an important dimension of the way forward.
Manuela Bucciarelli	Italy	Q1.1/15	<p>This is a follow-up of earlier input from Teresa Pinto Correia <mtpc@uevora.pt> (Portugal) and Richard W.N. Yeboah <narteyrwn@hotmail.com> (Nigeria) on the need of soft skills for farmers' cooperation</p> <p>To which Manuela adds:</p> <p>Regarding soft skills development, under the CDAIS project (Capacity Development for Agricultural Innovation Systems), value chain actors in small "innovation niches/ partnerships" are assisted and their soft capacities strengthened through participatory capacity needs assessments and coaching by a pool of national facilitators. Through capacity development action plans, called coaching plans, their requirements in terms of capacity development (including collaboration skills) and specific interventions are identified. The project helps the innovation niches by linking them with local service providers of capacity development. For example, in Bangladesh the project is helping the innovation partnerships with study tours to visit other farmers groups in neighboring countries to learn new techniques and to establish potential links.</p> <p>In Angola the project linked the niche stakeholders with an external organization to provide training modules on collaboration/capacity to collaborate as the niche actors identified this as major capacity gap. The project aims at institutionalizing this approach through the direct involvement of national facilitators (who are national institutions' employees) and through the strengthening of innovation coordination mechanisms at national level. For more info, contact: tropagplatform@fao.org</p>
Sami Elhag	Sudan	Q1.1/15	<p>Gedaref State, Sudan, started with farmers' cooperative associations, over the three past years a new law was enacted. We are working with a project called "Sudan Food Security Program", through this project we established 80 grass-root farmers' association (each association has 20-25 members), and 7 high level farmers organization (which are networks, each has 11 grass-root associations).</p> <p>Before the new law, there had been over 1,000 almost nonfunctioning cooperative associations.</p>

Q 1.2 - Could you provide specific examples of the advantages and/or disadvantages of cooperation among small farms?

Participant	Country	Aggregate	Comment
Ghulam Qadir Arbab	Pakistan	Q1.2/1	I am against a formal system of cooperatives that normally works in the form of cooperatives. This has failed due to several factors. Top of all is that small farmers have little surplus to sell collectively. Moreover, small farmers strive hard to survive, so they have no time for other activities.

Participant	Country	Aggregate	Comment
Ghulam Qadir Arbab	Pakistan	Q1.2/3	<p>I am against a cooperative system, based on its past performance in my country, but looking at things positively and assuming that things will perform as anticipated, then there are so many advantages of cooperation specially among small farms: In an ideal situation 1. Small farm owners are free from taking inputs on credit and they have enough saving to purchase quality product on cash. 2. Small farmers have better cropping skills to maximize their yield cost efficiently. Resultantly they have more production to sell 3. Cooperatives of small farms intervene in all cropping activities by resolving and sharing scarce irrigation water and other inputs that are purchased on collective and need basis 4. The cooperative will now negotiate price of the crop and will sell on fair price 5. Cooperative will also guide members to cultivate crops based on market research and price trends 6. This all need commitment of small farm owners and corruption free market and governance system that I don't see happening</p>
Bosede Oboh	Nigeria	Q1.2/2	<p>Formal system of cooperative do not work in certain parts of western Nigeria.</p> <p>Agrarian communities in Ogun State, where lots of their farmers are migrants from the middle belt, (we) experience (a) non-cooperation in their communal farming.</p> <p>Often times, a cluster of 10-12 farmers come together to assist each other in the manual labour at the onset of rains. in many instances, these activities end up with some farmers losing out in cultivation at the earliest time; especially those ones at the lower and of the scheduled list.</p> <p>Also many a times, conflicts arise in the quality of food that a particular farmer serves (to) his fellows assisting him in his farmland. Or sometimes the quality of service rendered by a certain individual in the cluster may not be pleasing to the farm owner, therefore, he seeks a way to retaliate when it gets to the turn of his "offender" to get his farm worked upon.</p> <p>Sometimes also, some farmers fail to show up in their cluster group member's farm land as soon as their own lands has been worked on the ground of flimsy excuses without any effort to getting someone to stand in for them, or they coming at their own convenient time to do their own portion.</p>
Maureen Duru	Belgium	Q1.2/2	<p>Cooperatives as a collection of different farmers with equal rights and say, in all matters affecting the cooperative, can work.</p> <p>However, in some developing countries cooperatives are established by individuals as a business model for their personal aims.</p> <p>Where a person (or persons) set up an entity and then invite (or compel) others to join, without allowing them equal acces to decision making process that will not work.</p>

Participant	Country	Aggregate	Comment
Lizzy Igbin Niwaafa	Nigeria	Q1.2/2	<p>Advantages of cooperatives between small-scale farmers, is basically "the numbers" as there is strength in numbers and possibility of having a common ground to make their case known and their voice heard.</p> <p>Advantages of Non State formed Cooperatives, is the ability to use the right persons and the capacity to innovate and freedom in decision taking. Also there could be opportunities to share experiences, Knowledge and expertise. This could lead to proper mentoring and development.</p> <p>Advantages of State formed cooperative is being able to use the state as an enabler to jump start or have easy access to the State funds.</p> <p>Disadvantages of State Formed Cooperatives: It is often not suitable and not durable (ed: sustainable). There are always square pegs in round holes and oftentimes they are formed to achieve the governments political agenda. From all indications, they do not outlive the masters' tenor or objective, and they are tools in the hands of "the masters for mischief" which are never focused on production, objectivity and goal delivery.</p> <p>From this submission I am making a case against state owned or supported cooperatives</p>
Dilip Kumar	India	Q1.2/2	<p>Formal associations like cooperatives are either non-functional or hijacked by local strongholds.</p> <p>Highly advantages (of cooperation) for small farmers / farming households: Purchase of machineries are beyond the capacity of small farmers and also uneconomical for small holdings. Under the situation when someone is able to manage (to get) credit they are able to use it economically when they provide services to neighbouring farmers in (a) hiring basis. Similarly facilities like tube wells are also used for irrigating the farms from other farmers who are unable to install (these). Many farmers keep limited number of draught animals in such case when they have single one, they cooperate with others to pair and use for tilling lands and also (for) transport.</p> <p>Disadvantage is not an issue under cooperation, except for (the) annoying (fact that) some bigger farmers (can have) their interest and ego affected.</p>
Sergiu Didicescu	Romania	Q1.2/2	<p>Co-operation projects reach private business goals but they also serve different public objectives like the improvement of local infrastructure, the provision of jobs and the enhancement of local purchasing power. It offers local peasants the opportunity to sell their products and to continue farming which may lead to a reduction of fallow land and therefore increased the attractiveness of the region for the residents and tourists.</p>

Participant	Country	Aggregate	Comment
			Most of the farmers perceive co-operation from the perspective of the producer but not as a stimulus to become more and better involved in the local rural development activities.
Walter Caesar Tumwesigye Owak	Uganda	Q1.2/3	<p>I would like to disagree with Ghulam's view that formal cooperatives are disadvantageous to small farmers with little surplus to sell.</p> <p>In my experience as an extension agent, I have seen firsthand the vulnerability of small farmers with their little surplus, the exploitation they suffer at the hand of traders has compounded their misery and left them in debt because of the absence of cooperatives in Uganda, the kind of poverty they experience today is unseen before especially since before the collapse of the cooperatives.</p> <p>In peak harvest season for example, the price of whole maize grain per kilo is \$0.16, and this rises to about \$0.544. This happens about two months after peak season or thereafter. Now, all this difference goes to the traders and not the farmers because individually they lack capacity to store grain securely for any duration of time, but in a formal cooperative, their combined little resources would afford them capacity to store grain long enough to benefit from these prices. This is a simple example.</p> <p>The biggest challenge with cooperatives remains their management. Corruption of management is a threat to coops, which denies the smallholder farmers of their respective benefits of being members.</p>
Mahesh Chander	India	Q1.2/3	<p>While I agree with the response of Ghulam Qadir Arbab to Q1.2, that cooperatives are mostly failures being too idealistic probably. Yet, I had an opportunity to see last April, the successful agricultural cooperative- HANSALIM (http://eng.hansalim.or.kr/?page_id=13) engaged in organic or eco-friendly agricultural products for consumers' welfare in South Korea. Similarly, Moshav and Kibbutzim in Israel are examples of cooperative farming.</p> <p>Can we learn from the successful cooperative farming models, since it is important for small scale farmers to pool up resources and be strategic in production and marketing? Often traders and retailers are organized into associations and producers have no collective formations, so they miss the opportunity to broker better deal for them. This link (http://mrunal.org/2013/11/land-reforms-cooperative-farming-in-india-features-benefits-limitations.html) gives some idea about cooperative farming in India, which mostly give a bleak scenario.</p> <p>Still, I believe, small farmers have to join hands to face the challenges, may be they have to feel the need for it rather than being thrust upon by the government to form cooperatives!</p>

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Scott E. Justice	Nepal	Q1.2/3	<p>From an agro-mechanization point of view and especially in South Asia cooperative business models for agri-machinery have had big problems. That has not to say that with strong leadership it cannot be managed. But maintenance and inevitable machinery breakage costs along with arguments about responsibility, leads to equipment grave yards. Also members many times ask for discount pricing which may not be sustainable for maintenance and repairs. This lower pricing can also distort local market as non-members ask for below market prices for services that private entrepreneurs will not/cannot provide.</p>
George Madoda	Tanzania	Q1.2/3	<p>There are more districts and wards where cooperation among small farms works it's because they are aware of advantages of them being in organization, cooperatives and Union there examples of KNCU in the Northern Region of Tanzania, Coffee association, cashew nut producers in the southern part of Tanzania... .</p> <p>These cooperatives work hard to improve their system of production and have the ambition to learn on how they can work together in improving their crop production and build a strong organization that help them and represent them to companies and enterprises. Every smallholder farmer understand the essence of being in union and work together. Training and other support such as subsidies on machines and pesticides is negotiated by cooperatives and organization through other government bodies and officials from the Ministry of Agriculture, they are empower with various method farming including seed production, this has attracted them and led them to be much more involved in cooperatives.</p> <p>There are cases where cooperation among small farms does not work due to unawareness of what cooperation is all about and what it can gives to each small holders(benefits) and how they will be involved or how each one will benefit from the cooperation, specific examples is that Eastern regions districts and wards (Kigoma, Kibondo, Ngara among others) they started cooperating but they were discouraged instead of being encouraged, government did not have much resources to support their cooperatives and leaders were not able to mobilize farmers to invest in their own cooperatives, so these cooperatives were introduced and later closed to date they are not operational. It's noted that leaders had little knowledge to run them and government funding to empower them was limited for those areas.</p> <p>There are much advantages when small farms cooperate, in the northern and southern Tanzania the cooperation is meaningful and organization speak on their behalf when they need subsidies from the government and in case there are issues that need government support the organization or head of the organization negotiate with government and markets on behalf of farm holders. India buys cashew nuts from Tanzania, it's not that each farmer introduces it to the Indian company rather the government and the organization does it on behalf of farmers.</p> <p>Farmers in the eastern part of Tanzania (Kigoma, Kibondo, Ngara, etc.) find the cooperation disadvantageous because leaders abused the power they were entrusted with, leaders of the existed cooperatives were not working as required,</p>

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			<p>they were not helping farmers when facing challenges and were not close to the government to seek for help when needed, they were not helping the organization grow, they were not providing any help rather expected farmers to support themselves while they were not capable to do so because of limited resources among them, farmers had to find it difficult to trust into organization and cooperatives and therefore closed and decided to be independent.</p> <p>We can draw more specific examples in the northern part (of Tanzania) where they had put more efforts to make sure their organization grew and farmers benefit from them. We have among them "KCU" in Kilimanjaro and cooperatives of small producers of coffee and farmers organization in Arusha, cashew nut producers in Mtwara among others, to date they work including Pwani Regions and they still work and they are enjoying all the advantage of cooperatives or being in organization.</p> <p>In the other places they failed to start up their cooperatives, or are still continuing to organize farmers into cooperatives.</p>
ngarambe scovia	Rwanda	Q1.2/4	In Rwanda, cooperatives for small farmers have been a good solution (to determine the) market price: farmers used to sell for example bananas (cheaply) while small farmers where discouraged by the price on the local market. But now where they were able to cooperate and fix the price, more suitable for small farmers, as (these) cooperatives for small farmers, are (collectively) a big supplier on local market.
Adado Abalo	Togo	Q1.2/4	<p>Advantages:</p> <ul style="list-style-type: none"> - They become important for input dealers who can have big quantities of order from them - It is easy for them to mobilize development interveners, who think on the number of actors to be strengthened in the same time, and agree to collaborate with them - Their number give them the capacity to succeed in negotiation with poultry farmers and traders when they have to negotiate prices. It is the same with input dealers or banks for interest of credit - The group is a guarantee for the bank in analyzing conditions of security of credit <p>Disadvantages:</p> <ul style="list-style-type: none"> - It is not easy for the group to take strategic decision quickly. They have to convince each of the group leaders and sometimes, it can take long time to do it. This is not good for business. - Incapacity of payment from some localities can become a problem for the other members of the cooperative. It happened with banks, which refused to renew credit for the maize producers, who even reimbursed at time, when some of their pairs were unable to pay at time their credit.
Diana Naikoba	Uganda/Germany	Q1.2/4	Cooperating and working in groups would be a solution to some of the challenges faced by smallholder farmers. The groups formed can be a source of capital which comes in handy for solving challenges faced by the farming community. The group members can support one another: Aiding one another with soft loans, can purchase inputs which they can

Participant	Country	Aggregate	Comment
			<p>share hence reducing production costs and can share knowledge amongst themselves thus improving their production potential. Being in groups can be one-way of reducing production costs if farm implements and inputs are purchased and communally utilised. The farmers, if they cooperated and sold their produce to the markets directly instead of selling through middlemen who exploit them, would gain higher profit margins. It would thus reduce the transaction costs incurred by the individual farmers.</p> <p>On the other hand, smallholder farmers are very many and bringing them together to cooperate would take a lot of time. In addition, issues arise when they are meant to collect funds to solve emerging problem. The temptation to free ride in collective action is high. This discourages the enthusiastic group members.</p>
Vivian CdV	Italy	Q1.2/5	<p>Advantages: [of cooperation]</p> <p>For our leading product we looked for a national food certification for an old plant, whose recipe was more than 100 years old. We also secured certification for some typical products such as the honey or fruit jams... The collaboration gave us strength and bound us.</p> <p>Because we had an (official) association (cooperative/collaborative), the institutions such as the Province or the Region, financed a processing plant for the transformation/processing of our products.</p> <p>At the beginning collaboration in these plants, was difficult. Some did not want to work together, but with certain rules, they did: We established two shifts: a day shift and a night shift one 18.00 to midnight.</p> <p>Advantages became obvious: it was much easier to organise the harvest. While not having any individual cop stock or bottles sharing might be confusing, slowly groups formed and stuck together. We became experts in these flower products, together</p> <p>Disadvantages/challenges:</p> <ul style="list-style-type: none"> - We have high transportation fees to get to the markets. - While working together, on the same product, in the end, we are still compete with each other - On a market, we have to be only one farm with these products, because otherwise the benefits are divided by two or more. - When 7 of us pulled together into one "association" (cooperative/collaborative), this association had to pay common taxes. How to divide these amongst members? - Forming a formal organisation, meant we had to hire a business consultant/accountant - how should we divide the cost for that? - How do you elect your governing structure (e.g. who presides your association)?

Participant	Country	Aggregate	Comment
Sandra Šūmane	Latvia	Q1.2/5	<p>In Latvia, few small farmers are involved in cooperatives or other formal collective organisations. When this is the case, farmers witness that participation in cooperatives improve their production capacity (through collaborative learning of good practices, shared equipment, access to inputs) and their market access by providing joint infrastructure (for instance, fruit storage facilities are crucial to postpone and prolong selling period), joint contracts with bigger retailers, and relevant market information (for instance, on consumers' preferences). Apart from market-related advantages, collective organisations are also important for farmers' social networking, meeting fellows and mutual moral support.</p> <p>Definitely, in response to the question "Can formal cooperatives work?" the answer is yes in Latvia. However, it has to be mentioned that there are no small farmers' cooperatives in Latvia – existing cooperatives join farmers of various sizes; and this may be one of the success factors (as mentioned by other contributors, small farmers have little and irregular surplus to sell which makes organisation of constant supplies more challenging). In addition, there are no state-run/-initiated cooperatives in Latvia, but there is state support to recognized (those fulfilling certain criteria) agricultural cooperatives. Professional leadership and loyal members are another crucial elements of cooperatives' success.</p> <p>Contrary to poor engagement in formal cooperation, informal cooperation is widespread among Latvian small farmers, similarly like presented here by the evidences from other countries. Small farmers exchange agricultural products, resources, services, labour. This informal cooperation serves for reducing monetary costs for needed services, inputs, food. But it has developed and farmers perceive it as a matter-of-course, indispensable part of their neighbourhood relations based on approachability, responsiveness and reciprocity. „We all are neighbours here, we have to live together,” as one of small farmer states. This informal cooperation is embedded in and regenerates their local social relations. A particular form of informal economic cooperation among small farms is a barter. Around half of the interviewed Latvian small farmers in SALSA project were involved in non-monetary barter activities with neighbouring farmers and businesses. Examples of such barter involve leasing farmland to a neighbouring farmer who helps in turn with machinery to cultivate and harvest the farmer's fields; receiving neighbour's help and machinery when time comes to bale the grass, and paying back with sheep meat or vegetables.</p>
Julien de Meyer	Mauritius	Q1.2/6	<p>During my time in FAO, the Research and Extension team participated in the EU funded SOLINSA project and we wrote a case study on agriculture innovation about the production system in South Tyrol (http://www.fao.org/3/a-i3789e.pdf). I am presenting some of our finding here in response to some of your questions.</p> <p>At the end of the second world war, the apple-producing farmers in South Tyrol (a region in the north of Italy) were faced with many constraints, among them was a lack of labor, high production cost and lack of access to finance or advisory services. A majority of the orchards in this region is between 0.1 to 1.5 Ha, but some larger ones exist. The farmers decided to re-create a cooperative to support their production system. In the last 50 years, the region has become a world leader in</p>

Participant	Country	Aggregate	Comment
			<p>apple production and has been very resilient to the various economic shocks experienced by the industry. The advantage of the cooperation were various and are well known: Pooling of resources to setup an extension system, creation of cooperative storage area to aggregate production of small farms for better sale, creation of a mechanical pool etc... the list is long and includes all the advantages that are known and that should work in "theory". Some of the participants in this conference have presented experience where formal collaboration did not work in practice... so why not?</p> <p>We found that one of the key factor for success was for the innovation system to be able to evolve with the needs of the farmer, we write that:" The network's development was influenced by formal and informal mechanisms with a strong social learning component. Formal mechanisms can be found at policy, institutional and individual levels. Social learning aspects permeate the system. Learning in South Tyrol is linked to an outside and inside dynamic, both at individual and at collective level. The social capital created in this geographical cluster allows the development of the system by absorbing existing knowledge from others and creating knowledge."</p>
Innocent Azih	Nigeria	Q1.2/7	<p>I wish to add that the value chain programme facilitated by IFAD in Nigeria has also enabled the development of a cooperative system that links farmers to the off-take mechanism using the cooperative scheme. This is currently working as farmers are grouped or those already working together under maize or rice commodity are targeted and their cooperative groups cross-guarantee members for inputs and services provided by the produce offtaker under a contract scheme.</p>
Nasreen Sultana	Bangladesh	Q1.2/8	<p>In 2000, mango farmers of Bholahat upazila (sub-district) of Chapainawabganj district of Bangladesh have established a collaboration platform, named Mango Foundation (MF). The upazila is located at the outskirts of the Chapainawabganj district and it borders with India. Mango is the major cash crop of the area which is located under Barind tract that is highly suitable for mango production.</p> <p>In this area farmers are growing mangoes for generations.</p> <p>Situation before establishment of Mango Foundation:</p> <ol style="list-style-type: none"> 1.The mango growers of the area were poor and could not afford children's school fees; 2. productivity of mango trees was low due to poor technical knowledge of farmers on management of orchard, pests and diseases, and irregular bearing habits of trees; 3. poor marketing infrastructures including road communication; 4. limited access to credit; and 5. poor linkages with research, extension and government offices. <p>In addition, two serious social and administrative problems badly affected mango growers' income:</p> <ol style="list-style-type: none"> 6. Stealing of mango from orchards, and 7. cross border trade from India

Participant	Country	Aggregate	Comment
			<p>To increase income and improve the livelihood of the mango growers of the upazila, the Mango foundation was formed with the leadership of the then Upazila Nirbahi Officer (Upazila Executive Officer) with 387 members. An executive committee (EC) of 31 members including a local police officer was established.</p> <p>After the establishment of the Mango Foundation:</p> <ol style="list-style-type: none"> 1. Mango production increased 2-3 folds; 2. mango export has been initiated from the area; 3. Technical knowledge of farmers on management of orchard and insect pests increased; 4. successfully managed irregular bearing of the orchards; 5. established local market place and sheds for mango traders; 6. complete prevention of stealing and smuggling; 7. established strong linkages with local policy makers, administrators and agriculture, rural development officers and exporters; 8. established a marketplace during mango season; 9. Several temporary sheds are built surrounding the market place and 10. The sheds are being leased to the traders during season. <p>At present, the number of members of the MF has increased to 4004 and members can afford fees for children schooling, health, and daily family expenses with the income from the orchards. They bought 14 bigha (more than 4.5 acres) of land and started to build a multi-story building.</p> <p>Future plans:</p> <ol style="list-style-type: none"> 1. Expansion of local and international market (export); 2. Introduction of safe mango production; 3. Establishment of new orchards; 4. Setting up standard postharvest handling e.g., pack house, improvement of transportation systems; 5. Establishment of mango processing industry; 6. Transformation of the area for agro-tourism for mango lovers and 7. Upward expansion of the building as the residential hotel for the traders and tourists.
Sylvester Ayambila	Ghana	Q1.2/8	<p>The major constraints facing farmers include:</p> <p>- high cost of inputs and difficulty accessing agricultural machinery (for land preparation and harvesting)</p>

Participant	Country	Aggregate	Comment
			<p>- difficulty accessing financial services (credit) and lack of access to markets.</p> <p>These are a result of weak cooperation, or no cooperation, among small farmers. Cooperation will offer farmers stronger bargaining power. The lack of markets for farmers produce is partly due to low quality of produce as farmers do not monitor farm produce quality. Active farmer cooperatives could help solve this issue.</p> <p>The difficulty accessing financial market is partly due to farmers not willing to join cooperative but prefer to sell individually. Cooperatives can guarantee on behalf of farmers and can enforce quality standards. Cost of obtaining inputs and difficulty accessing machinery could reduce if farmers belong to active cooperatives. Collective inputs purchase and marketing will reduce transaction cost.</p>
Richard Yeboah	Ghana	Q1.2/9	<p>I have led a part of a project '1000s+' by IFDC in the formation of Pepper Value chain and Market Oriented Agricultural Project (MOAP) by GTZ (now GIZ).</p> <p>During the period of the project, the groups functioned very effectively and members benefitted from trainings and links to other actors in the value chain resulting in high yields and income. Three years after the project, the groups are no more vibrant because there is no external facilitator to follow them up.</p>

Q 1.3 - Are there any forms of collaboration between small farms that work particularly well? Why? How does the size of the farm affect cooperation?

Participant	Country	Aggregate	Comment
Ghulam Qadir Arbab	Pakistan	Q1.3/2	<p>Pesticides and fertilizers are important inputs that having effect on crop yield. Small farms due to lack of funds cannot purchase these inputs by paying cash.</p> <p>As I said (before), cooperatives are not (the) solution for small farms (especially) in Sindh province. Why, because, there is a corrupt system of cooperative registration process...Even after registration, the small farms are not that much efficient to run collective business due to lack education, willingness and top of all the volume of farm produce (even collective) is not that much that can bring remarkable difference in their earning.</p> <p>Let me give you an example of a project, I have evaluated.</p> <p>One project that worked for coastal belt small farms' livelihood and food security - facilitated by financing all cost of registration of cooperative. Thereafter, the project convinced 10 growers (members of cooperative) to sell their wheat on a collective basis.</p> <p>The average land holding of these farms was around 1 hectare. Most of these farms cultivated wheat and after storing wheat for home consumption, each farm had around 40 kgs surplus wheat to sell. The middleman in that area was purchasing 40 kgs of wheat at Rupees (Rs.) 900 by keeping Rs. 100 his own profit.</p> <p>The project negotiated with a big dealer in a town, who agreed to purchase wheat at Rs. 1000/- if wheat is transported to his mill gate.</p> <p>The project convinced small farm owners (cooperative members) to transport their wheat free of cost. The small farmers were happy to generate additional Rs. 100 and provided wheat to project.</p> <p>But in reality this has no impact on their income as additional Rs. 100 is nothing because on an average daily labour wage is Rs. 300/- so earning extra Rs. 100 in whole year through collective wheat selling don't make any sense.</p> <p>The most important problem faced by small farms is good quality inputs. However, I am against cooperative system (based on ground realities in my area) but suggested collective purchasing of inputs may bring better results to farms. Governments or microfinance banks can intervene through provision of better quality inputs (pesticides and fertilizers)</p>
Raja Rathinam	India	Q1.3/2	<p>Small cooperative/farmers are being helped by big cooperatives. For example "Amul milk cooperative" is a bigger one in this country. Recently UNDP initiated a small cooperative company to help the small farmers in another region, Uttar Pradesh. Now the big cooperative has come forward to help the small one.</p>

Participant	Country	Aggregate	Comment
			This will be helping the small cooperative/farmers to get the inputs for enhancing the productivity of small farmers/small cooperative with the over all benefits of small farmers. It can be tried in other region also.
Sergiu Didicescu	Romania	Q1.3/2	<p>In the EU, the EIP-AGRI Operational Groups funded through the Rural Development Programmes are gaining a lot of ground since they have been introduced in 2014. Intended to bring together multiple actors such as farmers, researchers, advisers, businesses, environmental groups, consumer interest groups or other NGOs, their areas of action can be very broad. Field trials, pilot projects, joint working processes, short supply chain activities, initiatives for climate change adaptation and mitigation, collective environmental projects, and many more activities might be involved. The projects must always contribute to the EIP-AGRI objective of promoting agricultural innovation that is more resource efficient, productive, low emission, climate-friendly, and resilient and that operates in harmony with the essential natural resources on which farming depends.</p> <p>This might range from projects that target the development of new products, practices, processes and technologies to testing and adapting of existing technologies and processes in novel geographical and environmental contexts. An Operational Group is meant to be 'operational' and tackle a certain practical problem or opportunity, a 'need from practice', that may lead to an innovative solution. Therefore, Operational Groups must draw up a plan that describes their specific project and the expected results. Furthermore, the Operational Groups must disseminate the results of their project, through the EIP-AGRI network.</p>
Mayank Jain	India	Q1.3/2	<p>Yeah, while reading about the success stories of such collaborations, I came to know about the one particular case which I think would be relevant here.</p> <p>Bhartiya Agro Industries Foundation (BAIF) inaugurated Agri-Business Centre (ABC) in Praksham and Guntur Districts of Andhra Pradesh (South India). Name of Farmer Producer Organisation: Shri. Laxmi Rythu Vyaparkendram</p> <p>While joining the ABC, there is a one-time membership fee of Rs. 600 for the farmers. Apart from that, each member has to deposit a monthly fee of Rs. 100. These contributions make up the ABC corpus, which is then used to fund its activities, such as collective procurement for inputs, collective marketing, establishing custom hiring centres, savings and internal lending, and some smallscale activities such as collection of neem seed kernels, organization of health camps, sale of mineral mixture, fodder on bunds and vermi-composting, etc. Through collective procurement, a group of selected members visit traders and purchase inputs in bulk, thus saving 10-13% per bag on transportation and ensures the timely availability of the quality inputs as well.</p> <p>Similarly another latest example I can see from Dumraon Farmer Producer Company in Buxar District in Bihar. Here FPO was formed as part of Bihar Agricultural Reform Initiative (DFID is one of the supporters of this program) on 31st March</p>

Participant	Country	Aggregate	Comment
			2017. They are procuring inputs directly from IFFCO (Indian Farmers Fertiliser Cooperative). Though margin has been less (around 2%) but still they have managed some benefits as they play in volumes.
Dilip Kumar	India	Q1.3/2	<p>Though the cooperation among small farmers at village / community level have (gone) down it is still prevalent and contributing to farming.</p> <p>Mutual cooperation is seen in sharing machinery (usually held by better off farmers) such as tube well for irrigation, power tiller or tractor, thrasher, etc. They also share family labour, organic manure / compost, and even seeds and saplings. Neighbours also help in harvesting of pond.</p>
Ellison Musimuko	Zambia	Q1.3/2	In Zambia some small cooperatives mostly lack cooperative governance. Leaders tend to overstay hence members lose trust. There is also conflict between ministerial (ed: I think “governance”) roles.
Dorcas Omole	Nigeria	Q1.3/2	<p>In Nigeria, the majority of farmers are small-scale farmers and they produce on a subsistence level- only for themselves and their family members. They do not care about getting additional inputs/profit from outside sources because they only farm to survive.</p> <p>Hence, if there are additional sources of inputs for their farm, they tend to divert the resources to more 'promising' sources of income for themselves and their family members. There have been cases of such and one would not really blame these farmers.</p>
Walter Caesar Tumwesigye Owak	Uganda	Q1.3/3	Yes, I think these cooperatives would help farmers to acquire high cost inputs like acaricides, at a lower cost, and genuine products. I worked with a livestock farmers' organisation previously as a program officer, because there are many challenges in acquisition and procurement of farm inputs, I negotiated with input suppliers and manufacturers to provide the inputs and at a lower price. The collective bargain is good because you can place large orders at once, which are at more friendly prices to benefit farmers. There is strength in their unity.
Ruben Ruerd	The Netherlands	Q1.3/3	<p>I work as professor and researcher at Wageningen University (the Netherlands) and did my PhD research in the 1990s on the economic performance of cooperatives in Honduras.</p> <p>At that time, many agricultural coops were suffering losses and internally divided by political pressure. Recently, I had the pleasure to visit Again the same cooperatives. Much to my surprise, they were doing very well. Especially because they learned about sound entrepreneurial business management practices.</p> <p>Cooperatives are important in agriculture to speed up innovation amongst smallholder farmers and to enable economies of scale and scope. They need some internal heterogeneity and should maintain strict political independence.</p>

Participant	Country	Aggregate	Comment
George Madoda	Tanzania	Q1.3/3	<p>All small holder farmers do not possess same capacity to handle their challenges and carry their farming system properly some may depend on help from one season to another depending on the climate in the area, quality of soil and techniques.</p> <p>There are different forms of collaboration between small farms that work but depending with the area, we can observe Tanzania, it has a variance of climate in different part of districts, villages and regions so here am going to show form of collaboration that can work well between small farms in the eastern part on Tanzania where cooperatives closed and reason why the form should work.</p> <p>We should understand that the eastern part of Tanzania is bordering four countries and there are some of immigrants that comes over and become farmers, their capacity to talk and discuss about cooperation might fail since some do not want to be included in the formation because of their status on immigration, it's important to note this, some may play a key role to discourage this formation but still those that are national can still decides to form and leave the rest behind.</p> <p>The leader of the village or ward chairman is well placed to know the soil distribution and ownership for each farmer and farm, he/she is well placed to mobilize farmers for this collaboration and let them work together as cooperative, since he is the chairman or village leaders it's much more easy to negotiate with government officials on the demand of cooperatives from subsidies to loan on faming materials or machines and capacity building. From this point the collaboration that is being introduced by ward chairmen, village leader can work well with a reason that the leader is close and is working with the government and the government can listen to him and act immediately.</p> <p>Now the formation of the cooperatives should also consider the size of farms because some hold small sizes other hold medium size and others large size so when it comes to benefits this must be treated according to the size of the farm and benefit should be divided unequally if this cannot be discussed during the formation of the cooperatives then there can be issues that might dissolve the organization or cooperatives. In this case the size of the firm will not affect cooperation, each one will be a member of the organization or cooperatives keeping in mind that when it come to a case of distribution of subsidies each one will get accordingly and based on the size of his firm.</p>
E.M. Muralidharan	India	Q1.3/3	<p>Are there examples of collaboration between small farms that work well? Indeed, there are many and enough to show that it is a model that should be encouraged. In India, as already indicated in an earlier message (Q1.3/2 Raja Rathinam 21 March), the very successful example of the dairy cooperative movement in the state of Gujarat set the stage for similar cooperatives in the dairy sector in other parts of the country, with each promoting a brand name that became a force to reckon with. This was followed by similar ventures in oilseeds, vegetables and plantation produce.</p>

Participant	Country	Aggregate	Comment
			<p>Why does it work better? I think it is because of assured incomes, "ease of doing business", availability of technical support, financing and the absence of exploitation by middlemen.</p> <p>As with milk production, the majority of participants in these ventures are very small farms and households. The size, therefore, does not matter in the least, I think. The profits and "ease of business" should encourage many of the farmers to extend the size of the farms and to make further investments which they otherwise would not have considered, since it was mainly a subsistence activity earlier.</p> <p>The idea of agricultural cooperatives has clearly caught the imagination of farmers and policymakers all across India. While I am unaware of the weaknesses in the system if any, it appears that cooperative farming definitely solves many of the vexing problems faced by the small impoverished farmer.</p>
Adado Abalo	Togo	Q1.3/4	In the case of our project, we think that cooperatives are good, because this form of cooperation is good for business collaboration between people. Also, it is in accordance with the public regulation in terms of doing business, and the size of their farm has no impact on this form of cooperation.
Shantanu Abe	Germany/India	Q1.3/4	<p>Forms of collaboration:</p> <ol style="list-style-type: none"> 1. Rotating savings and credit association(Chit funds): Farmers pool their money into a common fund in order to allow people to save and have a shared source of money from which to lend out money to members. 2. A member may run away with all the money, destroying the group morale. 3. Watershed-level land management: A group of farmers pool their land, and convert the highest plot of land into a pond in order to irrigate the rest of the fields in the dry season. The land is compensated for by rotating cultivation land within the group. This requires a high level of mutual trust, and may be difficult to apply everywhere. 4. Marketing and sharing of profits: The farmers usually sell their own products themselves at the local market, but they also identify a representative from among themselves who collects all the produce and then sells the produce in the city. All profits are shared proportionally, or it is put into a shared account. 5. Seed Banks: The seed-bank 'lends out' seeds in exchange for the return of an equal amount of seeds from the harvest. It also acts as a repository of farmers' knowledge on cultivation methods, uses, and other location-specific information. 6. Input production: Making vermicompost and organizing workshops for making it, making mushroom straw substrates,

Participant	Country	Aggregate	Comment
			<p>slurry from biogas plants, open-pollinated seeds, sharing know-how of bio-pesticides,</p> <p>7. Common Property Resource Management: Roadside, Irrigation side, canal side, and riverside tree plantations. Planting an average of 12 varieties of agro-ecologically suitable trees, the community-led management of these resources allows for a long-term investment in a shared resource that can be felled after 25 years in order to realise a return, but also provides various ecosystem services during this time.</p>
Vivian CdV	Italy	Q1.3/5	<p>"The best way to work together is independence".</p> <p>Key success factors:</p> <ol style="list-style-type: none"> 1) Cooperatives have to become "a legal entity" e.g. paying VAT taxes and properly registered. This way, the cooperative becomes an actual entity. 2) No debts between members 3) The size of the land (from each individual farmer) is not important. It does not affect "their vote".
Julien de Meyer	Mauritius	Q1.3/6	<p>In reference to the EU funded SOLINSA project (case study on agriculture innovation about the production system in South Tyrol (http://www.fao.org/3/a-i3789e.pdf).</p> <p>If we consider this [<i>innovation system is able to evolve with the needs of the farmer - social capital created allows the development of the system by absorbing existing knowledge from others and creating knowledge</i>] as a key advantage for cooperation among small farm, so one of the response to 1.3 "Are there any forms of collaboration between small farms that work particularly well? Why? How does the size of the farm affect cooperation?". Would be that any form of collaboration between small farms will need to include trust and social learning aspect to work well.</p> <p>We can as well infer other factors of success by looking at past contributions: E.S. Nijeassa (Q1.1/1) writes that: Small farm cooperation experience over the years has been carried out through family relationships or friendships between two or more households. Viviane Crosa (Q1.1/5) explains how her innovation system was born and has evolved and Hadji Ousmane Ka (Q1.2/1) explains that cooperatives should not be setup by government, however they should be facilitated. In our example in South Tyrol, the system has started based on good relationships among a small group of farmers, was not set up by the government and kept evolving as all farmers participating could benefit immediately and see long-term advantages to the collaboration.</p> <p>On the other hand, Solomon Elorm Allavi (Q1.1/1) notes that cooperative that sprung up in Ghana are weak, and Mayank Jayan (Q1.1/3) explains that sadly cooperative model failed in India or let's say it did not get much gestation period it was required. Sergiu Didiscu (Q1.1/3) as well explains in Eastern Europe many farmers reject cooperation, due to a lack of true</p>

Participant	Country	Aggregate	Comment
			<p>cooperative tradition and negative experiences with forced cooperation during socialism. Maureen Duru (Q1.2/2) as well explains that where a person (or persons) set up an entity and then invite (or compel) others to join, without allowing them equal access to decision making process that will not work. Our findings demonstrate that in South Tyrol the collaboration between small farmers worked well. The system was not funded by outsiders, it was created by the farmers themselves who then looked for external financial and technical support. The governance of the system is important for its success as well. In South Tyrol, each farmer has one vote in the cooperative independent of the size of its farm (equal access). Finally, the innovation system we studied has decades of experience and so had a good gestation and growing period, and it was developed in a society that was used and accepted cooperatives.</p> <p>So, our paper findings disagree with Ghulam Qadir Arbab, a cooperative system can be an excellent collaboration system and works very well in some parts of the world. The size of the farm did not affect cooperation, as small farmers (0.1 ha) and relatively larger farmer (over 5 ha) all had the same voice in the collaborative structure. Finally, innovation system needs to be inclusive, in South Tyrol the system started with small farmers, but could only become the success it is today, when it brought in all actors in innovation, education, research, academia, industry, transport etc... These various actors had different importance at various time in the life of the AIS, however they always stayed engaged and always had a space to voice their opinions or concerns.</p>
Maresh Chander	India	Q1.3/7	<p>Towards the end of this conference, I present the possible scenarios for India,</p> <ol style="list-style-type: none"> 1. Will small farms disappear?: replacing small holdings by big farms on leased lands and managed by corporates for efficient farming practices, economies of scale, quality, market linkage, input management and making small farmers laborers in their own farms! This may mean more specialized & mechanized operations concentrated on a few commodities having comparative advantage. Horizontal cooperation among small-scale farmers replaced by vertical cooperation with increasing mechanization, globalization, international trade including for certified organic products. 2. Small farmers joining hands forming Farmer producer organizations/Companies for which policy support is now available. Unlike cooperatives promoted by government earlier, farmers may realize themselves that there are benefits in forming the collectives for buying inputs and better marketing of farm processed products. 3. Farmer vs Agripreneurs: Small-scale farmers will be compelled to take up farming as business to sustain. The agripreneurship would mean farmers taking up the role of traders, processors and retailers, including business services, such as agro-dealers, production services, equipment services, market information services, financial service providers that support the value chain.

Participant	Country	Aggregate	Comment
			<p>4. The smallholder farming landscape is rapidly changing owing to several mega trends creating both challenges and opportunities for rural communities in their efforts to commercialize. Successful rural actors will need to take on new skills, partnerships and technologies to diversify their on and off-farm activities to thrive.</p> <p>5. Within this rapidly changing environment, farmers and their rural advisory service providers must learn new skills and find new ways of working together to develop types of “inclusive business models” that help link diverse farmers and entrepreneurs to growth markets. One of the solutions to help with rural commercialization is to support the growing numbers of agripreneurs, who could play a catalytic role in generating new income streams and jobs. Politicians, practitioners as well as scientists have recognized that farmers, processors and local service providers increasingly require agripreneurship support, besides sound management and craftsmanship, to be sustainable in the future.</p>
Richard Yeboah	Ghana	Q1.3/8	<p>As mentioned by Elorm (in a previous input), the Cocoa Abrabopa, is a strong farmer-led Cooperation (Business). Their success is mainly because cocoa is an export crop and gets all kinds of support from both government and NGOs.</p> <p>There is also an apex body (National) -the Peasant Farmers Association - which has survived but its main function is advocacy.</p>
Kayode Oladeinde	Nigeria	Q1.3/9	<p>In Nigeria there are several forms of farm cooperation, cooperatives societies and farmers associations, and another larger cooperation is Farm Clusters which are usually more crop specific and may involve farm holdings from either a farm cooperative or association with a geographical area or landmark. These groups are unique in their characteristics. Membership of any of these groups helps farmers contributes to the resilience of their food systems. However these resilience depends on whether the cooperatives or farmers associations meets its target goals as In many cases Farmers join these group to access institutional support and financing.</p> <p>In Ogun, the Value Chain Development Programme (VCDP) funded by IFAD and the Federal Government of Nigeria encouraged farm associations to be in clusters of at least 100 farms per cluster, after which these clusters are linked with offtakers to buy off the farm produce from these cluster according to the Memorandum of Understanding (MOU) agreements they already have. These cooperations helps cassava and rice farmers access improves varieties, institutional and private extension services, market access, infrastructural upgrades, access to farm machinery if accessible and financing. In effect 40 cassava clusters with 687 members who cultivated 970ha of cassava were linked with 4 cassava offtakers, while 15 Rice Clusters with 242 members who planted 365ha of FARO 44 and OFADA upland rice Variety were linked with 3 Ofada Rice Offtakers. The terms in the MOU is usually farm size specific as individual farm holdings is usually not less than 1ha.</p>

Participant	Country	Aggregate	Comment
Yoanna Ivanova	Bulgaria	Q1.3/10	I believe that the form of cooperation between small farmers that works well in Bulgaria at the moment is related to their cooperation for direct deliveries to end-users - first point of sale, farm markets, direct deliveries
Boyko Doychinov	Bulgaria	Q1.3/10	Since 2007 the positive form of cooperation between small farmers has been the "LAGs" and "FLAGs" which are supported by the EU. Our organization is a member of regional LAG and FLAG and, thanks to our efforts, a number of small farmers in the region have become members of the cooperatives and show good economic results afterwards.
Sami Elhag	Sudan	Q1.3/10	There were no clear collaboration between small farms, considering associations under the Cooperative Law (an old law). But after structuring farmers' association under the new law every 11 grass-root associations are linked together, and now preparing themselves to buy and sell collectively.

Q 1.4 - In what way does gender influence cooperation among small farms? Please share experiences from your region

Participant	Country	Aggregate	Comment
Sergiu Didicescu	Romania	Q1.4/1	The necessity of gender equality in agriculture has been identified as a relevant political issue and incorporated into strategic documents and programmes of the EU. However, little is known of the impact to the everyday life of farm women.
Arbab Qadir	Pakistan	Q1.4/2	<p>Women are actively involved in agriculture and they have extended role in small farms as they work with their family's male members.</p> <p>But unfortunately they are not given rights to be part of any form of cooperation. However, they can play more effective role as compared to men.</p> <p>Two examples of small farms projects:</p> <p>I have evaluated one women economic empowerment project wherein rural agrarian women have played great role by learning sewing skills and started sending kids for education and also started having comparatively better food. Women are more organized in fruitful utilization of money as compared to men</p> <p>In another project I have studied role of women in water rights and found that there is no role given to them. The project after making local village organizations started involving women to struggle for their water rights and play peace-building role.</p> <p>As I said earlier, women are better organized and determined, hence, project started generating results and now community welcome women as member of village Water committees.</p> <p>Conclusion: I strongly suggest that all development projects may focus more on involving women in any form of cooperation whether it is formal or informal.</p>
Mayank Jain	India	Q1.4/2	<p>I think I have few observations from the field on this question:</p> <p>a. As I previously mentioned in my input to question 1.1: Where women farmers are running the show, I have seen more harmony and cooperation in the farm work. I have closely observed it in one of my field areas. Barter system for labor and informal cooperation is very effective this way.</p> <p>b. Also, inclusiveness of women apart from being an 'invisible labor' on field and acknowledging her position in the house also makes the difference. This has given helping hand to farmers as well as women are assumed to be finance managers at home. I have seen accounting and financial literacy at better level where both halves are involved. So it leads to better</p>

Participant	Country	Aggregate	Comment
			<p>cohesion at family farm level too</p> <p>c. Even on facilitating trainings and upskilling the farmers, I have found it much easier to train women farmers (where their position and role as farmer is acknowledged). They are more confident and training sessions are more engaging.</p> <p>d. Knowledge dissemination is also improved as peer-to-peer learning is better facilitated. Our working model is somewhat inspired from Women Extension Volunteer system in Ghana. My article on the same is accessible here: https://www.linkedin.com/pulse/agriculture-extension-peer-to-peer-learning-reaching-women-jain</p> <p>Adaptation rate to extension services get enhanced when there is peer-learning involved. Farmers are more likely to adopt a new intervention if the (program) officer helps in its introduction to farmers. The increased rate of adoption is possibly due to the high trust relationship that women officers have with other farmers, the fact that they themselves have adopted the interventions and their ability to communicate the information necessary for adoption in a way that is relevant to their peers. This aspect of (program) officers being peers is particularly important for female farmers. When implemented in a holistic way, peer-to-peer learning and officer can provide female farmers with much needed technology and information to implement improved agricultural practices, while spreading the benefits to a wider group of people.</p>
George Madoda	Tanzania	Q1.4/2	<p>Among the cooperatives that have existed (here), there are none that did not include gender participation.</p> <p>Those cooperatives that exists in northern, southern and western Tanzania gender was almost to be balanced. The reason why I am saying this is that there are tribes in all those parts that consider women to be part of those that should work hard to find food for the family, so farms have quite a number of women while men sometimes are less than women.</p> <p>Farmers understand the efforts that women (provide) to feed their families. Women in these regions that have succeeded to organize (themselves) into cooperatives, received knowledge on how cooperatives and organization operates and their advantages after that they decided to form cooperatives which has not become useful and is helpful to them.</p> <p>For this case of "in what way that gender influence cooperation among small farmers or farmers", we first realize that women are so much involved in finding food to feed their family and they are hard working in farms, for example in the northern, southern and western regions (in Tanzania), we have balanced male/female and gender has influenced cooperation among small farms.</p> <p>Gender can encourage and can discourage the influence of cooperation if all are discouraged of the protocols for the cooperation, cooperatives and organization. Both men and women can always discuss and share about the advantage and</p>

Participant	Country	Aggregate	Comment
			disadvantages (of some things), while they both decide whether to influence the cooperation among them as small holder farmers or not
Loupa Pius	Uganda	Q1.4/2	<p>Gender sensitivity in agropastoral, pastoral and agricultural ecologies of Karamoja is influencing in the whole local production chain of the rural people.</p> <p>I work with farmer groups and pastoralist on conservation agriculture and also on pasture seed multiplication with pastoralists.</p> <p>The gender roles in pastoral society of Karamoja are placed in a way that women, girls and boys are to do milking, boys herd and graze the animals, the women and young boys and girls make sales of milk. Women also participate in poultry sales and small ruminants like goats</p> <p>The men make decision on sales of cattle and women make decision on sales of goats, sheep etc.</p> <p>On crop farming men participate in land preparation, equally as women do the planting and general garden management. Harvest and sales also managed by women.</p>
E.S. Njieassam	Cameroon	Q1.4/2	<p>Women are very patient and work long hours. Most of the farm activities requires the different genders and in the case of my village community in manyu-upper bayang sub division (Cameroon), the role of gender in cooperation is possible in different domains. The women play a vital role along the value chain. In cocoa production farm, men do the clearing and slashing, while women are engaged in breaking and sorting cocoa from the pods. Most times when sun drying, women are left home to always spread and turn the cocoa seeds for sun to reach on them. During sales, the man and head of family is the one that measures and sells the cash crop for money. In livestock animal systems here, women do most of the job, they used waste corn and agricultural products to feed the chicks, since they are patient and always available at home, they clean the pen and provide water and on market days women and kids carry the chickens to the market for sale and after sales. As the head of household, the man is handed the money.</p>
Chimwemwe R. Mwage	Malawi	Q1.4/2	<p>A lot has been said about women's involvement in trading activities in Malawi and beyond. Statistics do show that women play a vital role in the economy of any country, but their opportunities are limited by a wide range of barriers. Africa Human Development Report from UNDP, 2016 highlights that economic and social discrimination against women is costing Africa USD 105 billion a year or 6% of the continents gross domestic product.</p> <p>Furthermore, it should be noted that women produce roughly 50% of global food products and they do comprise, on average 43% of the agricultural labor force in developing countries according to FAO, 2011. When it comes to wages,</p>

Participant	Country	Aggregate	Comment
			women earn on average only 60-75% of their male counterpart's wages. A report from the ITC, 2017 shows that only 15% of exporting firms are led by women and that close to 43% of SMEs worldwide are women-owned.
Adado Abalo	Togo	Q1.4/3	We noticed also that (in our project) the group on which we had female leaders worked better than the other. There were less conflicts in this kind of groups.
Diana Naikoba	Uganda/Germany	Q1.4/3	In patriarchal societies the land belongs to the men hence much as the women till the land and do almost all the farm labour, they do not have rights overharvests in some cases. For people to make decisions such as joining producer groups, they need to have some level of ownership over the main resources such as land and financial capital. The lack of ownership over these resources among women hinders their ability to join such ventures.
Scott E. Justice	Nepal	Q1.4/3	In Nepal and elsewhere in South Asia, it is the women who initiate and participate in the tradition of arrangements for shared labor especially in the labor bottlenecks of rice transplanting but also in harvesting of the major field crops and other activities.
Odeh Sabarna	Palestine	Q1.4/4	In Palestine, women's cooperatives play a large role in increasing the income of small farmers through the manufacturing of agricultural products, especially while processing the surplus. They market the produce as collective and they are now trained in the fair trade system (from product to consumer).
Esther Mwende Muindi	Kenya	Q1.4/6	I have found gender influence on cooperation among small farms to vary from region to region. I have experienced successful women groups that does not want to work with men as members. Their main excuse has been that at times men will want most leadership positions and dominate the whole process even when they are not as qualified to lead as the female members leading to failure of enterprises. Other regions prefer gender balance and this also leads to successful enterprises. From my analysis, gender influence on cooperation among small farms is dictated by cultural practices, religion, literacy levels of the players, among other factors
Richard Yeboah	Ghana	Q1.4/7	Most of the NGOs working in the Northern Region of Ghana prefer working with women because they are said to be truthful and loyal. Their groups pay credit advanced to them through hard work. In any cases they get better yields than the men in the crops that they cultivate e.g. groundnut, pepper (chilli). In their groups, mostly illiterates, they always have a 'strong Magazia' who makes sure that all members abide by their rules. A major challenge is that their husbands have control over their outputs and income in most cases hence they are unable to build up resources for self-sufficiency in production.

Participant	Country	Aggregate	Comment
Sami Elhag	Sudan	Q1.4/8	Each grass-root association has a variable number of female farmers, but specifically we have three pure women associations. Moreover, with potential, there are 11 grass-root women associations ready to structure a network

Topic #2: Small farms' contribution to resilience of the food system

Q 2.1 - What are the ways that small farms contribute to the resilience of the food system in your region? Please provide examples

Participant	Country	Aggregate	Comment
S. Mulu	Ethiopia	Q2.1/1	<p>Small farms use simple technology which can be accessed easily. On small farms family labour could be utilized efficiently. Products could be diversified and productivity would be enhanced.</p> <p>Given the climate variability problem affecting currently our agriculture the product diversification on small farms could be a means for adaptation and resilience of the food system in our region. For example: from a small farm in our region products like crop, tree, forage, fruit, spices and vegetables can be produced within the same time through an agroforestry system.</p> <p>In general on small farm it is possible to practice a low-input – high input agriculture.</p>
Shantonu Abe Chatterjee	Germany/India	Q2.2/2	<p>1. Safe-guarding crop diversity: The group keeps a seed-bank of more than 200 varieties of rice, which can be 'lent out' in exchange for the return of an equal amount of seeds from the harvest. The work of documenting, maintaining, and preserving these seeds is carried out by the group. There are also efforts to document crops that can be grown along with rice, like legumes and tubers, as well as "useful weeds"(maybe an oxymoron). These crops are specific to the location and the farming system (rice fields), and may not be applicable in all places, but these crops can be grown with minimum effort and represent a potential side business.</p> <p>2. Creating nested markets: The farmers sell to a particular market outside conventional marketing pathways, helping increase the number of options available for consumers and producers.</p> <p>3. Focus on producing for human consumption and own consumption: The farmers grow food mainly for human consumption. They grow many different kinds of vegetables and tubers in the fields, and have fruit trees, in order to supplement income and nutrition. Household members, particularly women, maintain a small nutrition garden adjacent to their home where they grow several types of fruits and vegetables, rear some cattle or small animals, and fish in small ponds. The produce is not marketed and is often for home consumption.</p> <p>4. Conserve water: In a monsoon region, most of the rainfall is concentrated in a certain period of the year. There is a need for infrastructure that stores this water and also allows groundwater to replenish. This infrastructure is</p>

Participant	Country	Aggregate	Comment
			<p>provided by additional ponds/tanks dug by the village community on a shared basis, or through funding from NREGA (A government scheme in India funding community projects).The design of the rice field may be modified as well in order to store more water and to allow cultivation of freshwater fish.</p> <p>5. Create and maintain ecological infrastructure: Farmers in the group realise the importance of predatory birds like owls in keeping down the pest populations, and grow trees that are also good for perching. Living fences are also used in order to provide fodder for grazing cattle. Little or no use of pesticide also prevents the contamination of local water sources, and avoidance of out-of-season crops reduces groundwater withdrawals.</p> <p>6. On-farm resource cycling: One of the characteristics of a well-functioning small farm is a reduced reliance on external inputs. Needs are met by using/enhancing by-products. This means that products like straw, chaff, and animal dung are put to use instead of being disposed of.</p>
Scott Justice	Nepal	Q2.1/2	<p>Average farm size/holdings in South Asia is under one ha, yet in a country like Bangladesh whose small farmers are nearly fully mechanization through the use of small and medium size tractors and equipments, has gone from an agricultural development basket case country in 60s 70s and 80s to a net exporter of grain by the 2000s.</p> <p>Much is due to mechanized shallow ground water extraction, but also where tillage and threshing operations are nearly fully mechanized that has led to not only continued productivity gains but just as importantly also intensification and diversification.</p>
Olga Moreno Perez	Spain	Q2.1/3	<p>What we have found about the contribution of small farms to the resilience of the food system in Castellón is the existence of kitchen gardens in nearly all the small holdings – gardens that are not necessarily found in big farms. In these kitchen gardens, the farm families produce diverse fruits and vegetables. Interestingly, these products are not only produced for self-consumption, but they are also distributed among the enlarged family members.</p> <p>This is an informal, non-market way to contribute to the resilience of the food system in this region (particularly taking into consideration that fruits and vegetables have a high nutritional value).</p>
Mark Redman	Romania	Q2.1/4	<p>Olga Moreno Perez from Spain made a very interesting point in her response to Question 2.1 (ways that small farms contribute to the resilience of food systems). She highlighted the important contribution of small farms to sustainable FNS (Food and Nutritional Security) that is generated through the informal distribution of food products (commonly including fresh seasonal fruits and vegetables) amongst their networks of extended family members. This is also a common practice in Romania and is a deeply embedded cultural tradition that continues to</p>

Participant	Country	Aggregate	Comment
			<p>sustain the health and happiness of many families – both rural and urban. However, it is also a practice that is declining.</p> <p>It is clear that we tend to undervalue such informal food systems, whilst our policy-makers are prone to actively discriminate against them in the name of standardisation and fiscalisation. Of course, I'm painting a rather simplistic picture since there are also some potentially negative aspects of informal food systems (including problems with food hygiene and safety), but I'm interested to know of any initiatives that actively foster / promote the informal - often family-based - food systems that are commonly associated with small farms in some countries.</p>
Harriet Gausi	Malawi	Q2.1/4	<p>In Malawi, small farms contribute towards resilience of the food systems in many ways:</p> <ol style="list-style-type: none"> 1. Village / local / scavenging chickens are generally kept by smallholder farmers (small farms), most of them with less than a hectare of land; and yet they supply village chickens to town and city markets, plus supplying directly to consumers throughout the country. In addition to the fact that this enterprise enables farmers to get income for their livelihood from the chicken sales; the small farms make a huge contribution towards resilience of food system and this will continue for many years to come since currently, big farms are not much involved in animal protein supply to rural areas. Again, small farmers help to reduce the magnitude of malnutrition among children under five of age, with the majority of rural communities relying on animal protein from village chickens. 2. Small farms in Malawi are also involved in food crop production. Apart from the market (Agricultural Development and Marketing Corporation), provided by Government for staple food crop, maize, most of the maize and other food crops that are cultivated by small farms are sold to consumers and traders through specific markets, generally along the main roads that connect the three regions of the country. These markets have designated days, every week and they operate throughout the year, but the volume of the produce sold is high immediately post-harvest. Small farms also supply vegetables, fruits and livestock to these markets. The markets act as 'buffet' markets, where consumers / traders can get any food, be it crop or livestock.
Philip Siminyu	Kenya	Q2.1/5	<p>Small farms contribute to the resilience of the food system in my region by growing and harvesting and storing their harvest while using the harvest till the next harvest.</p> <p>Example: Small holder maize producers produce their maize and every farmer stores more than 3 bags of 90 kilograms of maize. This makes the farmer to have food all year round.</p>

Participant	Country	Aggregate	Comment
			(Moderator: ... which shows one distinction between small farmers and larger scale or industrial farms, and how the former directly contribute to the resilience of the food system)
Lizzy Igbin Niwaafa	Nigeria	Q2.1/6	Small farms are traditionally organic based and face less hazards and chemical pollution. They use traditional seeds, not GMO or laboratory prepared seeds. They have 100% quality seeds they have been tried and tested over the years. Though there are arguments that these seeds yield less quantities and may not support the food needs of the growing populations, these claims can not be compared with the side effects of growing food seeds genetically.
Scott Justice	Nepal	Q2.1/6	In South Asia especially Bangladesh and Nepal (small farms contribute to the resilience of the food system), by intensifying farming - getting one whole other crop into the system, going from 1 to 2 crops or even 2 to 3 crops (Bangladesh especially). With intensification also came diversification into vegetables, pulses, and oilseed.
Vladlena Martsynkevych	Ukraine	Q2.1/17	<p>As an environmental group, we work on the agri-problems as we understand there is a need for more balanced approach to the use of the natural resources that can be done only by the small farmers and their cooperation.</p> <p>Currently in the Ukraine, the "corporate holdings", called "agroholdings", are having preferences: They own the same amount of lands as 30 thousand of officially registered Ukrainian farmers. And of course the operations of corporates are only aimed to get "the most with the least money" – chemicals, pesticides monocultures, GMOs, hard technologies – all these lead to deterioration of the lands, erosions and loss of biological diversity.</p> <p>Existing food production system like these, means "fast profits" for some companies (because of favourable nature conditions and cheap labour), and hampered rural development overall – degradation of the natural and human capital there.</p> <p>According to official statistics, lots of food is being produced by the rural households, who are not even officially counted as 'farmers', that are totally out of the legal system and social insurance. For example, more than 95 % of potatoes, 85% of other vegetables, 80 % of fruits and berries, 75 % of milk, 40 % eggs and meat – is being produced by these 'farmers' for the sales on the local markets and to the traders. This consists of 60 gross agriproducts from Ukraine.</p> <p>High levels of poverty among the 13 millions of rural population (1/3 of Ukrainian population), bad infrastructure and social care, youth migration to the cities, and mostly the change of MENTALITY – that to be a farmer is prestigious and paid-off (!) – all these are tendencies to be stopped in Ukraine. Preservation and re-introduction of</p>

Participant	Country	Aggregate	Comment
			the small farmers is crucial in the rural areas of Ukraine. For this social campaigns and programs with youth, improvement of infrastructure is really needed.
Mahesh Chander	India	Q2.1/17	<p>Close to the end of this exciting discussion, I wish to share our experience of working with the Nationwide Mega project by name FARMER FIRST. http://www.icar.org.in/files/farmer-first-project=proposal-28.11.2011Revised.pdf</p> <p>Under this project, small scale farmers are being targeted for their need assessment, suitable interventions, exposure visits and distribution of inputs like seeds of improved varieties, vermicompost, soil testing, sheep and goats, feed supplements etc. Today we distributed improved seeds of Summer Moong (Green gram) to 50 small scale farmers after sharing with them the total package of practices concerning showing of short duration green gram variety (Pusa Vishal) in the Fallow land in between wheat harvesting (April) and rice transplanting (July) . Farmers if follow this recommendation, they can have one additional crop in the same land which otherwise remains unutilized. If such practices are promoted, farmers can benefit more. More crop per drop and per unit land is the slogan being put to practice under the ambitious mega project Farmer First in India (http://icar.org.in/files/ApproachuidelinesforFarmerFIRST-04022016.pdf), being implemented by the Agricultural Extension division of Indian Council of Agricultural Research.</p>
Yoanna Ivanova	Bulgaria	Q2.1/17	<p>Despite the rapid growth rates of agriculture in Bulgaria and the EU funds invested in the last 10 years, in many regions of the country small farmers are the main producers and suppliers of agricultural products.</p> <p>In less developed and less accessible areas, small farms only provide food production. In some small villages there is still a natural exchange between farmers.</p>
Boyko Doychinov	Bulgaria	Q2.1/17	<p>At the regional level (Northeastern Bulgaria), the small farmers' contribution to the food chain is very important due to the developed tourism. In the summer months, the population increases more than two times, giving small producers the opportunity to sell their produce at a better price.</p>
Sami Elhag	Sudan	Q2.1/17	<p>From our experience in Sudan's Food Security Program there are two important ways that small farmers can contribute to resilience namely:</p> <ul style="list-style-type: none"> - introduction of new inputs and technologies (to increase production from the existing diversified crops per unit area), and - empowering them to financial institution and market , to absorb any unexpected variation . <p>Other challenges are:</p> <ul style="list-style-type: none"> - Engaging with private sector (limited machinery delivery capacity to rural area). - Strengthening collective procurement (seed multiplication farms to be scaled up; collective bargaining to the MoA on reducing input package cost to be organized)

Participant	Country	Aggregate	Comment
			<ul style="list-style-type: none"> - Engagement of women farmers (needs assessment workshops to be organized; household integrated approach under consideration) - Financial product and service design (limited access to ATMs/banking branch; voluntary insurance opt-in under consideration; expensive insurance design in terms of time and cost) - Access to weather information (lack of access to reliable weather information)
Anetta Szilagyi	Italy	Q2.1/17	<p>(source: Regional Initiative 1 project on Empowering Smallholders and Family farms TCP/RER/3601_ Synthesis Report draft)</p> <p>The answer is focusing exclusively on the state of play of the 7 focus countries of the Regional Initiative 1 during 2014-17; Albania, Armenia, Georgia, Kyrgyzstan, Moldova, the former Yugoslav Republic of Macedonia and Tajikistan and not on the whole region.</p> <p>The agricultural and the food processing sector in general and the commercial oriented smallholders and family farms in particularly face problems getting access to the markets, domestically as well as internationally. One thing is that the farmers lack market information and lack of knowledge about where to find it, and what to do with the information. Another and more important thing is that the small scale of production and low level of specialization hinder the smallholders from establishing durable or lasting links within the value chains. This is due to the difficulties for smallholders and small family farms to produce the stable quantity and the quality, which is demanded by the processors and the operators in the market. Therefore, long-lasting cooperation between smallholders and their clients are very few.</p> <p>Thus, two important aspects of associativity are lacking: a) long term relations and contracts between sellers and buyers improving vertical coordination and b) cooperation and collective action improving horizontal coordination.</p> <p>These aspects are interrelated as the only way for smallholders to get long-term relations/contracts with buyers is through participation in farmer groups, cooperatives or economic interest groups/joint-stock companies. Collective action, if well managed, contributes to achieving economies of scale that makes it more attractive for buyers to deal with smallholders thanks to the possibility to consolidate larger volumes and reduce transaction costs, to better manage post-harvest handling and reduce post-harvest losses and to facilitate the diffusion of good practices and innovations and increase productivity. In turn, the bargaining power of organized farmers in the contracting process can be strengthened.</p> <p>But this vertical and horizontal integration through cooperatives, farmer groups or associations is not common, and farmers therefore do not benefit from the improved market position that these organizations can provide. One</p>

Participant	Country	Aggregate	Comment
			<p>important problem here is lack of mutual trust between the operators in the value chains. Mistrust of farmers to each other is a constraint for cooperation. It prevents formation of service cooperatives and other forms of organization of the production process. Cooperation rarely goes beyond local clan networks and needs to be surpassed. Institutional settings of the value chains are complicated and cannot be easily established during a short period. Investments in value chain re-construction in new markets and products are highly risky. As a consequence, support mechanisms for the stimulation of development of value chains and for establishment of cooperatives and other types of cooperation are important to dissolve the difficulties for smallholders to get access to markets.</p> <p>The households are small scale with less than 1 ha of land and production is not commercially viable. Registration of ownership of land is not in place (or may lack compliance with the situation on the ground) and the household is as such not registered in the official farm register. If any livestock, they are not registered in the official livestock register. The households have no formal access to the market through value chains or with processors, but trade their production surplus locally in the barter economy.</p> <p>Smallholders and family farms can achieve higher levels of income, production and productivity through sustainable utilization of resources and intensification of production, better organization, adequate public services and better integration into the agri-food value chains. Getting family farming right in this respect is a key component in enhancing food security, ensuring equitable and decent livelihoods for all rural women and men, achieving sustainable rural development and diversification in rural areas and reducing rural poverty.</p> <p>It is a general observation that the smallholders and the small family farms have only weak, if any, access to the established value chains in the 7 countries. This is primarily due to the informal character of their production based on small and fragmented land. The quantities and the quality of the produce is often not sufficient for the value chain operators to be accepted.</p> <p>Cooperation among the commercial oriented smallholders and family farms is one way of getting better access to the value chains. This is also supported in some of the countries through support to development and operation of cooperatives, for example in Albania and FYR Macedonia.</p> <p>Agricultural Cooperatives Development Agency (ACDA) in Georgia provides investment subsidies for cooperatives (honey producers) through grants of up to 70% of the investment costs for a maximum of 100 beehives and related equipment. Furthermore, women-only cooperatives and cooperatives representing vulnerable groups receive 80% in grant to the investments. The subsidies contribute to an increased honey production and an important</p>

Participant	Country	Aggregate	Comment
			formalization of the sector, which is considered to be a precondition for the smallholders to get access to the value chains downstream.
Pavlos Karanikolas	Greece	Q2.1/8	<p>Recent research conducted in the Greek region of Ileia shows that the vulnerability of Ileia's citrus fruit subsystem has increased by the processes of intensification and mechanization, as well as by the loss of biodiversity and tacit knowledge. These mechanisms make the system more vulnerable, thus undermining its adaptive and transformative capacities. On the contrary, a series of other processes have strengthened the system, such as diverse livelihood strategies on behalf of small farms/households; the significant role of some co-ops in the concentration of production, the collective bargaining of prices and the exercise of a countervailing power within the agri-food chain; the existence of well-established marketing channels allowing access to domestic and foreign markets; macroeconomic stability and low unemployment rates up to 2010; the cost structure of the three main products (oranges, olive oil and mandarins) which allows for the attainment of a profit even at very small scales of production for a significant part of the surveyed farms.</p> <p>Moreover, the resilience of the regional food system is challenged by the hard austerity macroeconomic policies applied to the Greek economy since 2010. Besides drastically reducing available funds for agriculture, crisis has undermined two other critical mechanisms which for a long time have supported the persistence/sustainability of family farms: (a) the substitution of family labour with hired labour on-farm and the ability to reallocate family labour between on-farm and off-farm activities, and (b) the ability of farm households to finance their farms, in terms of working capital and investments, especially in times of losses. Both of these mechanisms are of paramount importance for a large part of the surveyed small farms, most of which rely mostly on non-farm sources of income for their livelihoods, while half of them are not sustainable in the long run without non-farm sources of funding. On the other hand, as a result of economic hardship of farmers, the use of chemical fertilizers has most probably decreased considerably in Ileia, a fact that will be beneficial to the environment, as well as possibly positive for yields.</p> <p>Furthermore, small farms always run the additional risk of extreme fragmentation which constantly erodes any achievements, especially in the context of power asymmetry within the broader agri-food system. In other words, SFs have to reach a minimum size threshold, either individually or through collaboration/synergies/networking, if they are to survive. In our analysis, this is indicated by the high percentage of non-viable small farms. Thus, serious concerns are expressed as to the capacity of the regional food system as well as of the subsystem of citrus fruits to respond effectively to the challenges they face.</p>

Participant	Country	Aggregate	Comment
			<p>The effective response to these challenges requires actions such as:</p> <p>(a) the cultivation of new citrus varieties, i.e. a reorganization of the system through new investments, which is hindered by the unfavorable economic environment of austerity macroeconomic policies applied to the Greek economy since 2010; it is also hampered by the above mentioned mechanisms that make the system more vulnerable;</p> <p>(b) the creation of a learning environment among farmers, which will favor the dissemination of existing practices of some small farms that successfully integrate scientific with traditional knowledge, such as site-specific fertilization after thorough soil analysis, the targeted-differentiated pruning of trees and an effective plant protection. This learning environment can strengthen the adaptive capacity of farms, and contribute to the resilience of the system after each successive shock.</p>

Q 2.2 - Have small farms been more resilient compared to large farms in your region? What were the main factors that determined their resilience? Please provide examples.

Participant	Country	Aggregate	Comment
Scott E. Justice	Nepal	Q2.2/1	<p>Yes (small farms have been more resilient compared to large farms).</p> <p>Agri mechanization, specifically scale appropriate mechanization delivered by an army of entrepreneurs-service providers in S and SE Asia, helps farmers of all sizes:</p> <ul style="list-style-type: none"> - to perform timely field operations that are more easily adjusted to changing weather patterns (think tillage and crop establishment but also diesel irrigation pumps/water markets) - to reduce (dependency on) labor availability - to lighten the drudgery of farm work - to allow greater time for off-farm income generation.
El Hadji Ousmane Ka	Senegal	Q2.2/2	<p>The co-operation between the farmers (was crucial for them) to achieve the self-sufficiency in onion (production), (allowed them) to obtain subsidies by the state on the inputs. (The co-operation and subsidies also allowed them to construct) warehouses (which helped) the farmers to (store) their products in case of difficulties (to market their produce at one particular time).</p>
Loupa Pius	Uganda	Q2.2/2	<p>Small farms are resilient. The small farms have continued to supply the urban centers with organic foods in most cases. Due to production of a variety of food stuffs/crops small farms are the sustainability of the system, more than the large farms. The land tenure systems and access to financial resources is the major heart breaker to the small farms, therefore limits their progress.</p> <p>In a pastoral context, pastoral resiliency is interdependent on the indigenous knowledge which triggers mobility for access of pasture and water. The milk, meat production and herd splitting is paramount to allow an easy escape of the harsh climatic conditions such as droughts and disease: (This consists mostly) by separating the female from male animals, to avoid reproduction or breeding, in such harsh conditions.</p>
Said Zarouali	Morocco	Q2.2/2	<p>In Morocco, since a long time, there have been ways to store food produce (cereals or vegetables), in common storage areas, built and managed by a system of cooperatives or more informal cooperation by small farmers. It also allowed small farmers to collectively market this local produce.</p> <p>In the framework of “Maroc Vert” (“Green Morocco”), the government strongly encouraged the cooperation between small producers, with the purpose of:</p>

Participant	Country	Aggregate	Comment
			<ul style="list-style-type: none"> - having only one single focal point (Ed: for storage, marketing, sales..) - facilitate the access to financing (grants), and market access
Said Zarouali	Morocco	Q2.2/3	The challenge has been in the financing (providing credit) - which is the main factor determining small farmers' resilience... Small farmers can contribute significantly to the resilience, with minor investments. Labour is often contributed by family members, without paying wages, and they are a major contributor to the food security resilience system (but fail to get the critical investment in their farm).
Bernadette Lahai	Sierra Leone	Q2.2/2	<p>In Sierra Leone it is the practice for both women in polygamous and monogamous households to, in addition to the family farm, operate a small plot or farm to augment the family food and income needs. Most of the produce are for food, with a little sold to get cash to help pay school fees, medical bills, buy clothing for children etc.</p> <p>This source of income is very important to women and their independence and decision making. In some cases when the food from the family farm is exhausted, it is the food from the women's small plots that sustains the family. Women's small plots are used as coping mechanism during food shortages.</p> <p>Of course there are constraints for competing demands for their labour, seeds, cash between the family farm and small plots. Coming from a rural area and in a polygamous family with five stepmothers, I worked along with my mother and siblings on both the family farm and small plot.</p> <p>Food from the family farm is eaten only in the evenings. Breakfast and lunch came mostly from our mother's small plots in which were cultivated between 10-15 crops; rice, cassava, sweet potato, yam, maize, sorghum, millet, vegetables, beans, egusi melon, cucumber, etc. Family member visitors were also first fed from food from the small plots. As a member of parliament for 15 and half years representing my rural community, I have observed decrease in women's small plots as most children are going to school outside of the villages and their labour less available, and farming population are aging, less healthy, with more young able bodied men and women leaving for urban areas.</p> <p>Small farms can adapt faster to changing food consumption, demands and habits than large farms, especially where large farms are practicing monoculture. We must further investigate women's small plots with regards their residence and food production systems.</p>
Mayank Jain	India	Q2.2/3	(in reply to Ousmane Ka's example of onion farming in Senegal): I would like to add that we are working on similar thing here is Gaya, Bihar, India through onion farming with small farmers.

Participant	Country	Aggregate	Comment
			In general Post Harvest Management (PHM) plays a very important role in food systems as well as resilience. Coming back to specific example, I focus more on service innovations in PHM where minor changes in practices at field can increase the shelf life of the crop. Be it field curing in case of onion or harvesting technique of tomatoes. These small changes not only provided better post harvest management but also resulted in longer shelf life which contributes to food system resilience.
Sandra Sumane	Latvia	Q2.2/4	<p>Together with ongoing concentration of agricultural production in Latvia, the number of farms is decreasing.</p> <p>According statistics, the sharpest decline is in the number of smallest farms, which suggests they are the most vulnerable. Indeed, during previous couple of decades, market and regulatory conditions – prioritizing production efficiency over other elements and outputs of food system – have been less advantageous for small farms. Small farms are said to be economically inefficient to compete in the market and to provide farming families with sufficient income, livelihoods.</p> <p>On the other hand, a majority of small farms has shown resilience and many of them are even successfully developing.</p> <p>Their resilience factors are various; there is no one common answer for all cases. Among the critical ones we can name:</p> <ul style="list-style-type: none"> - mobilising and relying "on your own", farms' and local community resources (like, using neighbours' or relatives' labour, relying on local farmer knowledge, borrowing neighbour's machinery, using farm's natural resources for production inputs), - developing individual market channels (small farms are poorly involved in conventional food chains and they are practicing various forms of direct individual selling: on farm, farm shop or stand, delivering to clients' places, on the internet, also on farmer markets), - diversifying on-farm economic activities (like, artisanal processing, tourism), - diversifying production or specialising in other cases, keeping the ability to switch enough rapidly from one agricultural branch to another.
Olgo Moreno Perez	Spain	Q2.2/4	There is not a simple answer to this question for our study case (the province of Castellón, Spain). In this region, small farms are resilient basically because nearly all of them are held by part-time farmers who have another main gainful activity. Small farms are therefore sustained by non-agricultural income, as they do not provide enough income to live on.

Participant	Country	Aggregate	Comment
			<p>In spite of that, small farms are threatened by a serious crisis of the traditional coops of the region, of which small farmers are members (particularly coops that stockpile citrus fruits, which is an outstanding product in the coastal area of the region). Many of these coops are struggling with the competition of private traders. Farmers are more and more often signing contracts with private traders, in a process of vertical integration.</p> <p>In addition, coops have more difficulties selling the products at a good price because they accept all the production of their members – regardless its quality – meanwhile private traders only accept the high-quality citrus fruits. The coops' disappearance has a high impact in their membership - many small, part-time farmers - and could led to the abandonment of small plots of land.</p>
Lizzy Igbin Niwaafa	Nigeria	Q2.2/5	<p>Small farms have been more resilient due to quality seeds and due to closeness of the farm owners to their farms. Small farm holders often times use animal wastes and practice mixed farming, in this case the plants, which are legumes, will support the other plants as manures and because traditional land clearings do not destroy the eco system. The use of tractors in land clearing can reduce the lands fertility, Traditional land clearing maintain the ecosystem and save the trees which act as shades and buffers in the farms. The wrong use of chemicals and fertilizers by big farms brings about low resistance in the big farms.</p>
Scott E. Justice	Nepal	Q2.2/5	<p>Yes, in Bangladesh and Nepal, it is mostly small farms and small holders who have intensified and diversified. Resilience- multi-cropping- first came from more assured irrigation water via spread ability to quickly and more cheaply drilled shallow tube wells and increased availability of inexpensive (mostly Chinese - mostly small < 7 HP) diesel and some petrol and some electric powered pumps.</p> <p>Second resilience came from high levels of mechanization of tillage and threshing mostly through service provision of tillage via 2-wheel tractor (12-24 HP) and small 4-wheel tractors (25 -45 HP) and powered wheat, rice and maize threshers. This reduced turnaround times and simply put more time/room in the farming system, that allowed for more on time sowing/harvesting of the additional crops AND with the timeliness leading to yield gains.</p>
Mahesh Chander	India	Q2.2/5	<p>This paper (http://www.spandan-india.org/cms/data/Article/A20155515919_20.pdf) may provide good information on small farmers in India.</p> <p>It says:</p> <ol style="list-style-type: none"> 1. Small farms involve cost economies due to use of family labour and lesser involvement of inputs and infrastructure. 2. Small holdings in India in agriculture exhibit a higher productivity than large holdings. Various studies in India

Participant	Country	Aggregate	Comment
			<p>during the 60s, 70s and in the later years have revealed that there is an inverse relationship between size of farms and productivity, despite a few researchers holding contrary opinion. Findings by UN agencies and National Sample Survey (NSS) have supported farm size and productivity relationship. Despite their significance in providing food security, family labour employment and economy in management and high productivity per acre, small farms face a few challenges particularly in the wake of globalisation and WTO dispensation. Enhancing the productivity of small farms has been stressed by various experts. Measures like providing modern technology, information and knowledge for better skills and extended credit have been suggested for higher productivity of small farms.</p> <p>3. Small farms need positive material and policy support by the Government.</p> <p>4. The Indian government is trying to solve the problems in agricultural sector under its strategies towards doubling the farmers' income by 2022 (a much talked about slogan in last one year). The government's vision and mission on small farms' productivity and profitability can be realized well if the suggestions given in this paper (http://www.ncap.res.in/upload_files/workshop/ws1_chapter1.pdf) are considered by the government.</p>
Boyko Koychinov	Bulgaria	Q2.2/6	For some specific products - fresh fruit and vegetables, wine, honey and organic food - small farms are much more flexible to market and consumer demand and are more active especially during the summer season.
Anetta Szilagyi	Italy	Q2.2/6	<p>The question is unprecise. In which sense the small farms should be more resilient? Economically they are not more resilient than large farms at this moment in the 7 Regional Initiative focus countries.</p> <p>The answer is focusing exclusively on the state of play of the 7 focus countries of the Regional Initiative 1 during 2014-17; Albania, Armenia, Georgia, Kyrgyzstan, Moldova, the former Yugoslav Republic of Macedonia and Tajikistan and not on the whole region.</p> <p>(source: Regional Initiative 1 project on Empowering Smallholders and Family farms TCP/RER/3601_ Synthesis Report draft)</p> <p>The main problem in agriculture and in the rural areas of the 7 focus countries is the low income generated from agricultural activities. For the majority of smallholders and family farms the income generated from agriculture is not sufficient to meet the basic needs of a family. The low income is mainly due to the informal character of production: The households are small scale with less than 1 ha of land and production is not commercially viable. Registration of ownership of land is not in place (or may lack compliance with the situation on the ground) and the household is as such not registered in the official farm register. If any livestock, they are not registered in the official livestock register.</p> <p>The households have no formal access to the market through value chains or with processors, but trade their</p>

Participant	Country	Aggregate	Comment
			<p>production surplus locally in the barter economy. Agricultural education is typically low or even absent, and the production takes place without any knowledge or concern about any national minimum standards for production (food safety, animal health, hygiene, animal welfare, traceability, environment and working conditions). The informality also implies that the households not are taking part in the formal economy, so bookkeeping and accounting, payment of taxes and VAT is not taking place.</p> <p>The low income and the informality of production not only prevents the families from meeting their basic needs, but it also prevents the local (and regional/national) authorities from collecting the taxes needed to invest in an appropriate social, educational, health-related and technical infrastructure. As a consequence, people migrate from rural areas due to lack of adequate services, lack of income and lack of future.</p> <p>Migration causes ageing and womenization of the remaining population since mostly but not exclusively young men are leaving the rural communities. This again leads to stagnation or even to decline in the rural communities. This again will increase the pressure, lower the income and keep the households in poverty and subsistence. This vicious circle of poverty due to subsistence and informal production must be broken.</p> <p>Small-scale, fragmented and informal farming restrict investments in mechanization leading to a low level of use of technology and farm machinery. Also the knowledgebase is restricted as well as implementation of national standards for production. The consequence is low productivity and low quality of the produce, which causes low prices and thus low income from farming.</p> <p>Stagnation of the rural communities is the result of this chain of factors constraining the smallholders from developing their production and improving their lives. Expressed in this way, the situation for many smallholders and family farmers in the seven focus countries may be improved with the help of policies and interventions specifically targeting the individual links in the vicious circle, not one by one, but with the help of an integrated approach, where several instruments are employed at the same time.</p>

Q 2.3 - What examples can you share where having more diverse product ranges and diverse channels have contributed to the resilience of small farms

Participant	Country	Aggregate	Comment
Dilip Kumar	India	Q2.3/1	<p>Have small/family farms (been) are more resilient compared to large farms in your region? Certainly yes. One of the biggest constraints being faced by farming sector is the unavailability of labour and the increasing cost of labour due to out-migration of agricultural labour to cities in other sectors, where plenty of jobs are available round the year and where wages are much higher than they get in agriculture.</p> <p>Small farms operators and farming families use their own family labour. Such inputs are not available with big farmers. In addition they are also involved in family scale dairy and rearing of small animals like goat, chicken and aquaculture in homestead ponds. Wherever available they also get involved in fishing in public owned fisheries resources.</p>
Mayank Jain	India	Q2.3/2	<p>I work with farmers in Bihar, and as a strategy we have focused on diversifying products with the prime aim of getting a sustainable recurring income for the farmers which alone cannot be attributed to cropping. We have incorporated pisciculture, vermicomposting as well as bee keeping as alternate revenue means which can generate income through allied-agro means.</p> <p>It becomes more like a necessity/compulsion to do such things as there is constant need to innovate.</p> <p>Even our Prime Minister on roadmap to double the income of farmers by 2022 emphasized on the very fact "We can ask farmers to grow sea weed, build apiaries, set up solar farms. We have to put advanced options before them and make them aware of the same. Income can even be generated through waste such as coir and coconut shell waste, bamboo waste and banana waste", he said.</p> <p>That also brings us to interesting viewpoint in light of 6.1</p>
Viviane CdV	Italy	Q2.3/3	<p>Input from Topic #5:</p> <p>In Italy, we have big farms, medium farms, small farms and micro farms. For the State, a "micro farm" means a maximum of 26 people are working on the same farm.</p> <p>However, in my example, I am talking of family farms of 4 people. In our case, we grow vegetables, livestock (for goat cheese), poultry, snails, honey, roses, herbs and amazing flower food in small quantities. Other small farms also grow potatoes, vegetables (prices are good), cows for milk (prices are very low because of multinational supermarkets).</p>

Participant	Country	Aggregate	Comment
			<p>In Italy, as a small farmer, you can produce and sell your crops directly from your farm and local markets, quite freely. But you want to sell further, e.g. in the two neighbouring provinces, you need to join the Commercial Chamber of Agriculture, and that costs, but you get access to financing from EU. But that point our small farms have to cope with taxes, pension fees...</p> <p>(Moderator: this example shows an increased resilience for small farms, through diversification of the product range, but also shows challenges if the small farmers want to market these produce themselves, beyond their immediate geographic location)</p>
Lizzy Igbin Niwaafa	Nigeria	Q2.3/4	In traditional farm settings we in the West African Region practice mixed farming this have been explained in my answers in 2.1 this is due to practice and result oriented records gathered from archaeologists, and land practice. As mixed farming ensures production of varieties it also supports recovery in times of poor harvests due to natural causes as the farmers always have residual crops to rely upon. Small farms have always stood the tide of times and are reliable durable and sustainable.
Scott Justice	Nepal	Q2.3/4	<p>The ability to move away from ox drawn tillage, where farmers have same number of cattle almost all milk cows / buffalo along with the spread of local chilling centers has led to increased incomes via commercial based white revolution.</p> <p>More irrigation and mechanical tillage allows more farmers to participate in higher-value crops/vegetables for at least one season. New local marketing channels are slowly reaching deeper and further into rural areas to supply commercial/urban centers in attempts to replace imported produce.</p>
Yoanna Ivanova	Bulgaria	Q2.3/5	In recent years, the production of organic food has been rapidly developing in Bulgaria, allowing small farmers to enter new areas of production. This also allows access to new channels such as specialized agricultural markets, specialized stores in major cities, restaurants and hotels offering organic products.
Boyko Doychinov	Bulgaria	Q2.3/5	<p>Some specific products such as Bulgarian yoghurt, white brined cheese, rose jam, specific sausages that are "Protected Geographical Indication" are practically produced by family and small farms.</p> <p>The high quality of these products gives small farmers access to both large retail chains and short supply chains and direct access to end users.</p>

Participant	Country	Aggregate	Comment
Anetta Szilagyi	Italy	Q2.3/5	<p>(source: Regional Initiative 1 project on Empowering Smallholders and Family farms TCP/RER/3601_ Synthesis Report draft)</p> <p>Data are not available for all countries, but some tendencies are clear. The majority of farms are very small. Between 36% (Moldova) and 77% (Georgia) operates less than 1 hectare of utilized land. For the 5 countries with segregated data, 56% of the farms are in this category. In average 40% of the farms are between 1 and 5 hectares, while 4% are bigger than 5 hectares. Land use measured in terms of total utilized agricultural area (UAA) in each country (2014/2017) compared with the number of farms confirms the small scale farming structure of the countries. In average, the farm size measured in UAA is 2.1 hectare. Albania hits the average, while Georgia has 1.4 ha per farm and Tajikistan 3.7 ha per farm. Furthermore, the small farms are typically operating land distributed on 3-4 land parcels. In average these parcels are between 0.5 ha and 0.7 ha.</p> <p>(source: Regional Consultation Workshop note)</p> <p>Taking into account the small land size it is very difficult to diversify the product ranges for smallholders, especially that they are mostly following the traditions and in any cases it is difficult for them to reach the market. The farmers stick to traditional production methods and crops, which are of low quality and not marketable (e.g. low quality wheat produced on small plots, which is not efficient). Concerning the pattern, usually the farmers keep producing what they produced traditionally, but in some areas they are producing non-traditional plants. It was observed that farmers are usually going to cultivate traditional plants, even though it is not profitable. They should adopt more to market demands. In Georgia a number of pilot activities are implemented in several regions to support the government in decision making, to improve the confidence of the rural population, and rehabilitate the traditional VCs through pilot activities.</p> <p>We have been requested if REU has case studies or projects in support of responding to those questions, which fall more in in your expert area. I assume short answers – about a paragraph -will be sufficient.</p> <p>Thank you very much in advance!</p> <p>From my view point, the largest case study we could bring from the region is the transition from collective to individual land tenure starting from 1990 in most of the Central and Eastern European countries and CIS, which in fact has increased the resilience of the food systems and realized recovery of the agricultural growth (Lerman and Sedik), FAO 2009. Moreover, countries like Poland and to a certain level former Yugoslavia have been able to revitalize quickly their agricultural sectors due to the fact that they have kept their small farm structure during the socialism.</p>

Topic #3: Strategies used by small farms to overcome challenges – a view of the past

Q 3.1 - Identify the three main challenges which small farms, in your region, have faced in the recent past

Participant	Country	Aggregate	Comment
Muhammad Tasleem	Pakistan	Q3.1/1	<p>Regarding this question, I have practically observed (these) things very closely (and concluded) people are "habitual of their deeds": (things) they have learned from their parents, and still they believe they are doing right.</p> <p>I conducted an activity on "How to become Rich", and (during that activity, based on the) response from the community, I concluded following points (which reflect the main challenges for small farmers):</p> <ul style="list-style-type: none"> - People only depend on one (single) source of income. They never think about "what if" this source ends - what are alternatives for them? - The complexity of a "combined system of families", where one combined family may consist from 10 to 20 members, (where) one member will earn and all rest of (of the combined family) will depend on it (which makes them vulnerable) - They only think for "today", (and don't plan) for tomorrow. (There is a lack of future planning) - Illiteracy - No Proper facilitation from government and the private sector <p>When we supported some of the families (through this project) and when they started (avoid) the above (identified problems), they slowly started to earn more, and effectively, (as) each of the family members (started to have) their input, and gradually their lifestyle was changing.</p>
E.S. Njeassam	Cameroon	Q3.1/1 and Q3.1/2	<p>1- Fluctuation in market: Fluctuation in market prices imposed by individual buyers</p> <p>2- Governance mechanism: Unsatisfactory approach by local administrators and government officials during land conflicts, etc.</p> <p>3- Human and social capital: Inadequate access to informal education and training</p>
Winnona Merritt	USA	Q3.1/2	<p>I am hosting Nigerians who report that for the past 1 1/2 years violence against farmers in the Middle Belt by armed herdsmen from the North has caused many deaths. Rapid population growth demands more food production from increasing farmland, obstructing old patterns of moving herds to markets, and climate change drives grazing herds south.</p>

Participant	Country	Aggregate	Comment
			As increasing violence in other countries affects farmers as well, is there a place for this discussion?
Kapa Sarjan Reddy	India	Q3.1/2	<p>The three major challenges faced by the small farm holders are mainly;</p> <ol style="list-style-type: none"> 1. Climate dependency: Small holders are not certain on the quantity and quality of the product due to vagaries and uncertainty in the climate in the recent past. Huge number of farmers at loss due to sudden change in climate affecting the pests to the horticultural products, damage to the crops and economic losses. In these cases, Climate or weather warning systems are of no much value. Occasionally, the government policies are a bit helpful in the form of compensatory waiver of crop loans due to nature calamities. 2. Pricing of the agriculture and livestock products: Most of small holders are facing this as a major problem of no minimum guaranteed price for the product. Most of the agriculture produce are perishable and no much facilities for storage. (Most of the storage godowns are in the hands of large farming sectors/commercials). Hence, the small holders are forced to sell the products to the prices as dictated by the commercial agencies/middlemen. Government policies of fixing minimum guarantee price are not being implemented due to the non-cooperation from the commercial vendors. This challenge existed earlier for many years and continues in future also unless policies and implementation part is strengthened. Minimum scope of value addition to the produce at small holders level. 3. Commercialization of input resources: In the past at the village scenario, the input resources available for cultivation at different farmers households are shared with lot of cooperation in Barter system. Nowadays, everything has been commercialized and cost involved. The input resources are shared on commercial lines; hence the agriculture and allied production systems have become more capitalistic for the small holders. The labour force availability in southern India to the small holders is difficult nowadays due to the secured employment with little work contribution from the Government policies and schemes, Hence, the small holders have to resort to the hiring of machines for harvesting of paddy, sugar cane etc. on cooperative basis. All these rise in input costs are hampering the agricultural production at small holders
Seid Muhie	Ethiopia	Q3.1/2	<p>My working region is a highland with altitude between 1500 to 4000 m above sea level, a drought prone (area), highly vulnerable to climate shocks and all farmers are 100% smallholders and practice mixed farming (crop production and animal husbandry).</p> <p>In the recent past they have faced:</p>

Participant	Country	Aggregate	Comment
			<p>1. Frequent drought and loss of production for both crops and animal products.</p> <p>2. Market: the smallholder farmers were advised to specialize in one type of crops through cluster farming (i.e. by sowing their consecutive lands with similar type of crop or vegetables, e.g. by sowing it with only wheat, teff or potato). In the most highland parts at and above 3000m altitude, the farmers have a unimodal cropping season (they produce once in a year). Through clustering, the farmers saw their land with potato (almost the first time to grow potato in most farms and in that scale) and they produced a large amount of produce above the local market can consume. At end they were obliged to sell it at the cheapest price or dump it away.</p> <p>3. Input (fertilizer, pesticide, selected seed, technical support). The farmers do not receive the inputs in time, with the needed quality, quantity and types. The state-run cooperatives are the only one that supply these inputs (fertilizer, pesticide and selected seed). They are not pro-smallholder farmers but pro-state and making profits. Many of the farmers have suffered a lot, as there are malfunctioning of these state-run corporations. I agree with the suggestions what a participant from Pakistan commented regarding these state-run cooperatives.</p>
Ghulam Qadir Arbab	Pakistan	Q3.1/2	<p>1. Lack of Funds This is top most problem of small farms. Government should intervene by provision of low markup interests or in kind loan through provision of inputs such as pesticides, fertilizer etc.</p> <p>2. Awareness / Skills Awareness plays important role in materializing the good agricultural practices. Small farm owners face multiple challenges. Their land holding is small and have scarce resources to invest. Therefore, they cannot make experimental investments on new cropping activity either a new crop variety or mechanization etc. Because if their experience is fail, they have to suffer huge losses to recover in many years to come.</p> <p>Mostly donors give catchy slogans of capacity building of small farmers to increase their crop yield and small farmers are provided training to improve their skills. But unfortunately I have never seen result oriented trainings that have real effect on capacity of the small farms. This is hidden discrimination by donors as they don't measure in true sense the real impact of their interventions rather just depend on paper reports of implementing partners.</p> <p>In simple words - proper capacity building of small farms can play a big role in changing the lives of the small farms.</p>

Participant	Country	Aggregate	Comment
			<p>Why I am saying this because I have also seen some small farms performing great even better than large farms. For example - one of small farmer has been achieving more than double crop yield against the prevailing average per acre yield of that crop in the area.</p> <p>3. Disaster Small farms are not prepared to face any disaster and they lose whatever they have in emergencies. Therefore, there is need to focus more on preparing small farms in a way so they can face disasters.</p>
Solomon Elorm Allavi	Ghana	Q3.1/2	<p>Small farm units in Ghana have struggled to maintain operational momentum due to the fact that their formation is usually external interest-driven:</p> <ol style="list-style-type: none"> 1. A donor-funded project in agriculture aiming to engage small farm units is compelled to create and work with a cooperative. 2. Unavailable structural support for small farm co-operatives after donor-funded projects exit 3. A report on Agricinghana Media since 2001 still repeats the same old cyclical challenge facing small farms: Limited access to credit/finance, Lack of improved storage facilities, and Limited access to markets. <p>It is 2018 and small farm units in Ghana continue to raise these same issues :-)</p> <p>In exception of private-sector managed cooperatives such as Cocoa Abrabopa Association and Masara N'aZiki Maize Farmers Association as stated by Sylvester Of Wienco Ghana, which remain vibrant with self-sustaining initiatives, most small farm cooperatives set up by Government and Development Projects have not survived realities and remain dormant.</p>
Shantonu Abe	Germany/India	Q3.1/3	<ol style="list-style-type: none"> 1. Lack of small-scale processing facilities: Due to various government decisions taken over the years in post-independence India in general and West Bengal in particular, large scale rice mills dominate. This makes it difficult to process specialty rice. Processing for extracting oil from rice bran or mustard is also hard-to-access, making it easy for intermediaries to capture most of the added value. Yet another kind of processing that is missing is for pulses. While many farmers cultivate pulses, they cannot eat it themselves because there are no village level processing facilities. These are just some of the examples I have found in interviews with farmers and NGOs.

Participant	Country	Aggregate	Comment
			<p>2. Lack of advice on integrated farming: While there exist governmental departments for crops, livestock, apiary, fisheries, poultry etc., there is no department for small integrated farms, or for nutrition gardens. This happens mainly because knowledge in research institutes is compartmentalised to specialise in research into one particular group of products. Greater specialized improvement is sought, and the 'highest-yielding' of each category is researched at the expense of finding out optimal combinations of different components. Farmers are often left to experiment themselves, or to specialize in one product, a move that is a risky business proposition.</p> <p>3. Lack of access to means of transport: Farmers usually take their products to the nearest city using a public bus. This is not optimal, since the amount taken to the market is limited, and it takes more time to get to the final destination. Hiring a transport van is expensive, and only pays off if done as a group. The government is trying to address this situation by providing some vans at a subsidized price. However, it is very difficult to get hold of one as the number is limited. Road infrastructure also needs to be improved in order to make deliveries smooth and fast.</p> <p>In addition, excessive groundwater withdrawals because of dry-season cultivation is a problem, as well as demonetisation.</p>
Mohammed Babashani	Nigeria	Q3.1/3	<p>The main challenges of smallholder livestock farmers in Zaria Nigeria:</p> <ol style="list-style-type: none"> 1. Diseases causing production losses such PPR and helminthic infections. 2. Theft due to insecurity and hunger amongst residents. 3. Lack of value chain approach to production.
Prudence Ayebare	Uganda	Q3.1/3	<p>Smallholder farmers in the general context has been a debated issues as far as their definition is concerned either to be defined in the context of the income the farmer earns from the farm or the size of land and many more parameters.</p> <p>The SMF have been progressing since the last 10 years. There has been evolution through many issues including access to technology, climate change, pests and diseases access to finance etc. Through the farmers have been able to sail through in coping to the changing environment.</p> <p>The adoption to technology mainly on the improved seed has been very significant, and accessing clean planting material has been progressing. Before there was a lot of fear that would hinder majority of the Small Holder Farmers (SHF) towards utilizing the new technologies as far as research is concerned.</p> <p>Preparation of some Small Holder farmers to the risks associated with Climate change has also been visible since the</p>

Participant	Country	Aggregate	Comment
			<p>last 10 years. The years before climate change appeared like a hoax to the majority of the farmers and therefore a little preparation was done to this regard towards for example the heavy rains, prolonged dry spell, at least at the moment some small Holder farmers have been engaging in developing the small-scale systems for accessing water for production to cater for the risks associated with climate change.</p> <p>Access to information has also been turned around for the farmers since the last 10 years. Information regarding markets, access to finance, agricultural extension, weather has all been eased with access to modern technology of internet enabled phones where farmers have been able to access most of the information everywhere.</p> <p>More so the attitude and mind set of the majority of the farmers has been positively changing in context that agriculture can meet the majority of the needs of the farmers if well planned. Trending majority are tending to draw towards agricultural production either full time or part time to ensure that they catch-up with the opportunities of the sector. Unlike before where the majority including the youth thought that the activity was not for the educated.</p> <p>From food security to income security as a trend where literary every product from the agricultural sector could be sold or exchanged valuably for the benefit of the farmer. Previously products like avocados, guavas and other fruits could not be sold anywhere in the market. More so, products like animal waste had no monetary meaning previous hover in a trend of about 10 years all products have been able to attract some product some market in one way or another. This has changed for the better.</p> <p>However a the trend has been shifting since the last decade, some is since the demand for money has been raising have negatively changed as well especially on the food safety related issues of the majority of Small Holder Farmers generally, as climate change has also taken toll, aflatoxin and other mycotoxins have also been increasing and many more.</p> <p>Conclusive what has not been attractive by the majority in past years has eventually turned into an opportunity that the majority are taking on and meanwhile other small Holder farmers are resigning from their formal jobs to full time farming that indicates that it is offering better opportunities than some other major sectors.</p>
Said Zarouali	Morocco	Q3.1/3	<p>In Morocco, small farmers contribute a lot to food security. The main challenges are:</p> <ul style="list-style-type: none"> - Ensure the small farmers are ensured to have an income, limiting their risks, and thus limiting them falling into

Participant	Country	Aggregate	Comment
			<p>poverty but rather increasing their life standard.</p> <ul style="list-style-type: none"> - Ensure a level of self-sufficiency of small farmers - Ensure the knowledge and experience small farmers gained in the past (both cultural and the “savoir-faire”- the local knowledge)
Eve Rubillos	Philippines	Q3.1/3	<p>The main challenges are</p> <ul style="list-style-type: none"> - Climate (typhoons, floods) - Minimizing Crop Damage - Need for affordable infrastructure
George Madola	Tanzania	Q3.1/3	<p>Small firms have not been able to produce to the maximum due to unavailability of fund for man power, machinery, purchase of seed, fertilizers and pesticides. Most of families are poor and depend on farms, so it happens that when they need machines to clean their farm, laborer to clear weeds, they need to buy hybrid seeds that are compatible with their soil and climate. The hybrid seed need fertilizer and sometimes are attacked by worms and there again rise the need for pesticides.</p> <p>Climate change in the Kilimanjaro region, especially the Hai district, has severely affected the area rain is now days unpredictable, they have one rainy season: For the past 5 years it use to rain around Mid-February now days it rain in March of every year for the past 3 years. It is now three seasons that it rained in March unexpectedly. The soil is dry and there is no much rain for the season, so farmers need to plant with the very first rain, otherwise no crop, lack of water for irrigation to support food production system. Very few channels of rivers are available but do not sustain farms in the district.</p> <p>Lack of sufficient extension officers to support the knowledge development of farmers, this has challenged farmers in the district, in such that they even plant seed where they are not supposed to because of lack of knowledge of type, quality of soil and type of seed to produce in particular areas.</p>
Dilip Kumar	India	Q3.1/3	<ol style="list-style-type: none"> 1. Shortage of labour 2. Marketing when produce is in smaller quantity 3. Quality of inputs made available
El Hadji Ousmane Ka	Senegal	Q3.1/3	<p>The difficulties faced by the producers were:</p> <ul style="list-style-type: none"> - Problems with the flow of products after harvest - Absence of storage facilities

Participant	Country	Aggregate	Comment
			Today these problems are solved thanks to the cooperation between the producers who met in (collaborative associations that) formed and pushed the government to build storage facilities in the Niayes area. (Particularly for the onion farmers) the state agreed to block import of onions and potatoes to allow local producers to sell their products especially at a good price.
Loupa Pius	Uganda	Q3.1/3	<p>The small holders in this region face a number of challenges. Some of the challenges range from the local situations to national levels.</p> <p>During the livestock assessment exercise conducted in early 2018, most livestock holders in Karamoja sell livestock only during the time of need and livestock marketing is not taken as a business.</p> <p>The main challenges:</p> <ul style="list-style-type: none"> - Land tenure security. - Expansion of large scale farms in need of more land area. - More animals sold at the time of drought. - The policy challenge - No livestock or pastoralist policy guidelines. - The low developed market facilities: Low access to both agro and livestock inputs such as the cold chains - Introduction of hybrids and modern varieties hence the seed rights for farmers undermined.
Katarzyna Panfil	European Union	Q3.1/3	<p>In the European Union very often the main 3 challenges are:</p> <ol style="list-style-type: none"> 1. The main economic challenges regarding family farms are: access to the resources such as: <ul style="list-style-type: none"> - land because of the high price of land. - capital as is often expensive for small farmers, who are unwilling to risk their land as collateral. The new technology is also often too expensive for small scale farmers. - access to markets with scale productivity it is difficult to compete on the market. 2. The major social challenge for family farmers is inter-generational succession, which can trigger the adoption of new technology, the consolidation/or fragmentation of agricultural land, and the restructuring of farm enterprises. 3. The requirement for both economic viability and environmentally sustainable management creates a complex challenge to family farmers. Small family farmers have difficulty to manage related costs. They may lack the information, knowledge and skills needed for modern environmental management.

Participant	Country	Aggregate	Comment
Diana Naikoba	Germany/Uganda	Q3.1/4	<p>The main challenges faced by small farmers in Uganda:</p> <ol style="list-style-type: none"> 1. Unreliable rainfall due to changing climate pattern predisposing the farmers to poverty and food insecurity While this is a problem affecting farmers generally, small farms are more vulnerable because most of them depend on these farms as their source of livelihood. Uganda was in the past blessed with fertile soils and on average adequate amounts of rainfall. Small farms have always depended on natural rainfall. The unpredictability of the onset of the rainy season has made it hard for farmers to timely plant their crops. In addition to this, the rains are more often than not inadequate and yet many if not all have no means of watering their fields artificially. As a result, crop failure occurs and yet many farmers do not have secure off-farm incomes. This has made small farmers vulnerable to periodic food insecurity and increasingly poor. 2. Poor market linkages and post-harvest processing Smallholder farmers are mostly in remote areas. In spite of the recent efforts to improve road density in rural areas, farmers are still not directly linked to the markets. They depend on middlemen who literally rip them off. Selling through middlemen gives them a very low price from their produce. In addition, farmers tend to sell just after harvesting because they do not have means of processing their harvest and prolonging the shelf life of their products. This makes them sell under pressure earning even lesser profits. 3. Lack of access to authentic inputs. Ugandan markets tend to be flooded with counterfeit products. This includes agro-inputs. Purchasing these fake products derails farmers from investing in such ventures if they are unsure of what they buy on markets.
Mohamed Osman Abdulkadir	Somalia	Q3.1/4	<p>On the question of identifying the three main challenges which small farms, in your region, have faced in the recent past:</p> <ol style="list-style-type: none"> 1- Lack of access to finance: The majority of the small farmers in the country face lots of challenges like the cost of land preparation, labour payment, pest control and mechanization cost, having little money from the crop products sold on local market, these aren't enough to support all facilities needed in the field and farm lands, sometimes they sell out their land because of the lend they didn't pay so that's one challenge. Also there aren't any investment banks or micro credit institutions which provide loans to small farms for their activities. 2- Water scarcity: Somalia is geographically arid or semi-arid country with two river flows from Ethiopian highlands. In the past years there has been huge reduction of rainfall and precipitation in the country but the most challenging

Participant	Country	Aggregate	Comment
			<p>is the Shabelle River which dries out in the many times in the two years which affects millions of small-scale farmers along Shabelle River. This low supply of water causes larger loss of crop production and most of small-scale farmers aren't able to dig wells in their field due to lower economy.</p> <p>3- Lack of marketing (market access) and poor transportation: Local and international markets are the destination for very farmer's goods or products, since the collapse of central government in Somalia, all infrastructures were heavily damaged and destructed including local vegetable and fruit markets. Somali products like bananas were used to export to Europe and Middle East for its taste and grade but after civil war, Somali bananas didn't get any international market since then. Transportation is also problematic to the small farms, rough and heavily destructed roads are causing much harm to the Somali small farmers to bring the product from farm to the market easier, sometimes it takes many hours with products getting invested with pathogens because of no health environment.</p>
Onima V.T.	India	Q3.1/4	<p>The findings presented here, are based on my study in South Gujarat region of India.</p> <p>One of the major challenges pointed out by the small farmers was that they lack of proper base price for the crop. The agricultural commodities prices are controlled by the government and they are not revised or not implemented as per the input cost resulting low profitability of farmers. Farmers indicated their inability to negotiate best price for the crop let the market or agents determine prices for their produce; expressed lack of procurement of farm products during bumper harvest due to overhang of excess supply in market affects income and investment in next crop season. Further, farmers indicated lack of minimum support price for vegetables and other crops. These perishable crops during glut in the market are sold at throwaway prices due to absence of cold storage and post harvest processing facilities. Farmers are not even provided with enough money to cover the margin of cost of cultivation. Also the manufacturers of industrial and various other consumer products enjoy the right to fix price for their products and are sold at maximum retail price. But the same right was denied to the growers of food grains, fruits, vegetables and all such commodities grown in agricultural fields and farms. They felt government so far has not taken step to at least fix scientific price for the agricultural produce considering the cost of cultivation.</p> <p>Second major challenge faced by farmers was labour problem.</p> <p>The farmers complained severe shortage of labour during peak seasons for operations like sowing, harvesting in the fields, followed by migration of workforce away from agriculture to urban centers coupled with government schemes like MGNREGA which have facilitated migration of labour to other segments has resulted in labour shortage and consequent escalation of cost of cultivation. Furthermore, farmers expressed agricultural labourers lack skills in carrying out agricultural activities. The skills traditionally required to be farm labour are no longer</p>

Participant	Country	Aggregate	Comment
			<p>sufficient. Also farmers reported about low quality work done by agricultural labourers. All educated folks are engaged in other enterprises and hesitate to be in farm labour thereby migrated labourers almost 50 km away from respective villages are engaged in agriculture work. Even though provided with necessary facilities they maintains low mentality and work less for more labour days and wages expecting farmers to be rich enough to pay them. The increase in food subsidy and access to cheap food grains turned labour group lazy and work less efficiently or spend the additional amount on things like alcohol, betting etc. All these factors have enabled labourers to demand higher wage rates from farmers and in places for shorter working hours. As a result, agricultural wages are increasing every year at a rather high rate and in turn increasing the overall cost of farming with no significant increase in returns.</p> <p>Third major challenge stated by farmers is its "expensive nature". According to the small farmer's calculation, agriculture is expensive, risky and requires back breaking work which does not even bring enough standard of living. Agriculture as an occupation is challenging because, inputs are more expensive and produce prices are lower, making food production, by and large, non-competitive. Farmers are wedged with more hard work load but earning less compared to other jobs. Farmers are stuck in a cycle of producing more, but earning less, the farm gate price - the price farmers were paid for their produce was less than the cost of production. Mismatch between income and expenditure the prices received by the farmers for their produce are compared with the prices they pay for the consumer goods it was observed that the farming community is facing an erosion of their real incomes due to the lower growth of prices of commodities they produce as compared to the prices of consumer goods.</p>
Akpo Akintoye	Nigeria	Q3.1/4	<p>These are some of the challenges faced by our small farmers:</p> <ul style="list-style-type: none"> a. Accessibility to inputs and equipment (no government interventions and no encouragement or support) b. Shortage of labor/incassant herders harassment. c. Unavailable standard measurements for farm produce and lack of a proper farmers market for organic farm produce.
Viviane CdV	Italy	Q3.1/4	<p>(Local) markets there are fantastic places (to sell our produce), but these markets are very far, and very expensive (to get a spot on the market). They do not want to understand that we are small (producers) and (thus limit our profit): we have to pay taxes (both market fees and actual government taxes), transportation and to market our produce (as they are very far away), you (also have to find local accommodation to spend the night).</p> <p>The main constraint is that taxes too high on all our produce.</p>

Participant	Country	Aggregate	Comment
Sanusi Jari	Nigeria	Q3.1/5	<p>Recently we conducted a field survey in the four irrigation scheme areas, Bakalori, Goronyo, Kano River Irrigation Project and Hadejiya valley irrigation scheme, all in North West zone of Nigeria). Rice farmers were asked to list their major challenges in order of priority:</p> <ol style="list-style-type: none"> 1. Lack of access to mechanization services especially during land preparation: farmers in all the irrigation schemes under study agreed that they could not access tractor to plough and harrow their farms in time. "Tractor hiring": the farmers no longer have serviceable tractors in all the four schemes so there is acute shortage of tractors in all the four irrigation schemes. Farmers have to clue to get their farms prepared, in view of the few available units of seasonal migratory tractor hiring service providers 2. Lack of access to quality input such as seeds, fertilizer and chemicals 3. Problem of quieler birds: militating against rice production in all the four irrigation schemes 4. Lack of access to financial services and delay in remitting the credit facilities when they are most needed 5. Delay in payment to farmers by the off takers (buyers)
Annalisa Saccardo	Italy	Q3.1/5	<p>The three main challenges which small farms have faced in my region are:</p> <ol style="list-style-type: none"> 1) how to remain on the market 2) how to answer to consumers' demand of buying high quality food obtained with sustainable systems of production at a lower price 3) how to increase their own income.
Esther Mwende Muindi	Kenya	Q3.1/6	<p>Challenges faced by small-scale farmers in Kenya vary from region to region. In the highlands, the main challenges are:</p> <ol style="list-style-type: none"> 1) Lack of good market for their products leading to either lose perishable products, selling at a throw away price or exploitation by middlemen. 2) Cost of inputs: Most farmers purchase inputs in small amounts and because some are not organized into cooperatives or groups to have a better bargaining power, they purchase at exaggerated prices from middlemen or local input suppliers. This cost affects their gross margins and they cannot break even. 3) Effects of climate change: Most small-scale farmers rely on either rain fed agriculture or irrigation. Climate variability or changing weather patterns experienced over the past few years which has resulted to among others, unreliable rains, drying up of water bodies where farmers obtain irrigation water has made agricultural production for small scale farmers who have limited capital base a big challenge.

Participant	Country	Aggregate	Comment
Bernadette Majebele	Tanzania	Q3.1/7	<p>Three main challenges for small farms in my region particularly the Southern Highlands Zone in Tanzania:</p> <ol style="list-style-type: none"> 1. Post - harvest technology access. The main production in the zone is maize to the tune of 4million MT +. Storage is a serious problem and most of the crop is lost because of storage pests and aflatoxin. 2. Access to inputs. Most of small farms produce their crops through loans which have very high interests. After harvest and paying back the loans during the planting season have to go through the same process of loans – a vicious circle. 3. Market access. Most small farms sell at farm gate. Small farms are vulnerable to price changes particularly for maize. Since they do not have efficient storage technologies cannot keep their crops longer and hence have to sell their maize at harvest with marginal prices.
Yakubu Musah	Ghana	Q3.1/7	<p>In Ghana small holder farmers have several challenges. For example in northern Ghana rice farmers face some challenges from production through harvest and marketing.</p> <p>The rainfall pattern is such that all operations have to be carried out in a six-month window. Thereafter comes the dry period or drought. While farmers are struggling for a market, there is a large processor that is also struggling for raw material (rice).</p> <p>The problem is that farmers hitherto were not organized and the ecological zone is such that if farmers are not able to harvest early, so the rice loses a lot of moisture. This means the rice has to be parboiled before milling, which in turn means that farmers loss about 25% of the value.</p> <p>The market in Ghana gives a premium price for "straight milled rice" which have to be milled at relatively higher moisture otherwise it is pulverized. Farmers say that they are not able to mobilize enough labor to harvest on time, at the right moisture content (even if the labor was available I wonder if they could pay for it during a period where all other crops are also being harvest). The milling company also says farmers only supply inferior rice.</p> <p>To mitigate this problems the mill came up with a proposal (the project is called "Shinkafa Buni" literally means "Rice is Wealth") to support farmers with inputs, extension and some mechanized harvesting, so they can supply quality grains to the mill for a premium price (similar to the Masara N'arzuki case I mentioned in an earlier input). The project is still in its early days, but my experience tells me the project will fail because the soft skills needed to bond the farmers together have not be properly developed and the company cannot control "side selling", which is bound to happen.</p>

Participant	Country	Aggregate	Comment
James Chacha	Tanzania	Q3.1/8	<p>Three main challenges which small farms have faced in the recent past include:</p> <p>i) Absence of connectivity/link between farmers and researchers' findings. This has been an ongoing problem though, since most of what is being obtained from the research arena is hardly disseminated back to the farmers. Research findings and developments ought to be communicated back to the farmers for improvement from their crude practices. New and practical ways need to be identified that will be user friendly to small holder farmers, most of whom are illiterate and are used to 'tangible' stuffs.</p> <p>ii) Lack of farm inputs. These include lack of improved seeds, fertilizer, chemicals such as pesticides/herbicides as well as improved tools. Small farms may at times provide greater yield, but with the continual utilization of the same farms every year, mechanisms that will ensure the soil fertility is maintained if not refreshed need to be put in place. Bad enough, given the low financial ability of the small holder farmers to purchase the right kind of fertilizer, soil quality has been deteriorating resulting to decrease in yield over time. Moreover, losses occur due to the use of crude harvesting and processing tools, leave aside the poor and primitive storage mechanisms and tools. This has also led to huge decreases in the quantity and quality of produce coming from the farms.</p> <p>iii) Poor orientation to modern agricultural technologies and agricultural know-how. This goes back again to the researchers, practitioners and extension officers. From my point of view, the way the new practices, knowledge as well as newly introduced technologies are brought to the small farms is devastating. This is because the procedures are biased, as you can find that only small groups of smallholder farmers are reached, most of whom are members of various groups or associations or cooperatives in the village. So, those who are not members of a group or cooperative have often been obtaining second-hand information on new technologies and knowledge, and at times none at all. It is therefore not surprising to find that from the same village, one small farm is productive and the other one (even adjacent to it) is unproductive. I think mechanisms should be developed to ensure that in the end, all small farms/farmers are beneficiaries of new agro-technologies.</p>

Participant	Country	Aggregate	Comment
Mahesh Chander	India	Q3.1/9	<p>I agree to the contribution of James Chacha (3.1/8), who talked about absence of connectivity/link between farmers and researchers' findings as one among the challenges small farmers face. In India too, we have a huge research and extension infrastructure for agricultural development. Yet, over 59% of the farm households in India received no assistance from either government or private agricultural extension services during 2013 (NSSO Survey 70th round 2013: Situation Assessment Survey of Agricultural Households in India). Of the 40.6% households who received extension assistance, only 11% of the services came from physical government machinery- i.e. extension agents, Krishi Vigyan Kendras and agricultural universities. More farmers depended on other progressive farmers (20%), media including radio, TV, newspaper (19.6%) and private commercial agents (7.4%).</p> <p>The public extension system is unable to reach many farmers in India; it is estimated that 17% of farmers get their information from other farmers and 13% from input dealers. Over 90% of the small-scale farmers continue to remain detached from new technologies and guidance from public research institutions.</p> <p>No wonder, agricultural productivity for major crops and livestock species in India is still lower than that of the world averages. Nevertheless, Indian farmers have found a new breed of enterprising farmers—the AGRIPRENEURS—who are the role models to follow!</p> <p>Some creative farmers across India are innovating and applying suitable technologies and practices developed by them or integrating in their farms the technologies developed elsewhere. This type of farmers' connection to farmer extension services, thus, is gaining ground in India. Such technologies have better adaptability and resilience to handle climate change impacts, too.</p>
Yoanna Ivanova	Bulgaria	Q3.1/10	<p>The main challenges I see are:</p> <ul style="list-style-type: none"> - Switch to industrial farming - Disinfection of production areas - Restrict access to major distribution channels - Lack of financial resources
Boyko Doychinov	Bulgaria	Q3.1/10	<p>The main challenges are:</p> <ol style="list-style-type: none"> 1. Low Competitiveness 2. Lack of marketing and logistics 3. Access to markets

Participant	Country	Aggregate	Comment
Sami Elhag	Sudan	Q3.1/10	<p>The main challenges I see, are:</p> <ul style="list-style-type: none"> - Fluctuation of rain and - availability of machinery service providers

Q 3.2 - Share specific examples of what types of adaptations and innovations have helped small farms to cope with these challenges

Participant	Country	Aggregate	Comment
E.S. Njieassam	Cameroon	Q3.2/1	<p>Identifying the three main challenges of small farms as:</p> <ul style="list-style-type: none"> - Fluctuation in market - Governance mechanism - Human and social capital <p>The examples of adaptations and innovations that helped small farms cope with these challenges:</p> <p>As a means to cope with challenges towards fluctuation in markets most of the farmers have here have engaged in the creation, of cooperatives societies where small farmers come together to determine (the) prices for their goods and to negotiate a common ground for the marketing of their goods.</p> <p>To cope with "governance mechanism", groups of farmers engage in similar product cultivation have, through societies and cooperatives, formed a leadership of governance which is registered and recognised by the state and local administrative authorities. Through these recognized groups, their local administrators and NGOs can easily negotiate disputes with them and organise training sessions respectively for them, to improve their lives and output, and to reduce conflict among small farmers</p>
E.S. Njieassam	Cameroon	Q3.2/3	<p>To cope with challenges towards fluctuation in markets. most of the farmers here, have engaged in the creation of cooperatives societies where small farmers come together to determine price for their goods and to negotiate a common ground for the marketing of their goods.</p> <p>To cope with governance mechanism, groups of farmers engage in similar product cultivation through societies and cooperatives, forming a leadership of governance which is registered and recognised by the state and local administrative authorities. Through these recognised groups their local administrators and NGOs can easily negotiate disputes with them and organise training sessions respectively for them to improve their lives and output, and to reduce conflict among small farmers</p>
Eve Rubillos	Philippines	Q3.2/2	One recent innovation I learned (from a few fellow farmers / farm owners) is planting bamboo in flood prone farm lands. I myself am working on implementing this into my farm, with the goal of transforming it into a bamboo farm.
Mayank Jain	India	Q3.2/2	I would like to highlight some service innovations we have incorporated while reaching out to small farmers:

Participant	Country	Aggregate	Comment
			<p>a. https://www.linkedin.com/pulse/low-cost-innovations-agriculture-extension-services-my-mayank-jain/ b. https://www.linkedin.com/pulse/innovations-agriculture-extension-services-mayank-jain/</p> <p>"Adult learning is not widely practiced in the extension services which are predominant in our country. Farmer are often told what is right ("modern techniques") and what is wrong ("traditional practices"), what to grow (often, cash crops), and where and when to market their produce. This approach to extension promotes dependency on outside inputs and expert advice (self-concept). It denies farmers the choice of what they want to learn (motivation). It does not focus on the farmer's most immediate need to grow more food for their family (time perspective). Nor does it take into account a farmer's accumulated experience of the environment where their crops are grown."</p> <p>Few learning which we have incorporated from our past two years of experience:</p> <ol style="list-style-type: none"> 1. Rather than focusing on concept of self-note, what we are offering; we have taken into account the farmer's accumulated experience of local environment and crops grown. 2. Incorporating thoroughly tested experiments in the local conditions. We go by doing our small experiments on the demo land which we have prepared for testing out spacings, seeds, timelines etc. 3. Focus on low cost innovations e.g seed quality, seed treatment, adjusting timelines for optimum yield and market driven approach 4. Seeing is believing, so we practically demonstrate and make them do the same in the field do to it the preferred way 5. Do not leave any class of farmers. All contribute to each other and inclusive development.
Sanusi Jari	Nigeria	Q3.2/2	<p>In an effort to fulfill the mandate of our university (Federal University Dutsin-Ma Katsina State, Nigeria) in bringing solutions to challenges facing farmers in our host community, the Department of Crop Production and Protection and the Department of Agricultural Extension and Rural Sociology initiated a project called "Climate Smart Agriculture" that aimed at helping farmers to adopt climate smart agriculture practices.</p> <p>Principal Activities of the project</p> <ol style="list-style-type: none"> 1. Capacity Building on Climate Smart Agricultural practices and sustainable management of natural resources for rural poor, smallholders and family farmers, to increase their productivity and income in the context of mitigation and adaptation to climate change. 2. Mapping and Characterization of areas affected by climate change and develop strategy, framework (action plan) and technology to address the challenges posed by climate change 3. To Build the capacity of small holder farmers to enhance their capacities to adopt more integrated, sustainable

Participant	Country	Aggregate	Comment
			<p>and resilient climate smart production systems</p> <p>Methodology: 10 rural communities were selected and each community selected 10 people to receive capacity building on Climate Smart Agriculture Practices. Due to the nature of our location in semi-arid environment, water scarcity constitutes the single most important obstacle towards sustainable crop yield. Farmers freely selected which technology is most appropriate to their needs. Therefore, farmers have their capacities developed in the following areas:</p> <p>I. Water harvesting technology such as Zai pit technology II. Half-moon tillage III. Planting of food crops beside young turf of <i>Habia thibaica</i> IV. Pitcher irrigation technology</p> <p>Zai technology as a veritable tool for enhancing crop yield in the semi-arid areas of Katsina State Nigeria.</p> <p>After having their capacities developed in the above thematic areas, they were assisted to set up a farmer field demonstration plot in their respective villages. The first set of farmer field school demonstration plot was a huge success particularly Zai technology and pitcher irrigation were very popular among farmers in all the locations. Adoption of Zai technology in some locations with frequent occurrence of prolong drought during the growing season which sometimes lead to total crop failure.</p> <p>In such communities, Zai technology provides a sustainable solution to uncertainty and risk of total crop failure due to drought. The farmer field school that demonstrated Zai technology recorded unprecedented bumper harvest which greatly influenced mass adoption of the technology by farmers in all the locations in 2017. We are anticipating greater adoption of this technology this coming cropping season as a result of successes recorded in the last two years. The appearance of an entrepreneur who mobilizes young men into a group as service providers that dig the Zai pit holes for a fee is a development that is further making the adoption faster and easier. Farmers that practiced Zai pit technology in 2016 & 2017 have recorded very high yield of up to 2.7t/ha of sorghum, thereby enhancing their family nutrition and food security, income and livelihoods.</p>
Said Zarouali	Morocco	Q3.2/3	<p>For me, this is linked to the mechanisms for the governance of agriculture (e.g. agricultural policies), and the cooperation/cooperatives of farmers. It is important that these agricultural stakeholders are properly represented in the government -- in the case of Morocco specifically the cooperatives of olive oil production.</p>

Participant	Country	Aggregate	Comment
Loupa Pius	Uganda	Q3.2/3	<p>I would like to share some experiences pastoralists and crop farmers use to mitigate or manage some of the key challenges in regard to "Strategies used by small farms to overcome challenges"</p> <p>Pastoralists in Karamoja (North Uganda) handle such cases through:</p> <ol style="list-style-type: none"> 1. Strategic Mobility 2. Herd diversification 3. Destocking and restocking at the challenging time. 4. Herd separation females from males in livestock 5. Livestock to markets 6. Paying out as bride price <p>Crop farmers:</p> <ol style="list-style-type: none"> 1. Sharing family land 2. Conservation Agriculture practices 3. crop diversity 4. group labour
Viviane CdV	Italy	Q3.2/3	<p>- We are actively using tourism to attract people onto local markets: Provide (on the markets) a quality of crop and livestock - better presentation of our products in a market, the presentation of your own farm, the history of the farm, the history of people eating your product - also the medicinal part of it, with the farms it becomes a zone of quality. This makes the people become curious of your story...</p> <p>- Apart from (marketing) our produce as a "food" or "beverage", we are also trying to look for a range of end-product: cosmetics.</p>
Annalisa Saccardo	Italy	Q3.2/4	<p>In Italy, there is not a problem of access to food but the question is how farmers can be competitive on the market maintaining or increasing their income.</p> <p>Coldiretti, the most important farmers' association in Italy, has introduced, for the first time, the system of farmers' market to support small and medium farms.</p> <p>This model could be adopted in other countries too. Actually, small farms in Italy are supported by actions provided in Rural Development Plans of CAP and towards the creation of a net called Campagna Amica ("Friend country") founded by Coldiretti.</p> <p>It is a system, created in 2008, to empower the role of small professional farms on the market (small self-</p>

Participant	Country	Aggregate	Comment
			<p>consumption are not considered by this system because they have not an active function in the development of territory).</p> <p>The net has been created because traditionally small farms have difficulties to get good prices for their products because the added value of intermediation is gained mainly by big retailers.</p> <p>On the other hand, when farmers have contracts with big retailers the margin of income is reduced because the price is imposed by the retailer.</p> <p>Small farms need to maximize the income cutting the intermediate relations with retailers.</p> <p>"Campagna Amica" is formed by farmer markets, farmers shops, farmers restaurants, Purchasing and Selling Groups, and urban vegetable gardens, in all the national territory to sell directly to consumers only 100% made in Italy agricultural products.</p> <p>The participation of the farmers or of other subjects to this net, need to subscribe the respect of specific regulations according to the kind of selling point (farmer market, restaurant, food shop, etc.).</p> <p>There is a severe system of "checks" and who doesn't respect the rules of this regulations are excluded by the net and can't use "Campagna Amica's" logo and branding.</p> <p>The preliminary condition is that the farm can come into the net only if it is associated to the farmers' organization and it is accredited.</p> <p>The practice is managed at a local level by Coldiretti that has the direct relations with the farms. The farm is accredited if accepts to be subjected to regular checks, the products must be obtained by agriculture and 100% made in Italy.</p> <p>"Campagna Amica" has created an internal group of controllers, an external group of security and there is a third certification organism. Farmers can obtain the logo of "Campagna Amica" when a single farm sells its products:</p> <ol style="list-style-type: none"> 1) to the consumers on its own site; 2) to the agromarkets associations that are created by the farmers to organize the farmer market. This association is ruled by a statute that provides how the farmers must behave (f.i. the products they sell have to be thoroughly produced by the farm).

Participant	Country	Aggregate	Comment
			<p>Coldiretti has made a guideline giving indications about the conditions that can't be derogated by the regulation of a farmer market so that they have a common standard. The regulation can be modified only with more stringent rules.</p> <p>The advantages of this system are:</p> <ol style="list-style-type: none"> 1) visibility to consumers towards the use of a single brand and promotional actions to make it known in all the national territory (use of gadgets, cloths and advertisement material printed with the logo of the net); 2) strength: all the sales points of the farmers create a net that make it stronger and enhance the development of agriculture and the valorization of local agricultural products; 3) authority: all the points of the net are included in a project of the national food chain; 4) the networks to ensure the right economical value to the agricultural products of small farms with advantages for consumers too; 5) to make (the brand) known to consumers. (The role of) national and local products make the public understand all the advantages to eat fresh, seasonal and traditional products at a lower price. <p>A farmer can open a food shop too where he/she has only local products that must be directed by a farmer or by a seller, always with the brand. It is possible to create a stand in a store or a space in a distribution center. In the food shop, having this brand, it is possible to sell national products with "Friend Country" mark or products of National Food Chain created by the farmers' association.</p> <p>The net provides to restaurants too. They must have at least a plate done with ingredients produced by farmers of the net.</p> <p>Coldiretti has obtained, from the Italian government, a law that allows a fiscal benefit to famers who practice the direct selling. The farmers who sell their own agricultural products directly to consumers for examples in farmer markets do not pay VAT (value added tax).</p>
Oladeinde Kayode	Nigeria	Q3.2/5	Adoption of good agronomic practices and cultivation of >1ha mechanized farm, help farms mitigate against challenges such as insect pest, cattle herds invasion, and price shocks, good agronomic practice helps sustain food systems as it can be a buffer against severe losses.

Participant	Country	Aggregate	Comment
			For instance, the challenge of birds devastating rice farms can be addresses by cultivating a large expanse of land with little or no trees, as the birds will consume insignificant proportions of the rice seeds, which will not have effect on their yield. Also, regrowth of cassava farms and still achieving optimum yield after herds invasion is imminent.
Yoanna Ivanova	Bulgaria	Q3.2/6	The main examples of adaptation and innovation, I see are: Organic food production and the revival of the farmers markets in Bulgaria, to help small farms to cope with some challenges

Topic #4: How small farms address future challenges

Q 4.1 - Within your region, what are the three main challenges that small farms face in the future? Why? Are these different from past challenges? If so, why?

Participant	Country	Aggregate	Comment
David Harris	Kenya	Q4.1/1	<p>I think this recent paper https://www.cambridge.org/core/journals/experimental-agriculture/article/intensification-benefit-index-how-much-can-rural-households-benefit-from-agricultural-intensification/7580F3F01DEEC06482D5D64DD8CC9EE5) will give people some idea of the magnitude of the problem facing rural households with small farms. The analysis covers Sub-Saharan Africa but is pertinent to other areas where land is a limiting factor. (doi: 10.1017/S0014479718000042)</p> <p>Abstract:</p> <p>Sustainable intensification (SI) of agriculture is the predominant objective for agricultural research and extension worldwide. Researchers and policymakers consider SI to be essential to avoid global hunger, improve human nutrition and reduce rural poverty while avoiding all manner of environmental disasters.</p> <p>To achieve these global public goods requires a large number of rural households – ‘small farmers’ – in less developed countries to improve their agriculture. Household size and farm size from 11,789 households in 15 countries from sub-Saharan Africa were used to calculate an intensification benefit index (IBI) that reflects how much a household will benefit if intensification occurs.</p> <p>IBI is defined as the increase in personal daily income (cents/person/day) as returns to land (dollars/hectare/year) increase. Actual net farm income from 160 rural households in each of three countries was compared with their IBI values to explore the gap between potential intensification and current smallholder farm performance.</p> <p>Fifty percent of all households had IBI values less than 0.075 cents/dollar, 70% less than 0.125 cents/dollar and 90% less than 0.225 cents/dollar. Returns of \$1000/ha/year would result in fewer than 15% of households crossing a \$2/person/day poverty line; \$2500/ha/year would be required to lift 50% of the sample above the line; and even with \$4000/ha/year, more than 30% of households would remain below the line.</p> <p>Since mean net returns from three sub-sampled sites were only \$78, \$83 and \$424/ha/year the gap between potential- and actual performance is large but, theoretically, amenable to closure through adoption of improved technologies. However, surveys have shown that the available technologies would struggle to bridge the gap</p>

Participant	Country	Aggregate	Comment
			completely for rural households with small farms. For many small farms, the gains from adopting improved technologies are unlikely by themselves to lift them out of poverty and so might not be as attractive as scientists would wish.
Ruerd Ruben	The Netherlands	Q4.1/1	<p>Smallholder farms (and agricultural farmer cooperatives) tend to face three major problems:</p> <ol style="list-style-type: none"> 1. Unfair market linkages; many smallholders face constraints w.r.t. access to input markets (seed, fertilizers, chemical) and have no credit access to invest in cropping system upgrading. Similarly, smallholder's relationships to output markets are dispersed and market prices are usually highly fluctuating. Some options for contract farming offer opportunities for linking input and output markets. But the competitive position of many smallholders is still too much based on cheap/undervalued family labour, without receiving a fair remuneration for their efforts. 2. Climate change & adaptive capacity: cropping calendars are strongly changing due to erratic rainfall and temperature changes. In a similar vein, areas for tree crop cultivation (coffee, cocoa, fruit) are shifting upwards, thus potentially affecting forest reserves. Smallholder farmers' adoption capacities of new farming practices and their innovation potential of farming systems changes are severely constrained due to insecurities and risks. 3. Internal organization & trust; some farmer communities and rural coops are internally divided and have problems to adapt to changing demands from their members and from the external environment. Consequently, good governance mechanisms for internal democratic decision-making are not in place. Many service provision activities (technical assistance, credit, marketing) cannot reach smallholder farmers in more remote areas. Small farmers' relationships with other value chain partners are constrained due to limited trust, low product consistency and low loyalty.
Arbab Qadir	Pakistan	Q4.1/3	<p>1. Irrigation water shortage Large farm owners are mostly influential and discriminate water rights of small farms. They cultivate more land and resultantly little water is available to small farms. Even in Tail areas farming activities have stopped due to unavailability of water. This e-conference fellows perhaps may not agree that I have seen owners of more than 50 hectares doing daily wage work as their land have become barren due to unavailability of water. This is most serious future challenge for small farms</p> <p>2. Climate change Climate change has also disturbed cropping activities and small farm owners either not aware or not capable to</p>

Participant	Country	Aggregate	Comment
			<p>address those challenges. The situation may worsen in future if not taken care for small farms</p> <p>3. Corporate farming Corporate farming is also big threat for small farms. However, corporate farming has not started destroying small farms as it did in developed countries like USA but in some areas of our province corporate farming have started. They have managed their own irrigation water canal leaving no water for other small growers in the area. If corporate farming trend grew more in future then i am sure small farms will become part of history.</p>
Castello Zodo	Benin	Q4.1/3	<p>The external environment of agricultural enterprises has always been in motion. The recent years have witnessed accelerating changes and the pace does not seem to slow down. For the coming years, among the elements of the environment to consider, there is:</p> <ol style="list-style-type: none"> 1. The globalization of the economy 2. Emerging countries on the supply and agri-food side 3. The protection of the environment (ecology) 4. Energy resources 5. Biotechnologies 6. Consumption trends ... <p>The rules of trade will make life easier for productions and exporting countries, but will complicate for productions and countries that work with protectionist measures. Fuel prices are expected to remain high, but biofuels could benefit. Consumer trends will benefit of some productions and will disadvantage others. The protection of the environment might be beneficial in the long run, and our measures put us ahead of the others, who will have to get there sooner or later. Biotechnology could bring lower prices and potentially risks in the long run.</p> <p>Are these threats or opportunities? It depends on the point of view and the attitude. Of course, there are challenges to overcome. This text presents eight of those, which are strategic, in the long term, or tactics, they relate more to daily operations.</p> <p>The strategic challenges are:</p> <ul style="list-style-type: none"> - Choose your market (convenience or added value) - Develop a transferable business - Work together

Participant	Country	Aggregate	Comment
			<p>- Cultivate knowledge.</p> <p>The tactical challenges are:</p> <ul style="list-style-type: none"> - Have a positive attitude; - Operate an efficient business; - Control the debt; - Manage resources and human relations.
Paul Iji	Australia	Q4.1/4	<p>We are completing a major project, investigating the twin problems of feed quality and supply to the small- and medium-scale (SME) poultry farmers in Tanzania. We perceive these problems as prevalent in other parts of sub-Saharan Africa. Our investigations (survey) confirmed the severity of these problems, as perceived by farmers. We conducted further investigations into the quality of feed that is available to the broiler chicken farmers in three regions of Tanzania. Feed quality was extremely poor, with protein content in the starter diets being sometimes as low as 16 %. Apart from low concentrations, there is also amino acid imbalances in the diets, and the energy and mineral contents are also inadequate. We believe that the quality of the feed is low due to poor ingredient supply but most importantly, lack of feed formulation knowledge. The result is inability of producers to get birds heavier than 2 kg even at 42 days of age. Raising birds for longer periods of time is a drain on infrastructure, including housing, power and water supplies. We believe that these problems have persisted for a long period of time and will persist into the future. Our immediate challenge has been aimed at developing diets that can be recommended to producers in these sectors and possibly larger scale producers in sub-Saharan Africa.</p> <p>A secondary challenge that the SME producers face is inability to compete with large-scale producers, particularly new international entrants into the industry. While large scale production will promote overall food security, SME producers are deprived of a means of livelihood, which affects their food security.</p>
Mahesh Chander	India	Q4.1/4	<p>Small (1-2ha) and marginal farmers (<1ha) account for more than 80% of total farm households in India. But their share in operated area is around 44%.</p> <p>The major challenges in future for small holders in India are:</p> <ol style="list-style-type: none"> 1. Fragmentation of landholdings making mechanization difficult- they have to pool up to be efficient, so cooperation whether vertical or horizontal including cooperatives, could be the key in making small scale farming efficient.

Participant	Country	Aggregate	Comment
			<p>2. Linking with remunerative markets- individually they cannot broker good margins for their produce, collective marketing of produce could be beneficial. The Farmer Producer Organizations could be a big help in linking farmers with value chains and in buying inputs and arranging extension services. Direct producer- consumer linkage is also a trend, wherein, individual producers are supplying primary food products to consumers eliminating the intermediaries, but this system has its own limitations when replicated in large scale.</p> <p>3. Lack of education and skills at the level of farmers coupled with processing infrastructure in rural areas also limits the reach of small-scale farmers to value added agricultural products market, thus, depriving them of profits earned by processed food segment. Fruits and vegetables for the want of processing and storage facilities yield either low profits (due to glut) or rot. The tomatoes, potatoes, peas, mangoes etc. are some examples where farmers are often forced to market their products at very low or no returns.</p> <p>Many of you might be interested to look into a consolidated document on "Small Farmers in India: Challenges and Opportunities" to know the trends in agricultural growth, cultivation patterns, participation of small holding agriculture, productivity performance of small holders, linking small holders with markets including value chains, role of small holders in enhancing food security and employment generation, differential policies and institutional support for small holders and, challenges and future options for small holding agriculture including information needs.</p> <p>Here is this paper <http://www.igidr.ac.in/pdf/publication/WP-2012-014.pdf> which answers most of these questions. It also provides lessons from the experience of India on small holding agriculture for other countries. On similar lines, there could be a kind of country reports on Small Farmers in different countries.</p>
Teresa Pinto Correia	Portugal	Q4.1/4	<p>I have a question to Castello Zodo, Benin. (Moderator: Castello provided input in Q4.1/3)</p> <p>The list presented (in Castello's input) is rather interesting. Specially the strategic and tactical issues. They seem like a good summary of conditions often referred to as required for small farms to succeed.</p> <p>But if a small farm does not have the skills (Moderator: or ability/opportunity) to collaborate, how does he/she get these skills? If you do not have access to knowledge or do not know how to use it, how can these skills be improved? There are drivers that need to be there otherwise the solutions do not work, and "the acquisition of drivers" is my main question.</p>

Participant	Country	Aggregate	Comment
Mahesh Chander	India	Q4.1/5	<p>This is in context of Teresa Pinto Correia's question (Q4.1): But if a small farm does not have the skills to collaborate, how does he/she get these skills? If you do not have access to knowledge or do not know how to use it, how can these skills be improved?</p> <p>We are mostly addressing production, processing, marketing, credit/financing, and logistics etc., ignoring human angle to the development process. In other words, giving more importance to hard skills than soft skills. When we talk of cooperation, collaboration, association, organization, often soft skills matter more than hard skills.</p> <p>In India, small scale farmers are being asked to organize into Self Help Groups (SHGs), Milk Cooperatives, or more recently into Farmer Producer Organizations/ Farmer Producer Companies. The success of these groups depend much on their ability to understand each other well, which in turn depend on their abilities in soft skills like Communication (oral and written), Creativity, Problem-solving, Collaboration, Adaptability, Positivity, Learning from criticism, Working under pressure, Conflict resolution etc. While in Business organizations, there is strong emphasis on soft skills training of employees, in agricultural/farm production this is largely ignored. I believe, time has come when we should start paying attention to soft skills training of farmers to reap maximum benefit from farming especially when farmers are being encouraged to come together and form groups and association to negotiate better deal for themselves by cooperating and collaborating.</p> <p>I thank Teresa for bringing this issue to our notice stimulating us to think on these aspects as well while discussing a lot of hard skills aspects of agricultural production. She has raised this issue elsewhere too citing example of Southern Europe, where many groups in society, do not have the soft skills needed for cooperation to be established with a larger group, in the long run, while asking the question: "Is this an issue in other countries too?" Certainly, I believe the Self Help Groups (SHGs) and Cooperatives in India could have been far more successful if they had or imparted good soft skills. Hope the stakeholders will take note of this important dimension, while talking of cooperation, collaboration, associations etc.</p>
Vivian CdV	Italy	Q4.1/6	<p>This is a reply on a query from Teresa Pinto Correia (Q4.1/4) related to this topic: How do small farmers get access to knowledge and skills?</p> <p>Vivian replies:</p> <p>You must consider that a group is rich in ideas, knowledge and have their own spirit of initiative. Even in a group, people are independent: they consider working together on a topic during one season, while the rest of the year they work on other things (for which they might be competing)</p>

Participant	Country	Aggregate	Comment
			<p>Yes, they need knowledge to improve their experience/knowledge. In Italy, the skill and knowledge they need, one can find in agriculture centers either in their immediate neighbourhood, or in close-by.</p> <p>E.g. how we work with local farms collaboratively to connect them with consumers:</p> <ul style="list-style-type: none"> - we develop a product logo (creating an identity, and having them work together on the logo) - the farmers have to choose on which items they want included in the marketing - they have to choose to agree on the same price by item - they have to agree to keep the same price even if one farmer has more land/produce than the other - we work together to improve the promotion of the items of your group - We often link the group with tourism, as a market <p>(Moderator: which illustrates the simple principle: You want a group to work together: well, bond them through a common project in which they have common interests)</p>
Sandra Sumane	Latvia	Q4.1/7	<p>On the base of small farmers' and experts' opinions expressed in SALSA research, small farmers' market access will continue to represent a major future challenge for Latvian farmers, but in a slightly modified context. Latvia experiences quite a strong depopulation, rural areas are becoming even more sparsely populated, which means small farmers have increasing difficulties to find a sufficient number of local consumers – their principal clients so far. Proliferation of bigger retailers and other food businesses have been squeezing out of the market smaller food businesses who have provided market access to numerous small farmers. Consumer food purchasing practices which during last decades have been increasingly favouring supermarkets have not helped small farmers either. The principal question is how to (re)establish contact with local consumers and how to access consumers in farer markets in the cities.</p> <p>Cooperation among farmers, as mentioned among several conference participants, might be a solution. From previous studies of cooperation in Latvia, we find that a professional non-farmer manager is one of the key factors; the question of farmers' soft skills remains open.</p> <p>But there are also other solutions which involve active participation of other stakeholders. There are other stakeholders who have power to improve small producers' market access. National food production and distribution regulations and taxation regulations can be better adopted to small farmers' situations (f.i., differentiated personal income tax), and support measures can be developed that better target small farms' needs (like, small-scale</p>

Participant	Country	Aggregate	Comment
			<p>investment programs in agricultural production).</p> <p>Local municipalities can provide valuable support to organise small producers' market initiatives (good examples from Latvia include supporting establishing local farmer markets, subsidizing a cooperative's manager, providing facilities for a cooperative's shop, developing municipal food strategies that favour local producers).</p> <p>Next to various governments, consumers can take an active role in supporting local producers. This is already happening through various consumer driven food initiatives involving small farmers. However, these groups might need some organised advice, learning platforms to avoid learning by doing each time and to disseminate their experiences more effectively.</p> <p>Hand in hand with growing consumers' interest in local food, there is an increasing number of food businesses launching themselves in this field. Producer organizations, associations and existing cooperatives are still much dominated by bigger farmers, and there is a margin in their policies and practices to better involve small farmers. Agricultural training can better address marketing knowledge and skills, and agricultural advisory could integrate knowledge needs of various stakeholders and serve as knowledge broker between them. So, we argue that there are needed joint efforts, not only from small farmers, to improve and profit from their improved market access.</p> <p>Small farmers will continue to tackle this challenge of market access individually (by maintaining personal market channels linking them with their individual customers) and also by using available collective platforms, like municipal farmer markets, online platforms for local food marketing and selling.</p>
Renars Sturmanis	Latvia	Q4.1/7	<p>Small farms face many challenges. The challenge in Latvia (and probably elsewhere) is population decline, especially in rural areas. Which, on the one hand, raises the problem of finding staff (especially during harvesting), but on the other hand, the number of potential buyers for production is also decreasing. Moreover, for the remaining buyers small farms have to compete with local large farms and import production (not related to the cereals sector, where the products are largely traded on the world market thanks to the cooperation).</p> <p>Another challenge - access to finance for small farms. For various reasons, small farms are not among the priorities of commercial banks. Other potential funders (venture capital, business angels) also give priority to projects with high profit margins (mainly in the IT area). The lack of funding from private financiers shrinks the opportunity to grow. Therefore, the only way to develop is national support and European structural funds.</p> <p>The challenge is also know how to operate efficiently and maximize the benefits from available resources. Although,</p>

Participant	Country	Aggregate	Comment
			it seems that to grow tomatoes or potatoes is easy, there are, however, a lot of things that can improve both the cultivating technology itself, as well as product sales, etc. Therefore, the importance of knowledge is high. In this context, I would like to hear other opinions and experiences on how to develop small farms, the role of business incubators / accelerators in the development of small farms? Importance of peer to peer learning?
Raja Rathinam	India	Q4.1/7	<p>Most of us know that the small farms are having more challenges. We have to work out strategy for helping the small farms as per the local needs with the support of FAO and the UN.</p> <p>For example, in India, helping the small farmers are much easy in certain part of the country like Gujarat, Karnataka etc. But it is difficult in certain other States Like Uttar Pradesh. Therefore UNDP has come forward to initiate the support to some extend.</p> <p>However the issue of helping the small farmers are still challenging in Uttar Pradesh because of the local problems, poor infrastructure and less cooperation among the farmers. Still we have developed a system so that the local production can be used locally through technological, managerial and innovative approach. This lead to help in productivity improvement and income generation of small farmers as compare to other regions within the specified area. This is the achievements which we have got for the past few years.</p> <p>Now it is to be expanded and continued with the help of professional like you so that the combined efforts will benefit the farmers as Dr. Kurien, the Father of White Revolution has done in this country.</p>
Gary Vaughan-Smith	UK/Tanzania	Q4.1/7	<p>SilverStreet Capital invests into the African agricultural sector and its primary goal is to help develop agricultural value chains which support small-holder farmers. We operate in Southern and Eastern Africa my comments below particularly apply to our Tanzanian project where we work with 9,000 grains farmers, ~two-thirds of whom are women and, over 20,000 poultry farmers, over 80% of whom are women.</p> <p>The key challenges going forward:</p> <ul style="list-style-type: none"> - Most crops grown by small-holder farmers have low value e.g. maize and cassava. - Crop yields in Africa are substantially lower than elsewhere in the World. As an example, maize yields average 1.5t/ha on smallholder farms in Southern and East Africa vs 7-10t/ha achieved by commercial farms in the same zones and, over 10t/ha achieved on average in the US. This combined with the firm point means that smallholder farmers achieve very low annual incomes.

Participant	Country	Aggregate	Comment
			- Removing negative environmental impact from sub-optimal farming practices: e.g. erosion, deforestation
Viviane CdV	Italy	Q4.1/8	<p>Our future challenges for small farmers in Italy, might be different from those in other parts of the world:</p> <ul style="list-style-type: none"> - the presence of a great number of supermarkets that belongs to multinational businesses (and import food in large quantities from abroad - ED: which might even be grown locally) - although our farmers are bound together and altogether can bring a big consolidated bid to sell our product; multinationals do not seem to notice our presence. (Indeed you can find some of our products, grown abroad, grown with a lot of chemicals, marketed at a very low price) - in the meantime our products market might grow as a produce of excellence, but it is still grown as a seasonal product, which we prefer not to sell in these multi-national stores. - The price of the land is increasing - the price to attend markets is really high. - politicians want to cut the strong family ties that bonds a farm family. The idea is that if your mother or son or uncle or cousin give you a hand in the farm, you have to hire them paying taxes and a salary and pension of 3.200 euro per year.
Mark Redman	Romania	Q4.1/8	<p>Sandra Sumane's very importantly highlights in her response to Question 4.1 that there are "other stakeholders who have power to improve small producers' market access" and that we should be careful not to focus only on "cooperation among farmers" – although this is clearly an important factor.</p> <p>I like the fact that Sandra specifically mentions the role of consumers, local municipalities and agricultural trainers / advisers as key stakeholders. As inspiration for Romania for increasing smallholder inclusion in the rapidly developing new agri-food value chains here in Romania, we have looked at a number of initiatives from other parts of Europe that aim to INTEGRATE the involvement of these different stakeholders.</p> <p>These initiatives include:</p> <ul style="list-style-type: none"> • Strategic planning to develop more competitive and resilient supply chains for smallholders in the Basque Country of Spain (including the allocation of over 50 million EUR of funding in the 2014-2020 rural development programme for the Basque region); • Using public procurement to create opportunities for local, small-scale producers to supply school kitchens with fresh produce in the east of Scotland; • Using the so-called LEADER rural development funding mechanism to create a network of over 100 small

Participant	Country	Aggregate	Comment
			<p>farmers in Slovenia to supply a newly established public food market;</p> <ul style="list-style-type: none"> Working with agricultural advisers to develop an 'urban food strategy' and short supply chain for linking local smallholders with urban consumers and school kitchens in Latvia. <p>There a lots of ideas and many good examples available!</p>
Marta Czekaj	Poland	Q4.1/9	<p>Lack of successors: Conducting research among farmers in Polish Reference Regions (Reference Regions in Poland are located in mountain and sub mountain areas), we can observe that most of the farmers do not know what will happen with their farms in the future. There is a huge problem with successors among small farm owners. Some of them want to pass on their farms, but their children do not want it. There is also a group of farmers who indicated that they do not want to engage their children into agriculture and they will do everything to assure they get a higher education, and job beyond farming.</p> <p>Problems with land acquisition: Agriculture land is very expensive in Poland. During the last months, several changes were made in the Polish agriculture law. These cause problems on the agriculture land market, especially for those who as newcomers want to start an agriculture activity.</p> <p>Another issue are direct payments, which in small farms are very important source of income. Farmers (or rather land owners) do not want to sell, or rent formal agriculture land, however they are ready to rent informal land just to keep them in good condition and do not have problems with obtaining direct payments.</p> <p>Lack of ideas for the future: Farmers who are still engage in farming, often do not have an idea how to increase their economic efficiency, how to increase value of their production, how to convince people to buy their production. I can observe problem of stagnation which influences agriculture income of the farmers, their willingness to work and in effect there is often a strategy introduced by farmers: "survive until retire".</p>
Lilian Okpala	Nigeria	Q4.1/9	<p>Three major challenges small farms face, are:</p> <ul style="list-style-type: none"> - Lack of land — this is practically a common issue. - Lack of capital — is an issue that hinders progress and makes farmers poor, as they find it difficult to expand their

Participant	Country	Aggregate	Comment
			businesses. - Lack of market —which leads to post harvests loss and decline in profit.
Winnona Merritt	USA	Q4.1/10	<p>This is a reply on an earlier message (Q4.1/9) from Marta Czekaj in Poland, identifying “the lack of successors” as one of the main future challenges for small farms.</p> <p>The same problem exists here in the USA - especially among minority populations with little financial resources. If the owner does not make a will, the case goes to court, and although one descendant of a very large family may want to farm, the court sells to the highest offer which is seldom the family member. Efforts have been made among African-American, Native American and Latino populations to encourage the creation of wills.</p>
Florence Egal	France/Italy	Q4.1/11	<p>I come from a sustainable development and territorial perspective. it is quite clear to me (including from the - very interesting - contributions I have been reading) that small farms have a comparative advantage in local economies, sustainable diets and resilience and that we should work from farmers knowledge, traditions and initiatives. Participatory approaches from the local level up is essential.</p> <p>The present economic development model (pushed by both corporate agriculture and governments) remains by and large commodity driven and export driven. It ignores the multi functionality of agriculture. Getting enough cheap and standard food to supermarkets and hotels is often the main objective, reticent farmers are considered ignorant, land plots need to be consolidated for mechanisation and supply of agricultural inputs, with obvious impacts on environment, biodiversity and health. Local markets have lost their importance and people are leaving agriculture because living in rural areas means poor access to health, education or other social services. It is clear that this process is unsustainable.</p> <p>On the other hand, there is increasing awareness that small farmers can contribute to, and benefit from, shorter food chains and that consumers are interested in knowing where their food comes from and how it tastes. The demand for organic, seasonal and local food is on the rise and people are "shopping out" on supermarkets. Fair trade and animal welfare have also become visible concerns. Food hubs, food processing of local and niche products and catering are generating jobs. And public procurement and eco-tourism are providing entry point for more sustainable food systems. Small farmers do need more income, but also social services and healthy lifestyles. Knowledge management of promising local practices is urgently needed to learn from the field and disseminate sustainable approaches</p> <p>What I am therefore missing in this consultation is what is the context and the purpose of organising small farms. In</p>

Participant	Country	Aggregate	Comment
			the context of Agenda 2030, it is urgent that we frame the conversation within a bioregional perspective. The growing attention given to agro-ecology should help us in doing that.
Mayank Jain	India	Q4.1/11	<p>Another important challenge that I see and can relate to is access to affordable, reliable and sustainable energy, access to affordable electricity for one: This is required both for growing crops as well as for post-harvest loss reduction perspectives.</p> <p>(Moderator: And for what I have seen in many parts of India, a crucial issue to have access to water - In many parts of Punjab e.g., the water level has dropped that much, that deep-water pumps are needed to access water for irrigation. And these pumps need electricity. No electricity, no pumps, now irrigation, no crops... In this region, I saw quite some government projects to provide electricity to farmers, on a subsidy basis, specifically for irrigation systems)</p>
Richard Yeboah	Ghana	Q4.1/11	<p>This is a response to the input from Teresa Pinto Correia <mtpc@uevora.pt> (Portugal) who said: If a small farm does not have the skills (Moderator: or ability/opportunity) to collaborate, how does he/she get these skills? If you do not have access to knowledge or do not know how to use it, how can these skills be improved? There are drivers that need to be there otherwise the solutions do not work, and "the acquisition of drivers" is my main question.</p> <p>To which Richard replied: There should be the revival of training in cooperatives at the institutions of higher learning. In our University there is one course 'Principles of Cooperative Practices', the only cooperative course (core for a department) but interest in the course is very low and if students were given to opportunity to choice they will hardly choose it.</p>
Yoanna Ivanova	Bulgaria	Q4.1/12	<p>The main future challenges I see are:</p> <ul style="list-style-type: none"> - Shedding of production areas - Climate change - Changes in distribution channels
Boyko Doychinov	Bulgaria	Q4.1/12	<p>The main challenges I see are:</p> <ol style="list-style-type: none"> 1. Deficit of skilled labor 2. High quality product requirements 3. Increasing competition at national and external markets

Participant	Country	Aggregate	Comment
Sami Elhag	Sudan	Q4.1/12	<p>The main challenges are:</p> <ul style="list-style-type: none"> - Market fluctuation - bank insolvency - traditional agriculture
Sylvester Ayambila	Ghana	Q4.1/12	<p>The three main future challenges facing small farms in the Gushegu region (Ghana) include;</p> <ol style="list-style-type: none"> 1. Loss of indigenous local seeds and implications on food security. There is an increasing trend of use of improved crop varieties. Improved crop varieties have higher yields as compared to local seeds. However, improved seeds are not resilient as compared to local crops varieties. The local crops are relatively more resistant to crop diseases, pests and climate variability. Due to the increasing use of local improved seeds most farmers have lost the local seed varieties. In the future, farmers will depend solely on improved crop varieties and will have to import these seeds from America and Europe (In the case of Africa). This may create a food security crisis in the future if farmers are not able to obtain the necessary certifications and regulations to import seeds. 2. High cost of production and land degradation. The increasing trend in the use of improved seeds has implication on cost of production and land degradation. Improved seeds are expensive and require the use of fertilizer and other agro-chemicals which add to the cost of production. When farmers plant improved seeds they must necessary add fertilizer to obtain good yields. The continuous use of agro-chemicals have long lasting effects on soil fertility and land degradation. In Africa and in particular, the Gushegu district, most farmers do not have adequate knowledge in the use of agrochemicals. Low level of education among farmers contribute to this menace. Disposal of waste agro-chemicals is a serious problem with consequences on health. 3. Lack of access to markets. Farmers continue to produce crops without targeting markets. Farmers do not identify potential markets before production. The increasing trend of quality standardization will affect farmers markets. For example, there is a big rice processing rice mill situated not far from the Gushegu district but many farmers are not able to sell their produce to the rice mill due to variety and quality of rice. The improved varieties require timely and appropriate planting and harvesting with good agronomic practices which many of the farmers in the region find it difficult to comply with. The situation is further worsened by the lack of storage facilities in the region. Many farmers have to store their crop produce in their homes under deplorable conditions that affects the quality of the produce. It is important to note that many of the local consumers do not prefer the improved crop produce for other reasons (taste, etc.) and this further limit the market available. Farmers now faced the dilemma of having improved/high yields with reduce markets.

Q 4.2 - To cope with these future challenges, do small farms require new innovations and adaptation techniques? And if so, which?

Participant	Country	Aggregate	Comment
Paul Rigterink	Colombia	Q4.2/1	<p>USAID has been funding American and foreign universities to develop new technologies that will help increase the income of small farmers in conflict and post conflict areas. An example of USAID efforts is the Purdue Improved Crop Storage (PICS) bags technology. PICS are hermetic storage vessels that allow farmers to hermetically store their crops while at the same time avoiding the use of any chemicals.</p> <p>Purdue also supplies microloans to the farmers that use the PICS bags so that they can sell their maize when prices are high. In addition, Purdue provides a system that connects super-dealers to vendors. Purdue University believes that this very inexpensive maize storage technology will increase the income of small farmers by more than 30% per year.</p>
Dilip Kumar	India	Q4.2/2	<p>Small farms certainly do need new innovations and adaptation techniques.</p> <p>Following are the potential areas:</p> <ol style="list-style-type: none"> 1. Optimising water use at the farm level by making improvement in the irrigation system 2. Designing / improving agriculture machineries for de-weeding and harvesting - only hand-hold (tools) used for manual operation 3. Application of manure in farms as well as ponds 4. Integration and diversification of farm level practices including horticulture, livestock, dairy, aquaculture, etc. for inputs use optimisation, cutting cost of farming and ensuring availability of inputs at family farm level
Saminu Zawiya	Nigeria	Q4.2/2	<p>Small farmers should be taught on the modern method of communication. They should have more knowledge using social media in order to have more connections to other farmers and markets.</p> <p>(Even) urban youth farmers have difficulties to find people in their industry, in order to establish (networks and) cooperation.</p>
Philip Ifejika	Nigeria	Q4.2/2	<p>Philip replied on an earlier input from Paul Rigterink in which he introduced the Purdue Improved Crop Storage (PICS) bags technology, an example of USAID's efforts to support the development of new technologies</p> <p>Philip's reaction is: "I think that the technology on storage bag for crop farmer is good and can be introduced to Nigerian crop farmers to reduce chemical usage in produce storage and its after-effects on wholesome foods."</p>

Participant	Country	Aggregate	Comment
Roger Leakey	UK	Q4.2/3	To address on-going issues of hunger, malnutrition, poverty and land degradation in Africa, smallholder farmers are developing Socially Modified Crops as part of a 3-step approach to a multifunctional farming system that impact positively on the social, economic and environmental constraints to farm productivity responsible for the gap between potential and actual yield. Furthermore, these new crops also rehabilitate, diversify and intensify the agroecosystem, diversify local diets and generate income from trade and new value-adding business opportunities. (From the paper: "Socially Modified Organisms in Multifunctional Agriculture - Addressing the Needs of Smallholder Farmers in Africa" - Published in "Archives of Crop Science")
Dave Hunter	USA	Q4.2/3	<p>Time to talk about a new technology: using native bees in crops as a means of gaining more food. Specifically hole-nesting species that can be moved from one location to another. Research across the globe shows that poor farmers can gain 24% more food when native bees are found on their crops.</p> <p>Honey bees are not a great pollinator but do create honey. Native hole-nesting bees carry their pollen dry on hairy abdomens with the pollen falling off everywhere. As a result, more pollen exchange occurs. The cost of the bee is negligible... Put out a variety of hole sizes and see what bees nest in them. Over a few years, if there is available pollen and holes, the colony builds up.</p> <p>More food is produced, and potentially a new commodity is created "bees that nest in holes" that can be sold to farmers.</p> <p>Few small farmers in the world understand the value of bees to yield: missing education. Few researchers, governments, and organizations in the world, including the USA, understand the value of native bees.</p>
Mayank Jain	India	Q4.2/3	<p>As climate change and weather eccentricities cause much distraught to the farmers and also one of the participants touched about "weather warning system" I was curious to know how weather advisories being managed across the globe because I think this is one of the critical factor in driving towards climate-resilient agriculture - need of the present as well as future.</p> <p>Also, how it is ensured that weather information obtained is processed and presented as an advisory to the farmers which has considerably helped them. Any success story to share and learn? Anyone?</p>
Paul Iji	Australia	Q4.2/4	To address the main problems identified in Q4.1, we believe that the most important intervention would be in the area of government policy enactment. There is a need for the setting of feed quality standards. The SME producers rely on feed suppliers, to feed their stock. It would be useful for them to receive feed that meets the nutrient

Participant	Country	Aggregate	Comment
			<p>requirements of the poultry and is consistent in quality. It is possible for SME producers to make their own feeds, as some of them already do, but commercial feed formulation is an art and science, which is difficult for non-nutritionists to understand. There is a need to re-develop feed formulation in a way that can be understood by SME farmers. Feed ingredients can be measured with traditional standards rather than metric. This is easy to apply on major ingredients but practically, minor nutrient requirements are often met once the requirements for most of the major nutrients are met.</p> <p>To address the competition posed by major players and lack of access to the market, SME producers should be encouraged to form cooperatives, in order to develop a critical mass. This will make them more viable and competitive. Such cooperative structures will also improve knowledge acquisition, including the development of a value chain, which is currently lacking.</p>
Winnona Merritt	USA	Q4.2/5	<p>Winnona highlights a theme that ran through many of these discussions - the need for cooperation. - Which also refers to discussion topic #1</p> <p>Referring specifically to the input from Prof Paul Iji <piji@une.edu.au> and Edwin Chang'a <echanga@myune.edu.au> (Australia) - who said: "To address the competition posed by major players and lack of access to the market, SME producers should be encouraged to form cooperatives, in order to develop a critical mass. This will make them more viable and competitive. Such cooperative structures will also improve knowledge acquisition, including the development of a value chain, which is currently lacking. "</p> <p>Winnona asks: "How can farmers address issues of human relationships that impede cooperation? - the need for trust-building and trustworthiness, care for the common good, justice, transparency, open and fair consultation, etc etc ?</p> <p>Does lack of addressing these issues stymie the best intentions and progressive initiatives? Are some places finding ways to address this? Is there a success story?"</p>
Mark Redman	Romania	Q4.2/6	<p>There have been some interesting responses to Question 4.2 (To cope with future challenges, do small farms require new innovations and adaptation techniques), but I think it's important to extend the discussion about smallholders and innovation to also include a) innovation in policy-making for smallholders, and; b) innovation in the development of alternative business models for smallholder inclusion in value chains.</p> <p>There are numerous examples and it would be great to hear some practical experiences of what is working well – and also less well.</p>

Participant	Country	Aggregate	Comment
			<p>One approach I'm particularly interested to hear more about is the hybrid concept of 'Productive Alliances' that has been promoted by the World Bank in Latin America for linking smallholders, buyers and the public sector in order to improve smallholder access to major markets.</p> <p>See: https://openknowledge.worldbank.org/handle/10986/25752</p> <p>A Productive Alliance (PA) involves three core agents: 1) a group of smallholder producers; 2) one or more commercial buyers, and; 3) relevant organisations / agencies in the public sector. These three agents are connected through a joint "Business Plan" which describes: i) the necessary productive investments and infrastructure of the co-operating smallholders; ii) the specific needs of the smallholders for technical assistance and services, and; iii) the specific actions / business developments that will be implemented to upgrade smallholder productivity and strengthen their skills to build long-term linkages with domestic and export markets.</p> <p>Within the strategic framework of a Business Plan two types of "productive alliance" can be developed in a complementary way: a) a horizontal alliance among the smallholders, and/or; b) a vertical alliance between the smallholders and the buyer(s).</p> <p>The basic concept of the Productive Alliance approach is innovative and simple and goes beyond classical business models to forge a functional partnership between producers, buyers and public agencies with the specific objective of harmonising public services and commercial interests to improve smallholder productivity and market integration. The key – and distinct – feature of the Productive Alliance is the commitment to channeling available public and private financing to support the commercial efforts of smallholders.</p>
Praveen Shrivastava	India	Q4.2/6	<p>A follow-up on Winnona's question: "How can farmers address issues of human relationships that impede cooperation? - the need for trust-building and trustworthiness, care for the common good, justice, transparency, open and fair consultation, etc. etc. ?</p> <p>Does lack of addressing these issues stymie the best intentions and progressive initiatives? Are some places finding ways to address this? Is there a success story?"</p> <p>To which Praveen replied: I also face same problem. Farmer never trust us ("outsiders"). They feel their experience is so elaborate that they know everything around "agricultural knowledge". Timing, cooperation and sharing resources are very difficult to achieve. We never impart soft skill and knowledge cooperation, in our daily life (so</p>

Participant	Country	Aggregate	Comment
			<p>why would we do this in our professional life?).</p> <p>I do believe within span of 2 to 3 years these skills will be available in each village.</p>
Paul Iji; Edwin Chang'a	Australia	Q4.2/6	<p>Winnona asks: "How can farmers address issues of human relationships that impede cooperation? - the need for trust-building and trustworthiness, care for the common good, justice, transparency, open and fair consultation, etc etc ?</p> <p>Does lack of addressing these issues stymie the best intentions and progressive initiatives? Are some places finding ways to address this? Is there a success story?"</p> <p>To which Paul and Edwin reply: "Thanks for your questions, Winnona. There may be differences around the world or even within the same country how small-scale producers behave, so I am not going to over-generalise. However, I think there must be similarities between regions, and developing cooperation is certainly going to be a major issue in farmers coming together to solve their problems. In the very rural areas, trust among producers may be high due to the strength of existing relationships between families. This relationship may be lacking in urban areas where producers may come from different ethnic background or level of knowledge may be quite divergent. This is where sociologists need to be involved and most government departments of agriculture or rural development would have such specialists. Yes, there are success stories, reading the response to the other topics. In Nigeria, for example, there is a government/farmer project called Fadama (coined from areas that hold water and forage longer into the dry season). The Fadama project brings farmers (mostly crop producers) together, in order to facilitate government support. Such farmers may not necessarily produce together but it an avenue for sharing information and possibly creation of cooperative farming and/or learning from one another. To the best of my knowledge, the process has not extended to the area of poultry production but that sector can certainly learn from the crop producers. It would be easy for animal producers to operate as cooperative but from different production sites. There is certainly a need to develop trust and clearly define the roles of members (to avoid the starvation of the proverbial public cow). Overall, I think government support of the development of these structures will be important. In other areas, it may just be enough for enlightened producers to initiate the network."</p>
Max Olupot	Uganda	Q4.2/7	<p>(Max replies to an issue brought up several times: the need for developing soft skills to work with farmers, and for a collaboration amongst farmers:)</p> <p>The issue of soft skills is very important not only for farmers but also for professionals who facilitate farmer institutional development with focus to empowerment, cohesion and sustainability grounded in good governance and management.</p>

Participant	Country	Aggregate	Comment
			<p>Extension agents and other social works/ change agents should have soft skills to assist farmers and farmer groups in building their capacity. Of recent, agricultural extension and advisory services has bounced back to the development agenda with essentially added roles of facilitating change and ensuring transformation. This led to the development of a key document / concept on new Extensionist. Emphasis in the new Extensionist is soft skills nelk.g-fras.org. Smallholder farmers need technical support to address emerging challenges, despite their resilience and indigenous adaptation strategies employed.</p> <p>AFAAS and GFRAS are currently working with other partners to build capacity of extension to be technical sound and responsive. AFAAS is also hosting and nurturing Field Schools Knowledge Hub.</p> <p>The role of the hub is to facilitate knowledge generation and sharing across actors and provide catalytic support to countries and actors for enhanced quality implementation of FS interventions. Lessons here shall be applicable to other approaches hence empowering farmers and other value chain actors.</p>
Viviane CdV	Italy	Q4.2/7	<p>This is a reply on a query from Winnona (Q4.2/5): ""How can farmers address issues of human relationships that impede cooperation? - the need for trust-building and trustworthiness, care for the common good, justice, transparency, open and fair consultation, etc. etc. ?</p> <p>Does lack of addressing these issues stymie the best intentions and progressive initiatives? Are some places finding ways to address this? Is there a success story?"</p> <p>To which Viviane replies:</p> <p>I definitely believe in cooperation between small farmers. The quality of their crop beats the corporate one. You are asking about the difficulties of being bound together/working together: Yes it is difficult.</p> <ul style="list-style-type: none"> - In meetings, in just a few minutes conflicts can flare up. - We might be working together, but in the end, we are still competing with each other. - Misunderstanding happen, and happen easily <p>In our cooperative we went through all of this...</p> <p>It takes thinking things through, and working on practical matters:</p> <ul style="list-style-type: none"> - to discuss the best way to sell; - the best way to present your merchandise in a market; - studying strategies <p>Concentrating on things which have clear benefits for all, are much more convenient/useful to discuss in a</p>

Participant	Country	Aggregate	Comment
			collaboration. While at the beginning you believe in a product, success does not arrive right away. You have to work at it. You have to look for consumers outside the usual market....
Gary Vaughan-Smith	UK/Tanania	Q4.2/8	<p>- The establishment of processing plants for higher value crops that can be grown by small-holder farmers – the ‘market’ for most crops is a processing plant of some sort with associated storage. By introducing a processing plant /market for a high value crop one can help introduce the new crop into small-holder on farm rotation plus increase the income of the small-holder farmer. Introducing a new crop leads naturally to the provision of training and conservation farming techniques. We built the first soya processing plant in Tanzania and this has allowed us to develop an out-grower program for 9,000 farmers to date. Soya is worth ~3-fold the price of maize and works well in rotation with maize because it is from the legume family and maize is from the grass family. Maize yields are increased as a result.</p> <p>- Education and extension work in conservation farming techniques: use of a mulch, rotation of crops, composting, precision farming etc. to raise yields and reduce environmental impact.</p> <p>- Distribution of improved/hybrid seed adapted to local conditions bringing benefits such drought and disease tolerance. This raises yields substantially and increases resilience when the weather varies. When improved seed is combined with training on conservation farming techniques, yields can treble from 1.5t/ha into the 4-5t/ha range within 1-2 years.</p>
Ganesh Bora	USA	Q4.2/9	<p>I am Ganesh Bora, an Associate Professor of Precision Agriculture (PA) in Mississippi State University, USA. Recently I have completed a project involving small farmers in Bangladesh, India, Thailand and Vietnam to adapt Precision Agricultural Technology in small farms. As you know, PA is most advanced in USA and we are engaged in high decibel research with advanced technology. But those technology are not suitable for small farms. So, it is very important to emphasize on "Transfer of Concept", not transfer of technology. The concept which works in USA, should work in other countries or in small farms, provided the concept is understood.</p> <p>For example, a large combine harvester for grain crops in USA is attached with a yield monitoring system and it creates yield maps with georeferenced data. This yield map along with information on soil, topography and other information, a prescription map is prepared for variable rate application of chemicals, fertilizers, seeds and irrigation. But it is not possible for very small land holding in developing countries. The farmers in those areas can benefit from the same concept. He/she can go to the field before the harvest and note down on a piece of paper about the good spots and bad spots on the field. She/he knows about the field best and can analyze reasons for bad</p>

Participant	Country	Aggregate	Comment
			spots and act accordingly in the following year. The universities and research organization can develop technology based on the concept, suitable for the region.
Mahesh Chander	India	Q4.2/10	<p>I see growing importance and increasing presence of International quality enhancing organizations like Fairtrade, Fair for Life etc., who are promoting their standards, labels among the small-scale producers in India as also elsewhere in developing countries.</p> <p>The agriculture in future may be governed by these certification standards especially for exporting from the developing countries like India. The small scale producers are being educated, trained on input use, social development issues while producing the products of required quality often ensuring market premiums to the producers and making available good quality products to the consumers. This has created an opportunity for developing country producers to get engaged in agricultural production for export market. The small-scale producers often lack capacities to link their products to international market but for these agencies the farmers are motivated to produce high quality products for export market. The export orientation, however, limits the scope of producing diverse products since the promoters focus on only a few select products which are in demand in importing countries.</p>
Ghulam Qadior Arbab	Pakistan	Q4.2/10	<p>This is a response to the input from Ganesh Bora (USA) in Q4.2/9</p> <p>Nice to see your email on adoption of Precision Agricultural (PA) Technology to cope with future challenges. A solution with practical example. Since you have completed a project in Bangladesh, India and Thailand, I would highly appreciate if you may please also share the project reports so we can take benefit from your learning. I am extensively involved in working with small farms in Pakistan. I am currently working in a World Bank funded project which is focusing on increasing yield and sales of small to medium size farms.</p> <p>I am very much sure that learning of PA technology in neighboring countries, which could also be replicated here as well.</p>
Mahesh Chander	India	Q4.2/10	<p>Yes, farmers' collective efforts would pay dividends; individually they cannot handle the challenges. In gradual process- Informal association, self help group, farmer producer organization to producer company, farmer can benefit coming closer to each other for sharing resources to produce and market their produce. Here is a success story. One of the key requirements will be soft skills, the Extension and Advisory services can help on this so that the association doesn't get dissolved due to misunderstanding and conflicts commonly seen. The small-scale farmers need a lot of informal extension educational efforts to improve their understanding of cooperation.</p>

Participant	Country	Aggregate	Comment
Karin Nichterlein	Italy	Q4.2/11	<p>This is an answer to a question from Mayank Jain <mayank@sumarth.org> (India): How can we ensure that weather information obtained is processed and presented as an advisory to the farmers which has considerably helped them. Any success story to share and learn?</p> <p>To which Karin replied: Julien de Meyer provided earlier an example of the apple industry by smallholders in South Tyrol. This sector is supported by a private advisory service ("Beratungsring") with almost 7,000 members offering a well-functioning weather information service. Weather data is collected through a network of 130 weather stations, actualised every 5 minutes, and used for weather forecast. The data is successfully used to warn farmers of frost, a serious threat to apple producers in South Tyrol. Member farmers can access these data through internet (two third of members use internet), a mobile application of the advisory service or through SMS.</p>
Richard Yeboah	Ghana	Q4.2/11	<p>As are reply to the input from Mayank Jain <mayank@sumarth.org> (India), who said: How can we ensure that weather information obtained is processed and presented as an advisory to the farmers which has considerably helped them. Any success story to share and learn?</p> <p>To which Richard replied: There is an annual workshop in Northern Ghana (led by CARE Ghana) just before the beginning of the farming season where weather data is analysed and predictions made making use of the Meteorological department specialists. Some predictions are made, and farmers are give advise as to what to do. This needs evaluation to know how effective it has been. There is also a very good development to help reduce the effect of climate on small farmers in Ghana. This is the introduction of 'Crop Insurance' which is growing gradually to help farmers gain some cushioning in case of weather failure.</p>

Participant	Country	Aggregate	Comment
Dennis Escudero	Italy	Q4.2/11	<p>As a response to an input from Mark Redman <mark@highclere-consulting.com> (Romania), who said: One approach I'm particularly interested to hear more about is the hybrid concept of 'Productive Alliances' that has been promoted by the World Bank in Latin America for linking smallholders, buyers and the public sector in order to improve smallholder access to major markets.</p> <p>To which Dennis replied: I think that the mentioned World Bank document presents detailed information about the concepts and examples of the implementation of Productive Alliance projects considering different realities of the Latin-American countries. Thus, the question could be answered considering the following sections: i) the productive Alliance approach (10 – 12), ii) Subproject preparation and selection (page. 30 – 32) and iii) Subproject financing (page. 34 – 38).</p> <p>In addition, it is important to consider that the methodological approach and the implementation model of the "Productive Alliances" – demand-based projects with territorial approach- facilitate the participation and interactions of producers, buyers and public institutions. Typically, the local governments support the smallholders and buyers because these public entities have institutional responsibilities in promoting the economic development in their territories. In this sense, the "Productive Alliance Projects" can leverage significant public and private resources of the different levels of governments (national, regional and local) in order to improve the product value chains. For instance, the "Productive Alliance Project" in Peru was implemented by a specialized national entity. The regional and local governments actively participated in the promotion, elaboration, implementation, monitoring and evaluation of the business plans by having a crucial role in articulating the producers and buyers with the territorial development priorities. The local governments co-financed strategic business plans that were aligned with the territorial development plans. In this way, small farmers can access to better and competitive markets at the national and international levels with the involvement of national, regional and local governments in the implementation process of the "Productive Alliances".</p>
Yoanna Ivanova	Bulgaria	Q4.2/12	<p>The main ways I see to cope with the future challenges are:</p> <ul style="list-style-type: none"> - Attract manpower - Climate change production techniques - Co-operation to provide new distribution channels

Topic #5: The importance of food businesses to small farms

Q 5.1 - What kind of food businesses are important to small farms in your region? Which of these are small food businesses? Please also explain how you define small food businesses.

Participant	Country	Aggregate	Comment
George Madoda	Tanzania	Q5.1/1	<p>In the northern Tanzania entrepreneurs have taken advantage of farmers produce and added value after-sales in local markets or export to neighbouring countries.</p> <p>Banana, vegetables, maize, potatoes, rice are the main crops transformed into food. Farms' production depending on the strength of farmers, ability to produce and availability of resources to produce them. In my region, sales of vegetables, maize, bananas, cassava/ cassava flour and potatoes is considered as small businesses. These can be found in streets of the town, small markets and farmers markets.</p> <p>I (relate) small food businesses (also to the) collection of various crop mostly consumed, whether with value added or with no value added (services).</p> <p>(It may also include also) food that (people) make in (their) own kitchen and sell it in small markets, restaurants, (on the road or via other means such as) mobile (sales points) such as bike, bicycles, or even in farmers markets.</p>
Mahesh Chander	India	Q5.1/2	<p>There is growing trend of vertical cooperation, wherein, the processors, retailers and exporters are helping farmers grow food and other cash crops of required quality, often supporting small farmers with technical know-how, inputs and infrastructure.</p> <p>Recently we visited an entrepreneur in North Indian state (Uttar Pradesh), who was supporting a group of about 2000 small scale farmers growing mint crop as certified organic for export of organic mint oil to US & EU. These farmers were also producing cereals & pulses organically to be procured by him. It is just because of the support from this entrepreneur, they could convert to organic production & earn price premiums.</p> <p>The vertical cooperation appears to increase in future to meet the requirements of market especially on quality front. India has the largest number of organic producers in the world, who are basically small-scale producers. Most of their organic products are put into organic value chains by entrepreneurs and exporters. India's export of organic products worth about 300 Million USD (http://apeda.gov.in/apedawebsite/organic/Organic_Products.htm) has been contributed by mostly small scale producers. Also, in domestic markets, Participatory Guarantee System (PGS) of organic certification is promoting cooperation among farmers. The PGS certification is being promoted by Indian</p>

Participant	Country	Aggregate	Comment
			Ministry of Agriculture & Farmers' Welfare among the clusters or groups of farmers. The organic food production is paving the way for both vertical and horizontal cooperation.
Said Zarouali	Morocco	Q5.1/2	<p>A large majority of small farmers are actually informal family businesses. They are farm businesses with all kinds of agricultural activities (including arboriculture, livestock - sheep, goats, cows, but all in smaller amounts). The problem these businesses have, is the lack of a commercial license ("Patente"). On the other hand, as they also represent smaller commercial activities (and smaller business figures), they are exempted from taxes.</p> <p>These "small businesses" are defined by specific criteria (business turn-over, number of people employed, etc.). Many of these small farm businesses are family-run with workers not being paid an actual wage (as they are family members).</p>
Solange Umutoni	Rwanda	Q5.1/2	<p>What I call "small food businesses" are businesses retailing processed commodities, selling food products directly from the farm at the market and restaurants services without food complex processing industries.</p> <p>Here in Rwanda, the food market includes what is being grown locally and some imported commodities. The locally grown commodities are Irish potatoes, sweet potatoes, maize, rice, beans, various vegetables (Cabbages, green beans, red and green pepper, carrots, etc.), various fruits tomato, passion fruits, mangoes, avocados, pineapples, etc.) and cash crops (tea, coffee and pyrethrum).</p>
Aliyu Bamalli	Nigeria	Q5.1/3	<p>The importance of food businesses cannot be over emphasized over here in Nigeria as both dryland farming and farming in rain-fed areas are prosperous.</p> <p>60% of farmers here are rural farmers, yet they sustain the consumers' daily need of "dinner table requirement" of vegetables and fruits. I know of some people that are engaged into the productions of tomatoes, onions and spices in the dry season, gaining average income of near \$6000 yearly with just small investments of less than \$700.</p> <p>These products can be seen on the road side, which they are bought bit by bit, by households. These people do not even care to process, store or even convert their produce into more profitable products, yet they are happy, as they reserve some of their financial incomes to invest in rainy season farming for instance for the purchase of fertilizers and other farm services.</p> <p>A collection of such farmers makes a lot of difference in terms of food requirements here. We don't need to buy processing systems to preserved potatoes or vegetables due to their relentless services helping us to procure such</p>

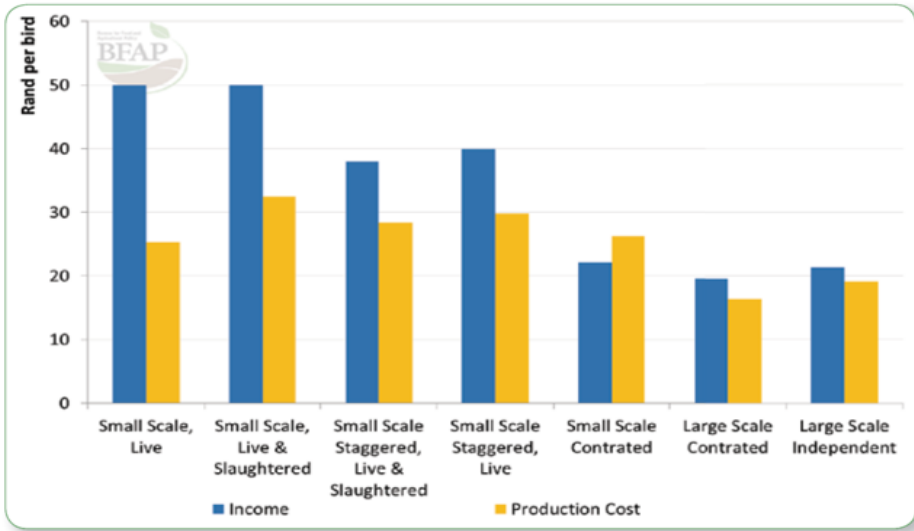
Participant	Country	Aggregate	Comment
			<p>goods at a giveaway price, while maintaining their livelihood.</p> <p>Without such farmers, we, as consumers, could starve in looking and hopping around to find such products from producers elsewhere.</p> <p>However, what needs to be done is to intervene to improve production capacity, storage facilities and processing equipment/systems.</p>
Richard Yeboah	Ghana	Q5.1/3	<p>The food business subsector of the food system in our reference region (Gushegu Ghana) is not well developed. The food businesses are mainly the trade in raw produce. The major food businesses are Aggregation of farm produce, marketing of farm produce, cooked food sold in 'chop bars' (local restaurants). There are also a few warehouse service providers (storage), grinding mill service providers and food transport service providers. Processing of food items is minimal.</p> <p>Food business (a part of agribusiness) deals with all the activities that are carried out on the crops produced including all those that add value to the produce and make them available at the right places and the right time and in the form needed.</p>
Mahesh Chander	India	Q5.1/3	<p>The share of small farmers' price in consumers' price is very small. There is a huge gap in what farmers earn and consumers pay for the agri-produce sold in India. The small scale farmers are the victim of this marketing imperfection. This can be solved to some extent by new trends seen in recent past in India.</p> <p>The big retailers are trying to reach directly to the small farmers through collectives and bring them into the system. For example, with more than 20 collection centres across the country, Bigbasket procures about 60% of its FFVs directly from farmers and the company reportedly expects that number to go up to 80% as it adds more collection centres. Others big retailers like METRO Cash & Carry, Walmart, Mother Dairy, Reliance Fresh, Heritage and PepsiCo also have similar arrangements. Some of these retailers educate and help farmers to adopt good agricultural practices. They guide farmers on post-harvest care and facilitate packaging and transportation services to the associated farmers. For example, SAFAL has established Collection-cum-Grading Centres in rural areas each covering a cluster of 8-10 villages. The farmers supply their produce through associations or in individual capacity.</p> <p>The entire procurement network of Mother Dairy' SAFAL is spread over 20 states in India, comprising nearly 8000 farmer members from 93 Safal growers associations. And the 600-store strong RELIANCE FRESH has gone beyond direct purchase from farmers to assisting farmers to grow commodities like papaya and banana which helps in</p>

Participant	Country	Aggregate	Comment
			<p>better yield and end-consumer pricing. Reliance Retail directly partners with a large number of farmers and small vendors in a farm-to-fork model. The linkages with the farm has brought about transformational changes in the quality of life of the farmers as also enhancing the quality of produce, reducing wastage by shortening the time to move fresh produce and reducing intermediaries in the value chain thereby benefiting all. These retail chains have managed to bring down prices with several new initiatives such as increasing direct sourcing from farmers, assisting farmers in crop cultivation to bargain better prices, driving efficiencies in supply-chain and benchmarking their prices with local retail market more frequently which will also help to compete against the general trade.</p> <p>Linking supermarkets and farmers could be good for farmers and consumers both. So it is important to explore the ways how best the super markets models can help integrate the small and marginal farmers with supply chain system in India and may be elsewhere too. Farmer organizations/producer companies can help smallholder farmers specifically in improving their position in the emerging value chains. The need for organizing farmers into groups for running agriculture like business is being felt with every passing day. Farmers' producer companies as a new concept for collective action is rapidly gaining ground in India. A new corporate India is in the making as close to 1,000 companies owned by young farmers take shape and engage in businesses such as exports and direct marketing with revenue of a few crore rupees.</p>
E.M. Muralidharan	India	Q5.1/3	<p>Food processing with modern technology is now becoming increasingly available around the world, is now affordable to small businesses, and therefore can serve an important role in supporting local small farmers with surplus produce after selling in the local market during the glut in the peak season.</p> <p>Usually wastage due to spoilage and distress sale, results with a loss to the farmer. In many parts of India, this is a recurring story with tomato farmers who have often in protest dumped truckloads of harvest into garbage bins or left them to rot since prices were too low to incur the harvesting costs. If they had access to decentralised processing plants distributed across the region this could have been avoided.</p> <p>Cooperatives of small farmers could easily get into this business of processing vegetables and fruits locally - something that today seems to be restricted to small-scale units manufacturing just pickles. Some countries like Sri Lanka appear to be better at it and a diversity of products, for example, made of coconut had come into the market many years back. In the south-west coastal region of India where I live, small landholdings with a diversity of crops ranging from fruits to vegetables to spices is the norm. Fruits like banana, plantains, jack fruit etc. are being processed into snack foods by small businesses in recent years but the scope is really much more in volume as well as in the range of crops.</p>

Participant	Country	Aggregate	Comment
Lizzy Igbinde	Nigeria	Q5.1/4	<p>Food business are "entrepreneurships" run at the level of small-scale communities. These food businesses rely on and patronize small scale local farmers for daily food supplies, thereby enriching the farmers and reducing post harvest losses due to lack of markets.</p> <p>These have been a steady way to build the incomes of rural farmers, and reduce inaccessibility of markets due to lack of transportation.</p> <p>Food businesses play a key role in the food systems of a community. It is a system that runs on its own. A farmer who sells raw food to a food seller buys prepared food to eat as he returns from the farm and uses money made from his harvests to pay for the food. This brings expansion or increased turnover and enterprise.</p> <p>The food business strengthens the community activities, off-takes readily available food stuffs and makes food easily available for farmers in the farms. Business men and women in their various workplaces have little time to cook after work and there patronage increases exchange of money as well as create jobs.</p>
Raja Rathinam	India	Q5.1/4	<p>I have seen the input emails of Mr. Murali and Mr Chander. No doubt that "Mother Dairy" and other organisations are helping the small farmers as I was also associated with these organisation at a high level in the earlier days. But the competition is building up beyond imagination. With that, the producers are not getting better return in comparison with the other stakeholders like processors, wholesale agents and retailers. In addition to this, the private company's attraction to the middle man like wholesale agents or retailers presents a challenge: If there is excess production, the processors are not taking the products.</p> <p>For example, this year, there is an excess production of milk in the country as a whole. The private players are not collecting all the milk. The cooperatives collect the milk and there is enormous delay in payments to the farmers. This presents a problem for the small and marginal farmers whose income is solely depending upon the milk business. The cooperatives say that sales are lower and therefore, there is huge stock of commodities like milk powder etc. This blocks funds, which leads to delay in payments for the milk to the farmers.</p> <p>The government is not helping to dispose of the excess milk powder. Ultimately the small and marginal farmers are the ones who suffer. We all should come forward to help the small farmers with some solutions, in this situation of crisis.</p>

Participant	Country	Aggregate	Comment
Elizabeth Kamau	Kenya	Q5.1/4	<p>What kind of food businesses are important to small farms in my region? - Direct selling of dairy cow or goat milk, poultry eggs, roots and tubers, fruits and vegetables that are all sold fresh and cereals and pulses.</p> <p>Some farmers have also individually or collectively gained skills in food processing and value addition and sell processed products such as edible oils including peanut butter, dried fruits and vegetables, jams and juices, and milled flours composited or singly from the farm produce.</p> <p>Which of these are small food businesses? The food processing enterprises, which use agricultural produce to develop food products</p> <p>On the question "how you define small food businesses": I define small food businesses as micro food marketing and/or processing enterprises whose operating capacity is low, often owned and/or run by individuals, women groups (in Kenya) etc.</p>
Abalo Adodo	Togo	Q5.1/4	<p>For the 2SCALE project, which is one of the largest incubators of inclusive agribusiness, any type of food business is important for small farms in its intervention areas (West and East Africa). The importance for the project is the availability of small farms that are producing a produce for food. Based on this consideration, the project targeted various produce for food consumption. Some of them are: Dairy product (milk, cheese), rabbits, soybeans, maize, rice, cassava, potatoes, vegetables, fruits (pineapple), sorghum, etc.</p> <p>In order to promote these produce, and later foods after processing or not, the 2SCALE project uses an approach based on agribusiness partnerships formation with small businesses alone or a mixture of small businesses and big companies. The project links the small farms to the other actors of targeted value chains to build these inclusive agribusiness partnerships. Because of that, it can easily observed an inclusive agribusiness partnership on rice in Benin, where small women rice processors are in collaboration with rice small farms for supplying local consumers with processed rice. These women processors use small-scale processing facilities for their activities.</p> <p>Or, in country like Nigeria, it can observe Friesland Campina Wanco, a Dutch based company, links with small Fulani milk producers to supply dairy products to dairy product consumers in the whole West Africa. Also in Kenya, it can observe African small medium industries, like Shalem, which collaborates with small sorghum farms to process sorghum in flours and supplies local consumers, especially BoP (Bottom of the Pyramid-low income) consumers.</p> <p>From these examples, I can define food businesses as value chain actors who work at local level with limited</p>

Participant	Country	Aggregate	Comment
			<p>technicity and processing facilities capacity or big companies with sophisticated processing facilities to deliver food products to consumers. It can be local traders and/or processors, specific service providers (like transporters), and local restaurants and/or shops, big trade/processing companies. I can also make the small farms in this category, because sometimes, they don't produce food based produce only for their own consumption (subsistence), but also to sell to their neighbors or to sell in local market by their relatives or themselves.</p>
Laura Arnalte Mur	Spain	Q5.1/5	<p>Our region of study for the SALSA project is the province of Castellón. In this region we found that the typology of Small Food Businesses (SFB) very much depends on the product or products they work with, but generally they can be differentiated according to their activity, whether they are packagers, processors, artisan food makers or retailers. These activities are rarely carried out on-farm, even when the final destination is self-consumption, as in the case of olive oil.</p> <p>Sorting and packaging is important for export crops such as citrus, one of the main products from the region with an important participation of small farmers. This activity at small scale is done by either farmers' cooperatives or private companies, and it is essential for this crop to access the market.</p> <p>Processing and food product making is particularly important for those primary products that require some transformation for their final consumption, such as milling olives into olive oil, almond cracking, making nougat ("turrón") from almonds, or animal slaughtering and making meat products like sausages. In our study region, oil milling is dominated by farmers' cooperatives, often at small to medium scale, and artisan foods are made by small businesses.</p> <p>A particular case of food retailers are the independent butchers', which are almost always small businesses, most of them make their own meat products (sausages, hams, etc.) and tend to keep close connections with their supplying farms, also independent.</p>
Langelihle Simela	Republic of South Africa	Q5.1/5	<p>In Republic of South Africa (RSA) I would say direct sales to customers (informal trade) are important to smallholder farmers and generate better income for them (e.g. poultry production as shown below). The challenge is that such markets have limited growth opportunities and hence for a farmer to expand further they'd need to link into corporate value chains where the profit margins are smaller but production cycles much more frequent.</p>

Participant	Country	Aggregate	Comment																								
			 <table><caption>Data from Bar Chart: Income and Production Cost per bird</caption><thead><tr><th>Business Type</th><th>Income (Rand per bird)</th><th>Production Cost (Rand per bird)</th></tr></thead><tbody><tr><td>Small Scale, Live</td><td>50</td><td>25</td></tr><tr><td>Small Scale, Live & Slaughtered</td><td>50</td><td>32</td></tr><tr><td>Small Scale Staggered, Live & Slaughtered</td><td>38</td><td>28</td></tr><tr><td>Small Scale Staggered, Live</td><td>40</td><td>30</td></tr><tr><td>Small Scale Contrated</td><td>22</td><td>26</td></tr><tr><td>Large Scale Contrated</td><td>20</td><td>16</td></tr><tr><td>Large Scale Independent</td><td>22</td><td>19</td></tr></tbody></table>	Business Type	Income (Rand per bird)	Production Cost (Rand per bird)	Small Scale, Live	50	25	Small Scale, Live & Slaughtered	50	32	Small Scale Staggered, Live & Slaughtered	38	28	Small Scale Staggered, Live	40	30	Small Scale Contrated	22	26	Large Scale Contrated	20	16	Large Scale Independent	22	19
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Large Scale Independent	22	19																									
Yoanna Ivanova	Bulgaria	Q5.1/6	Small food businesses in Bulgaria may be associated with a primary preparation of the production, primary processing, production of products typical of the region concerned, production of ready and semi-prepared foods.																								
Boyko Doychinov	Bulgaria	Q5.1/6	Small food business is a basic economic structure and its sustainability needs to be supported in a period of growing population and consumption and eco-challenges. The production of traditional and organic products with high quality added value are important for the development of small farms in Bulgaria.																								
Sami Elhag	Sudan	Q5.1/7	Drying of wild okra, producing of oils, paste groundnuts, and other																								

Q 5.2 - Do food businesses in your region play an important role within the food system? How? Please provide specific examples.

Participant	Country	Aggregate	Comment
Said Zarouali	Morocco	Q5.2/1	<p>Yes, (in Morocco), food businesses play a strategic role in the food system:</p> <ul style="list-style-type: none"> - Collection of produce e.g. collection of milk, argan oil or olive oil from small farmers, and the redistribution/resale of these products - A lot of food businesses are organized in cooperatives, where e.g. producer groups can work together, to decide on markets and prices.
Eliot Gee	Italy	Q5.2/1	<p>Our project (BFN) works with local producers in Brazil, Kenya, Turkey, and Sri Lanka to promote cultivation and consumption of indigenous species. Many farmers face difficulty receiving a fair price for their crops and have only limited access to the market. However, there has been considerable success connecting schools, hospitals, social programs, and other organizations with local procurers to provide a fair price and reduce the costs of shipping and storage. Below are two examples of small business strategies:</p> <p>For Kenyan farmers in Busia County, Home Grown School Feeding has been particularly effective at granting a fair price for leafy vegetables (in fact cutting procurement costs for the school as well) with the added benefit of supplying fresh and healthy meals for students (nutrition analysis has demonstrated the higher benefits of many indigenous crops such as bambara nut or finger millet).</p> <p>In Sri Lanka, women have initiated a market outlet business called “Hela Bojun” which empowers them as primary breadwinners for their families while sharing traditional cooking techniques (it is also popular on TripAdvisor).</p> <p>These different approaches to sustainable value chains keep produce within the local economy and help with conservation efforts, invigorating communities at multiple levels. A challenge is building capacity at the wider regional and national level through policy that explicitly recognizes the value of these initiatives and supports further market opportunities or partnerships with social programs and other vulnerable populations.</p>
Umutoni Solange	Rwanda	Q5.2/1	<p>The importance of food businesses for small farmers, is that enable direct sales from the farmer to the buyer. The farmers have a direct hand in the price negotiation and the farmer can seek for a market of the produce, before the actual harvest. This ensures that there will be no losses because of the perishability of the produce.</p>
Gary Brenner	Israel	Q5.2/2	<p>I come from the side of the food and nutrition business. We are an informal group of business people who have been studying, of late, the Bambara groundnut as a potential source of alternative proteins in industrial food processing.</p>

Participant	Country	Aggregate	Comment
			<p>Our research has been primarily in Africa. In our vision, implementing such a business venture will be dependent upon five key success factors:</p> <ul style="list-style-type: none"> (i) choosing the most suitable of the 7-10 Bambara varieties, (ii) creating an infrastructure for a cluster of emerging farmers, (iii) post-harvest processing into a suitable food protein source for multiple food & beverage products, (iv) branding and go-to-market, and (v) project investment and long-term financing.
Gary Vaughan-Smith	UK	Q5.2/2	<p>In our experience, the presence of food businesses that can buy crop off small-holder farmers is of crucial importance to the improvement of their incomes and to improve on-farm practices. This is particularly the case when the new food business wants to buy a crop that is high valued and does well in rotation with the existing staple crop. This means that the farmer can introduce the crop into his/her rotation thereby improving farming practices as well as his/her income.</p> <p>We describe this as the 'hub-out-grower model': a market is created for a new, more valuable crop by the introduction of a processing plant. Small-holder farmers are then engaged with to help grow the new crop as 'out-growers' alongside their existing crops. Vegetables, fruit, legumes and pulses are all viable candidates for small-holder production under the hub-out-grower model.</p> <p>Case study: introducing a legume in an area where maize is the predominant crop: Where the staple is maize and where this is largely mono-cropped, as it is done in much of Central and East Africa, the introduction of a legume such as soya beans or sugar beans can create a substantial impact. We established the first soya processing plant in Tanzania thus providing a sustainable market for small-holder soya for the first time. Soya beans have three important benefits for small-holder farmers and for the environment: Greater income: It is a higher value crop than maize which is mono-cropped in the productive Southern half of Tanzania where the business is located. We pay ~\$450/t for soya vs the maize price of \$150/t typically achieved by these farmers. More sustainable farming: Soya works well in rotation with maize and leads to more sustainable farming practices and substantially reduced environmental impact. If one mono-crops maize then the diseases attacking maize eventually build up in the soils so that after 6-7 years the plot needs to be abandoned, leading to deforestation of neighbouring savanna woodlands. Soya is a legume and maize is from the grass family, so different viruses and fungi attack each. Rotating a legume and a grass crop is a sustainable approach therefore.</p>

Participant	Country	Aggregate	Comment
			<p>Soya, like all legumes, has a special property in that it takes nitrogen from the air and 'fix' it in the soils as 'nitrates'. If one buys a bag of fertiliser, around 50% of the weight is made up by 'nitrates'. Soya thus replenishes the soils naturally so that subsequent crops have higher yields per hectare.</p> <p>We estimate that incomes per farmer have increased from ~\$600 p.a. to ~\$1,250 p.a. simply as a result of providing a market for soya. At present 9,000 farmers are growing soya up from zero in 2013 and we are targeting reaching 30,000 by 2020.</p>
Richard Yeboah	Ghana	Q5.2/2	<p>Without the services of the food business subsector, production would be minimal. Many of the food growing areas are far from the regional capital or big towns, and road linking these places are quite bad. Without the services of these food businesses especially the aggregator and transport service providers, small farmers would have difficulty in selling their surplus and hence may not have the incentive to produce more than they need. Hence, though not well developed and very small in nature they are very important to the food system.</p>
Elizabeth Kamau	Kenya	Q5.2/3	<p>The food businesses play an important role as an outlet especially during seasons of glut of the perishable agricultural produce, thus reducing levels of post-harvest food loss and waste.</p> <p>Most fruits and vegetables are seasonal in Kenya and thus periods of glut provide enough raw materials for processing.</p> <p>The food businesses assist in stretching the dairy, fruit and vegetable seasonality and shelf life hence improved food and nutritional security.</p> <p>The food businesses also provide income generation diversification and employment creation especially for women and youth. Food cottage industry development among women groups have resulted in establishment of food business that provide income diversification and employment creation.</p>
Abalo Adodo	Togo	Q5.2/3	<p>In West Africa, local food businesses are the leading input for the food consumption of the population (rural and urban). It is not rare to see traders to go to remote places to buy and bring food produce close to where the majority of consumers lives. In this adventure, they have a lot of support from transporters.</p> <p>Also, local processors work hard on some agriculture produce to transform them into edible foods. I can give the examples of soybeans in Benin or cassava in Nigeria. Consumers cannot eat soya grains or cassava tubers, but they</p>

Participant	Country	Aggregate	Comment
			<p>can easily eat soya-based products like soya cheese, soya milk, soya kebab, etc. or “gari”, pounded cassava (“fufu”), “tapioca”, etc.</p> <p>Generally, it is observed that the food produced by smallholders and their value chain partners is consumed by more than half of consumers of African consumers in rural and urban areas (However, I don’t have clear statistic to confirm it).</p>
Laura Arnalte Mur	Spain	Q5.2/4	<p>The SALSA study found small food businesses to be important in the region from the economic and social point of view, as they produce and/or sell high quality products, generate economic activity in some areas threatened by depopulation, and have a more direct relationship with clients and, in some cases, their supplying farmers, than large food businesses.</p> <p>Small farmers’ cooperatives with handling and/or processing activity were also pointed out as playing an important role in maintaining economic activity in rural areas through the generation of employment opportunities rooted in villages.</p>
Leslie Berger	UK	Q5.2/4	<p>ADAS works closely with international food and drinks manufacturers who source their raw materials globally from a range of farm types, from large commercial farm businesses through to individual smallholder farmers. In our experience with one major food manufacturer who is sourcing raw materials from India, smallholder farmers’ crops are collected at the village level. These village groups contract directly with the food manufacturer to sell their product. In many cases they are not organised into businesses, just local village farmers coming together to aggregate their crops.</p> <p>In this example, the food manufacturer has supported the collection of relevant data on water use by smallholder farmers in their supply chains. We have collected and analysed this data to identify areas where smallholders’ water use efficiency may be improved. The results of this analysis are then used by the food manufacturer to support relevant mitigation options e.g. improved irrigation scheduling, capital improvements, crop management advice. This food manufacturer provides direct support to the smallholder farmers through a series of projects. The benefits of having the large manufacturer supporting this supply chain is that they have the resources to roll out and scale up this type of support reaching thousands of smallholder farmers across the world. In this case, improvements are being made in water use efficiency.</p> <p>In a second example, we have supported ABInBev (formally SABMiller) with their raw material sourcing sustainability agenda. They are committed to improving the livelihoods of smallholder farmers as well as the</p>

Participant	Country	Aggregate	Comment
			<p>sustainability of their crop production in Africa, while also boosting the profitability of their business. ABInBev are working closely with farmers across Africa to support the production of beer from local products such as cassava and sorghum. In one example they are working through their local branch Zambia Breweries, to support smallholder cassava farmers. Zambia Breweries have reformulated this beer product to use a higher proportion of cassava, and have simplified the amount of processing (peeling, cutting and drying) the farmer has to do before selling the cassava to them. This has provided a new market outlet as previously cassava was either consumed locally or exported. Encouraging greater production of cassava is also helping to reduce the use of artificial fertiliser, as cassava has lower fertiliser requirements than the maize that was previously grown. ABInBev are hoping to scale up this project in Zambia reaching 5,000 smallholder farmers by the end of 2018, and are investing in similar projects in other African countries.</p> <p>see: https://www.iol.co.za/business-report/international/zambian-breweries-cassava-project-to-reach-5000-small-scale-farmers-by-year-end-14131058</p>
Mayank Jain	India	Q5.2/5	<p>Mayank Jain follows up on an input from Laura Arnalte Mur (Spain) in Q5.2/4, who mentions a SALSA study showing the importance of small food businesses in Spain.</p> <p>Mayank Jain comments:</p> <p>I completely agree with findings of the study. I think these informal market plays an important role in the socio-economic state of region. We tend to explore the local markets for our farmers and provide them an opportunity through a local market place or within a village area to sell their produce.</p> <p>As for small farmers, we go for diversified products like fish, honey and mushroom; we have opened a village outlet for the farmers to put their produce and channel it from there catering to the people in/around the village. Similarly, we have also facilitated and worked with farmers to lead through local market.</p> <p>Such food businesses become important because:</p> <ol style="list-style-type: none"> 1. While working with farmers over past three years, I have realised that slowly and slowly agriculture has turned from profession of hope to that of despair and people are looking ways to run away from the same and indulge in different activities. But once through these businesses (informal/formal) they see access to credits; a gleam in their eyes is seen and they are willing to continue with new energy 2. It also serves the very purpose of sustainable & local consumption as well cut down on logistics and money handling with immediate returns which in turn happens to be good.

Participant	Country	Aggregate	Comment
			<p>3. It also revives and creates opportunity for livelihood. e.g. while working in Northern Bengal region, women interaction within village was limited. However apart from being the invisible labour in the fields, they also doubled up as putting up market access for their farm produce which also strengthens their power equations in households and generally these households are found to be more progressive and prosperous.</p> <p>In Gaya (South Bihar - India) - all fresh farm produce market in the local morning market are mostly lead by women - which strengthens their position and also serves as potential to handle gender issues in agriculture.</p>
Boyko Doychinov	Bulgaria	Q5.2/5	In Bulgaria, food businesses play an important role, not only in feeding the population and exporting, but also in meeting the needs of tourism that is highly developed in the country.

Topic #6: How can policies affect small farm activities and their resilience?

Q 6.1 - What are the policies (international, national or local) in your region that affect the viability and development of small farms, and small farms' decision making regarding the amount and type of food produced and their ambitions regarding market integration

Participant	Country	Aggregate	Comment
Mayank Jain	India	Q6.1/1	<p>Experience from my work in the North Bengal region, in the Jalpaiguri District (India). Accelerated Development of Minor Irrigation (ADMI), is a project being run in West Bengal in collaboration with World Bank (http://www.projects.worldbank.org/P105311/west-bengal-accelerated-development-minor-irrigation?lang=en)</p> <p>The ADMI project aims to enhance agricultural production of small and marginal farmers in the project area through</p> <ol style="list-style-type: none"> Strengthening community based Water User Association (WUA) on irrigation management, operation and maintenance. Agricultural Support Services: Providing support to agricultural development, including provision of agricultural services, encouraging crop diversification and use of new technologies, and creating income generating opportunities. Irrigation system development This component will improve availability of water for agriculture and fisheries by developing new minor surface and ground water irrigation schemes on areas that are currently cultivated under rain fed conditions <p>Agriculture Water Management plays major role in developing human capital in rural area and is also essential to food security. Ensuring access to water for irrigation becomes critical in efforts to improve sustainable agricultural production.</p> <p>For the poor, deprivation of water is linked both to:</p> <ol style="list-style-type: none"> their vulnerability, i.e., the lack of financial and technical assets to access available water resources; and the ability of better-off competitors (large farmers, absentee landlords, industries) to use their strong bargaining position to either claim, pay or extract more water, particularly during periods of scarcity, thus exerting pressure on the limited water resources of the poor. [Dr. Sara Ahmed, 2004] <p>ADMI projects have improved irrigation enabling agriculture during non-monsoon periods and offsetting climate impacts (late/ irregular rainfall).</p> <p>Despite being focus on marginal farmers, WUA, as per the project design, have included few small and medium farmers. It paves way for inclusive rural development.</p> <p>One example is from a village in Dhupguri Bloc of Japaiguri where the area has a sandy loam soil with good water retention. The dominant Kharif crop is paddy with an approximate profit margin of INR 2500/ bigha (1 bigha =0.33 acre) in a single season. Farmers in the community cultivated jute in pre-kharif and potato in rabi prior to ADMI intervention. Post the ADMI intervention, the area under cultivation has increased dramatically in rabi and kharif while cultivation of</p>

			<p>the non-lucrative jute has fallen and there is enthusiasm to experiment with maize in the now vacant pre-kharif season. The dominant Rabi crops include Potato, Mustard, Wheat, Tomato, Cabbage, Cauliflower, Chilli. Potato is the most lucrative crop and lands are allocated on priority to potato. Most of the produce is sold in bloc's market or local haats.</p> <p>I work with farmers in Bihar, and as a strategy we have focused on diversifying products with the prime aim of getting a sustainable recurring income for the farmers which alone cannot be attributed to cropping. We have incorporated pisciculture, vermicomposting as well as bee keeping as alternate revenue means that can generate income through allied-agro means.</p> <p>It becomes more like a necessity/compulsion to do such things, as there is constant need to innovate.</p> <p>Even our Prime Minister on roadmap to double the income of farmers by 2022 emphasized on the very fact "We can ask farmers to grow sea weed, build apiaries, set up solar farms. We have to put advanced options before them and make them aware of the same. Income can even be generated through waste such as coir and coconut shell waste, bamboo waste and banana waste, he said."</p> <p>Also, presently in India, we came up with a law for contract farming. I want to know the opinion of fellow participants on contract farming with small farmers through examples across different geographies.</p> <p>How does it help the cause of farmers? Because agriculture is not only a business but a way of living too. Isn't becoming employee in your own land taking us at an alarming pace closer to industrial agriculture?</p>
Sylvester Kwame Osei	Ghana	Q6.1/2	<p>The implementation of good policies plays a pivotal role in small farming activities and also promotes cultivation resilience.</p> <p>There is a policy framework (in Ghana) that leases land to smallholder farming cooperatives to produce rice on credit bases in Aveyime, Volta region. The policy guarantees the provision of all input needs of which the farmers may have had to pay before commencing cultivation. The policy also monitors the farmers in the planting processes and equally makes available periodic technical or extension services. Also, there is irrigation infrastructure provided by Wenco/RMG as part of the policy arrangement to guarantee production all year round. After harvesting, there is policy arrangement for their rice to be milled and topped with a ready market.</p> <p>With this policy in place, the farmer needs not worry about capital to commence production. This is making rice production attractive in the area.</p> <p>The Minister of Food and Agriculture, Ghana, visited the farmers in the last quarter 2017 to seek the opinion of farmers on</p>

			<p>the project. Their concerns included increasing the land size per farmer to triple output, and reduction in utility tariffs. It is worth noting that with the implementation of good policies that ensure a win-win situation, farmers will work assiduously in increasing productivity.</p>
George Madoda	Tanzania	Q6.1/2	<p>Response to Mayank regarding contract farming:</p> <p>The cause of farming is realized after every harvest of crop because the quantity and quality of crop can vary from season to season. The contract between the buyer and farm producers should be beneficial to both from one season to another and it should not be, but can be the same (the contract amount). I too had three hectares where I had a contract farming in the Northern Tanzania around Bomang'ombe, Sanya station what we have to do is to make sure the soil is well prepared. We plant on time when rain is ready, we clear weeds properly, we use urea at proper time and incase warm attack crop we spray pesticide. This way of supporting each other the contract farming helps the cause of farmer but at the end we will deduct the cost that I incurred on the amount that we agreed on the crop after harvest. But there are those that leave the burden to farmers from farm cleaning to harvest then agreed on the price of crop in the farm it happens to those that are able to.</p> <p>Let us understand that:</p> <ul style="list-style-type: none"> - Agriculture can be a business or not a business: this depends on the size of the farm and type and quality of crop that were harvested now the farmer can decide of what it is and it should be for. - Agriculture can be a way of living: only when it is considered as a source of living where farmers depend on crop, they sell, add value, store for sale after a certain period and consume the rest. - Agriculture can become an employer: it can recruit a number of people and pay them as laborers or contract people on seasonal basis. - Agriculture can take us at an alarming pace closer to industrial agriculture or to industrial agriculture: all the effort that farmers make to produce can alarm signifying that industrial agriculture is needed, farmers can decides to organize into cooperatives and organizations where they will all be supplying industries with crop and the industry will transform, add value and sale for a profit or farmers organization or cooperatives can decides/ struggle to get a loan to plant an industry or they can be funded with a plant that will contribute much development to their area where they will all supply and produce goods and foods for sale at local market and for export.
Maria Rodriguez	Canada	Q6.1/2	<p>Response to Mayank: Contract farming is important as source of income and helps provide a livelihood for many small farmers, but there are many issues, and the fair share of the revenues is only one of them. In my opinion, it often creates barriers to innovation and to the adoption of appropriate technologies for small farming. We have seen many cases of this, for example, crop varieties or animal breeds that are known to perform better in a microregion or under a set of</p>

			production practices that are feasible for the small farmer, but cannot be adopted because the contract requires a product with certain characteristics.
Iyaji Andrew Ukama	Nigeria	Q6.1/2	<p>Response to Mayank: I believe it depends on the model being used. The Nigerian Farmers Group and Cooperative Society, NFG-CS in Middle Belt Nigeria just started early last year by leasing up to 5,000 hectares of previously unused arable land from the community and are making great strides for agricultural revolution through co-operative and contract farming. So if the land has been lying fallow and unused with no capacity by the owners to make use of it whether individually or collectively, it makes obvious sense to put it to use even if it means industrialised farming. What is good in the case of NFG-CS is that the land is being leased for a period of time after which it will be left to the community. At the same time, the women and young people of the community are being employed and paid wages throughout the period from land preparation to crop production and processing. They are gaining valuable experience in managing a co-operative, organising and best practices. Most of the registered co-operative members are people with primary employment/jobs elsewhere who fund the farming of a crop of their choice 100% and get 70-80% of the returns.</p> <p>The 2nd model is another crowd funding opportunity where smallholder farmers can expand their farms with money obtained from above with net returns shared in ratio of 40:40:20 in favour of the crowd funder, the farmer and the tech organisation respectively. The tech company does the initial contact, vouching, training in good agricultural practices (and arrange for off-takers) for the smallholder farmer while the latter does the entire work otherwise.</p> <p>Having said this, I do share your concerns, given that industries here do have smallholder farmer contracted.</p>
Sarjan Rao	India	Q6.1/2	<p>Response to Mayank: One of the finest examples considered to be successful in contractual farming systems is "Contract Broiler Farming" in poultry industry. Due to emergence of various diseases outbreak causing lot of mortality in the poultry population in the commercial sectors and due to the threat of various zoonotic diseases, many broiler farms in small holder sectors have been closed and still it is debacle point on the economic viability of broiler farming in small sectors due to the above problems discussed.</p> <p>However, these small holders have established lot of infrastructure like housing, cage systems, and feed plants with the support of banking. This has happened from year 2000 and continued. In order to support the smallholders to continue in the poultry industry and to make use of the infrastructure facilities efficiently, contract broiler farming systems initiated from some of the commercial large scale units (no need to mention the commercial names here) have supported all the inputs like chicks, feed, vaccines and support of veterinary services and at the end of the crop production inclusive of marketing. Finally, the small holders get profit/payment per unit of chicken produced. Many risks being avoided in this system. Similarly, some of the Sugarcane industries both in cooperative sectors and private sectors are presently helping the small land holders to support all inputs from seed to harvesting and marketing have been supported in Contract</p>

			Farming in Southern India providing the livelihoods to the small holders and greatly putting their lands into usage under low irrigation input conditions.
Dionisio Ortiz Miranda	Spain	Q6.1/2	Response to Mayank: Contract farming has arisen as a trend also affecting small farms. Although it is not, at least in Spain, an issue about policies, we have found that for some small famers, a growing integration with large actors (processors, traders, large producers) of the food chain has become an option to be (by the time being) economically viable. The counterpart is that they 'transfer' a part of their decision power to these actors, reducing the autonomy of the farm. The challenge is to assess if, in the long run, this will be a stable way to maintain small farms (in a context in which they keep disappearing).
Dionisio Ortiz Miranda	Spain	Q6.1/2	<p>The administrative burden of dealing with a large number of small farms is an issue in those contexts where agricultural policies imply "growing bureaucracy". This is for instance, the management of CAP (Ed: CAP = Common Agricultural Policy) direct payments in the European Union.</p> <p>In the Spanish Region of Valencia, the regional administration decided to exclude small beneficiaries (less than 300 Euros) from CAP payments. This is fully allowed by the EU regulations. When looking at the beneficiaries of other CAP payments (e.g. agri-environmental or organic payments) we find that larger farms use to participate much more in these schemes.</p> <p>The point is that, beyond, the 'official' discourses highlighting the relevance of small farms, the real implementation of policies tend to forget them. Small farms are not only 'invisible' in statistical terms, they tend to become also invisible in policy frameworks.</p>
Winnona Merritt	USA	Q6.1/2	<p>Response to Mayank: A family member is a contract specialist in the Agriculture Economics Department at Purdue. This is what he said when I asked this question:</p> <p>I do think contract agriculture is designed to get small farmers access to markets and the contractors (e.g. exporters and agribusinesses that contract with them) will want things done their way for the most part. So yes, I think it will gravitate more toward a business rather than a way of life. Production contracts in particular limit the farmer's ability to farm their own way as the contractor will control most of the process.</p>
Blastus Kahemela	Tanzania	Q6.1/2	There are some policies which are to be considered at national level though some countries like Tanzania have to revise those policies which affect directly or indirectly the small farmers who works in those small farms.
Diana Naikoba	Germany/Uganda	Q6.1/3	In the recent past, in Uganda, there has been the explosion of what can be called the boda boda economy. Young men sell their land to purchase motorcycles. They then abandon rural areas to go to towns to (engage in a) "taxi" business.

			<p>In addition, there is a tendency of the semi-elite to look down on agriculture.</p> <p>There is also a section of the population stuck on the old paradigm of “merchanising” agriculture as the only way to develop. I think for rural communities to continue existing, there is need to educate the masses that the small farms are actually productive and have potential to bring about growth in a society. That way, the sector will not be totally ignored and people will take pride in their farms.</p> <p>For the sake of making the rural household food secure, countries with many small farms like Uganda, much as it seems impossible, is the need to find ways of supporting small farms to a certain level. It may not be input support but can also be through encouraging formation of groups so that they receive training from extension officers to improve their capacities. This is because many are semi or not literate. Training them on ways to deal with emerging issues such as how to deal with climate change impacts may make a difference in as far as making the farms resilient is concerned.</p>
Michael Nana Osei	Ghana	Q6.1/3	<p>In a country like Ghana where about 80% of total agricultural production is attributed to the smallholder farmer, policies are developed to enhance and ensure the sustainability and development of small farms.</p> <p>The Food and Agricultural Sector Development Policy (FASDEP) is the Ghana’s main agricultural development policy driving the sector in Ghana. In the first phase of FASDEP I provided a framework for modernizing agriculture sector making it a catalyst for rural transformation. It however failed to target the farmers within the environment where drivers of modernization (capital, infrastructure, etc.) is limited and hence the motive of modernizing the small farms were not achievable.</p> <p>The FASDEP -Phase 2 was developed to address the loopholes and inefficiencies in FASDEP I. It sought to enhance the environment of all categories of farmers while targeting poor and risk prove and risk averse producers.</p>
Mayank Jain	India	Q6.1/3	<p>On the ongoing discussion about contract farming, replying to input from George (Tanzania) and Maria (Canada):</p> <p>I have a clarification to make - while mentioning contract farming, I implied more towards corporate farming. I acknowledge, I forgot this aspect of contract farming while framing my question. In this way, I agree to the aspect of contract farming which you are citing as it is much traditional way and I think this also takes into consideration the local know how of the area and hence I presume that the autonomy of farmer remains there in such contract farming. Would be happy to know the other views on this from the fellow participants.</p> <p>But I was more interested on the dimension when a large firm own or influence farms and agricultural practices? AND I THINK CORPORATE FARMING IS DISGUISED INTO CONTRACT FARMING. Would love to hear views on this and any</p>

			<p>examples across geographies.</p> <p>Agriculture can be a business or not a business: by work and rationale (particularly in case of small farmers), it has to be their source of living - hence it is not a choice of not being a business - until and unless you are rich brat doing things for leisure.</p> <p>- Agriculture can be a way of living: by way of living, I implied that still people engaged in agriculture are valued in traditions and it is something they do because that's the way they know how to live by (In India, and I think agriculture is fast moving from profession of hope to that of despair: (...) So, when people get engaged in contract (corporate) farming, there autonomy is severed and local knowledge is compromised.</p> <p>- I somewhat echo the thoughts Maria has and that's what I meant - the autonomy is under threat and there has to be compromise because economic viability is a pre-requisite.</p> <p>Secondly, leasing of land is also taking place where the land owners end up being serving in their own land; that is more a transitional shift to corporate and commercial farming - what is your take on that?</p>
Dominic Duckett	UK	Q6.1/4	<p>When questioned about constraints to agricultural productivity, small farmers throughout Europe and Africa, (interviewed for the SALSA project), point to predatory and destructive wild animals. Wild animals are nothing new but the conservation context and the constraints imposed on farmers are. We are living in an era of rewilding and species reintroductions in which conservation and ecological values drive policies promoting farming practices that increase rather than decrease the presence of select wildlife.</p> <p>Farmers are incentivised to participate in conservation schemes and are penalized over traditional control practices including hunting. From Kenya's elephants and Norway's wolverines to ground-nesting birds on Scotland's western islands, conservation governance is affecting rural spaces. Colonising influences are both urban and international with citizens in distant countries effectively petitioning governments, often through international NGO's such as WWF, to protect iconic species or otherwise produce newly hybridized landscapes. Impacts are felt on the remotest of farms.</p> <p>SALSA is interested to hear about and discuss related experiences of small farmers and their advisors across Europe and Africa dealing with rapidly evolving conservation governance affecting the farming world.</p>
Sigfrido Burgos	USA	Q6.1/4	<p>From experience I can tell you that when transboundary avian diseases strike in any given country the immediate action of livestock or veterinary departments is to stamp out flocks to control disease spread and contagion. But this is a reactive</p>

			<p>measure, oftentimes not grounded on research or field evidence. Careful consideration during disease outbreak must be paid to geographical exactitude given that blanket killing of birds results in loss of productive assets that are normally used three ways: as a source of eggs and meat for internal consumption (cheap source of protein); as a source of income by selling eggs, meats, viscera, feathers; and a source of savings, by keeping investment in livestock that can be transferred or exchanged in the future (or in certain cultures as payments, as religious offer, as dowry, and as donation).</p> <p>A policy measure that considers the above is one that encourages a census of livestock in rural areas, with estimated numbers of animals and productive area details, along with a background process of disease surveillance and detection, so that "bad" farmers are differentiated from "good" farmers, and also to distinguish the specific areas where disease occurs so that measures can be targeted and surgical. One has to remember that people's livelihoods are at stake, and that poverty, nutrition, and family empowerment are interconnected in a myriad of ways in rural smallholding communities.</p>
Vivian CdV	Italy	Q6.1/5	<p>This is a reply to the query from Dominic Duckett, who asked: "SALSA is interested to hear about and discuss related experiences of small farmers and their advisors across Europe and Africa dealing with rapidly evolving conservation governance affecting the farming world."</p> <p>Viviane's input: Wolves arrived by themselves in my neighbourhood. I wonder about the statistic tourism parks get. It is certainly good because they organised a museum (on wolves in the region), and the public curiosity is very high! But... I deal with two small farmers who had the visit of the wolves. In one case, 20 goats were killed in one night. This means that you have to report it to the authorities to get a compensation. If you want a compensation, your goats have to have an ID card or tag, otherwise you get nothing. How about the newborn goats which have not yet an ID: In that case, no money is reimbursed, and you may also get a fine, if you report ID-less goats, as this is well regulated in Italy. In a response, the regional government proposed "sheep dogs". For me, this is useless as sheep dogs have to be trained. Who pays for this? Why does the regional government not pay for this training cost?</p> <p>Reply to the input from Sigfrido Burgos (USA), who urges that policies need to be evidence/science based (with the government response on avian flu as an example-in-case)...</p> <p>To which Vivian confirms: In the South of Italy, a multinational constructing a complex of houses in a fantastic scenery, declared the olive had a contagious disease and, as a result, had the old olive trees destructed. I agree completely that a scientific diagnosis is very important. The scientific centers or research organisations should actually recognise these findings.</p>

Vivian CdV	Italy	Q6.1/6	<p>This is a reply to a request by Dominic Duckett (Q6.1/4) to hear more about related experiences across Europe and Africa dealing with rapidly evolving conservation governance affecting small farms.</p> <p>Viviane replies:</p> <p>Conservative issues are good. (But sometimes they go far - for instance, here in Italy) , one time the idea was to pour viper snakes from helicopters...But overall, wildlife is precious: it bounds people, it gives value to your land, it gives quality of life, of air, of water, to your crop, to your product.</p> <p>In the example used, on wildlife attacking poultry: you have to protect your poultry for instance using widespread shelters. For other wildlife, we protect our crops or livestock with fences. We also protect sheep against wolves by providing them protected shelters, distributed over the land. Wildlife means tourism, which means “income”, and you have to protect your income.</p>
Dominic Duckett	UK	Q6.1/7	<p>In reply to Viviane CdV <dalieforever@hotmail.com> (Italy) on the question from Dominic Duckett <dominic.duckett@hutton.ac.uk> relating to conservation/production trade-offs (Q6.1/4)</p> <p>I’m fascinated by the combined conservation and production challenges faced by small farmers. In this Italian case. Viviane describes what sounds like accidental rewilding with wolves reappearing in some areas in an unplanned way, possibly related to the effects of national or natural parks. SALSA is particularly interested in agricultural production on small farms as a component of food and nutrition security. In this regard, we have asked small farmers to identify barriers to increasing their outputs and maximising the productive potential of their land. In various regions farmers have said that predation and destructive wildlife stops them from producing more food. Of course wildlife and conservation are valuable and enrich touristic and cultural landscapes. I am not for a minute suggesting that conservation is not of the utmost importance.</p> <p>However, I am interested in how increasing agricultural production and conservation are operating together. How is today’s small farmer managing wildlife differently to the previous generation? Which new institutional and governance challenges and opportunities are emerging? How can we more successfully combine increased agricultural production and effective conservation on small farms? What is working and what is not working?</p>
Mark Redman	Romania	Q6.1/8	<p>Dominic Duckett asks some interesting questions in the on-going discussion about small farms and nature conservation under Question 6.1.</p> <p>The discussion to-date appears to have focused upon the negative impacts of large carnivores upon livestock. This is a major issue here in Romania, for example, since more large carnivores (wolves, brown bears and Eurasian lynx) live near</p>

			<p>domestic livestock than in any other European country. The loss of sheep to wolves especially is a significant economic burden on small farms and an on-going challenge for shepherds managing flocks in the mountains during the summer grazing period. For a comprehensive overview see here: http://ec.europa.eu/environment/nature/conservation/species/carnivores/pdf/4_Ionescu_Management_LC_Romania.pdf</p> <p>There is an EU platform on coexistence between large carnivores and people which meets regularly: http://ec.europa.eu/environment/nature/conservation/species/carnivores/coexistence_platform.htm</p> <p>More generally, Dominic's question about "How can we more successfully combine increased agricultural production and effective conservation on small farms?" is central to the challenge of maintaining the large areas of High Nature Value (HNV) farmland that exist in Europe – much of which is managed by small-scale farms in marginal areas using traditional management techniques which have created and maintained high levels of farmland biodiversity (e.g. species-rich semi-natural grasslands) for hundreds of years.</p> <p>A significant proportion of the 3.4 million small farms in Romania are managing HNV farmland. However, as the number of small farms decline (over 0.5 million small farms were lost between 2005-2013 - equivalent to an average of 180/day!) so is the biodiversity associated with them. Maintaining profitable small farms that can sustain an acceptable level of household income is therefore critically important for nature conservation – as well as food and nutrition security - in Romania.</p>
Richard Yeboah	Ghana	Q6.1/8	<p>The open market economy policy of the government of Ghana since the mid 1990 (Economic recovery programme after the Structural Adjustment Programme) has brought about the collapse of many small farms and small food businesses. People have taken more to import of and trade in almost all food items and processed products that used to be produced in small quantities by many small farms and businesses. The local small businesses could not match the low prices of the imported goods that come from commercial farms that have economies of scale and sometimes subsidy.</p> <p>Market forces (demand and supply) determine the price of produce. In years when small farms produce more or have better yields they become poorer because the price of their produce drop, sometimes drastically.</p> <p>In 2017 the government rolled out a new policy they dubbed "Planting for Food and Jobs". This policy provides 50% subsidy on fertiliser, allow registered farmer to pay 50% of the subsidised cost cash and pay the rest after harvest. Seed of some cereals and legumes are given free. This has helped increased the number of small farms and small businesses as well as improve the yields of farms that hitherto could not apply fertiliser to their poor soils. This a good policy</p>

Daniel Nkomboni	Zimbabwe	Q6.1/9	<p>This is a follow-up answer, to the question of Dominic Duckett (Q6.1/4) about experiences across Europe and Africa dealing with rapidly evolving conservation governance (e.g. wildlife conservation efforts) affecting small farms.</p> <p>Small farms along the conservation areas in the Lower Zambezi and Limpopo (National Parks and Conservancies) in Zimbabwe (and am sure most of southern Africa) are in conflict with wildlife and in most cases are on the receiving end (problem animals destroying their crops, preying on their livestock, and even killing humans). In these instances, conservation policies protect wildlife more than humans.</p> <p>As conservation areas are protected they have better grazing / browsing areas than the adjacent small farmers and when livestock stray across the borders into the Parks, farmers are penalised but when wildlife strays into their areas destroying that cropped lands and endangering their lives, there is minimal or no compensation at all.</p> <p>There are diseases that are transferred from wildlife to livestock that inflict heavy losses on the livestock eg the Bovine Malignant Catarrh Fever carried by wildebeest during calving. Farmers don't have capacity to prevent these diseases as they are lowly resources, leaving the government to assist them.</p> <p>The farmers in these regions are further disadvantaged in that their areas are zoned as red zones (refer to veterinary red zones in Zimbabwe), restricting their cattle to be sold in lucrative markets (because of these zoning and other international policies these farmers may not even export).</p> <p>On the positive side Community Based Natural Management projects (in particular "AMPFIRE") which allow the farmers to utilise wildlife in their areas for development projects eg infrastructure (schools, roads, water sources) have been helpful. This project has seen small farms conserving wildlife around them.</p> <p>CIRAD through the DREAM project and Ministry of Lands, Agriculture Rural Resettlement and other stakeholders are conducting studies on livestock -wildlife interactions in the KAZA and the Great Limpopo transfrontiers that are expected to inform policy on suggested solutions to some of these challenges.</p> <p>My opinion is that there is need to revisit some agricultural and wildlife (veterinary and conservation policies) that may be old and irrelevant (especially after Zimbabwe land reforms).</p>
Richard Yeboah	Ghana	Q6.1/10	<p>This is a reply to an earlier question from Mayank Jain:</p> <p>I want to know the opinion of fellow participants on "contract farming" with small farmers, through examples across different geographies. How does it help the cause of farmers? Because agriculture is not only a business but a way of living too. Isn't becoming employee in your own land taking us at an alarming pace closer to industrial agriculture?</p>

			<p>to which Richard replies:</p> <p>A form of contract farming is the collaboration between "Nucleus farmers and small farmers called out-growers". This is the case where a farmer referred to as Nucleus farmer has many registered small farmers who he/she works with. He/she provides some inputs as credit to the small farmers. In addition, extension service is provided hence these small farmers turn to get higher yields and hence get more profit than those not registered. The small farmers in turn sell some/all of their produce to him/her the credit is deducted and the rest paid to the small farmers. This is helping many small farmers. The challenge Nucleus farmers face is that some small farmers sell their produce to the open market and refuse to pay for the inputs provided.</p>
Dominic Duckett	UK	Q6.1/10	<p>I would like to thank Daniel for his insights. I had neglected to mention issues around epizootic and zoonotic diseases which are of profound concern around the world. In the UK there has been longstanding controversy around bovine tuberculosis and the role thought to be played in its epidemiology by wild badgers which are a protected and iconic wildlife species. More widespread have been fears surrounding avian influenza as a potential human pandemic and the role of migratory wild birds, particularly their interactions with commercial bird rearing as a disease pathway. Treatments, losses and the control mechanisms surrounding outbreaks can have huge financial costs associated with them. I am grateful too for his notes on the positive sides of wildlife conservation for small farmers.</p>
Yoanna Ivanova	Bulgaria	Q6.1/10	<p>Policies in Bulgaria related to agricultural production are EU policies. The country is still in the process of moving towards full implementation of these policies</p>
Boyko Doychinov	Bulgaria	Q6.1/10	<p>Over the last 10 years, the GAP of the EU has been stimulating financially the production of cereals. Insufficient attention is also paid to national policies for the development and support of small farmers.</p>
Sami Elhag	Sudan	Q6.1/11	<ul style="list-style-type: none"> - Access to bank facilities, - subsidizing inputs, - poor extension services, - fluctuation of crop prices, - monopoly of big companies and traders to sesame

Q 6.2 - Can you give specific examples of how these policies have affected small-farm decision-making?

Participant	Country	Aggregate	Comment
Nidhi Nagabhatla	Canada	Q6.2/1	<p>MDG's steered global energies, strategies, and innovations to combat hunger, addressing food insecurity and malnutrition for all, - the efforts are advancing since then. The global count of undernourished people is around 800 million, although the proportion of the global population dropped from 15% from 2000/02 to 11 % by 2014/16. The SDG give us another tenure to look into remaining challenges- one being- to sustain focused efforts, especially in Asia and Africa- small farms and subsistence systems- requires directed investments, governance reforms (spending and assistance) and building capacity of field-based stakeholders.</p> <p>Sustaining local food production systems and resilient agricultural practices is key to maintaining the agrobiodiversity [UN reports 4.7 million samples of seeds and another plant genetic material for food and agriculture were preserved in 2016 (2 percent > 2014), in 602 gene banks in 82 countries and 14 regional and international centers. The focus on agrobiodiversity conservation is creating the good business case for investments, and governance reforms in this space- a reference - http://www.uni-passau.de/fileadmin/dokumente/projekte/biodiva/BooklaunchPoster061113Last-1.pdf</p> <p>Specific examples of local/national policies translated these global strategies:</p> <p>Ecosystem based decentralized land management policies for ensuring food security was discussed with the Kurichya community. http://www.mssrf.org/mssrfoldsite/?q=content/policy-interventions-empower-kurichya-joint-family-farmers-wayanad</p> <p>Trade-Related aspects of Intellectual Property rights (TRIPs) extensively discussed in this discourse.</p> <p>CBD (ed: Convention on Biological Diversity) identified data gaps and methodological problems [including effects of trade liberalization on agrobiodiversity] https://www.cbd.int/doc/meetings/cop/cop-07/information/cop-07-inf-15-en.pdf - although the focus on issues at small scale remain less</p> <p>Nepal Biodiversity Policy 2007- addressing food security- although generic- farm size and scale not defined with clarity-the focus on indigenous communities is set clear http://www.farmersrights.org/pdf/asia/nepal/nepal-agrobiodivpolicy07.pdf</p>

Participant	Country	Aggregate	Comment
Manyank Jain	India	Q6.2/2	<p>District project monitoring unit has handed over the irrigation system to the WUA in August 2015. The villagers are enhancing their farming productivity and profitability by using the irrigation system of River Lifting Irrigation (RLI)</p> <p>The farmers are using irrigation water during this Rabi (Oct-Mar) season and dry period. They are further sharing the water resources with villagers not part of the water user association.</p> <p>With volatile markets for farm produce community in Uttardanga Para decided to shift to tea-plantation as it provided farmers with better livelihood opportunities (assured market linkage). The intervention under ADMI has successfully prevented the shift of community from agriculture to tea-plantation. Farmers in the community cultivated jute in pre-kharif and potato in rabi prior to ADMI intervention.</p> <p>Post the ADMI intervention, the area under cultivation has increased dramatically in rabi and kharif while cultivation of the non-lucrative jute has fallen and there is enthusiasm to experiment with maize in the now vacant pre-kharif season. The dominant Rabi crops include Potato, Mustard, Wheat, Tomato, Cabbage, Cauliflower, Chilli. Potato is the most lucrative crop and lands are allocated on priority to potato. Most of the produce is sold on markets or haats (small bazaars).</p>
Dilip Kumar	India	Q6.2/2	<p>Urea is one of the critical inputs for crops, horticulture and also for manure based low cost aquafarming. Due to deliberate diversion of urea for various industrial application there was a huge shortage of urea in the market to be used for farmers.</p> <p>The recent policy of coating urea with neem, made the bulk of the urea manufactured useless for industrial application which made easy and adequate availability of urea for farmers. Accordingly, farmers have again resorted to intensive agriculture.</p>
Mayank Jain	India	Q6.2/3	<p>I would like to elaborate upon response of Mr. Dilip on 6.2 (on neem-coated urea)</p> <p>The brief findings of the study on the impact of neem-coated urea in India are as follows:</p> <ul style="list-style-type: none"> i. Improvement in soil health. ii. Reduction in costs with respect to plant protection chemicals• iii. Reduction in pest and disease attack. iv. Diversion of highly subsidized urea towards non-agricultural purposes negligible among farmers after the introduction of the mandatory policy of production and distribution of only Neem coated urea.

Participant	Country	Aggregate	Comment
			<p>v. An increase in yield of paddy to an extent of 5.79 per cent. vi. An increase in yield of sugarcane to extent of 17.5 per cent. vii. An increase in yield of maize to the extent of 7.14 per cent. viii. An increase in yield of Soybean to the extent of 7.4 per cent. ix. An increase in yield of Tur/Red Gram to the extent of 16.88 per cent.</p> <p>Moreover, the availability of Urea during 2015-16 and in the current year is more than the requirement and sales. Further, some state governments have reduced their requirement which was initially projected. There is no report of shortages received from any of the state government. It is, therefore, perceived that Neem Coating of Urea has helped in curbing the diversion.</p>
Irina Toma	Romania	Q6.2/2	<p>In Romania 99.2% of 3.63 million registered agricultural holdings are small farms (according to EUROSTAT 2015). This makes Romania a clear outlier amongst other EU Member States. One of the key challenges for integrating them into markets and bringing them on an income-based food and food nutritional security (FNS) development pathway is the lack of appropriate agricultural knowledge and innovation systems (AKIS) targeting them.</p> <p>Romania and Eastern Europe in general might have a lot to learn from the context of other African and Asian partners, and innovative policies or other mechanisms piloted there.</p> <p>We're curious to hear whether you have any good examples of successful projects on this in your country:</p> <ul style="list-style-type: none"> - Do you know of any cases where agricultural Knowledge and Innovation Systems (AKIS) had good results on FNS and market integration? - Were these AKIS systems using any interesting communication/ICT technologies and innovations? - Are there other cases where innovation policies helped solve key issues related to Food Nutritional Security (FNS)?
Mayank Jain	India	Q6.2/3	<p>This is an answer to an earlier question from Irina Toma (Romania): "Are there other cases where innovation policies helped solve key issues related to Food Nutritional Security (FNS)?"</p> <p>Answer: While working on a project in Northern District of West Bengal; I had an opportunity to work alongside a team from Landesa, a rural development institute. We were trying to find out an intersection that could happen between Water User Associations & Self-Help Groups which leads to better opportunities for holistic rural development. Our work touched upon the issues of Gender in Agriculture, Land and Water usage rights. It formed considerable part of</p>

Participant	Country	Aggregate	Comment
			<p>that project.</p> <p>Coming back to LANDESA and their work in West Bengal, I found the model interesting and worth discussing in response to this query.</p> <p>Landesa's work across India focuses on four critical themes:</p> <ol style="list-style-type: none"> 1. Develop innovative policies and programs that provide homestead and farmland for rural landless 2. Strengthen women and girls' land rights 3. Increase land tenure security through legal aid 4. Reform laws and policies to provide legal recognition of farm land leasing for the rural poor. <p>As a mandate, Landesa only works along with government intervention and having them partners. As an approach they envision to alleviate people out of poverty through micro-land ownership by homestead development. These homesteads serves three purpose:</p> <ol style="list-style-type: none"> 1. Provide land to the landless/women 2. On these, homesteads kitchen garden/nutritional garden are setup which tries to ensure FNS for the family 3. Once FNS is ensured, the surplus produce is sold in the market or local haat (community market)
Langelihle Simela	Republic of South Africa	Q6.2/4	<p>In South Africa, there are a number of policies to support SMMEs (Small and Medium sized Enterprises), which in agriculture would include smallholder farmers. Some are as follows:</p> <p>- Broad-Based Black Economic Empowerment (B-BBEE), which promotes economic transformation in order to enable meaningful participation in the economy by Black (historically disadvantaged) people. This measured against a score card known as the Codes of Good Practice. The scorecard has 5 elements of empowerment, namely ownership, management control, skills development, enterprise and supplier development (ESD) and socio-economic development (SED). The latter 2 entail that an entity spend up to 3.5% of NPAT on economic development of entities (e.g. helping start up entities to become established businesses), enterprise development (facilitating growth of entities), supplier development (development of entities in the supply chain) and procurement from such entities. These elements make up a large part of the scorecard. The entities that are development should be have a turnover of <R10 million (exempt micro enterprise, EME) or between R10 - R50 million (qualifying small enterprise, QSE) and should be at least 51% Black owned, and the owners should include women, youth, people with disability (reflected on scorecard for ownership). Big off takers, such as supermarkets and food processors are leading in the</p>

Participant	Country	Aggregate	Comment
			<p>implementation of ESD programmes to include smallholder farmers in their supply chain. There is effort from some input suppliers to include smallholder farmers in their distribution chain for agri inputs.</p> <p>- Preferential Procurement Policy Framework Act & its regulations. Under this policy, one of commitments is that organs of state should prioritize tenders, with at least 30% of the rand value of the contract sub-contracted exempt micro-enterprises (EMEs) and qualifying enterprises (QSEs) that at least 51% black owned. Smallholder farmers can potentially be drawn in state procurement for hospitals, prisons, army, etc.</p> <p>- Cooperative Incentive Support - a 100% grant scheme for primary cooperatives.</p> <p>There are numerous other programmes that one could include, run by the Department (Ministry) of Agriculture , Forestry & Fisheries, Department of Rural Development & Land Reform, Department of Small Business Development and Local Government (local and district municipalities) to address skills development, extension services, cooperative development, access to infrastructure and inputs and access to markets and development finance. The big challenge is coordination of all supports for meaningful impact.</p>
Mahesh Chander	India	Q6.2/5	<p>An interesting paper, entitled "Pursuing sustainable productivity with millions of smallholder farmers", published in Nature volume 555, pages 363–366 (15 March 2018) reports the outcome of nationally coordinated efforts over a 10-year period that encouraged 20.9 million smallholders to adopt enhanced management technologies for greater yield and reduced environmental pollution in China.</p> <p>This paper, presents the results of 13,123 field trials that tested the applicability of a comprehensive decision-support integrated soil–crop system management (ISSM) program for growing maize, rice and wheat across China’s vast agroecological zones. It also, describes the coordinated campaigns, leading to the implementation of ISSM-based management in farmland with a total of 37.7 million cumulative hectares over the years (2005–2015). Finally, it discusses scenarios for pursuing sustainable productivity in the entire country and the potential impacts on grain output and selected environmental indices. Engaging farmers to adopt those recommendations involved the collaboration of a core network of 1,152 researchers with numerous extension agents and agribusiness personnel.</p> <p>From 2005 to 2015, about 20.9 million farmers in 452 counties adopted enhanced management practices in fields with a total of 37.7 million cumulative hectares over the years. Average yields (maize, rice and wheat) increased by 10.8–11.5%, generating a net grain output of 33 million tons (Mt). At the same time, application of nitrogen decreased by 14.7–18.1%, saving 1.2 Mt of nitrogen fertilizers. The increased grain output and decreased nitrogen</p>

Participant	Country	Aggregate	Comment
			<p>fertilizer use were equivalent to US\$12.2 billion. Estimated reactive nitrogen losses averaged 4.5–4.7 kg nitrogen per Megagram (Mg) with the intervention compared to 6.0–6.4 kg nitrogen per Mg without. Greenhouse gas emissions were 328 kg, 812 kg and 434 kg CO₂ equivalent per Mg of maize, rice and wheat produced, respectively, compared to 422 kg, 941 kg and 549 kg CO₂ equivalent per Mg without the intervention. On the basis of this large-scale survey (8.6 million farmer participants) and scenario analyses, the potential impacts of implementing the enhanced management practices on China's food security and sustainability outlook has been demonstrated in this large project focused on small scale farmers in China.</p> <p>The purpose to discuss this paper here is to know if such efforts are being made elsewhere too with what outcomes towards improving the productivity, profitability, employment and livelihoods of small-scale farmers.</p> <p>In India, for instance, currently a big project, called "Farmer FIRST Programme" (.PDF link here) is under implementation. The Farmer FIRST Programme (FFP) is an ICAR initiative to move beyond the production and productivity, to privilege the smallholder agriculture and complex, diverse and risk prone realities of majority of the farmers through enhancing farmers-scientists interface. There are concepts and domains that are new in emphasis like resource management, climate resilient agriculture, production management including storage, market, supply chains, value chains, innovation systems, information systems, etc. The Farmer FIRST as a concept of ICAR is developed as farmer in a centric role for research problem identification, prioritization and conduct of experiments and its management in farmers' conditions.</p> <p>The focus is on farmer's Farm, Innovations, Resources, Science and Technology (FIRST). Two terms 'enriching knowledge' and 'integrating technology' qualify the meaning of Farmer FIRST in Indian context. The outcomes of this nationwide project will be known on or after 2020. This has certainly brought small holders in focus as many interventions are currently being made to improve the life and livelihood of small-scale farmers.</p> <p>I would like to know more on (and examples of) such national level evidence-based interventions of long term nature.</p>
Gary Vaughan-Smith	UK/Tanzania	Q6.2/6	<p>We operate in Southern and Eastern Africa my comments below particularly apply to our Tanzanian project where we work with over 20,000 poultry farmers, over 80% of whom are women.</p> <p>Example of how policies have affected small-farmers: The poultry industry is very young in Tanzania with consumption per capita only 12% of that of South Africa. Almost</p>

Participant	Country	Aggregate	Comment
			<p>all poultry and egg production is done by small-holder farmers.</p> <p>In 2015 the Tanzanian government introduced VAT of 18% on poultry (and other) feed. Farmers were not able to increase egg and poultry prices correspondingly and this introduction of VAT led to reductions in egg and poultry production because poultry farming became less viable. The government listened to feed-back and removed VAT on feed in July 2017.</p> <p>We have seen a 50%+ increase in demand for feed and chicks in the 9 months since that date because farmers became viable again and were able to ramp up production.</p> <p>Poultry represents a higher value product for small-holder farmers, generally giving them a substantially higher income than grain farming. Women disproportionately benefit – in our case over 80% of poultry farmers that we work with are women.</p>
Richard Yeboah	Ghana	Q6.2/7	Government in Ghana attempted to increase tariffs on imported chicken and chicken parts in order to help the local poultry industry made up of many small farms and a few medium scale farms. As a result, poultry farmers increased their production only for the policy to be withdrawn because of international pressure. The farmers lost miserably and many farms collapsed.
Boyko Doychinov	Bulgaria	Q6.2/8	"Branch organizations" in Bulgaria play an important role in shaping policies for small farms.
Sami Elhag	Sudan	Q6.2/9	Cost of one ton of sesame, in the last season was about SDGs 600, and this year has risen to above SDGs 3,000

Q 6.3 - What are the most critical policies that are needed in your region to support small farm development and increase their role in food and nutrition security in the (regional) food system?

Participant	Country	Aggregate	Comment
El Hadji Ousmane Ka	Senegal	Q6.3/1	<p>To make the farms more resilient, you have to go find the farmers in their locality and help them to have small modern mixed farms where you will have fish farming, livestock farming and arboriculture on the same farm.</p> <p>Example ANIDA in cooperation with the PAPEJF project financed by ADB (African Development Bank) creates farms named NATANGUE. For example, with this program we have installed the Ferme Vitrine de Ndoiyene: production of 1000 layers and 1000 broilers plus market gardening on 0.5ha. Creation of 15 direct and 45 indirect jobs for the local population. Among other things, it makes it possible to promote local production, fight against immigration through canoes and participate in local development.</p> <p>That is the first community farm in my locality: http://www.youtube.com/attribution_link?a=JVMVPB7-UJQ&u=/watch%3Fv%3DK4z_Ljw8oc4%26feature%3Dem-share_video_user</p> <p>10 modern farms are created in every region of the country. Another 56 farms will be created in different regions. this program will make it possible to modernize the family farms which will use the new production technique and possibly face the future difficulties. After the creation of all farms, they will create a formal cooperative to work together to strengthen their productive capacity to create a partnership with the state and other partners to ensure their survival.</p>
Raja Rathinam	India	Q6.3/2	<p>With my vast experience of Amul and other cooperatives which support the small and marginal farmers, I feel that International organisations like FAO and UNO should come forward to support the small and marginal farmers by guiding the policy makers of local Government and other farmers oriented institutions with the over all benefits to them. Now-a-days the challenges such as technology, consumers preference, operational volume, computerization, climate Change, globalization etc are going to be much intensive than the past. Unless such interventions are not taken place, the purpose of conference will not be achieved. There is also need that we will all make combined efforts to help the small farmers with our continuous contributions.</p>
Mahesh Chander	india	Q6.3/2	<p>To address the challenges Indian farmers are facing, the Government of India has taken a few policy decisions:</p> <ol style="list-style-type: none"> 1. For the notified crops, the minimum support price, will be declared at least 1.5 times their input cost

Participant	Country	Aggregate	Comment
			<p>2. Agriculture Marketing Reform is being done at a very large scale in the country for ensuring fair price of crops</p> <p>3. The government is promoting the Farmer Producer Organizations- FPOs</p> <p>4. Dairy Cooperatives in India are shining example of Government's support towards organizing small-scale farmers into potential groups where not cash income but also human capital development, women empowerment are given importance. By the end of the year 2017, the cooperative milk unions covered about 177 thousand village dairy cooperative societies, with a cumulative membership of 16.3 million milk producers. There has been a constant focus on bringing in greater number of women members into the system, who are benefiting from improved economic status and training on improved animal husbandry practices. Of the incremental membership achieved until now, about 48 percent are women. Fairness and transparency in milk payment has improved by the installation of automated Milk Collection Units (AMCUs) and Data Processor-Based Milk Collection Units (DPMCUs) in the newly formed and existing Dairy Cooperative Societies.</p> <p>5. Small Farmers' Agri-Business Consortium (SFAC) is an exclusive Society focused on increasing incomes of small and marginal farmers through aggregation and development of agribusiness. SFAC has pioneered the formation and growth of Farmer Producer Organizations/Farmer Producer Companies, which is now being implemented across the length and breadth of the country. SFAC is progressing towards establishing an eco system for FPOs/FPCs to make them sustainable and viable in the long run. SFAC offers Schemes like Equity Grant and Credit Guarantee Fund Scheme to FPCs to improve availability of working capital and development of business activities. SFAC promotes development of small agribusiness through its VCA Scheme for value added processing and marketing linkages. SFAC is also implementing the National Agriculture Market Electronic Trading (e-Nam) platform. The purpose is to provide for a single unified market for agricultural products with much higher price discovery for farmers. The e-NAM (http://enam.gov.in/NAM/home/index.html) could be a big game changer for doubling the farmer's income by 2022. The Users can register themselves in eNAM through Mobile App. The eNAM Mobile App Android Version is available in google playstore. The Indian Government bullish on farm sector to provide better Returns to Farmers via e-NAM. The e-NAM Project has successfully integrated 585 Agricultural Produce Marketing committee (APMC's) of the country on eNAM platform.</p> <p>The Indian Government is committed to doubling Farmers' income by the year 2022, for which government is working on measures including policy changes. For instance, addressing the Krishi Unnati Mela 2018 in Delhi, the Indian Prime Minister said, "We are working for farmers who rent agriculture land to do farming. To ensure that such farmers get easy agriculture credit we are in talks with state governments", he said</p>

Participant	Country	Aggregate	Comment
			https://economictimes.indiatimes.com/news/economy/agriculture/working-to-ensure-that-farmers-who-dont-own-land-get-agriculture-loans-pm-modi/articleshow/63345130.cms).
Mayank Jain	India	Q6.3/3	<p>A scheme for Creation/Expansion of Food Processing and Preservation Capacities (CEFPPC) under the PRADHAN MANTRI KISAN SAMPADA YOJANA launched in May, 2017 by the Ministry of Food Processing Industries, Government of India, 400 Food Processing Units would be set up in the country for which financial assistance by MOFPI in the form of Grants-in-Aid up to Rs.5 Crore (~50 million) to eligible organizations such as Central and State PSUs/Joint Ventures/Farmer Producer Organizations(FPOs)/NGOs/Cooperatives/Self-Help-Group(SHG's)/Public and Private companies/Corporate entity/ Proprietorship firms/Partnership Firms.</p> <p>Putting in perspective, India processes less than 10% of its actual produce as compared to Malaysia, Indonesia (which do about 70-80%). With launch of this policy, Ministry's focus Food processing as the bridge between the industry and farming.</p>
Paul Iji & Edwin Chang'a	Australia	Q6.3/4	<p>Re-use of comment in Q4.1</p> <p>To address the main problems identified in Q4.1, we believe that the most important intervention would be in the area of government policy enactment. There is a need for the setting of feed quality standards. The SME producers rely on feed suppliers, to feed their stock. It would be useful for them to receive feed that meets the nutrient requirements of the poultry and is consistent in quality. It is possible for SME producers to make their own feeds, as some of them already do, but commercial feed formulation is an art and science, which is difficult for non-nutritionists to understand. There is a need to re-develop feed formulation in a way that can be understood by SME farmers. Feed ingredients can be measured with traditional standards rather than metric. This is easy to apply on major ingredients but practically, minor nutrient requirements are often met once the requirements for most of the major nutrients are met.</p>
Raud Bronkhorst	The Netherlands	Q6.3/4	<p>I think it is important that policies are designed in such a way that the small farmer receives a 'fair' price for his products. This means such a price that he can have a 'Living Income'. With sufficient income the farmer can both look after the food security needs of the family and as well invest in necessary inputs. Fair prices have their effect on the whole economy. ISEAL Alliance is coordinating calculation methods for Living Income, and I have published a 'Guide How to Calculate Fair Prices'</p> <p>https://www.researchgate.net/publication/310133756_Guide_How_To_Calculate_Fair_Prices).</p>
Mayank Jain	India	Q6.3/4	The scheme for the Creation/Expansion of Food Processing and Preservation Capacities (CEFPPC) under the Pradhan Mantri Kisan Sampada Yojana (Ed: "Scheme for Agro-Marine Processing and Development of Agro-Processing

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			<p>Clusters") launched in May, 2017 by the Ministry of Food Processing Industries, Government of India, 400 Food Processing Units would be set up in the country for which financial assistance by MOFPI in the form of Grants-in-Aid up to Rs.5 Crore (~50 million) to eligible organizations such as Central and State PSUs/Joint Ventures/Farmer Producer Organizations(FPOs)/NGOs/Cooperatives/Self-Help-Group(SHG's)/Public and Private companies/Corporate entity/ Proprietorship firms/Partnership Firms.</p> <p>Putting in perspective, India processes less than 10% of it's actual produce as compared to Malaysia, Indonesia (which do about 70-80%); With launch of this policy, Ministry's focus Food processing as the bridge between the industry and farming.</p>
Vivian CdV	Italy	Q6.3/4	<p>Multinational (large) agricultural firms seem afraid of our quality of life, (and here in Italy e.g.) our fantastic quality of food and traditional know-how.</p> <p>They try to cut the competition by producing contracts that choke the small farms in every way... and they have the political support.</p> <p>Something interesting is (to counter this, is) the collaboration between industrial agriculture and farms: for instance we (as small farmers) had a problem with a crop that had diseases and was not performing well. There were centres who knew how to cure and clean the seeds, and they did the job with us.</p> <p>Another example on the advantage for small farms is the "characterisation" of a wine crop: you study the micro organism fauna and flora that helps your crop to grow sturdy and healthy and it gives personality to your land, and your production.</p> <p>Italy 's very good reputation on food is based on family farming, which represents 70% of all the agriculture population. As you all understand, cooperation between farms is very important. (Official) institutions are surprised to learn that the excellences of the food comes from small farms, in villages less with than 4000 people (and NOT from larger industrial farms). While in the old days aggregation between farms was at the basis of the Italian agriculture (small farms are still at the basis of it, today).</p>
Vivian CdV	Italy	Q6.3/5	<p>In Italy, from the 1980-ies to 2010, agriculture was considered a waste of time. I disagree completely. Truly, farming in my zone went through a really bad time, but gradually we recovered. In my region the flower industry is the main crop, in the mountains, the potato agriculture picked up fast, closely followed by vegetables cultivation. Also the cultivation of spices like basilicum picked up fast. The same happened with "pesto", a signature dish in the Italian Ligurian region, which is also mainly made of herbs. Today, after the agricultural crisis of 2012/2013, agriculture did</p>

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			<p>not lose its market, on the contrary, it grew. Not only that, but it is the only section where young people engage in, and enjoy it.</p> <p>(Policy makers should recognize this, and encourage agriculture, small farms' agriculture, and youth's engagement in it)</p>
Manyak Jain	India	Q6.3/5	<p>On the question raised in Viviane's input in Q6.3/4: "I think this also brings/highlights my previously raised question on small farm vs contract/corporate/commercial farming."</p> <p>In context of India, corporate farming is not fully regularized but still is practiced as disguised contractual farming or by taking land on lease. Hence it becomes really difficult to differentiate. As a policy, Govt. of India is in final leg of model contract farming law that takes care of the same. Secondly, the promotion of farmer owned institution (groups/companies/clusters) in an ideal world should also protect the interest of farmers and I think that vision is there but it is more like a distant dream (as evident from inputs and observations across the globe)</p> <p>Thirdly, our paradigms of development only considers GDP, so other 'important' issues take a back seat. I think we should have something like national prosperity index. Then only policy shift or rationale behind protecting small farmers would occur.</p> <p>In a bid to attract investments in agri-sector, land (ownership) laws have been either manipulated by some larger corporate enterprises in the past or laws have been liberalised by some provincial governments (agriculture is a "state subject" in India).</p> <p>Also on this topic: Financial inclusion and financial literacy are two important components which are very important from policy front. Also, in India, we have some good schemes even on financial literacy programmes but unfortunately they are suffering on manpower front. I am interested to know measures taken for financial literacy and its impact from different geographies.</p> <p>Another input from Mayank on this topic: I also find sometimes there exists total disconnect between bureaucracy and policies which leads to abuse/misuse of position or a policy. There are lot of armchair (policy) naysayers who design policies on whims and fantasies. Can I get some views on the same?</p>

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Onima VT	India	Q6.3/5	<p>(Moderator: On the overall importance of small farms...)</p> <p>In India, according to the Agriculture Census 2010-11, the total number of operational holdings in India numbered 138.35 million with an average size of 1.15 hectares. Of the total holdings, 85 per cent are in marginal and small farm categories of less than 2 hectares and it is expected that about 91 per cent of the total farm holding would belong to small and marginal farmers by 2030.</p> <p>These small farms, though operating only on 44 per cent of land under cultivation, are the main providers of food and nutritional security to the nation. Few successful small farm business practiced by Indian farmers are poultry farming, mushroom farming, bee keeping, fish farming, fruit juice-jam-jelly production, vegetable farming, medicinal herbs farming, fodder farming, vermicompost production. Majority of them sale their produce in local markets or nearby regions.</p>
Beloved Mensah Dzomeku	Ghana	Q6.3/6	<p>Smallholders are often disconnected from policy. Smallholders contribute about 70% to the agriculture GDP in Ghana but policy support for smallholders is limited: (Moderator) Which translates into policies needed for small farmers:)</p> <ul style="list-style-type: none"> - During glut periods smallholder lose a lot as a result of poor post harvest practices. - The market does not often favour the smallholders. - With climate change, smallholder lacks support for irrigation. - Smallholder is not protected from international trade liberalization. - Smallholders compete with large scale farmers.
Richard Yeboah	Ghana	Q6.3/7	<p>In Ghana and in most parts of Africa, small farms and small food businesses are not just for production but contribute a lot in reducing unemployment hence the need to support them to thrive.</p> <p>Among the policies critical to make small farms more relevant are:</p> <ol style="list-style-type: none"> 1. Uniform weights and measures: Traders buy from the famers using their own measures and the farmers have no say because if they refuse there will be no one to buy. They sell with different measures. There is no measurement for selling animals but by bargain and so it is for vegetables. 2. Price intervening policy: There should be a minimum price, taking into account the production cost, below which farmers should not sell 3. Opening up the rural areas (motorable roads) where most of the small farms and food businesses are so that they can transport their produce to the nearest market with ease.

Participant	Country	Aggregate	Comment
			<p>4. Low interest credit.</p> <p>5. Policy to protect the small farms and food businesses from cheap imported goods which they produce.</p>
Bokyo Doychinov	Bulgaria	Q6.3/8	The EU School Fruit Program needs clearer rules to ensure that local small farmers are involved in delivering quality products. The program can be expanded by including other healthy products such as vegetables, dairy products and more.
Sami Elhag	Sudan	Q6.3/9	<ul style="list-style-type: none"> - Facilitation to access loans, - controlling markets, - provision of machinery and - extension services.