

Executive Summary

EU farming systems are facing increasing economic, social, environmental and institutional challenges. Finding the opportunities to improve risk management contributes to enhancing the farming systems' resilience. Based on the participation of a wide variety of stakeholders across European agricultural sectors, four main avenues to improve risk management are proposed: 1) Useful, accessible and well-structured information; 2) Professional, adapted and widespread training and advice and boosted knowledge transfer; 3) Developing and spreading new forms of cooperation among farming system actors; and 4) New/ improved products and services adapted to current and future needs of the farming systems. Not only farmers, farmers' households and associations but also value chain actors, financial institutions, NGOs and public administration are encouraged to be part of the opportunities to improve risk management towards resilient farming systems.

Fostering innovative ways of cooperation between actors in the farming systems

Motivation

The SURE-Farm project aims to improve the resilience of European farming systems. According to Meuwissen et al. (2019) resilience is the ability of the farming system to ensure the provision of the system functions in the face of increasingly complex and accumulating economic, social, environmental and institutional challenges, through capacities of robustness, adaptability and transformability. Farming system is characterized by its functions, local conditions, and actors. Not only farmers but other stakeholders, who have a close mutual connection to farmers, are considered as relevant actors for farming system resilience.

Risk management is identified as one key process to strengthen farming systems' resilience. In SURE-Farm, we understand risk management as the application of management procedures and practices to the tasks of identifying, assessing, and treating shocks and long-term pressures.

This business brief builds on previous main findings on risk management in SURE-Farm. Farmers' risk perception differs across farming systems (Spiegel et al., 2019) who implement a wide range of risk management strategies to deal with differing challenges (Finger et al 2019). Farmer's decision-making is shaped by three levels of influencers; a trusted inner ring of confidence, information sources and external influencers (Urquhart et al. 2019). Finally, farmers appear to be unprepared to deal with climate change and rapid policy movements (Coopmans, 2019).

The aim of this business brief is to present the opportunities to improve risk management towards more resilient EU farming systems. The proposed improvements are identified by assessing the current and potential role of the stakeholders involved in risk management, i.e. farmers, farmers associations, cooperatives, supply chain actors, financial institutions, NGOs and civil society and public administration.



Co-creating improved risk management opportunities

The active engagement and participation of the stakeholders is a key element to enhance the farming systems resilience in SURE-Farm. To this end, focus groups were organized in 11 case studies (CS) regions across Europe, which range from arable production in the UK to the extensive sheep sector in Spain.

In every focus group, the stakeholders provided their ideas about how to improve the role of the actors involved risk management strategies in their farming system. The most implemented risk management strategies in the CS regions are: i) to maintain financial savings for hard times; ii) to have low debts or no debts at all to prevent financial risks; iii) to work harder to secure production in hard times; iv) to implement measures to prevent pests or diseases; v) to be a member of a producer organisation, cooperative or credit union; vi) social learning to improve sustainability and resilience; vii) to have access to a variety of input suppliers; viii) to use market information to plan farm activities for the next season and ix) to diversify production (Spiegel et al., 2019).

The variety of the case study regions in the project allowed for the co-creation of diverse opportunities to enhance risk management that could provide tangible improvements. More than 500 ideas provided by more than 80 stakeholders across Europe have been first coded and then categorized by actor involved and the nature of the proposed improvements. Following an iterative process, three classification rounds allowed us to get the key actions to improve risk management in EU farming systems below.

Opportunities to improve information flows

Digital, useful, updated and structured information on climate and market data, new technologies (novelties and implementation) and challenges facing the sector is needed. Information portals should be carefully designed and easy to read. It can be provided by including hyperlinks from relevant websites and different sources and engaging all the actors in the sector. Information should be made available ideally in the mother tongue of the target users and should be prepared in clear and understandable language. Information, carefully selected, should be updated and trustworthy. The use of social media and mobile applications offers potential to spread information, but every organisation leading this role should be vigilant about the quality of the information. See Table 1 for more detail.

Opportunities to improve training, advice and knowledge exchange

Bidirectional training needs to be reinforced: 1) From the farming system's actors to the farmers: Training and advice on challenges facing long-term management and financial planning, sustainable practices and efficient use of assets, and cooperation; 2) From farmers to the farming system's actors: Financial institutions and value chain actors have to guarantee a space for farmers to share their experience and transfer their knowledge. In this way these actors will be fully trained about the sector specifics.

Furthermore, demonstration projects, field trips and site visits are called for to better disseminate knowledge among the farming system's actors because they expose farmers to workable solutions and strengthen their sense of community. These initiatives should be well designed, implemented and communicated at local level, combining commercial campaigns with showcasing applicable knowledge developed in Universities and research centers.



Commercial technologies and services should consider providing leasing-for-experimenting to help farmers becoming familiar with the latest technologies, arise their awareness and improve their decision-making. This also applies to input suppliers, which should reinforce the organization of the informative seminars to train farmers on innovation and input use in farm production. Special attention to the facilitators profile should be paid. They should have strong communication and advisory skills and be closer to the farmers' needs. Additionally, a recommended action to enhance the knowledge exchange is to develop / reinforce networks of facilitators that contributes to share, update and improve training.

In addition, publications showcasing scientific results must be available and easy to understand. Greater efforts must be dedicated to dissemination, also by hiring communication experts and providing positive case studies (for instance those provided by the NGOs). Web pages offer potential but engaging the diversity of stakeholders in training and research programmes appears to be an effective knowledge exchange channel. See Table 1 for more detail.

Opportunities to improve cooperation between farming system actors

Engaging in effective and trustworthy cooperation is not straightforward and requires soft skills. Training to reinforce cooperation, i.e. reasons to cooperate, how to cooperate and cooperation success stories, is demanded by stakeholders. This initiative can be led by farmers associations in close collaboration with the rest of the farming system's actors. Furthermore, it can be accompanied by dedicated platforms to share experiences. Online platforms contribute to attract more users and increase their value as learning means and networks. Many digital tools such as project management and team collaboration tools, offer potential for becoming true cooperation enablers.

There is also potential for reinforcing the existing networks and developing new ones. There is a need of new forms of cooperation between farmers focus on sharing activities to deal with very time demanding agricultural activities and facilitate the succession processes. Innovative cooperation networks are claimed not only involving farmers from different regional levels (local, regional, European level), but also between actors from different sectors in the farming system (i.e. networks of upstream-downstream actors; networks of financial institutions). Digital, virtual and face to face facilitation are the most suitable tools to boost the networks in farming systems.

The use of comprehensive contracts along the supply chain is recommended to balance the bargaining power of stakeholders, and coordinate supply/demand along the supply chain. This action can be supported by sharing good practices in the value chain in dedicated platforms.

Finally, the definition of new products can boost the cooperation among farming system' actors. Value chain cooperation can be boosted by banks by designing new products to finance joint initiatives between actors in the value chain; financial institutions cooperation can be strengthened by combining financing and insurance products. See Table 1 for more detail.



Opportunities to overcome the misalignment between services/products provided and farmers' needs and risks faced.

Tools to assess economic challenges should be developed to support farmers' decision-making. They will need to be accompanied by numerical and digital training. Financial institutions could provide these simulation models in their digital platforms.

Farmers need adapted financial products, with broader guarantee options (for example, the sales contracts), adequate repayment periods and flexible matching of cash flow and liquidity needs. Farmers need to synchronize the financial payments timing on the cash flow, especially with typical revenue and policy aids. Short-term financial products to support farmers' working capital should be widespread (for instance, to finance the input purchase for the next production-campaign). New investment products with favourable conditions tailored to cooperative and innovative projects need to be developed. New insurances are also requested to deal with the increasing environmental and economic challenges.

Actors in value chain led by cooperatives and associations should share good practices in the definition of contracts to spread their fair implementation among the actors in the chain. Once again, supervised and updated digital platforms will facilitate this action.

Furthermore, actors in the farming system should guarantee a staff with in-depth knowledge about farm business and skills in communication and advisory. Their consultants should be constant and widespread across rural areas. Face-to-face contact between farmers and consultants should be possible even in rural areas that are remote from cities and large villages. See Table 1 for more detail.

How could public administration support these opportunities for risk management improvement?

First, to enhance information transparency, we recommend that public administration collaborates with different actors by providing systematic databases services, for example of satellite data (Vroege, et al., 2019).

Second, new public-private collaboration opportunities could support the provision of physical and online infrastructure close to farms to enhance the training, knowledge transfer and cooperation. Public administrations can support the associations, cooperatives and value chain actors by enabling training centers and informative road shows in rural areas. They can also support the development of web platforms and the digitization of farmers' and farming system actors' networks to improve the connection in the farming systems.

Encouraging bidirectional training to design services and products adapted to farming systems current and future needs.



Public-private collaboration opportunities involving every actor in the farming systems.

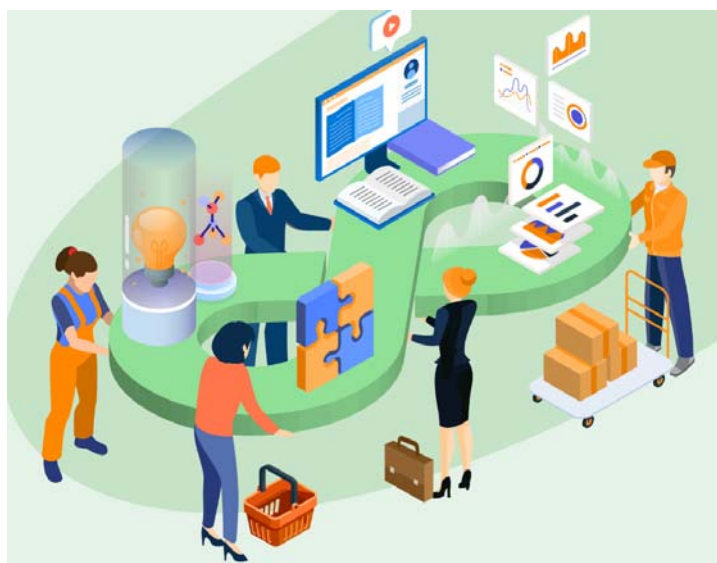
Third, public-private collaboration with financial institutions might offer solutions for unmet needs of services and products. On the one hand, farmers are claiming for new products adapted to their financial needs. Policies can facilitate loans that are offered which reduce the cost or make access to guarantees and rates easier. On the other hand, insurance companies are called to cover increasing risks. Supporting the availability of satellite data would benefit the development of improved remote sensing-based insurance solutions (Vroege, et al., 2019).

Concluding remarks

As a result of the participation of a wide variety of stakeholders across agricultural sectors in Europe, we are proposing four main ways to improve risk management for resilient farming systems: 1) Useful, accessible and well-structured information; 2) Professional, adapted and widespread training and advice, and boosted knowledge transfer; 3) Developing and spreading new forms of cooperation among farming system actors; and 4) New/ improved products and services adapted to current and future needs of the farming systems.

Many of these proposals are already on the ground but stakeholders in farming systems call for their improvement. Existing initiatives need to be adapted to better reflect the farming systems' specific context and needs. Financial institutions, value chain actors and civil society organizations in the farming systems need to learn from farmers and farmers need to learn from them. As a result, not only information, services and products will better meet the farming systems needs but also will boost the cooperation opportunities among the actors in the system. Enhanced cooperation in the system will enable existing and new initiatives to reach more stakeholders in the farming system.

Not only farmers, farmers' households and associations but also value chain actors, financial institutions, NGOs and public administration are encouraged to be part of the opportunities to improve risk management towards resilient farming systems.



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Table 1.- What stakeholders can do to improve risk management towards more resilient

	Information flow	Training, advice and knowledge exchange	Cooperation between farming system actors	New tailored products and services
 Financial Institutions	<p>Friendly-to-use web site tailored to farmers and value chain actors. Updated information about financial risks and financial products.</p> <p>Specific tab to joint project financing in the farming system.</p> <p>Online platform to calculate risks and available products.</p>	<p>Knowledgeable employees in agricultural sector specificities.</p> <p>Agricultural knowledge from farmers to financial institutions.</p> <p>Enable consultants to be present in rural areas.</p> <p>Risks and long-term financial planning training, by facilitators with communication and advisory skills.</p> <p>Joint training programmes with other actors in the farming system.</p> <p>Increase face-to-face meetings.</p> <p>Informative seasonal meetings with farming systems actors on risks and financial services.</p>	<p>Exploit potential synergies between financing and insurances products.</p> <p>Combined financial products/services involving different actors in value chain: funding joint commercial activities.</p>	<p>Adapted debt payments to the farm cash flow.</p> <p>Beneficial conditions for high innovative and /or environmentally friendly projects.</p> <p>Broader guarantees, i.e. future harvest.</p> <p>Less complex, automatic and digital access to financial services (apps).</p> <p>Insurances to cover new environmental and climate change-related emerging risks (i.e. animal and plant diseases) and based on satellite data.</p> <p>New personal parameters to evaluate the customers' risk profile</p>
 Value chain actors	<p>Friendly-to-use web site tailored to farmers and value chain actors.</p> <p>Updated information about new technologies, products and joint initiatives and good practices in value chain.</p>	<p>Knowledgeable employees in agricultural sector specificities.</p> <p>Agricultural knowledge from farmers to the value chain actors.</p> <p>Training on sustainable practices and input/machinery usability options by facilitators with communication and advisory skills.</p> <p>Joint training programmes with other actors in the farming system.</p> <p>Leasing for experimenting.</p>	<p>Regular meetings and workshops with farmers' associations and upstream/-downstream actors in the value chain.</p>	<p>Adapted debt payments to the farm cash flow.</p> <p>Beneficial conditions for high innovative and /or environmentally friendly projects.</p> <p>Broader guarantees, i.e. future harvest.</p> <p>Less complex, automatic and digital access to financial services (apps).</p> <p>Insurances to cover new environmental and climate change-related emerging risks (i.e. animal and plant diseases) and based on satellite data.</p> <p>New personal parameters to evaluate the customers' risk profile</p>
 Farmers' Associations & Cooperatives	<p>Up-to date online information about prices, technologies, policies, new challenges, good practices in financial/-management planning, actors and cooperation alternatives in the farming system and job exchange.</p> <p>Updated information on nutrition and environmental impacts.</p> <p>Open-days, public events and campaigns</p> <p>New target audiences: universities/schools and primary health staff (nutrition).</p>	<p>Training on challenges, long-term management planning, and cooperation, by facilitators with communication and advisory skills.</p> <p>Joint training programmes with other actors in the farming system.</p> <p>Network of facilitators</p> <p>Expert agencies advisory</p> <p>New sources of skilled trainers among all the actors in farming systems.</p>	<p>Information about the actors in the farming system.</p> <p>Good practices in cooperation in agriculture.</p> <p>Network of connected agricultural sectors at both country and EU level</p> <p>Network of value chain actors.</p> <p>Create a joint job exchange of actors in farming systems.</p>	<p>Standardized rules for traceability, quality seals, transport, storage and sales</p> <p>Active search for new markets</p> <p>Research on nutrition value and environmental impacts</p> <p>Employment of communication experts</p> <p>Improve lobby</p>