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AGRICULTURE & INNOVATION

Robust and resilient dairy farming production systems

How to create good conditions for dairy cattle husbandry in different production systems?

The competitive environment of dairy cattle production systems is often linked to increased pressure on animal welfare due to various stress factors. It is sometimes argued that there is a trade-off between production and animal welfare and health. The EIP-AGRI Focus Group on Robust and resilient dairy farming production systems discussed how to combine both. A sustainable robust and resilient dairy production system can recover from, or adapt to, changes in environmental, social or economic conditions. Robustness combines a high production potential with resilience to stress factors, allowing for stable, high production in a wide variety of conditions.

The 20 experts in the Focus Group identified main factors which can enhance robustness and resilience:

- ▶ A genetically robust and resilient dairy cow for the future.
- ▶ Farm management strategies to increase the robustness and resilience of dairy farming systems.
- ▶ The impact of precision livestock farming on dairy farm robustness.
- ▶ Societal challenges including re-establishing strong relationships between consumers and producers and looking for synergies with economic factors to make dairy farms robust and resilient.
- ▶ Sustainable (robust and resilient) dairy cow milk production systems.
- ▶ Indicators of robust and resilient dairy production systems.
- ▶ Skills for future robust and resilient dairy farming - curriculum for farmers and advisers.

The Focus Group experts concluded that there is no single dairy production system, instead there are many production systems, each with their respective advantages and disadvantages. The system for a specific country, region or farm must be robust, resilient and provide a good income and return on investment for the farmer while maximising animal welfare and health as well as social and environmental sustainability.

“I feel that sound and happy cows are the foundation for our economical and emotional success. I also feel that this is essential to maintain the acceptance for our work as dairy farmers and for our product - milk - in society.”

- Kirsten Wosnitza (Germany), expert from the EIP-AGRI Focus Group on Robust and resilient dairy farming production systems -

funded by



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Ideas for Operational Groups

- ▶ Key Performance Indicators: identify indicators to assess skills for robust and resilient dairy production systems, what advisory areas are needed to increase robustness and resilience of dairy farms?
- ▶ Scarcity of labour force for dairy farms: identify causes of shortage of labour at dairy farms, develop training for new employees and co-operation between farms.
- ▶ How to improve communication from your dairy farm to the glass of milk?
- ▶ Enhancing precision livestock farming.
- ▶ Develop and test easy-to-use sensors in dairy.
- ▶ Testing and demonstration of existing systems in different environments.

Research needs

- ▶ Validation of indicators for robustness and resilience: analysis of existing indicators regarding different needs depending on adaptability of these indicators to farm conditions, system, region or others.
- ▶ Integration of indicators to indexes: indexes = indicators classified into groups. These indexes benchmark farm performance to increase robustness and resilience, indexes should be reliable, easy to understand by farmers and some of them by society too.
- ▶ Crop and forage production: search for best practices and strategies to improve robustness and resilience at individual animal and farm level. Improve forage digestibility, protein and energy self-sufficiency at farm level. Farm strategy in terms of crops. Forage alternatives in case of severe drought or other problems.
- ▶ Identification of best practices in different systems: once indexes are validated in terms of robust and resilient, best practices that are optimal for each system must be identified.

More ideas for Operational Groups and research needs available in the Focus Group report

Other recommendations

- ▶ Social demands from dairy industry: necessity to know the real opinion of consumers about dairy farming
Surveys about social demands and farmer attitudes to fulfil these demands.



More information on the EIP-AGRI website

Focus Group webpage	Inspirational ideas: <ul style="list-style-type: none">- German farmer creates sustainable on-farm dairy solutions- Decision support tool for dairy farm management- Improving welfare for cows...and farmers- Improving feed intake in cows, sheep and goats- Sports apps for dairy cows!- Greek dairy farmers bring fresh milk to customers with vending machines- Selling dairy products from a milk van- Amazing Grazing- going back to the roots- Changing the menu in the cow barn
Final report	

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