European Commission

AGRIRESEARCH FACTSHEET

ANIMAL PRODUCTION SYSTEMS

Why do research and innovation on animal production matter?

Growing population, rising income and global shifts towards consumption patterns which are richer in animal proteins will further increase pressures on agricultural resources. Research and innovation will tackle the various dimensions of resource use, looking at approaches at the level of animals, of agro-ecosystems and throughout value chains. Implementation of circular economy principles will lead to better ways of valorising and using residues and by-products by farms e.g. feed for livestock, fertiliser from manure. It is also expected to change farm management and result in a reduction of natural resource inputs. The knowledge and tools developed will serve to decrease the role of livestock sector in the depletion of natural resources. In the livestock sector, the relationship between animal feed and feeding and health needs to be further investigated. In addition, the possibilities for improving animal welfare, e.g. through more appropriate management (including human-animal relationship in farming), need to be further explored.

Animal production under Horizon 2020 Societal challenge 2 (SC2)

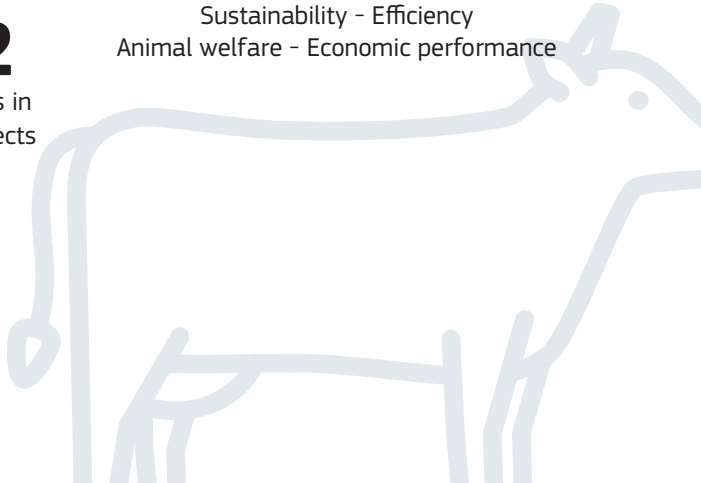
23
Projects or expected grants

142 M€
EU contribution 2014-2020

262
Participations in selected projects

Key themes

Resource use – Feeding
Sustainability - Efficiency
Animal welfare - Economic performance



JUNE 2019 UPDATE

Agriculture and Rural Development

Animal production systems under EIP-AGRI activities

Focus group:	
Robust and resilient dairy production systems	bit.ly/2pCRSJC
Grazing for Carbon	bit.ly/2IUd8T4
Reducing emissions from cattle farming	bit.ly/2I5bCMu
New feed for pigs and poultry	bit.ly/2GnPj7R
Profitability of permanent grassland	bit.ly/2pG5qUr
Protein crops	bit.ly/31ahP4i
Workshop examples:	
Sustainability of the EU's Livestock Production Systems	bit.ly/2pJwBwT
How to make protein crops profitable in the EU?	bit.ly/2q7yJiZ
Operational group (OG) examples:	bit.ly/2pQIXDm
Jarmelista Value - Territorial valorization of the Jarmelista breed	bit.ly/2Z6UheD
The Tuscan calf: innovative growth strategies (VITOSCA)	bit.ly/2HVnh3e

SC2 Collaborative Projects – Animal production systems

Horizontal activities

MA = Multi-actor

SusAn www.era-susan.eu Total cost: 16 M€ EC contribution: 5 M€ Coordinator: BLE Mar. 2016 – Feb. 2021	The ERANET SusAn targets innovative research across all areas of the animal production system such as health and welfare, feeding and nutrition, reproduction, breeding and genetics, housing, nutrient management and economics. It will increase international collaboration between research groups in the area of sustainable animal production, in order to speed up research and reduce overlaps. The fourteen projects funded through the first call involve over 100 research teams across 20 countries all working towards a more sustainable livestock sector in Europe.
HoloFood bit.ly/2WvB3lp Total cost: 10 M€ EC contribution: 9.8 M€ Coordinator: Kobenhavns Universitet Jan. 2019 – Dec. 2022	HoloFood explores a holistic approach to improve the efficiency of food production systems by deciphering the molecular and physiological processes triggered by feed additives across animals with different genetic background and grown under different environments. The farmed animal systems -salmon and chicken- will be used as models to characterise their associated microorganisms' genomes and transcriptomes in relation to key performance indices and animal welfare issues.

Pigs and poultry

Hennovation [MA] www.hennovation.eu Total cost: 2,1 M€ EC contribution: 2,1 M€ Coordinator: University of Bristol Jan. 2015 – Dec. 2017	Using the laying hen sector as a case study, the Hennovation project aimed to explore and test novel mechanisms for addressing and overcoming the 'research/practice' divide in the delivery of sustainable animal welfare practice in two specific areas of current farm animal welfare concern: feather pecking amongst laying hens and end-of-lay transport.
Feed-a-Gene [MA] www.feed-a-gene.eu Total cost: 10 M€ EC contribution: 9 M€ Coordinator: INRA Mar. 2015- Feb. 2020	Feed-a-Gene aims to better adapt different components of monogastric livestock production systems (i.e., pigs, poultry and rabbits) to improve the overall efficiency and to reduce the environmental impact. This involves the development of new and alternative feed resources and feed technologies, the identification and selection of robust animals that are better adapted to fluctuating conditions, and the development of feeding techniques that allow optimizing the potential of the feed and the animal.

EU PiG MA
www.eupig.eu
Total cost: 2 M€
EC contribution: 2 M€
Coordinator: AHDB
Nov. 2016 – Oct. 2020

The EU PiG Innovation Group (EU PiG) helps pig producers find tried-and-tested best practice from fellow producers across Europe, sharing all new knowledge in one place, online. It is about connecting producers and sharing the latest best practice and innovations to help improve farm efficiency and raise the competitiveness of the European pig industry.

OK-Net EcoFeed MA
ok-net-ecofeed.eu
Total cost: 2 M€
EC contribution: 2 M€
Coordinator: IFOAM
Jan. 2018 – Dec. 2020

OK-Net EcoFeed seeks to help farmers, breeders and organic feed processors in achieving the goal of 100% use of organic and regional feed for monogastrics, in particular pigs, broilers and laying hens. They will synthesize existing knowledge and set up a network of innovation groups facilitating knowledge creation and exchange involving farmers, businesses, scientists and advisors. All tools and materials developed by the project will be made available on the organic farm knowledge platform (farmknowledge.org).

PPILOW MA
bit.ly/2wFrx0l
Total cost: 10 M€
EC contribution: 10 M€
Coordinator: INRA
Sep. 2019 – Aug. 2024

PPILOW aims to co-construct innovations to improve the welfare of poultry and pigs reared in organic and low-input outdoor farming systems. Among others, the project co-creates with end-users welfare self-assessment tools, innovative breeding and rearing strategies and techniques for improving the welfare of animals favouring positive behaviours and improving health and robustness in both species and avoiding the killing of day-old layer male chicks.

Ruminants

EURODAIRY MA
eurodairy.eu
Total cost: 2 M€
EC contribution: 2 M€
Coordinator: AHDB
Feb. 2016 – Jan. 2019

EuroDairy will foster the development and dissemination of practice-based innovation in dairy farming, targeting key sustainability issues following the abolition of milk quotas: socio economic resilience, resource efficiency, animal care, and the integration of milk production with biodiversity objectives.

iSAGE MA
www.isage.eu
Total cost: 7 M€
EC contribution: 7 M€
Coordinator: Aristotle University of Thessaloniki
Mar. 2016- Feb. 2020

iSAGE will assess the sustainability of the sheep and goat sector in Europe in relation with current and future challenges such as climate change, food security, resource use efficiency and rural deprivation in marginal regions. Following the sustainability assessment, iSAGE will develop strategies to meet or mitigate these challenges.

4D4F MA
4d4f.eu
Total cost: 2,1 M€
EC contribution: 2 M€
Coordinator: Innovation for Agriculture
Mar. 2016 – Feb. 2019

Data Driven Dairy Decision For Farmers (4D4F) aims at developing a network for dairy farmers, dairy technology suppliers, data companies, dairy advisors, veterinarians and researchers to improve the decision making on dairy farms based on data generated by sensors.

SheepNet MA
www.sheepnet.network
Total cost: 2 M€
EC contribution: 2 M€
Coordinator: IDELE
Nov. 2016 – Oct. 2019

SheepNet aims at improving sheep productivity through practice-driven innovation, both in meat and dairy. It will specifically focus on efficient reproduction, efficient gestation and reduced lamb mortality, as these 3 factors are crucial for farmers' income and therefore for the sustainability and attractiveness of sheep farming. Sheepnet will establish long-lasting exchange of scientific and practical knowledge among researchers, farmers and advisors across Europe.

Inno4Grass MA
www.inno4grass.eu
Total cost: 2 M€
EC contribution: 2 M€
Coordinator: GLZ
Jan. 2017 – Dec. 2019

Inno4Grass will bridge the gap between practice and science communities to ensure the implementation of innovative systems on productive grasslands. The long-term goal of the project is to increase profitability of European grassland farms and to preserve environmental values. The project will set up a facilitator agents network, capture novelties from innovative farms, discuss these practices collectively and make them available through knowledge exchange activities, training material and dissemination tools.

Interesting activities under other Horizon 2020 sections

There are numerous projects on livestock production funded under other Horizon 2020 parts or via the SME instrument. A few examples are listed below.

European Research Infrastructures (including e-Infrastructures)

- **SmartCow**: integrated infrastructure for increased research capability and innovation in the European cattle sector – EC Contribution: 5 M€ - bit.ly/2I5I1CQ - Feb 2018 to Jan 2022

SME-Instrument

- **RAPSODY**: Fermentation processes for functional foods from RAPeseed, Sunflower and Other EU matrices Devoted to Young animals - Zero-miles model –EC contribution: 50.000 € – bit.ly/2G8i0Gq - Feb 2015 to Jul 2015
- **Phespa**: Phytogenic heat stress prevention in farm animals – EC contribution: 50.000 € – bit.ly/2uhCNC0 - Sep 2016 to Nov 2016
- **ECBCBSFII**: Sustainable mass production of Hermetia illucens in controlled environments to produce protein feeds for aquaculture, poultry and livestock industries – EC contribution: 50.000€ – bit.ly/2uhDpHO - Aug 2017 to Jan 2018

Marie Skłodowska-Curie Actions

- **NanoFEED**: Nanostructured carriers for improved cattle feed – EC Contribution: 0.7 M€ – bit.ly/2ur535a - Feb 2018 to Jan 2022
- **Treat2ReUse**: Treatment of Animal Waste to Reduce Gaseous Emissions and Promote Nutrient Reuse – 0.2 M€ - bit.ly/2ukPvzE - Jan 2018 to Dec 2020

In the pipeline – 6 projects to start under 2019 H2020 SC2 calls (46 M€)

Improving animal welfare - Precision livestock farming [MA]	(1 project, 6 M€)
Alternative proteins for food and feed	(4 projects, 32 M€)
Closing nutrient cycles - Bio-based fertilisers from animal manure [MA]	(1 project, 8 M€)

Funding opportunities - Open H2020 SC2 calls for 2020 (41 M€)

SFS-02-2020 - Healthy terrestrial livestock microbial ecosystems for sustainable production	
FNR-05-2020 - Husbandry for quality and sustainability	(2 projects, 20 M€)
FNR-05-2020 - Husbandry for quality and sustainability	
A. Husbandry for sustainability [MA]	(1 project, 9 M€)
B. Husbandry for quality [MA]	(2 projects, 12 M€)

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