



# Feed-a-Gene: adapting the feed, the animal and the feeding techniques to improve the efficiency and sustainability of monogastric livestock production systems

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## Feed-a-Gene



Feed-a-Gene is a EU-funded (H2020) research project that aims to better adapt different components of monogastric livestock production systems (pigs, poultry and rabbits) to improve the overall efficiency of

these systems, to reduce their environmental impact, and to enhance food security whilst maintaining the quality of animal-derived food. Feed-a-Gene started in March 2015 for a duration of 5 years. It has a budget of 9.9 million €.

## Challenges and objectives

Feed-a-Gene will provide answers to the new challenges facing animal production. In addition to productivity and efficiency, animal health and welfare, product quality and security, environmental impact, consumer and citizen expectations as well as competition between food, feed, and fuel have now become increasingly important. New solutions are thus required to increase the efficiency and sustainability of livestock production systems.

### Alternative feed sources and feed technologies

The EU can rely on locally produced resources by unlocking the potential of existing feeds and identifying new and alternative feed sources. Because of the diversity in feed sources and technologies, an approach where different actors combine their skills and expertise is essential.

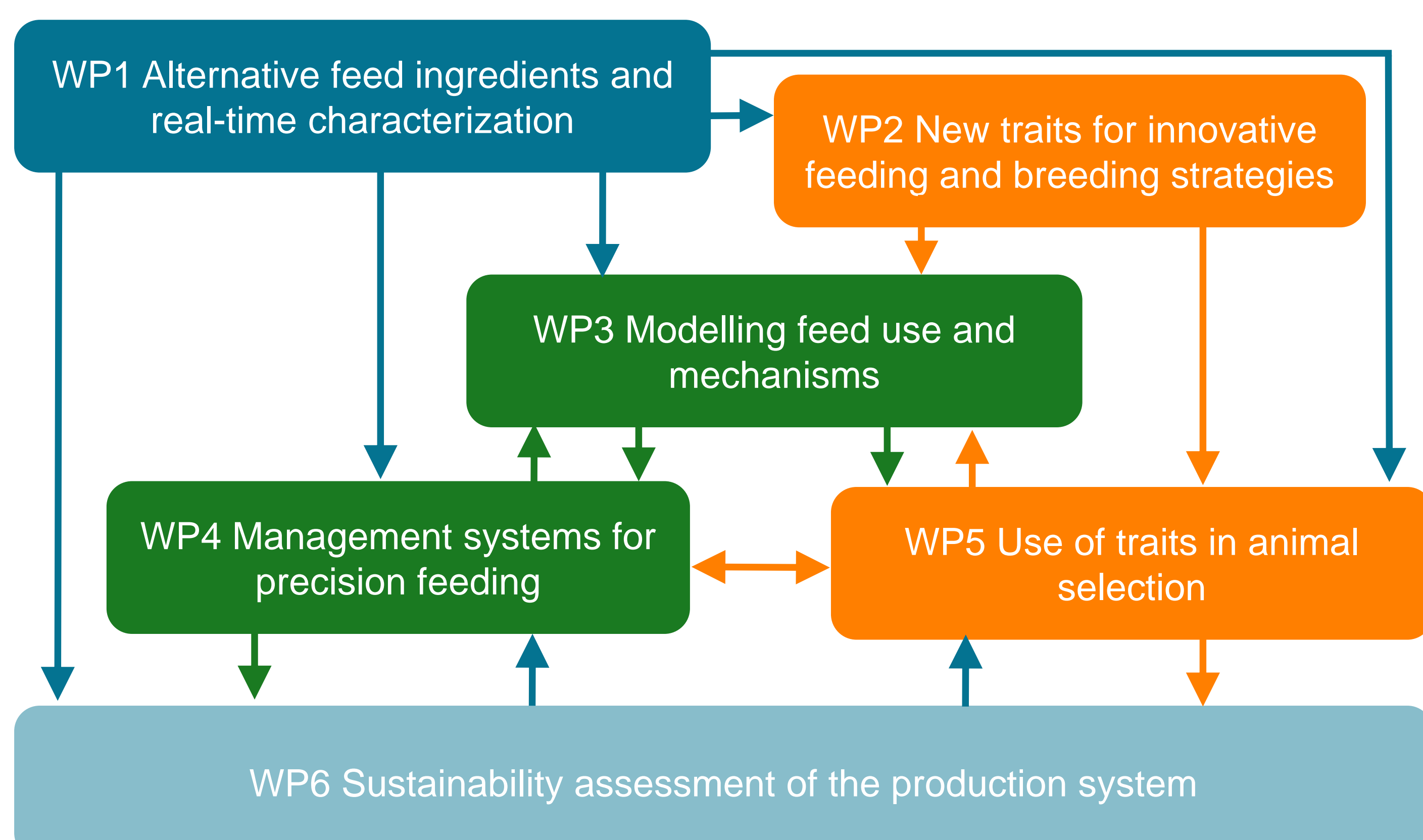
### Adapting animals and feeding techniques

The efficiency of livestock production systems can be improved by better adapting the nutrient supply to animal requirements and by selecting animals adapted to use current or future feed sources. Monitoring devices allow precision livestock production, including precision feeding. Genetic diversity can be used to breed more efficient and robust animals. High-throughput technologies make it possible to pinpoint variability in traits from metabolites to gene sequence. Breeding schemes can be revisited to enhance selection efficiency. These technologies are essential tools to breed animals able to use feed resources that are not or less in competition with other uses.



## Work plan

Feed-a-Gene is composed of 6 Research and innovation work packages (WP), 1 Dissemination WP and 1 Management WP.

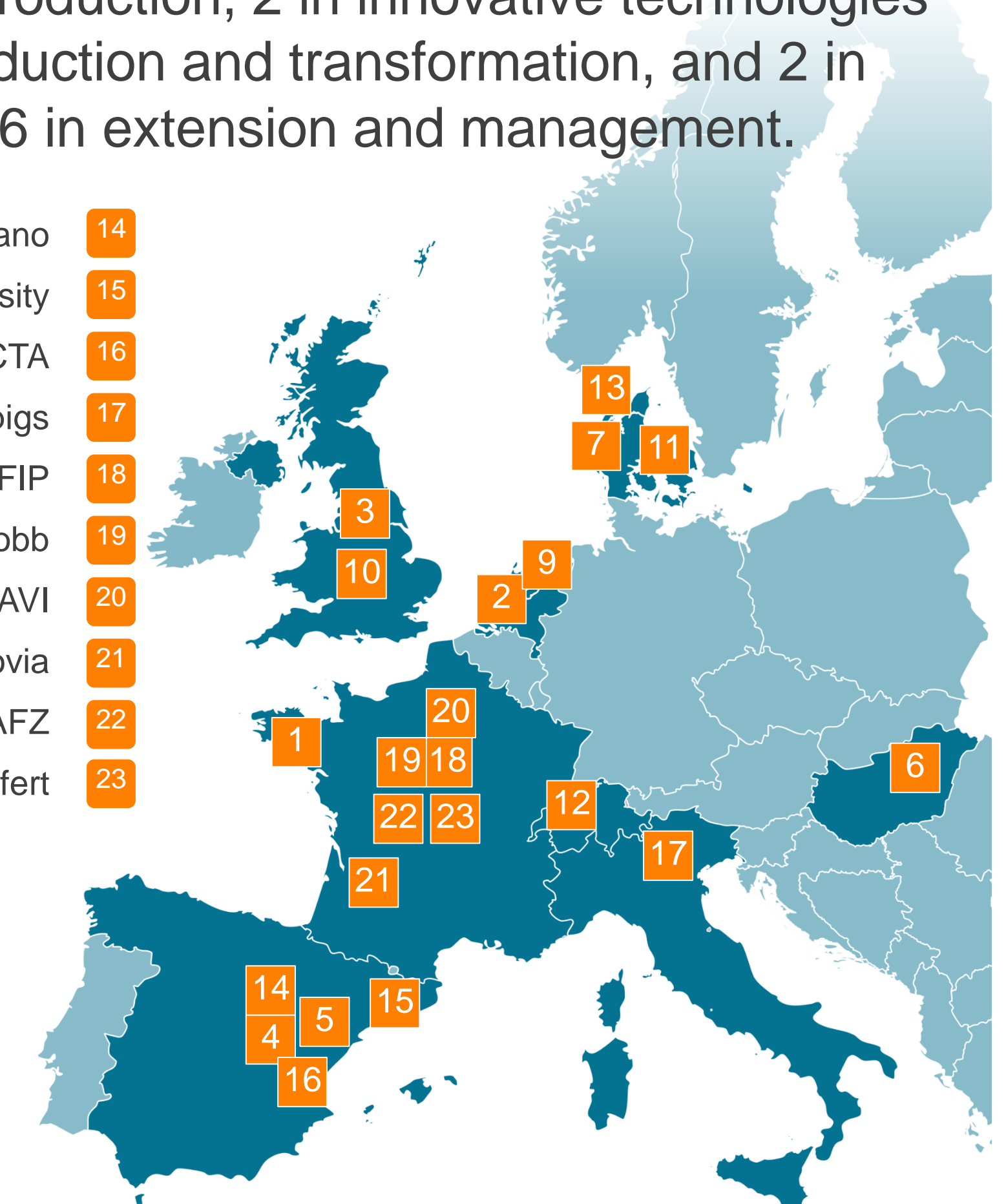


## Feed-a-Gene partners

Feed-a-Gene gathers 23 partners from 8 European countries and China: 8 research institutes and higher education organisations, 9 industry partners (2 involved in livestock production, 2 in innovative technologies for animal breeding, 3 in feed production and transformation, and 2 in equipment for precision feeding), 6 in extension and management.

- INRA 1
- Hamlet Protein 2
- Wageningen UR 3
- Bühler 4
- Newcastle University 5
- DuPont 6
- Universitat de Lleida 7
- Exafan 8
- IRTA 9
- Claitec 10
- Kaposvár University 11
- INCO 12
- Aarhus University 13

- Gran Suino italiano 14
- China Agricultural University 15
- ACTA 16
- IPG/Topigs 17
- IFIP 18
- Cobb 19
- ITAVI 20
- Terres Inovia 21
- AFZ 22
- INRA Transfert 23



## Stakeholders

Feed-a-Gene targets the following groups of stakeholders:

- ▶ Farmers and cooperatives
- ▶ Genetics and breeding companies
- ▶ Producers of compound feeds, ingredients and additives
- ▶ Equipment manufacturers and IT solutions providers
- ▶ Food industry and retailers
- ▶ Extension services, advisors, consultants
- ▶ R&D organisations, academic institutions
- ▶ Networks and associations
- ▶ Consumer organisations
- ▶ Policy makers

Stakeholders can register on the project website [www.feed-a-gene.eu](http://www.feed-a-gene.eu) to be informed of the project results and activities.

## Expected results

- ▶ Alternative feeds and feed technologies to make better use of local resources, green biomass and food and biofuel by-products.
- ▶ Methods for real-time characterization of the nutritional value of feeds.
- ▶ New traits of feed efficiency and robustness to select more adapted animals.
- ▶ Models of livestock functioning to better predict nutrient and energy utilization.
- ▶ New management systems for precision feeding and precision farming.
- ▶ Evaluation of the sustainability of those systems.

The technologies developed by Feed-a-Gene partners will be demonstrated and disseminated in collaboration with industrial partners and farmers' organizations.

## Contact

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[www.feed-a-gene.eu](http://www.feed-a-gene.eu)



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