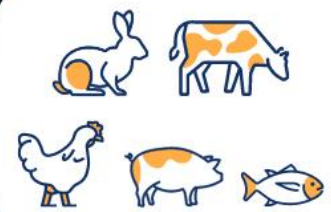


# Use of co-products (circularity)



Last update: 2 June 2023

- **Type of challenge:** Environment.
- **Challenges:** Climate change (GHG emissions); resource management (food-feed competition).
- **Action:** Increase the use of co-products to reduce competition with direct food production and reduce environmental impact.
- **Animal category:** All species.
- **Technique:** Incorporation of co-products that result from other industrial processes in feed formulation.
- **Mode of action:** The use in feed of co-products (e.g. dried distillers grains, processed animal protein, sunflower meal) reduces the environmental impact of feed production, while they are not human-edible and contribute to circularity by closing the nutrient cycle in the food chain.
- **Mode of implementation:** Co-products are created at the level of food and non-food industries, who must apply EU feed legislation to ensure the safety and integrity of the material.
- **Requirements/limitations:** Suppliers of co-products must comply with EU feed legislation, even though their core focus may lie with other market outlets (e.g. food, biofuel).
- **Economic consequences:** Co-products, while usually available on local markets, are often also traded as commodities. Their availability of co-products are often used as a hedging tool in feed material procurement, thereby helping to control price volatility for livestock farmers.
- **Other considerations:** Co-products are nutrient-rich resources, contributing to animal growth and well-being.
- **References:**
  - Alessandro Vastolo *et al.* (2022). *A review on the use of agro-industrial CO products in animals' diets*. Italian Journal of Animal Science 21(1):577-594. <http://dx.doi.org/10.1080/1828051X.2022.2039562>
  - Robin Crawshaw (2001). *Co-Product Feeds: Animal Feeds from the Food and Drinks Industries*. Nottingham University Press, Nottingham, 2001 pp 285, ISBN 1-897676-35-2
  - FEFAC (2022). Publication "Circular Feed". <https://fefac.eu/wp-content/uploads/2022/06/FEFAC-circular-feed-publication.pdf>

Charter Ambitions: 1 & 2