



How can I produce an interesting document for practitioners with the results of my project?

Checklist and guidelines for people in Operational Groups and in projects dealing with farming and forestry and willing to publish good Practice-Oriented material



Think about the users' needs: what would make your document relevant for farmers, foresters, teachers, advisors?

- ✓ The content is practice relevant and recommendations stand out
- ✓ The language is simple
- ✓ The sources are mentioned and trust-worthy
- ✓ It is easy to navigate through the content
- ✓ The context is described

1 The content is practice relevant and recommendations stand out

- You can emphasise content which provides answers to a concrete and identified problem, content which has been proven to work in the field.
- You can enhance the explanation by describing examples, providing testimonies and/or case studies.

2 The language is simple

- You should make the language easy to understand, explain complicated words and technical terminology; avoid abbreviations.

3 The sources are mentioned and trust-worthy

- You should mention the relevant location (region, country), organization, author and if possible, the author's contact.

4 It is easy to navigate through the content

- You should provide a clear structure for the content with easily identifiable parts.
- You can apply a mobile-first strategy for content that will be viewed on the internet: e.g. organising the text in two columns on a page instead of one big block allows the text to be presented more easily on a mobile phone.

5 The context is described

- You should describe the context in which this content has been developed so that the reader can identify differences to their own context.



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Sharing an example of a good practice-oriented material

INFORMATIVE TITLE

Promote insects as an alternative source of protein in broiler chicken feed



Insects: a sustainable protein alternative for broiler chicken feed production?

The production of poultry feed still mainly relies on plant proteins, requiring resource-intensive crops. Indeed, after the mad cow disease crisis (bovine spongiform encephalopathy), the contamination of agricultural land, feed, including the proteins (PAP). Derogations issued, regarding insect-based feed material, with a high content in phosphorus, and a high content in protein, which would reduce this dependence on third countries' protein" as highlighted in Regulation (EU) N° 2021/1372.

SUBTITLES AND PARAGRAPHS

Insect-based feed: main farmed species

Incorporating insect meals into broiler chicken feed would thus offer a solution to the overdependence on conventional used protein sources like soya meal from third countries, thereby mitigating the ecological footprint associated with their cultivation. Main insect larvae species used to manufacture animal feed:



Black soldier fly *Hermetia illucens* Yellow mealworm *Tenebrio molitor* Common housefly *Musca domestica*

These three species are chosen because of their nutritional composition, the ease of their life-cycle management and their ability to be mass-produced. They have been the subject of numerous scientific publications and are now the ones most commonly produced for animal feed in Europe (Foucard et Pampouille, 2020).



IMAGES

Promote insects as an alternative source of protein in broiler chicken feed

Situation of insect farming

Europe leads the market in insect farming to produce pet food and feed for fish, poultry and pigs, especially France and Netherlands. According to a recent report, 500,000 tons of insect protein will be produced by 2030, with 120,000 tons for poultry feed (FAO, 2022). Two of the largest insects farms for animal feed in EU are French: Ynsect (*Tenebrio molitor*) and InovaFeed (*Hermetia illucens*). These companies manufacture a range of insect-based products (Foucard et Pampouille, 2020):

- Whole live larvae.
- Dehydrated whole larvae.
- Defatted whole larvae.
- Insect meals (protein concentrates = PAP).
- Insect oil/fat.
- But also amendment (soil fertiliser).

Whole unprocessed larvae are currently not authorised in European Union for use in poultry feed.

Benefits of insects in chicken feed

Insects as an alternative protein source of protein from plant-based in broiler chicken feed presents numerous benefits:

- Reduced environmental impact (less imports, avoid deforestation, less water and less space used - large volumes produced in vertical farming)
- Promoting European feed self-sufficiency
- Recycling and processing co-products from agriculture (e.g. fruit and vegetable peelings)
- Insect proteins (e.g. meal, oil, fat) are a sustainable source of protein for animal feed



BENEFITS AND LIMITS

Limits of insects in chicken feed

Despite being a promising protein source, challenges persist in achieving the development of a robust insect farming industry, economically affordable and able to control sanitary aspects, namely due to its recent development facilitated by recent regulatory authorisations. Other limits for the incorporation of insect protein in broiler chicken feed are:

- Environmental impact depends on the substrate used (insect diet), the production system (amount of energy consumption for insect farming - renewable source or not) and insect species.
- New logistic to adapt to avoid cross-contamination with feed for ruminant farming.
- Variability of insect meal quality.
- Precaution on chitin content as it could impair digestibility.
- Management of insect's welfare during farming.

References:

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32021R1372>
Foucard, P. et Pampouille E., 2020. Utilisation des insectes et produits à base d'insectes dans les filières aquacole et avicole. ITAVI, Telfa n°33
FAO, 2022. Is the time ripe for using insect meal in aquafeeds? Bangkok
Azif MA, Pampouille E., Média B., Rousset N., 2022. L'utilisation des insectes dans les filières aquacoles. Perception des consommateurs et des acteurs de la filière.

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SOURCES AND FURTHER READING

What farmers, foresters and advisors are less interested in:



Non-practice-oriented material: Deliverable, scientific paper, communication material, too many written pages.



Industry Advertisement: If the advertisement is present, then object must contain good practice judgement with diverse points of view and provide a comparison of different solutions.

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