Camelina processing: experience in Italy

Problem
Camelina is a new (or rediscovered) crop for Italian farmers and there is no experience in post-harvest and processing operations. At the same time there is the need to build a value chain for the oil, in order to be able to use the by-product, cake, as animal feed.

Solution
Cold pressing of organic camelina seeds, with the production of crude oil and cake (Figure 1).

Benefits
Regional production of Camelina cake, to be used as animal feed. A new crop to be included into Northern Italy crop rotations, fitting organic farming practices and diversification needs. A high value product, oil, for use in food, cosmetics and nutraceuticals.

Practical recommendation
Camelina from organic cropping systems, in the Northern Italy environment, is sown in October and harvested in May/June. At harvesting time two types of problems can occur: a) weed pressure is high and it is hard to separate the small camelina seeds from other plant material; b) if harvested in wet weather condition a high moisture content can cause storage problems.

For high quality products, oil and cake, the following key points from harvest onwards should be considered:

- if possible wait for a dry week to harvest (Camelina siliqua – seed pods – do not open easily)
- if available use a harvester for alfalfa seed, otherwise use a combine harvester for wheat at low speed and, preferably, with straw separation
- if there is a high presence of other materials select the product with sifters and, if available, with optic tools
- if the seeds have a high moisture content, dry immediately, to avoid fermentation processes that reduce the quality of the seeds and, as a consequence, of the oil and cake
- oil extraction by pressure and at low temperatures preserves all nutritional components (tocopherols etc.) valuable for feed, food, and cosmetic use.
Further information

Video
- Check the video "Cultivation, processing and use of camelina for organic layers feed"

Weblinks
- Check the Organic Farm Knowledge platform for more practical recommendations.

About this practice abstract and OK-Net EcoFeed

OK-Net EcoFeed: This practice abstract was elaborated in the Organic Knowledge Network on Monogastric Animal Feed project. The project is running from January 2018 to December 2020. The overall aim of OK-Net EcoFeed is to help farmers, breeders and the organic feed processing industry in achieving the goal of 100% use of organic and regional feed for monogastrics.

Project website: ok-net-ecofeed.eu
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