

Camelina organic cultivation experiences in Italy

Problem

Soya bean cake is a major source of protein in organic poultry diets. However, it does not contain the required levels of methionine and cysteine resulting in more soya being fed to fulfil amino acids requirements, leading to higher costs and negative effects on animal health for over proteic diets.

Solution

To improve at the same time the crop rotation and the local production of feed-stuff with camelina (*Camelina sativa*). It is a low-requirement crop producing oil-rich seeds whose cake can contribute to protein supply.

Benefits

A complementary source of feed for poultry, rich in proteins and specifically in sulphur containing amino acids, as well as omega 3 fatty acids, as well as omega 3 fatty acids and tocopherols. A new crop to be included into Northern Italy crop rotations, fitting organic farming practices and diversification needs.

Practical recommendation

Camelina fits well into crop rotations on organic farms in North-Eastern Italy (Figure 1), as it can be sown in October and harvested in late May/beginning of June, so allowing a second crop, after it, of soya bean.

It does not require high amounts of nutrients and, if it follows a cover crop with leguminous species or is sown in highly fertile soils, no specific inputs are required. No irrigation is needed. There are no diseases or pests affecting it. It is very resistant and will grow on marginal areas and sloping land.

It does not require specific machinery but, as the seed is extremely small (smaller than rapeseed), care at soil-bed preparation, drilling and harvesting is needed.

Key aspects for success:

- light soils with good drainage
- careful seed-bed preparation, seed should not be set deeper than 1 cm
- as the amount of seed per hectare is very small (about 7 kg depending on the variety) the seed drill should be appropriately set
- Camelina has a limited leaf development, that does not cover the soil, leaving space for weeds to grow (Figure 2). Preventative weed management methods should be applied, for example stale seed-bed technique (Figure 3). Besides it stand with no damage one or two passages of weeder harrow after the plants are established and before the weeds are too developed (in Northern Italy conditions in March).

Applicability box

Theme

Layers, Broilers

Context

Northern Italy

Application time

Included in the crop rotation as winter crop (October-June)

Required time

Usual crop management, few interventions required

Period of impact

October-May/June but depending on varieties and locations it can also be used as Spring crop (February-June)

Equipment

General sowing, harvesting machinery

Best in

Good alternative to cereals to diversify crop rotation. It needs well drained soils.



Figure 1: Camelina sativa open field.
Photo: Cristina Micheloni, AIAB.



Figure 2: Camelina sativa first period. Photo: Cristina Micheloni, AIAB.



Figure 3: Camelina sativa action against weeds. Photo: Cristina Micheloni, AIAB.

Further information

Video

- Check the video "[Cultivation, processing and use of camelina for organic layers feed](#)"
- Check the video "[Edible Camelina Oil Production](#)"

Weblinks

- Check the [Organic Farm Knowledge](#) platform for more practical recommendations.

About this practice abstract and OK-Net EcoFeed

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