

Organic cheese production in Finland

Case Study 13

Experimenting crop diversification and low input farming

Experimentation plot of 2.6 ha with feed for milk production in Kouvola (Finland) with rainfed conventional feed production finally used for cheese



3 MANAGEMENT PRACTICES WERE TESTED IN THE CASE STUDY

- 1** Organic production in crop production
- 2** Organic production in milk production
- 3** Legume in crop rotation

ENVIRONMENTAL BENEFITS

1. Grasses in the crop rotation **increased soil organic matter**
2. Organic management **reduced nutrient losses to watercourses**
3. **Negative phosphorus balance** in organic production

SOCIOECONOMIC BENEFITS

1. Higher gross margin in organic compared to conventional milk rotation
2. Price of **organic products is higher in the markets**
3. **Savings in fertilizer costs with the legumes**

WHY IMPLEMENT CROP DIVERSIFICATION?

Organic farming is a good option for part of the farms because there is a growing need for organic products. However, legumes or grass species in crop rotations can be applied by any farm and they are a good way to increase the diversity in the rotations.

Beneficial effects on soil quality are expected with this kind of diversification in crop rotations.



AGRONOMICS DRAWBACKS

1. Poorer yields from organic farming

ENVIRONMENTAL DRAWBACKS

No environmental drawbacks

SOCIOECONOMIC DRAWBACKS

1. Poor markets of organic products
2. Poorer yields in organic production

WHY IMPLEMENT CROP DIVERSIFICATION?

Is it beneficial to adopt these sustainable practices?

Long-term organic cereal yields were 38% lower than conventional yields. In forage production organic yields were 12% lower than conventional.

If shifting from conventional dairy production and related forage grass cultivation to organic dairy production with related changes in forage grass production the calculation shows a relatively significant €95/ha gain. Adopting clover grasses to be used in conventional dairy milk production implies a small gain of approx. €10/ha.

Farm economy does not seem to be a barrier for the diversifications considered, but the market demand for organic products might in fact be such a barrier.



DIVERFARMING