



Sod-seeding & use of mixtures & cow crossbreeding



Pisanu Brothers

1 Description of the innovation



The farm 'Le Palme' is located in South West Sardinia (Italy).

The main innovation that the farmers adopted in their farm is the sod-seeding. Although they did not have specific technical problems with the traditional soil tillage, they had to spend more than one month in carrying out traditional soil tillage. Moreover, this latter implied the use of a huge amount of fuel and the hard wear of agricultural equipment. Then, they adopted sod-seeding, obtaining other benefits: improvement of the organic matter in the soil and improved efficiency in the water use. Moreover, they began to sow legume-grasses mixture to lower the nitrogen fertilisation (oats/Rye grass mixed with Squarrosso Clover/Vetch).

Their cows do not graze, and this allows to avoid the compaction of soil and the need for minimum tillage after few years.

Currently, they are also performing a crossbreeding programme among their herd of Italian Frisona with other breed characterised by higher fertility rates and disease resistance than the Italian Frisona (Montbéliarde and Swedish Red). They have already obtained an improved milk quality.



Reason for the innovation

- Solve the problem of a high labour intensity of traditional tillage
- Improve the economic results of the farm
- Improve the quality and quantity of milk production of their herd

- Reduction of labor intensity
- Reduction of costs
- Improved soil structure and fertility



2 Farm description

ENVIRONMENT

Soil types: clay-sandy soils, subalkaline pH

Climate: Mediterranean climate

Altitude: 60 m a.s.l.

Slope: 10%

GRASSLAND MANAGEMENT

Grazing: no. Forage crops are exclusively mowed

Grazing management type: -

Length of the grazing season: -

Forage conservation type: hay and silage

Fertilisation rate: 150 kg ha⁻¹ of inorganic nitrogen

FARM STRUCTURE

Annual Work Unit: 4

Agricultural Area: 200 ha, all considered as UAA:

- 200 ha, legume-based annual mixtures
- 80 ha, mais under irrigation as 2nd crop after winter crops.

Activity: dairy cow breeding (Italian Frisona breed, crossbred with Montbéliarde and Swedish Red)

Number of heads (LSU): 498

Stocking rate referred to total farm area: 2.49 LSU per hectare

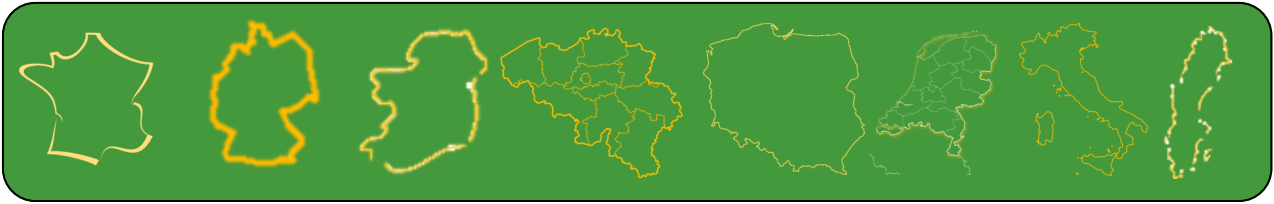
ANIMAL PERFORMANCE

Milk production: 9500 l per head per year

WHY IT IS WORKING

- The farmers found the sod-seeding technique very efficient in their farm: it did not influence the forage dry matter yield or quality
- They observed other benefits, for example the reduction of weeds
- They travelled Australia and North America to visit farms to learn about the best combination of soil tillage and forage crops that could solve their problems

Country shapes



Domains of innovation



Machinery, tools



Forage mixture



Forage conservation technique



Grazing management system



Legume management



Animal feeding management



Animal type (breed)



Product processing



Marketing



Farm system



Landscape

Main types of animal

