

THE TEACHING FARM "CASCINA BRICCO"

Carmagnola (Torino) - Italy

SECTION A: THE ENVIRONMENT

Physical characteristics of the territory

The town of Carmagnola lies to the middle of Piedmont, the westernmost Italian region, in the south of the province of Turin. The municipality has a total surface of 96 km² and more 24.000 inhabitants; the downtown is situated at 242 m of altitude on level of the sea.

The **climate** is characterised by relatively cold winters with an average temperature of 12,6°C, which reaches 0,9°C in January and 23,8°C in July. The rainfall, mostly concentrated in spring and autumn, is of about 710 mm, with 160,7 mm in the summer (June, July and August).

The **cultivated agrarian surface** is more than 7.500 hectares, so shared: about 40% are corn fields, other cereals (wheat, barley and rice) reach 16,5%, soybean, sunflower and rape or colza are more than 10%, permanent meadows and other forage growing are under 25%, vegetables are about 3%.

The farms

The over 530 farms of this area are typical family-run farms, shared in several productive specialisation:

- milk and meat, for breeder;
- cereal and hay for farmers;
- pepper and other vegetables for growers;

A common characteristics of this farms is the productive system which is intensive, that is to say directed towards the maximum exploitations of the available soil, with high productions both in the agronomical and zootechnical sector. However this intensive productive system don't prevent that many farms direct their production towards the typical productions of the territory.

So Carmagnola is known overall for **6 agricultural and food traditional productions**: Pepper of Carmagnola, Long sweet leek of Carmagnola, Grey rabbit of Carmagnola, Salame di Giora (salami made with meat of cow of Piemontese breed), Formaggio del fieno (so called cheese of the hay, made with milk of cows feeding only hay), Alpestre (a digestive liquor, prepared with 33 different kinds of grasses).

The breeding

The zootechnic activity is specialized in the bovine sector, carried out in 209 farms (73 for milk, 43 for meat and 93 mixed) with a total amount of about 15.000 animals (over 8.000 for reproduction and less than 7.000 for fattening).

Milk production is carried out in stables with free stalling, with permanent litter and with fastened stalling: the fragmentary character of the farms and the high cost of the plain do not allow the grazing. The breeding system of the Holstein is not different from that used in the rest of Europe, the absence of grazing excepted, and allows breeders to attain rather high productions, which on the average exceed 80 quintals of milk per lactation, with peaks over 100 quintals, among the best in Europe.

The milk, in conformity with Community regulations, is paid according to quality criteria, which depend on the content of fat, proteins, somatic cells and bacteria. Every time the milk is collected, moreover, it is subjected to controls which verify the presence of antibiotics and water. The feeding is mainly based on corn silage, hay, hay silage, ray-grass silage, cereal ground (mostly corn) and oil industry by-products (mostly soybean expeller).

Meat production is mainly attained with the most important meat breed, the Piemontese, both for the pure breeding and for the crossbreed. It's characterized by a remarkable development of muscles which is exalted in the animals with double rump, in which is found a muscular hypertrophy in the rest part of the body: the thin skin and the reduced diameter of the bones guarantee an output at slaughter time which is certainly higher than the average and can reach 70% in the adult calf. Added to this is the high incidence of precious cuts, which makes it possible to get cuts of excellent commercial value even from the front part of the body. These breed is characterized also by high quality of its meat, particularly lean and poor in cholesterol, but equally tender.

The breeding of the Piemontese breed is carried out both in traditional stables, with few fastened animals, and in modern stables with free stalling of large dimension. There are substantially two many kinds of breeding and both of them produce either weaned calves (about six months old with a weight of about 250 kg) or calves ready for slaughter, with a variable weight of 450-650 kg), depending on the market request.

Pepper of Carmagnola

Carmagnola is known like the country of pepper: this vegetable - got from South America like other Solanaceus - is cultivated a Carmagnola from the first years of the last century, founding in this area the best conditions of environment and growing. The natural selection allowed to keep four variety: Quadrato (square), Lungo (long), Trottola (this berry looks like a spinning top), Tumaticot (variety with berry flattened, like a tomato)

The producers' association, with over 50 grower, follow definite rules of productions joined in a productive regulation approved by Region Piedmont, Ministry of Agriculture and European Union. In a short time the Pepper of Carmagnola will obtain the certification mark "IGP - Protected Geographic Indication" from European Union.

SECTION B: THE FARM "CASCINA BRICCO"

One of these farms specialized in milk production and cheese making is **Cascina Bricco**. The herd is composed of 130 Friesian Holstein cows reared on free stalling and unifeed. The products of the farm are Caciotta, Crescenza, Fior di latte (mozzarella), Formaggio Bricco, Formaggio del Fieno, Primosale, Ricotta, Scamorza, Tomini and ice cream. This farm is placed at the beginning of a Natural Reserve, the river Po Park.

Characteristics of the farm

The farm Cascina Bricco that houses the "**Fattoria didattica dell'agricoltura carmagnolese**" last year has cultivated 37 hectares, so divided: 29,89 ha with corn; 4,34 ha with hay; 1,74 ha in set aside; 6,30 ha are assigned to Didactic Center; 1,04 ha let to other uses.

Reasons for the teaching project

The first reason for the achievement of a teaching farm consists in the leading role of farming in this place, and it represents the best way for getting to know the agricultural world to students, citizens and consumers. It help them to discover the origin of feed, the rural uses and the secrets of nature that is still unknown for many people.

Works already achieved

Surface	Teaching Module and/or function
0,80 ha	Information and reception point of Po Park and RARE (Razze Autoctone a Rischio di Estinzione). Exposition show, tasting room and shop. Dairy and ice cream parlour. Observation tower. Parking.
0,23 ha	Cattle breeding and area for teaching laboratories.
1,12 ha	Kiosk; Fish kettle; Didactic orchard.
1,02 ha	Amusement park. Cattleshed. Didactic vegetable garden. Didactic greenhouse..
3,13 ha	Pastures.

The teaching farm will be inaugurated the next **16 March 2008** and you are all invited.

A synthetic description of the main part of the Teaching Farm:

1) The **Information and reception point of Po Park and RARE** (Razze Autoctone a Rischio di Estinzione). This room fitted out with teaching materials on the river and the wood environment and with popular poster on the livestock rare breeds reared in the farm and others rare Italian breeds.

2) The **Exposition show, tasting room and shop centre**: this room is assigned to the sale of the Cascina Bricco farm products and others typical products of Carmagnola agriculture.

3) The **Teaching Centre** is bounded by a hedge (about 1.500 metres) composed with **local shrubs and trees** as Acer campestre, Alnus glutinosa, Carpinus betulus, Cornus sanguinea, Crataegus monogyna, Evonimus europaeus, Fraxinus excelsior, Ligustrum ovalifolium, Prunus avium, Prunus spinosa, Rhamnus catharticus, Rosa canina and Sorbus aucuparia useful for the creation of an ecological niche.

4) The **Didactic path** winds along:

- the **didactic vegetable garden** divided in lots of 4 x 10 m. with the cultivation of the main vegetable of the area (asparagus, carrots, cabbages, cauliflowers, beans, string beans, long sweet leeks, marrows...) and aromatic plants with the organic farming system.
- the **didactic greenhouse** of 10 x 3,5 m. where are cultivated four varieties of peppers (Peperone di Carmagnola Quadrato, Lungo Corno di Bue, Trottola and Tumaticot).
- the **didactic orchard** composed by old varieties of apple, apricot, persimmon, cherry, peach and plum trees;
- the **didactic retery** for hemp (Cannabis);
- two **fish ponds** where are reared tenches (Tinca gobba dorata del Pianalto di Poirino) and carps;
- the wood made **stables** and **pastures** for some specimen of rare breeds of Piedmont:
 - **Tortonese** (rare bovine breed for which an embryo-transfer program is foreseen);
 - **Mora Romagnola** (swine rare breed of Emilia Romagna);
 - **Savoiarda** (rare sheep breed);
 - **Vallesana** (rare goat breed);
 - **Bionda Piemontese** (rare hen breed);
 - **Gallina Bianca di Saluzzo e Cavour** (rare hen breed);
 - **Grigio di Carmagnola** (rare rabbit breed);
 - Horses and donkeys (n. 10 exemplars). The common donkeys will be gradually replaced with specimen of rare Italian donkeys breeds and will be used for hippo therapy and trekking in the Po Park.

The search of the rare breeds exemplars and the material and display panels for the presentation of the genetic resources of our region have been prepared with the collaboration of the National **Association R.A.R.E.**

5) a **didactic area** partially covered used for the realisation of didactic laboratories;

6) **photovoltaic panels** on the roof of the cattleshed;

7) a wood made **kiosk** as place for eating or shelter from rain;

8) an **amusement park for children** and a large parking.

Near to the Teaching Centre an **observation tower** 14 metres high will be realized.

Expected benefits

- Promotion and valorisation of local products;
- Promotion and valorisation of farms breeding rare breeds;
- Creation of a tourist flow interested to agriculture and animals;
- Exploitation of alternative and natural sources;
- Breeding help for livestock keepers and emergency places for endangered livestock;
- Diffusion of a different culture of the territory, the vegetal and animal resources management.

SECTION C: THE TEACHING ASPECT

The Teaching Farm "Cascina Bricco" aims to offer to the visitors an emotional and involving experience and then immediately and spontaneously "educational".

As the Cascina Bricco has, first of all, an agricultural vocation and activity but talks to different levels of school and various public, the teaching proposal must be based on two different and complementary actions:

- **Realisation of educational paths** organized with **didactic laboratories** for the students of the elementary and secondary schools;
- **Preparation of spaces** assigned to "tell and explain" the different activities of Cascina Bricco, in order to popularize, vulgarize, first step to education and forming.

Achievement of educational paths

The didactic proposal provides for 3 laboratories:

- the vegetable garden;
- the milk production and the cheese making;
- the rare and endangered breeds.

Receivers:

Students of nursery, elementary and secondary school, public.

Description of the Laboratory on endangered breeds

Activity	Time
Presentation of the Laboratory	_ hour
Illustration of the endangered breeds reared in the farm with description of their physiological and productive characteristics, description of the feeding and breeding systems and of the reasons for their abandonment.	2 hours
Discussion on possibilities of rescue.	1 _ hours

Didactic materials

For each laboratory different educational supports will be prepared for students and for teachers and will be differentiated on the base of disparity of age and school level.