

FARM ADAPTED BREEDS: A PANEL PRESENTATION OF FLOCK PERFORMANCE RECORDS - LACAUNE DAIRY SHEEP

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Introduction

The Lacaune dairy sheep had its origin in an area of southern France, where the world-famous Roquefort cheese is produced. It is therefore nick-named 'Roquefort sheep' and is very well adapted to the harsh conditions of this rocky terrain. When you consult literature you will find performance data of 130-200 kg. in 100-200 days, well behind other dairy sheep breeds as East Friesian, Awassi, Chios and Sarda.

Why could somebody want to bring this sheep breed to a continent with a completely different climate and vegetation? Why exactly the Lacaune sheep, which is only ranking in position 5 for milk performance? To answer this question, I have to write a little bit about the dairy sheep industry in Switzerland.

History of Lacaune dairy sheep in Switzerland

Sheep dairying has a long tradition in Switzerland. Especially in the mountain areas, where beef and dairy cows can hardly graze the steep pastures, the dairy sheep had always a certain importance. The most popular dairy sheep in these often small alpine farms was for many decades the East Friesian dairy sheep.

In the early 80's agricultural structures began to change. Bigger farms in the lower lands started with sheep dairies. Larger herds were established and some of these farmers were not satisfied with the East Friesian sheep, because of health problems and unsatisfactory milk performance, especially in flocks over 50 sheep.

Several farmers gathered together and started to visit sheep dairies in different countries. Most impressive for them were the sheep dairies in southern France, which are milking Lacaune dairy sheep mainly. They saw healthy herds with 300 to 500 lactating sheep, well managed with a good, active breeding industry. The only problem seemed to be that southern France had a totally different climate, and the management of the Lacaune dairies was absolutely not the same as the Swiss farmers were used to.

In France the main lambing season is from December to January. The lambs suckle about 4 to 5 weeks, after that they are weaned and the ewes were milked for about 145 to 174 days. In July the ewes were brought onto pasture, which are at that time completely dry, so the sheep will dry off instantly.

Swiss dairy shepherds instead were accustomed to lamb in late winter to early spring and to milk until late fall or beginning winter for up to 300 days. Despite these differences, the farmers decided to import some Lacaune sheep.

Years later Swiss authorities allowed the importation of several hundred Lacaune ewes and rams. Nobody knew up to then, if the Lacaunes would adapt to the situation in Switzerland and how they would perform.

Experiences with Lacaune dairy sheep in Switzerland

Most of the imported ewes were kept under the same management conditions, the same environment and in the same climate as the other dairy sheep (East Friesian) on these farms. Therefore this project was a perfect way to compare, to see advantages and disadvantages of the two different breeds. The results were astonishing:

- Milk performance and lactation length were roughly equal to the East Friesian sheep, but with higher milk fat and protein;
- Productivity was also comparable to the East Friesian, but best fertility rates were mainly achieved in fall, winter breeding;
- Advantages:
 - Especially well adapted for large commercial dairy sheep operations;
 - Well shaped and suspended udders: Systematically selected for machine milking;
 - Good graziers;
 - High daily gains in lambs with a good carcass quality;
 - Healthy, robust sheep: No major health problems.

These experiences led in Switzerland to the situation where larger commercial sheep dairies are keeping mainly Lacaunes and Lacaune crosses, whereas in smaller purebred operations, East Friesian sheep are dominating.

Table 1: Milk performance comparison of Lacaune sheep in France, Switzerland & Canada

	Av. performance in liters	Av. days in lactation	Av. days milked
France ¹	218-271 ²	175-204	145-174
Switzerland ³	350-412	250-260	250-260
Canada ⁴	330-392 ²	262-283	220-241

¹ = Source: UPRA Lacaune

² = Only milked amount (without suckling)

³ = Source: Swiss Dairy Sheep Association

⁴ = Source: Personal data

Experiences in Canada

My family and I had been milking Lacaune and East Friesian ewes already in Switzerland for years and had been very pleased with the Lacaune breed. In 1996 we imported the first Lacaune embryos, that had been flushed from ewes in our flock in Switzerland, to Canada. We also brought with us East Friesian embryos, because we didn't know how the Lacaunes would adapt to the conditions in Canada.

Table 2: Milk performance of Lacaune and EastFriesian sheep on our farm (1999; self recorded))

Breed (Numbers)	Av. performance in kg.	Av. days in lactation	Av. days milked
East Friesian ¹ (53)			
•1 st lactation (21)	333 ²	263	221
•2 nd lactation & up (32)	385 ²	285	243
Lacaune ¹ (42)			
•1 st lactation (17)	330 ²	262	220
•2 nd lactation & up (25)	392 ²	283	241

¹ = Only purebred sheep ² = Only milked amount (without suckling)

So far the Lacaune ewes are producing under the same feeding and management as good or even better than the purebred East Friesian ewes, and the lactation period is more or less the same for both breeds (sometimes up to 300 days!). Our highest producing ewes are Lacaunes. They are milking on the average of 2 kilograms a day. We don't 'push' our milkers: All ewes are on pasture and receive medium-quality hay during the night. In the parlour we feed up to 0.9 kilogram of a whole barley/corn mixture per ewe each day. In late fall and winter we add grass silage to the ration. Lacaunes are more like meat sheep, but are easier to keep in large commercial dairy flocks, and they are on the average healthier (less mastitis and pneumonia) and have by far better udders than the East Friesian.

Table 3: Advantages and disadvantages in comparison between Lacaune and East Friesian sheep on our farm:

	East Friesian	Lacaune
•Milk performance	Equal	Equal
•Milk contents	Lower	Higher butter fat and milk protein
•Fleece	Lots of good quality wool, fast regrowth, 1-2 shearings per year	Wool mainly on back, 0-1 shearing per year
•Productivity		
–Breeding	Year around	[+–] Year around
–Litter size	2.2	2.0
–Fertility	96%	94%
•Daily gain in lambs	0.350 kg.	0.410 kg.
•Udder	Tendency to bag udders (some lines)	Nice shape and well suspended, small teats, easy to milk
•Health	Susceptibility to respiratory problems and mastitis	No major health problems
•Character	Like pets, easy to handle, need more attention, not so suitable for large flocks	More like meat sheep, better adapted for large flocks
•Grazing	'Picky eaters'	Excellent, steady grazers

Conclusion

The Lacaune dairy sheep breed represents an excellent and robust dual purpose breed, characterized by:

- Good milk performance with high butter fat & milk protein;
- High daily gains in lambs with a good carcass quality and a mild tasting and, to consumers, attractive looking and nicely coloured meat.

Other outstanding advantages:

- Especially well adapted for large commercial dairy sheep operations;
- Systematically selected for machine milking;
- Good graziers;
- Healthy and robust;
- Breed has a professional organized breeding program with well selected and monitored sheep genetics.

Experiences with Lacaune dairy sheep in North America are so far too little to give a really accurate sight of this breed. More sheep producers need to be involved with a lot more Lacaune sheep in production for detecting all advantages/disadvantages and to pass a final judgement.