

Proceedings of the fourth
international symposium
on livestock farming
systems

An EAAP Satellite
Symposium

Organized by EAAP
Livestock Farming
Systems working group
and DIAS



Livestock farming systems

More than food production

*Foulum, Denmark
22-23 August 1996*

EAAP Publication No. 89, 1997

Livestock farming systems

More than food production

Proceedings of the fourth international symposium
on livestock farming systems

EAAP Publication No. 89

Jan Tind Sørensen

(Editor)

Editing Board:

J.C. Flamant (INRA Dept SAD, Toulouse, France)

R. Rubino (Istituto Sperimentale per la Zootecnia, Potenza, Italy)

A.R. Sibbald (MLURI, Aberdeen, UK)

J.T. Sørensen (DIAS, Foulum, Denmark)



"Mirandesa" cattle breed: Farm structure, management and marketing

A. Fragata¹ & F. Sousa²

¹ *Estação Agronómica Nacional, Quinta do Marquês, Oeiras, Portugal*

² *Escola Superior Agrária de Bragança, Quinta de Santa Apolónia, Bragança, Portugal*

Summary

In spite of losses suffered in the last decades, the "Mirandesa" cattle breed still plays an important economic and social role and the carcass is famous for the quality of the "posta mirandesa", a very appreciated dish by the rich gastronomy of Portugal.

The area studied is the highlands of Northeast of Portugal (Trás-os-Montes) which range from 700 to 1000 metres. The farming systems adopted by farmers are very low intensity animal production systems and the meat of the "Mirandesa" cattle breed has been marketed as "Protected Designation of Origin" since 1996, within the meaning of the European Union rules adopted under the reform of the CAP.

This paper reveals the results of soft systems approach to the farmers of the "Professional Association of "Mirandesa" Breed" which present a diversity of characteristics in what is referred to the types of family-farm systems, sources of family income, level of education and vocational training, animal management practices and supply chains of "Mirandesa" calves.

Introduction

The highlands of Northeast of Portugal (Trás-os-Montes) support a herd of about 6000 cows of a local breed, the "Mirandesa" breed, whose principal objectives of utilisation are: growth of veal calves, animal labour and manure. The "Mirandesa" cattle breed has been marketed as "Protected Designation of Origin" since 1996.

At the end of 1995 the Professional Association of "Mirandesa" Breed ("PAMiB") integrated 638 farmers. The present paper analyses their starting situation concerning the types of family-farm systems and the main practices of animal husbandry and marketing.

The inquiry was carried out in all agrarian villages with 20 or more "Mirandesa" cattle systems integrated in the "PAMiB" at the beginning of 1996. Soft farm household surveys were made to 44 % of their farmers.

Types of family-farm systems

In previous studies concerning the management and husbandry of "Mirandesa" breed, the studies suggested the importance of the family household, in particular the stage in the life cycle and the income sources (Fragata & Sousa, 1995) (Sousa & Fragata, 1996).

Continuing these studies, we stratified the members of the "PAMiB" as: elderly farmers (EF), part-time farmers (PTF), and full-time farmers (FTF).

In the universe of members of the "PAMiB", the EF represent 33%, the PTF 8% and the FTF 59%.

The EF are aged over 65 with 2 or 3 members per household, they receive a state pension every month and they are still engaged in farming and apparently with no plans to retire; the farm has an average of 2,9 "Mirandesa" cows ("MC") and 18,3 ha of utilised farm area (UFA).

The PTF has a larger family with 4 to 5 members, the head of the farm is on average 42 years old, and the farm has an average of 4,6 "MC" and 18,3 ha of UFA.

The FTF has a family with 3 to 4 members, he is 49 years old and the farm has 4,5 MC and 18,8 ha of UFA.

As to the future of these farms, 62% of the members do not have a successor, 11% have a successor, and 27% are in a situation of uncertainty concerning a successor.

Sources of family income

The families of FTF are the most dependent of farm receipts. However, a large number of EF (42%) have their main income from the sale of farm products.

Subsidies and bonus constitute the principal receipt of the farm for a major proportion of the EF (55%) and of the FTF (54%). The sale of products is the prime receipt for 53% of the PTF.

In relation to the products sold by the farm households, the sale of veal constitutes the most important product for 84% of the farmers of the "PAMiB".

Education and vocational training

In reference to the level of education and vocational training, the more significant aspects are: 72% of the members have 6 years of education; 49 % of the EF are not able to read or write; about 10% of the FTF have vocational training.

The last category includes young farmers with an average age of 32 years who have taken for example an agricultural farm records course in order to acquire credit for farm investments.

Number and age of cows

The average number of "MC" per farm within the "PAMiB" is equal to 4 heads.

The number of "MC" differs according to farm type, e.g. 90% of the EF, 72% of the FTF, and 61% of the PTF have less than 5 cows whereas more than 8% of the FTF and 6% of the PTF have more than 10 cows.

The average age of "MC" is 8 years, with 45% less than 8 years old, 27% 8 to 10 years old and 28% older than 10 years.

In the population of farms investigated there are 309 replacement heifers, which corresponds to a substitution rate of 37 %.

The heifers are mated the first time at the age of 15-16 months. The cows are culled around 10 to 14 years of age, but there are cows still producing at the age of 19 years.

Management and husbandry of cows and calves

The feeds used for the "MC" throughout the year are listed in Table 1.

The "lameiros" are irrigated native permanent pastures with great importance in the region of Trás-os-Montes. The cows are never feed concentrates.

The cows are normally mated to a bull belonging to a farmer on a village basis (on average 30 cows for one bull) and the calves are born on a year round basis without a defined season.

Table 1. The feeds for Mirandesa cows.

Feeds	Spring	Summer	Autumn	Winter
harvested grass from <i>lameiros</i>	X			
grazing in <i>lameiros</i>		X		
maize for green fodder		X		
pumpkin		X		
hay of oats and <i>lameiros</i>			X	X
turnip			X	X
beat			X	X

The calves suckle the cow until 4 months old. Thereafter the calf is only allowed to suckle twice daily and is supplemented with hay and rye flour produced on the farm. Weaning normally takes place at 6 to 8 months of age, depending on the milking ability of the cow and the market for veal.

The percentage of members of the "PAMiB" who have adopted innovations related to farms practices are as follows: 31% are using AI, 24% are grazing re-seeded pastures, 20% are keeping the cows outside during summer, 5% are using electric fences, at least 13% have modernised their stables and only 0.4% are aiming at a specific calving season.

Within the whole of the "MC", 54% supply animal draught power to farms. Almost all the farms (86%) use the "MC" for executing specific cultural operations. The draught animals are also used for cultivation of small plots unsuitable for the use of tractors, such as vegetable gardens, harvesting potatoes and tilling rye.

Nevertheless, there is generally mechanical traction as well, either owned or rented in the form of tractors, single axle power tillers and combines. Although most of the farms are small, 67% own a tractor and 52% own single power tillers, this ownership being most prominent with PTF and FTF.

Why the farmers keep "Mirandesa" cows?

The farmers point out a number of reasons for owning "MC" (Figure 1).

The reasons of affection are very significant: 72% of breeders give special emphasis to "the love of breed". Besides, the producers point out motives related to the ability to draught (39%) and to the rusticity (40%): the farming of "MC" is low in manual labour input, the cattle are well adapted to the environmental conditions, they are easy to farm and have no calving problems. At last, as a reason for owning "MC", 16% of the breeders suggest the subsidy and only 5% of producers farm MC in order to win prices at agricultural shows.

Figure 1

Market

The live part, 67% farms sel

A larg continue:

Almo: weighing the count cattle bre

Since the "PAM carcass o trader of

Conclu

The farm age, size farms (ar

The " low inter

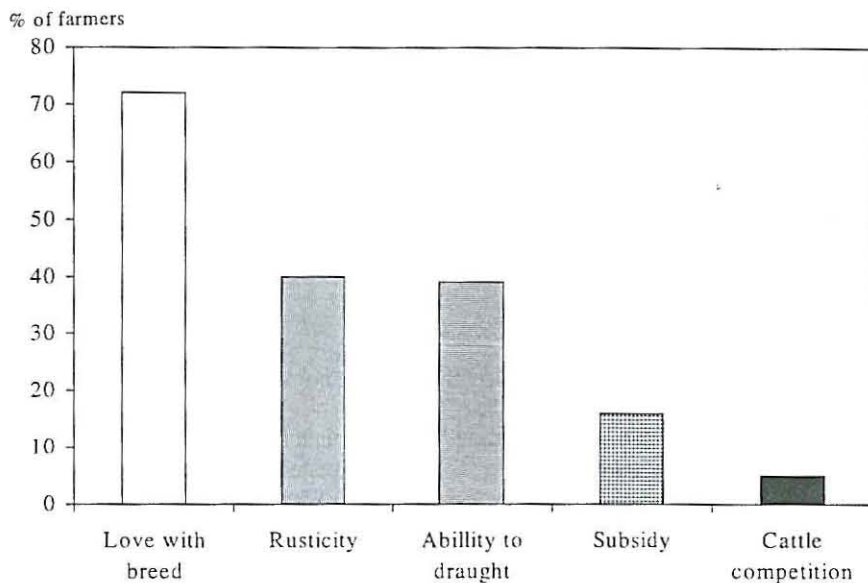


Figure 1. Reasons for owning "Mirandesa" cows (% of farmers).

Marketing

The live weight limit of calves is 150 kg. Almost all of the farms sell animals as veal: a major part, 67%, at 5 to 7 months of age and 26% as veal at 7 to 9 months of age. At least 7% of the farms sell steers at 30 to 36 months of age.

A large proportion of the farmers (89%) sells the calves at the farm gate and at least 11% continues to make their transactions at fairs.

Almost all of them (84%) sell the animals "by eyeing", while the rest (16%) sell it by weighing on scales. At the end of 1995 the most important buyers were the butchers within the county seats (59%) and the cattle traders (26%). Within the buyers, one could also find the cattle breeders (15%) who transact among themselves.

Since January 1996 the meat of "Mirandesa" cattle has been marketed by some farmers of the "PAMiB" as "Protected Designation of Origin". This meat is sold as major parts of the carcass or as small vacuum packages. Twenty calves per week are presently (1996) sold to a trader of the city of Oporto and to local restaurateurs.

Conclusion

The farmers of "PAMiB" present a wide range of diversity of characteristics as regards their age, size of family, external income, level of education and vocational training and the size of farms (area and number of cows).

The "Mirandesa" breed is utilised for mixed farming systems and the farmers adopt very low intensity animal production systems based on home-grown forage.

"Mirandesa" cows are kept for a range of reasons including "love of breed", utilisation of draught animals and rusticity.

Previously the marketing of veal calves has been left mainly to local butchers, but the introduction of the brand "Protected Designation of Origin" is rapidly changing the situation.

Acknowledgement

The present study is part of the Project PAMAF "Portuguese cattle breeds. Contribution to the evaluation of their productivity in traditional ecosystems and its social and economic effects", co-ordinated by A. Vaz Portugal.

References

- Fragata, A. & F. Sousa, 1995. Práticas dos criadores de bovinos mirandeses e melhoramento da raça, *Revista de Ciências Agrárias* 3, 3-9.
- Sousa, F. & A. Fragata, 1996. Mirandês cattle breed: genetic base and breed improvement. In: J.B. Dent, M.J. McGregor & A.R. Sibbald. *Livestock farming systems: research, development socio-economics and the land manager*. Wageningen Pers, Wageningen, 79-84.