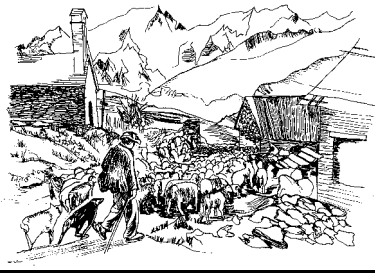


PASTORAL (2003) *Examples of European pastoral systems*

PASTORAL Project Information Note 4

*EU -Funded
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SAC, EFNCP,
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This series of eight Information Notes and accompanying video are intended to provide a brief introduction to some of the issues facing pastoralism in Europe today. They were produced as part of the output from the PASTORAL project, an EU-funded Concerted Action which considered the agricultural, socio-economic and ecological characteristics of high nature value pastoral systems in Europe.

The PASTORAL project was steered by a consortium consisting of the Scottish Agricultural College (UK), European Forum on Nature Conservation and Pastoralism, ALTERRA, (The Netherlands), Institute for

European Environmental Policy (UK), Asociacion para el Analisis y Reforma de la Politica Agro-rural (Spain), Universidad Autónoma de Madrid (Spain), Escola Superior Agraria de Castelo Branco (Portugal) and Coordination Paysanne Européenne (Belgium).

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Further detailed information on the PASTORAL project and European pastoralism can be found at: www.sac.ac.uk/envsci/external/Pastoral/default.htm

Introduction

- This Information Note contains some interviews with pastoralists from PASTORAL's Spanish, Romanian and French workshops. The interviews provide a snapshot of the production systems, their characteristics and the problems that they face.

Case study 1: Cattle systems in the Sierra de Guadarrama Mountains, central Spain Summer 2001

Ricardo Colmenares, an ecologist at the Parque Regional de la Cuenca Alta del Manzanares gave an introduction to the ecology of the Sierra de Guadarrama at the start of the day. Delegates then visited a communal pasture, two farms and, following a superb lunch of local produce, had the opportunity to pose questions to a panel of local experts. The details of the agricultural characteristics of the system visited are described below.

Summer pastures, Morcuera Pass

Farmer: Antonio Matín Merino

Cattle from local communes graze the pastures during the summer months - April/May through to September/October (or to when snow appears). The land is state-owned by the Comunidad de Madrid and currently about 2,200 cattle and 140 horses graze 12,000 ha however, much of this area is woodland. Antonio pays approximately \$15/head for the summer and these low rents are one of the reasons why a switch to more sedentary systems has not taken place. At the moment, the state is examining the grazing management system, particularly with regard to possibility of introducing 10-year agreements. At present, grazing levels are considered to be generally acceptable. However, there are problems associated with localised undergrazing and overgrazing and this is attributed to the decline in herding practices.

The majority of the 60 farmers in the Morcuera pastures grazing association farm part-time and each own between 20 and 30 cattle. Only 10 farmers are full-time. Antonio reckoned that farmers would need to be full-time, claim support payments, own 60-70 animals and utilise intensive finishing practices to be viable and support a family. Support payments are only available to full-time farmers and although there are no agri-environment support at present they are in development. There are payments for local breeds – 10,000 ESP per cow - but these are subject to quotas. Full time farms within a Less Favoured Area would receive

approximately 100, 000 ESP each (LFA payments), 3, 400 ESP for each female animal (suckler cow premium) and 16, 000 ESP for stocking less than 1.44 LU/hectare (extensification payments).

Antonio is one of the full-time farmers using the Morcuera pastures. He has a quota for 80% of the 120 cattle he owns. About 40% of his income comes from support payments and 60% of his income comes from selling produce to local supermarkets. Cows calve either in November or February/March. Calves are kept for 4-5 months on pastures and then are finished for a further 8 months. Some of the farmers finish calves themselves but the majority sell animals to finishing systems in Segovia. Charollais and Limousin attract a 20% better price than local breeds because they produce more meat per carcass. Antonio views prospects for systems in the area using mountain pastures as poor with farmers being forced to chose between abandoning their farms or changing breeds. He thinks that few people under the age of 30 would go into farming.

The farming system visited is semi-open. Grazing occurs on the poor grass of the summer pastures whilst hay is cut in the valley on natural, unfertilised wet meadows. Some straw is brought in from elsewhere. Where finishing occurs, it involves concentrates bought-in from Segovia. Branches of *Praxinus angustifolium* in the ash dehesas used to be cut in spring for animal feed but this practice no longer occurs. There is plenty of water on the pastures during the summer months. Although it sometimes happens, supplementary food is not normally given to the animals while they are on the mountain pastures. Accordingly, animals usually lose condition towards the end of the summer but, despite this, it is still profitable to keep them on these pastures for as long as possible because the rent of the pastures is low. Each owner generally checks his own animals once per week. Antonio lost 3 out of 140 cows in 2000. BSE restrictions require dead animals to be collected where possible. It was pointed out that in France BSE regulations were changed and farmers receive certificates if carcasses are eaten by carrion.

Historically, sheep grazed the area and the types of grass species present are much more suitable for sheep than for cattle. However, the fall in wool prices led to a decrease/complete cessation of sheep grazing on the pastures. During the same period, some of the pasture was planted with Scots pine, *Pinus sylvestris*, to aid water retention. The former pastures are now too shrubby for sheep grazing to be reintroduced. Shrub growth used to be controlled by both grazing and burning. As there are now too many trees to allow burning, scrub growth has continued to increase and grassland to decline. In addition, sheep (and goat) grazing was directly beneficial to the grasslands, especially at higher altitudes where cattle are less inclined to go, as dunging maintained fertility and aided seed dispersal. Now, there is no real interest in reintroducing sheep because of the high labour inputs; one shepherd is needed per 1000 sheep. Shepherds cannot be attracted even at the salary of 250, 000 ESP per month.

Cattle farm, Garganta de los Montes

Farmer: Heredos de Francisco Fernandez del Pozo and Ramón Garcia (foreman)

Sixty years ago this farm was used for rearing bulls for bull fighting and then changed to rearing goats. For the last 30-40 years, Avileña cattle have been reared on the farm because of the family's interest in the breed. The farm is outside the core area for the Avileñas and because of this there is no special market for their meat. Product labelling is restricted to specific geographical areas and the farm cannot take advantage of specialist market.

The farm is owned and run by five brothers and farmed part-time with outside work supplementing their incomes. Of the total 513 ha, 60-70 ha are used for cutting hay and hay is also bought-in from outside. The hay fields are irrigated but are only fertilised by manure from the stables. The branches of ash trees are not used for fodder. There are 218 adults cows on farm and 60 calves/young stock. Of the 8 bulls, 4 are Avileña, 3 are Charolais and is 1 Limousin. The Avileña bulls are used for breeding and stock replenishment, depending on the quality of the mothers. The Limousin and Charolais bulls are used for meat production. The Limousin bull is also used in the first cross, as the calves produced are smaller and easier on the cows. The first calving of Avileña cows occurs when they are at least 24-36 months old. Some artificial insemination is practised.

Adult animals are free-ranging on grass between April and September and between September and December are fed on alfalfa and hay. Between December and April cattle are fed on hay and concentrates consisting of bruised grain. It is generally only during mid-winter that body condition and weight is lost. Calves feed on milk for the first 4-5 months and are then fed in stables for the next 4-5 months. At around 9 months they are sold for slaughter or to a dealer and by this stage they weigh about 200 kg or 300 kg, for females and males respectively. Sale of pure-bred young stock is profitable but limited and therefore support payments for the Avileña breed (10,000 per cow and 15,000 per bull) keep the system viable. Half of the total income from the farm comes from subsidy support. Quotas are available but only at a cost of 120,000-

150,000 ESP per right. Heredos sees the future of rearing Avileñas as bleak over the next 10 years but doesn't see that the farm could be used for anything else.

Cattle farm, Gascones

Juan José Briceño Gil

Juan's farm was a successful dairy unit producing 6000 litres per day but in 1992 he sold the milk quota in response to dwindling support and subsidies for dairying. The farm was then converted into an extensive beef rearing unit combined with in-stable finishing of calves and the farm also now finishes the calves of neighbouring farms. The farm has approximately 250 ha of land in total, 150 ha of which is used for cutting hay. Irrigated crops are grown on 50 ha of the land.

On conversion, Juan decided to choose a traditional breed from Galicia, north west Spain. He believes that this breed is easier to manage compared to Limousins and produces better quality meat with more marbling or fat in the muscle. The bulls of the Galician breed are cross-bred with mixed breed cattle, some of which are his own some of which are his neighbours. Juan is trying to promote the advantages of mixed breeds with his neighbours. There are 80 pure-bred cows on the farm and he is searching for cattle at his neighbours farm which have the highest percentage of the Galician breed in them. At moment Juan breeds his own replacements and is therefore, not worried about having to claim 15% of his suckler cow quota on heifers in two years time. The average cow will produce 12-15 calves during its lifetime.

Adult females, replacements and calves up until 8 months old are fed outside on grass. After 8 months the calves are bought inside for finishing and are fed concentrated cereals, straw and water. They are then sold at 9-10 months old (550 kg live weight, 320 kg dead weight). The majority, 80%, are sold direct to local supermarkets and the remainder are sold to local butchers. Juan gets a good price from the supermarkets and feels that their price is more constant through year.

Calves are also bought in from the local area for finishing. There can be a 10% difference in price depending on their purity. Juan used to buy 6 month old calves (c. 250 kg live weight) and sell them at 12 months. However, he has found that it is not possible to get calves bought at this age from extensive farms up to 320 kg (dead weight) by 12 months. So now, he prefers to buy calves at 4 months old from intensive farms and sell them at 11 months. Calves fed inside are fed 6 kg per day. One of the reasons that he sells at 11 months is that costs are lower as spinal cord does not need to be removed. The farm has the capacity to house 300 animals at any one time and can therefore process around 600 animals per year. Animals are not castrated as it is traditional in Spain to keep them entire and as animals are sold young, there is no problem with this. All his animals are sold under the Sierra de Guadarrama quality brand. Juan considers that it was worthwhile to convert. Although there is more income from dairying it requires three extra people to do the work and therefore entailed higher labour costs.

Main points from a discussion with local experts

Three local experts, Maria Josefa García Grande, an economist at Universidad Carlos III, Madrid; Fernando Mediavilla from the Professional Association of Local Farmers and Maria Teresa Domingo, Head of the Buitrago de Lozoya Delegation gave their opinions on the key issues affecting local livestock production.

What we have seen today is not so typical of the area - rather it is normal to have 30-40 cattle and be on limit of economic viability. 60% of farms have 10-40 cattle, 22% of farms have 40-80 cattle, 7% of farms have 80-100 cattle and 4% of farms have more than 100 cattle. 80-85% of farmers are part-time. More than 50% of land in State/District is not privately owned - 70% of this land is in communal ownership. Even of the land that is privately owned, lot of this is in multiple ownership. An individual family has to make use of public and private land at same time.

Extensive livestock systems have problems. For example, lot of crossing of breeds to get better market prices but pure-bred stock is the ideal (but this is expensive to maintain). In addition, no good maintaining a breed if there is no marketing strategy and public support. In addition, small farms cannot manage pure-bred herds - cannot afford the bulls and their cattle have to mix with others on the pastures (so difficult to keep pure).

An average of 30 cows per unit means that average family can achieve c. 35% of average income for Spanish farm. However, if farmers cannot achieve this 35% reference point on this nominal income level then they cannot qualify for grants and subsidies. Future is not good - cattle numbers are decreasing and farmers are fed up with bad bureaucracy. Simplification of farm management is just as bad as abandonment. Livestock numbers have generally stayed the same on many of the pastures BUT there is no active scrub management (cannot afford to do it) so pasture deteriorating. Tourism can complement farming but is NOT an alternative - there is not enough to go around.

Case study 2: Sheep production in the Romanian Carpathians Summer 2002

Interview with an elderly couple with a household in the village of Fundatica, Romanian Carpathians, 6 August

- **Advantage of communal village pastures**

The pasture's location on the edge of the village means that cattle owners do not have to pay a cowherd to look after their animals. They take their own cows the short distance to the pasture each morning, where they can spend the day unattended and return to their owners of their own accord in the evening. It is common for pastures to be located on the edge of the village but sometimes they are owned by several families rather than the village or comuna as a whole. [In Romania the "commune" (comuna) is the basic rural administrative unit through which rural policy is implemented. Each commune has a town hall, and can be made of one or more villages. Fundatica belongs to the Fundata "comuna"] Similarly, the owners milk their own animals and therefore do not incur the cost of paying someone to do this for them. Not everyone in the village grazes their cows on the pasture, preferring instead to pay for them to be looked after by a cowherd elsewhere, usually in a shepherd camp.

- **Declining numbers of cattle and use of the village pasture**

The couple's land is adjacent to the communal village pasture, which is 210ha and currently grazed by 60 cows belonging to 30-40 owners. Until 1992, 60 owners grazed between 160-180 cows on the pasture. The decrease in the number of cows is a reflection of the decreasing numbers of people living in Fundatica. The couple perceive that people are leaving Fundatica because life is too hard. In the last five years, none of those that have left have returned to live. In addition, they mentioned that people find it difficult to afford to feed cows concentrates during the winter. The householders are concerned about the increase in scrub and that this will encourage the presence of large carnivores. It is predicted that within 5-6 years the pasture will be dominated by *Nardus stricta*. They suggest that it is better to have a more manageable smaller and better quality pasture than a larger poor quality pasture. They also mentioned that there are conflicts with shepherds who bring their sheep through the village and on to the pasture, which they have no right to do.

- **Grazing tax and pasture management**

Grazing tax is 100 000 Lei (2GBP or 2.8 Euros) per animal for three months (1st June – 1st September). Last year the grazing tax was used to clear the pasture of scrub. However, the grazing tax is now set so low that the pasture cannot be managed effectively. Local politicians set low grazing taxes in order to increase their chances of being elected.

Until 1996, cattle owners that used Fundatica's communal pasture, would have to give two days work per cow (or pay the equivalent amount of money for two days work) to manage the pasture in addition to paying the grazing tax. This was underpinned by a law (8/1971) obliging animal owners to contribute 'x' days work into pastures. It was left to the community councils to decide how many days each owner has to work. This law was replaced by another law (8/2002) this year, which does not include this obligation anymore.

- **The household**

The householders, an elderly couple, have two cows of the Sura de Stepa breed each producing 10-12 litres of milk per day. The cows are milked in the morning before leaving for the pasture and in the evening when they return. The family does make cheese, which is sometimes sold, to tourists. Not all the families using the pasture produce their own cheese.

They also have 4 sheep and these are looked after at a shepherd camp in Sercaia. They receive 7kg cheese per sheep per summer. If they had the money they would buy another cow. Cows cost 17-18 M Lei each but can go up to 35 M Lei. They would not buy sheep because they are not profitable. The cows and sheep graze the hay meadows from 1st of September onwards. In winter, the cows are fed beet (mangolds) and wheat chaff (4 kg/day/cow of wheat chaff).

They own 2 ha of hay meadows and rent another two areas of hay meadows (0.7 ha for 2 million Lei and another of 0.5 ha). Last year, from 2.7 ha, the first cut yielded 4700 kg hay but due to the rain this year the yield of the first cut has decreased to 3200 kg. Last year they didn't need to buy any extra hay. This year they hope also hope to get by without buying any extra in despite the first cut being poor in both quantity and quality. They only ever get two cuts from the meadows as growth is limited by altitude (over 1000m).

Their two sons cut the hay and the whole process takes 2-3 weeks. They wait until the flowers have seeded and then for a good spell of weather. Some people prefer to mow earlier, losing out on quantity but gaining on quality and vice versa. They aim to balance both quality and quantity. The hayloft is filled first as hay stored here loses less goodness than that on stacks. The hayloft hay is fed to the cows in early winter and the more nutritive second cut is fed later in the winter closer to calving and lambing time. The hayloft is replenished with hay from stacks throughout the winter. Before 1990, they did buy and use NPK fertilisers but believe that the cows didn't like the resulting hay. Now they use dung to fertilise the meadow, which is only applied every other year on the slopes.

The land has always been in family ownership. In the future the land will be divided between the two sons. Both of the sons live in Braşov but return to Fundatica to help their parents make hay each year. If the sons are unable to manage the hay meadows themselves they will probably rent them out.

Interview with Eugen Popoiu, Inspector of Pastures and Zootechnology, Braşov County, Moieciu de Sus, 6 August, 2002

Agricultural policy is changing rapidly in Romania, not only from year to year but also within the course of a year. For example, the subsidy introduced last year to encourage the reuse of arable land (whereby farmers receive 1 M lei per hectare of land planted with seeds approved by the Ministry of Agriculture) has now been abolished. This however, was not applicable to small-scale mountain farmers in the Moieciu area who do not have any arable land.

Theoretically, farmers in the Moieciu area could receive a subsidy for milk but few do. To be eligible to receive subsidies for milk production farmers have to have a contract with a processor. Financially, this subsidy is only worthwhile if farmers are unable to sell milk directly to the market where higher prices can be obtained. Last year farmers could sell the milk to a state milk collecting and processing company for 3500 lei/kilo and would receive a 1400 lei per kilo subsidy (compared to 10 000 lei per kilo by selling directly to the market). This year the law has been changed so that farmers on the plains receive 1400 lei subsidy and those in the mountains receive 1800 lei. In winter the subsidies are increased by 20% more only if a certain quality is met. There is no subsidy for fodder production because this is considered to be covered by the milk subsidy.

There is also a meat subsidy but only for larger scale farmers than those in the Moieciu area. Last year this was paid per head but this was changed this summer so that it will now be paid per livestock unit. Farmers can also receive a fuel subsidy (irrespective of farm size) which in effect means that they do not pay tax on fuel. The nearest slaughterhouse with a food processing plant is in Rasnov, 12 km from Bran.

This year, the government proposed that farmers and shepherds must have completed the 5th grade at school in order for their farms to be accredited and eligible to receive subsidies. There was much opposition to this from shepherds and subsequently, this law was not accepted. Subsidies are often paid late and the bureaucracy involved in obtaining them is particularly bad. There are still moves to form associations of farmers in mountain areas but many of those that currently exist are badly organised and ineffectual. There are no farmer's organisations yet in the Moieciu area.

• **The Popoiu household**

Nicu Popoiu's family (Eugen's brother) still own 5 cows, 4 are presently being looked after at a shepherd camp and 1 is kept at the house to provide milk. They have more cows than many families in the area because of their pension where they can sell the cheese for higher prices. The numbers of sheep have dropped from 10 last year to 7 this year. Sheep numbers are low because there is no use for ewe's milk when the sheep return from the shepherd camp.

On this meadow [the one visited during the 2nd PASTORAL workshop] the first cut of hay yielded 7000 kg hay this year (an additional 4000 kg has been produced in other meadows elsewhere). 12 tonnes/ha of chicken dung was applied to the hay meadow in April (this is applied every 4-5 years). Every 2-3 years they spread cow dung mixed with sawdust and straw. Cutting began on the lower slopes at the beginning of June and on the upper slopes three weeks later. Rain does damage the hay but the dew can be just, if not more, as damaging.

The family spends 30% of their time on the land and 70% of the time in the pension. No extra help is normally required for haymaking unless it is a particularly good year or if they are particularly busy in the pension. Last year they hired one extra person. Hay cutters arrive on the morning bus (08:30) in Moieciu de Sus. Some of them have arrangements with farmers but others turn up looking for casual work. They are paid 150 000 lei per day (£3) and are also given food and beer and suica (first distillation of the plum schnapps, palinka is the

second distillation). In total, therefore, they cost the farmers between 150 000 and 250 000 lei per day. Women are sometimes employed to rake hay at a rate of 80-100 000 lei per day but because they eat and drink less they are unlikely to cost more than 200 000 lei per day.

Visit to a shepherd camp in the Ciucaş Mountains, south east of Braşov, 8 & 9 August, 2002

- **Number of shepherds**

The camp organiser employs 6 shepherds (2 are based at the camp making cheese, one herds the rams, 2 herd the sheep and 1 herds the cows). He finds it increasingly difficult to hire shepherds and explained that no one wants to be a shepherd anymore because the life is so hard. Every 2-3 days the camp organiser, who lives in the nearby village of Vama Buzaului, visits the camp to bring the shepherds food, alcohol and cigarettes. He also collects the cheese, which he distributes to the villagers. The camp organiser also manages two other camps in the area

- **Cheese making**

The cheese produced at the camp is:

Brînza de Burduf (the one that is eventually wrapped in pine bark)

Caş – salty cheese

Urda – soft creamy cheese like Ricotta

Sheep are milked three times a day (this drops to twice per day in September). At this moment, the shepherd camp is producing, from each milking, 1 caş (6-8kg) and 1 urda (2-3 kg). The urda is made with the whey of the caş. After 6 days the caş is ground up to make brînza de burduf. Salt is added and the mixture is kneaded by hand in a wooden trough before being placed in a stomach. The caş is also sold as caş not all of it is used to make brînza de burduf. The cheesemaker shepherd has 35 years experience of making cheese. He only returns to visit his family in the village once a month.

The cheese is sold, used for the shepherd camp owners own consumption and is 'given' to local dignitaries. In addition, a certain amount of cheese is given back to the animal owners. Usually sheep owners receive 6-8 kg brînza de burduf (or telemea, in the plains) and 1-1.5 kg urda per sheep they own. For cows, milk production is measured on a specific day in the spring to determine how much cheese each owner should receive. For example, if an owner has 2 cows that each produce 10 l milk per head per day, s/he will receive, per summer, (2 x) 60-80 kg brînza and 10-15 kg urda (so the amount of cheese given to their owners is a set amount but from the cows depends on the amount of milk they produce)

- **Camp organisation**

At this camp, the 300 sheep belong to the shepherd camp owner. They are of the Țigaie breed. The camp organiser combines these sheep with the sheep of a second camp nearby (which he also manages) into a flock of 7-800 animals for the transhumance. This second camp manages sheep belonging to farmers who each own between 5 and 100 plus animals. Many of these farmers don't have enough land to provide fodder for the number of animals they own. One farmer in Bran, for example, will make hay for 3 years running and will send his sheep on a transhumance for each of these three years. He then keeps the animals at home for the fourth year by which time he has enough hay to feed them for the whole winter.

When the transhumance returns to the mountains in the spring the sheep are again divided between two camps, those belonging to the camp organiser and those belonging to other farmers. The third camp contains yearlings. This shepherd camp also has 7 milk cows and calves (Balțata Romaneasca crosses, Sura de Stepa and Bruna) 13 pigs and a few milking goats. The pasture used by this camp is 35 ha. It costs 13 M lei to rent the pasture for 5 months; this rent has not increased since the fall of communism. We did not learn the size of the other pastures rented by this camp organiser. The pasture most likely belongs to the local village. There are always a certain number of sheep/cows/pigs/horses that they do not have to pay tax on and this helps the shepherds to keep their own animals. This is determined by the local community council and is not dictated by law. In the morning the sheep are taken to graze in the forested areas for exercise. In the afternoon they are taken to the 'best pastures' where trifolium is abundant.

- **Transhumance**

We didn't learn the amount it costs to send a sheep on a transhumance to winter pastures but this will probably be in the region of 100-200 000 Lei per animal and Eugen Popoiu mentioned that one rate he is aware of is about 3000 lei/sheep/per day. Four shepherds accompany the sheep on the transhumance. The other two shepherds probably return to their households in the village. The transhumant shepherds have a mobile phone so that the camp organiser can find them once a week to bring them food. However, the camp

organiser doesn't see the shepherds for the first two to three weeks of the autumn journey to the winter pasture because there is no signal in the mountains. The shepherds only eat what he brings but are also given money with which they buy cigarettes.

The transhumance route, approximately 300 km is from Intorsura Buzaului to Nehoiu to Buzau then to Calarasi (Baragan region) or Braila (usually the latter). They leave the shepherd camp in mid to late September and move to private pastures and hay meadow aftermaths and in the plains, to stubblefields. On 25 October they depart on foot for the winter pastures, a journey which takes 2 months (arriving in late December). The shepherds 'zigzag' between pastures – there are no set drovers routes like the Cañadas of Spain. The journey usually takes two months, one month longer than necessary because if a good pasture is found along the route they will stay there several days. This is because they do not pay for pastures along the route but do pay rent on the destination pastures. By delaying arrival at the destination winter pastures they therefore save money. This may be a contributory factor to the hostility they receive from farmers along the route.

There is an 'unofficial' system of renting forest pastures. Grazing in forests, most of which are still under state ownership is not allowed. However, forestry officials are often persuaded to turn a blind eye by the gift of a sheep. The winter pasture costs 10-15 M Lei to rent (£200-300) for two months (January and February). The flock starts the journey back to the mountains in March – April. This rent includes both the pasture and the shepherd's accommodation. The shepherd camp organiser still provides the shepherd with food during these months.

During the Communist era most land belonged to the state (see explanation at the end) and was essentially common land. Now that privatisation of many areas has occurred it is increasingly difficult to find pastures along the route. In spring the journey is even more difficult because of the young crops of wheat. Most shepherds keep their animals off the wheat but the very few those that don't give all shepherds a bad reputation. They are often chased off land and forced along roads. They try to avoid going near villages and during the day and often follow rivers or railways because these areas belong to the state. They are not supposed to graze along railway lines and if found are given 48 hours to leave the land. To avoid conflicts they often rest the flock during the day and travel at the night.

The area that individual settled farmers now own is much smaller than it once was This is partly due to the way the land was being given back to the owners. Up until 2000, people were only given back 10 ha of land, even if formerly they had owned more. In the past, people were happy for the flocks to pass through their land because of dunging. But now that areas of land are smaller the impacts of a 7-800 sized flocks are too damaging (trampling and too much dung) and they no longer welcome the flocks. The shepherd camp organiser suggests that farmers should group together individual pieces of land to overcome this problem. He also explained that coordination of transhumant shepherds is difficult because they are dispersed far and wide.

- **Sheep terminology**

Miel – lambs until a year old

Cârlan – lamb until September when put to the ram

Miora – between September and lambing

History of landownership (by Annette Mertens)

Traditionally, agriculture has always played an important role in the Romanian economy. The country used to be considered the "grain field" of Europe, due to its large areas of fertile arable land, hayfields and pastures. In the 19th century, Romania exported surplus grain to Western Europe. Up until 1918, 40% of the agricultural land was owned by large landowners. In 1918 there was a major agricultural reform to distribute land as "equally" as possible. Land was expropriated from foreigners and absentees and from land owners owning more than 250 ha. This land was redistributed to people that had no land. An average of 2,8 ha was made available to people without holdings. Following the land reform, production was shifted from wheat to maize production, which was consumed mainly at the domestic level. The reason for this shift is that the price of maize seeds was lower than the price of wheat seeds.

By 1941, over half of Romania's farms were less than 3 ha in size with only 6-7 % larger than 10 ha. In this period, approximately 75% of the population was active in agriculture. In 1945, a new land reform redistributed the land even more equally and larger farms almost disappeared. Outputs of maize increased at the end of the 1950's. In the 1960's, the process of land collectivisation began. By the mid 1970's only 28% of the population were employed in the agricultural sector due to the shift in emphasis, by the communist regime, from agriculture to industrialisation. Production decreased after 1986, but Romania continued being

an exporter of agricultural and food items. In 1992 the share of agriculture in the GDP was 18.5%. This increased until 1995, after which it began to decrease again.

- **State and Collective farms**

During the communist era farming was mainly divided between the state farms (Intreprindere Agricola de Stat, hereafter called IAS), and the collective farms (Cooperativa Argicola de Productie, hereafter called CAP). Collectivisation first occurred in 1948, when some people voluntarily entered their privately owned land into a CAP. Officially, their land remained privately owned until 1965, when under a new constitution land owners lost their right of ownership. The IAS comprised land that had been state owned before the beginning of the communist regime. Throughout the communist era the IAS and CAP exchanged pieces of land. Thus, private land went over to state owned farms. The communist regime only managed to collectivise productive land easily accessible to machinery. So in the mountain regions all farms remained privately owned (although theoretically there was no private land) and privately managed.

- **Restitution of land**

In 1991, the new land law (law 18/1991) caused the disappearance of the CAP but the IAS remained. Former land owners, who had put their land into the CAP, received up to 10 ha of their land back. For the land that was taken over by IAS, former owners became shareholders in the IAS. Theoretically, they should have received 600 kg wheat per hectare land they had in the IAS but this never materialised. From 2000, with the new land law reform (law 1/2000), former owners received up to 50 ha of land they had had either in the CAP or the IAS. Land that has not been claimed by anybody is automatically transferred into the ownership of the community administrations. The community administrations can give land to people within the community that do not own land. Former owners will then receive compensation. However, compensation will not be paid until 2004. Land belonging to the IAS, which was already state owned before 1948, will be privatised according to the law of privatisation.

Case study 3: Sheep production in La Crau, south east France Spring 2002

Summary of an interview with Jean-Marie Gautier, May 2002.

Jean-Marie Gautier, a shepherd, is an *'herbassier'* and rents all of the pastures he uses. At the time of the interview, Jean-Marie herds 600 sheep. The mean size of a flock in the Crau is 700. It is difficult to find large enough areas of hayfields to rent for over 600 animals. Shepherds that have reliable access to larger parcels of steppe can have flocks up to 1700 animals, much larger than those that have to rent parcels of steppe each year. Stocking densities are on average 10 sheep/ha on hayfields and 2-3 sheep on the coussoul (steppe). In the Crau there are 160 sheep owners, 35 of which graze their animals on the steppe and have the largest flocks (e.g. 1 shepherd rents 2000 ha steppe and has a flock of 6000 sheep, the largest flock in France). Jean Marie's flock graze 300 ha steppe (200 ha owned by CEEP and 100 owned by the army) and 70 ha hayfields located 15km away from the steppe.

On 7-8 June the sheep leave in lorries to the Alps, to the area near Briancon. The shepherds work with private truck companies and usually manage to agree the departure date that they want. Between June 15 and July 1 is a popular time and it is not always possible to get the exact date he wants. Jean-Marie travels to the Alps with the sheep and stays with them all summer. Flock sizes increase to 1500 in the Alps. Wolves have not affected him personally but he knows of shepherds that have had problems with them. Securing pastures in the Alps is no problem. However, access to water can be a problem in the Alps (this is not a problem in the Crau as there are plenty of working wells).

There is usually enough grass in the Alps each year as the growing season in the mountains is relatively stable. However, by April in the Crau, sheep often graze mainly on *Brachypodium* (perennial grass) which this year was still green in April. The nutritive value of this grass is highly dependent on rainfall. Jean-Marie does not feed any additional fodder but some shepherds do. Animals usually have the chance to make up the condition that they loose at this stage on the alpine pastures so this is not a serious problem. Overgrazing may occur but this is usually not a permanent problem.

Renting hayfields in the Crau is a problem for Jean-Marie and has to be done each year. The hayfield owner that he rents from was reluctant to enter into longer written contract because she wanted to sell some of her land. Jean-Marie has a girlfriend who also owns her own flock. They would like to combine their flocks but cannot because they do not have security of tenure. If you own your own hayfields you can leave a few hectares uncut for flocks returning from the Alps or take the last cut earlier to allow more grass to grow. Jean-Marie cannot dictate cutting dates because he doesn't own hayfields. This means that he cannot bring his animals down from the Alps until 15 October each year.

There are enough hayfields to rent for everyone but not enough steppe for all. So many shepherds need to use less suitable areas such as fallows, fodder crops and garrigue in the Alpilles. Hunters can restrict the areas where shepherds can go in the Alpilles area.

Lambs are born between October 15 and November 15 and are sold for finishing at the end of February. Intensive finishers are located in the Alpes de Haute Provence. Some Crau shepherds do finish lambs themselves. Jean-Marie sells his on for finishing to keep the animals light and fit and able to move long distances. Females are sold for breeding. Each sheep is stamped in red paint with a G for Gautier. This is a requisite for transhumance. Although the sheep are tagged, the stamp is much more visible and it isn't necessary to catch animals to determine whom they belong to. Blood samples are taken by the veterinary services of the department from the sheep before they are allowed to travel to the Alps. In particular, they test for brucellosis. If any traces are found the sheep are not allowed to move. This happened in 1995 when 15,000 sheep were not allowed to move. Most hygiene and veterinary regulations are locally determined rather than by the EC. There has been no foot and mouth in the area but because the disease was spreading in March many herds still grazing hayfields were kept there and not allowed moving to the steppe. If movement restrictions had happened later when the sheep were on the steppe this would have caused serious problems.

A total of eight Information Notes have been produced from the PASTORAL project:

- 1: *An introduction to European pastoralism*
- 2: *The need for a typology of European pastoral systems*
- 3: *The nature of European pastoralism*
- 4: *Examples of European pastoral systems*
- 5: *Trends and threats to the viability of European pastoral systems*
- 6: *Potential policy approaches to support European pastoralism*
- 7: *Gaps in the understanding of European pastoralism*
- 8: *European pastoralism: farming with nature*

Many of the points in these Information Notes are illustrated by examples taken from the location of the four main workshops held during the course of the project, Sierra de Guadarrama Mountains (Spain), Transylvania (Romanian Carpathians), Isle of Islay (Scotland) and the plain of La Crau (south-east France).

These Information Notes were compiled by Sally Huband (the dedicated officer employed by SAC on the PASTORAL project) with additional input from the other members of the project steering group: Davy McCracken and Gwyn Jones (SAC), Eric Bignal (EFNCP), Berien Elbersen (ALTERRA), David Baldock and Harriet Bennett (IEEP), Guy Beaufoy (Spain), Begoña Peco (UAM), Luis Pinto de Andrade (ESA-CB) and Gerard Choplin, Isabel Bermejo and Jesús Garzón (CPE). The project meetings enabled us to consider and discuss the future of pastoral systems with many colleagues drawn from our own institutes and elsewhere throughout Europe, and we offer our thanks to them for their useful contributions towards the development of many of the views presented here.