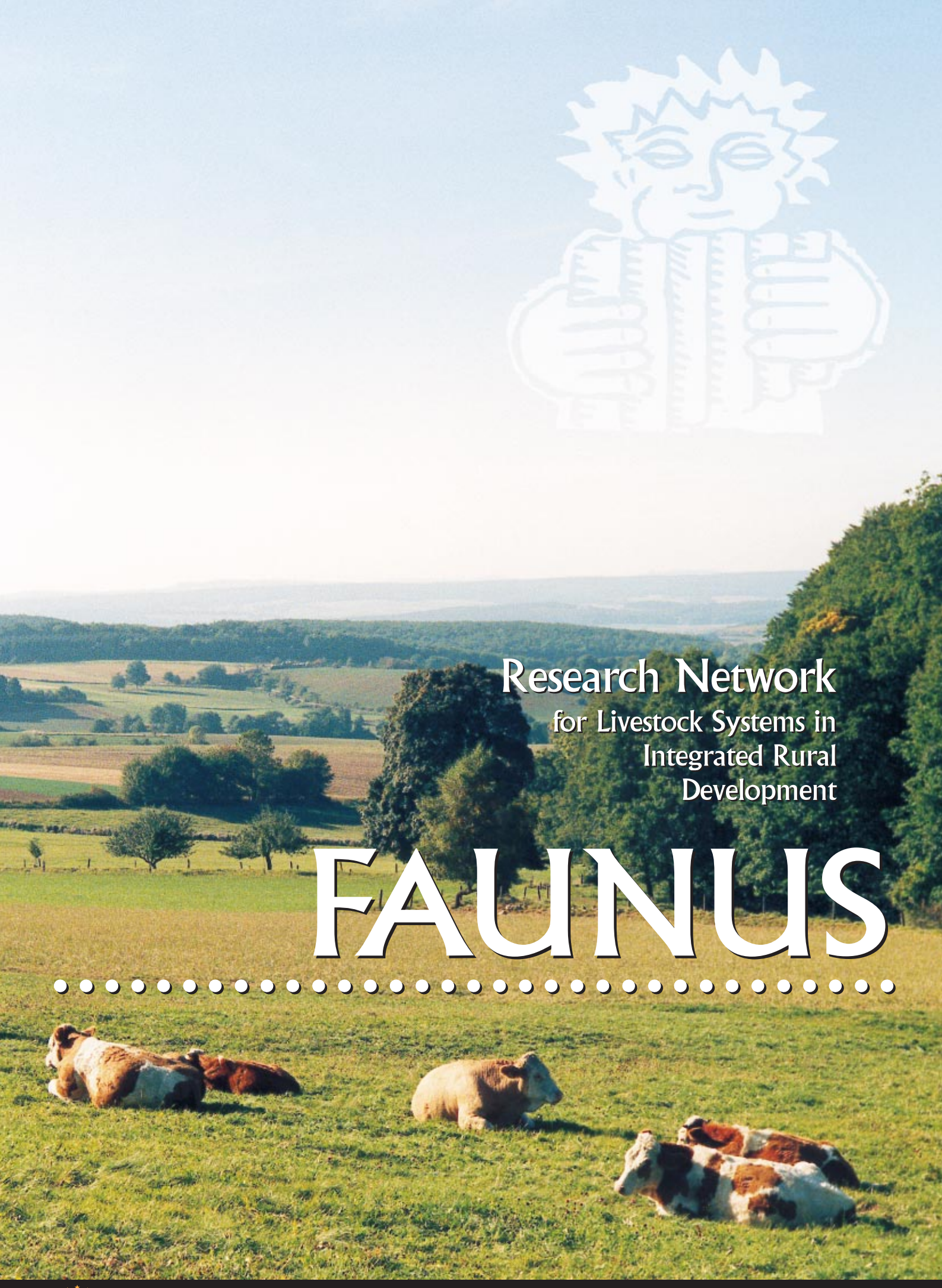

Research Network
for Livestock Systems in
Integrated Rural
Development

FAUNUS

newsletter of the LSIRD network • ISSUE 3 • SEPTEMBER 1997

LSIRD network

A Review of Progress

by Jerry Laker

Our objectives

The LSIRD network aims to identify the ways in which the research community should be reacting to developments in the livestock sector in the less-favoured areas of the EU, and to develop ideas for multi-disciplinary research that will be appropriate for the 21st century. The programme of activities has been designed in order to explore a number of areas in detail that are currently highly influential on the development of the sector through the medium of conferences and focused workshops.

The LSIRD project has reached its mid-point, so it is now time to take stock of the progress made so far and to highlight the main objectives for the coming 18 months.

The changing nature of LFA livestock farming

Livestock farming systems in the European LFAs are and will continue to be influenced by developments in EU policy. In particular, the main issues towards which these policies are directed will be diversification and the encouragement of quality value-adding, maintenance of landscape and natural resources, and the development of rural economies.

The Nafplio Conference and the Focus Workshops

In January 1997, the first conference on "Livestock systems in European rural development" was held in Nafplio, Greece. The Nafplio Conference presented these issues in a format designed to bring together as wide a range as possible of key actors in LFA livestock, policy and environmental research, and to set the agenda for the rest of the LSIRD activities.

The Nafplio conference demonstrated that we have some way to go in developing a co-ordinated research approach towards a sustainable livestock sector in the LFAs. In particular, it highlighted the considerable controversy that remains over the political development of the CAP and rural development policy and how research was needed to inform the debate.

The LSIRD network is now discussing the main issues in a series of focused workshops. Each of the workshops is addressing a different topic that is likely to influence the kind of livestock farming systems that will be found in the next 10 - 20 years. The objective of each is to identify the direction of change in each case, and to develop a vision of the future towards which multi-disciplinary research may be directed.

Two workshops have been held already this year. The first of these, "The future development of EU rural policy mechanisms and the implications for livestock farming research in the disadvantaged areas", examined the ways in which EU policy is evolving. In particular, the workshop, which was held in Granada in May, explored the likely effects of the WTO negotiations, the incorporation of Eastern European countries into the CAP, the "Cork Conference", and the demands for increased emphasis on the environmental management role of agriculture.

The second, "Improving market integration and value-adding in domestic livestock enterprises in disadvantaged regions - implications for future research" , was held in Witzenhausen, Germany in September 1997. One of the means of maintaining profitability in farming enterprises in the face of (at best) static product prices and rising costs, is to undertake some form of value-adding activity. The Witzenhausen workshop looked at a variety of ways in which value may be added to the products of LFA livestock systems such as on-farm processing, organic farming, and regional labelling (e.g. *Appellation d'origine*). Value-adding is set to increase in importance, and is likely to have a significant effect on LFA livestock systems by placing the emphasis to a greater extent on product quality through for example the use of traditional extensive production systems, rare breeds, organic farming etc.

Camargue ponies in the Rhône delta, venue for the next LSIRD workshop.

Future Events

The relationship between livestock farming and landscape/ habitat management and the development of agri-environmental measures will form the basis of the next workshop which will examine the kind of environmental products that livestock systems will be expected to deliver in the future and what research will be required to support this. The final workshop will look at the changing role of rural development initiatives in supporting farming communities and the application of integrated rural development strategies.

Workshop 3 will be held in the Rhône delta, France in March 1998, and Workshop 4 in Metsovo, Greece in June 1998.

The final conference will draw all these themes together into a synthesis of current thinking on the future goals for livestock farming in the LFAs, a considered analysis of recent developments in LFA livestock systems, and a series of recommendations for future research. This conference will be held in Ireland in November 1998.

LSIRD online http://www.mluri.sari.ac.uk/~mi361/lsird.htm

FAUNUS

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Cover illustration: Rhöner Weideochsen, Extensive organic steer beef production in the Rhön Biosphere Reserve.

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Workshop host, Javier Calatrava

GRANADA Workshop

23-24 May 1997

The future development of EU rural policy mechanisms and the implications for livestock farming research in the disadvantaged areas

Mediterranean grassland under olives in Alpujarra, near Granada.

The Granada workshop was set up to consider where current trends in the evolution of EU rural policies are leading, and what the implications of this will be for LFA livestock systems. This was the first of the four focused workshops that will together examine the range of key issues that will shape the future course of LFA animal production.

Given the reliance of the LFA agricultural sector on the CAP, future reforms of the CAP are likely to have a profound effect on the economic environment in which farmers will have to operate. The European Commission is keen that the CAP evolves into a broad policy of rural development. It is also clear that account needs to be taken of environmental factors with the creation of economic incentives for environmentally acceptable agriculture and alternative farming methods, such as organic production. Such a philosophy is likely to play an increasing part in the thinking behind rural policy reforms, but particularly in the LFAs, where agriculture is less productive, and landscape values tend to be higher.

The workshop, hosted by Dr Javier Calatrava of the *"Centro de Investigación y Desarollo Agraria*, Granada, considered a range of factors currently acting on policy reform in the EU. The main ongoing processes were considered to be the WTO negotiations, the incorporation of Eastern European countries into the CAP, the concept of integrated rural development, and the demands for increased emphasis in the environmental management role of agriculture.

The papers presented in Granada demonstrated the very strong pressure that is being exerted on the EU to end production-linked subsidies by the WTO - the so-called "blue box" payments. It was felt likely that we will see a situation in which withdrawal of price support mechanisms will lead to falling commodity prices in the beef and sheep sectors, with support to livestock farmers being channelled through either regional assistance programmes, environmental programmes or de-coupled income support. Whichever of these routes is chosen it is likely to reduce any incentive to intensify grazing systems.

A key issue is the extent to which compensatory payments will be sufficient to alleviate the trend in many parts of Europe to the abandonment of land. A broadening of the CAP to incorporate a wide range of rural activities could result in a decrease in the total amount available to farmers, though should help to provide more opportunities for alternative part-time employment.

The CAP itself will be severely strained by the incorporation of between four and ten of the countries of Eastern Europe from about 2003. The incorporation of these countries may make it necessary to re-categorise the west-Europe LFAs, and the increased diversity in agricultural activity will make it necessary for the CAP to concentrate on basic objectives and focus funding more accurately on sectors in need.

Finally, it is becoming increasingly accepted that farming activities will be obliged to deliver more environmental benefits than at present. Cross-compliance of agricultural support, and the extension of agri-environmental measures such as 2078/92, and the possible linking of 2078/92 with LFA payments will encourage more environmentally sensitive systems of grazing livestock, and in particular an increase in organic farming systems.

It was identified that interdisciplinary research should focus on actions and measures which will stimulate enterprise and business expansion in farming, industry and services. Such research should attempt to identify the essential elements of a ***Farm Development Package*** suitable for the majority of farmers in vulnerable areas. In addition research is required to examine mechanisms for positive discrimination in favour of the location and dispersal of industry, commercial and other services and housing, in or within the hinterland of less favoured rural areas.

CIDA, Granada.

WITZENHAUSEN Workshop

27-28 September 1997

Improving market integration and value-adding in domestic livestock enterprises in disadvantaged regions - implications for future research.

To improve the profitability of enterprises in the European LFAs, there are generally three alternatives open to farmers: reduce the costs of production, often through reducing labour or other fixed costs; increase the intensity and productivity of the system; or to increase the value of the products sold. The first two of these alternatives often carry with them undesired social and environmental costs. The third, which can be achieved in many different ways, is considered to be the alternative which offers most opportunities in terms of maintaining some of the desired outcomes of LFA agriculture - rural employment, high quality food and landscapes which meet conservation objectives. The Witzenhausen workshop, hosted by Dr Gerold Rahmann, of the Department of International Agriculture of the University of Kassel, was held in order to explore where the expansion of value-adding activity in Europe is leading, and what the implications of this will be for the systems of animal production required for LFAs in the future.

Landscape interpretation by Gerold Rahmann at the LSIRD workshop in Witzenhausen.

Value-adding to livestock products can take many forms. Products may be marketed in some way that makes them innately more valuable (added-value created), or the marketing chain may be shortened in some way to increase the value realised by the producer, while the product remains the same (recovered added value). Chairman Prof. Brian Revell of the Scottish Agricultural College, summarised the various approaches to value-adding in Figure 1.

Created added-value places a strong emphasis on product quality, either enhancing the " intrinsic quality" of a basic product (i.e. productivity, usability, acceptability, taste etc), adding services to a basic product (i.e. extrinsic attributes/qualities, such as further processing or packaging), or improving the effectiveness of service delivery (e.g. direct customer contact). Systems of animal production which are perceived by consumers to produce higher quality products, such as traditional, extensive, grass-fed ruminants, rare-breeds and organic farming systems have a particular importance in this respect. The basic product already has a perceived intrinsic quality advantage which can be passed on to higher-value retail products.

The strong message that came through both in the workshop and the field trip on the following day, which visited various key sites in the Rhön Biosphere Reserve (see FAUNUS, Issue 2), was that the effectiveness of all of these value-adding alternatives can be greatly enhanced when they are linked in with well co-ordinated regional plans for integrated development. Integrated development can provide a coherent context within which organic farming, nature management and other environmentally-inspired practices can realise material benefits in terms of improved regional image and increased tourism revenues, in addition to the benefits from increased product quality realised directly by individual farmers.

The Witzenhausen workshop demonstrated the need for LFA livestock systems to provide products which in some way may be differentiated from other alternatives on the market. There is a strong role for extensive and organic farming systems, and in areas blessed with natural resources and landscapes attractive to tourism, regional images may have a synergistic effect to further enhance returns to farmers.

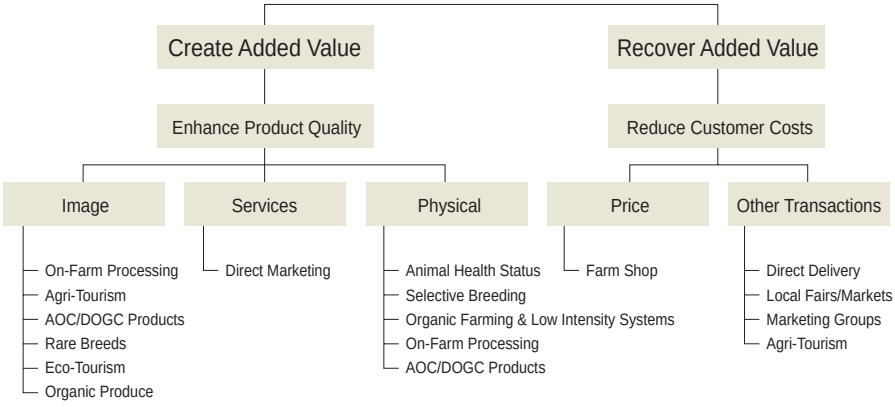

Fig 1. Value Adding Enterprises and Approaches (Revell, 1997)

AGENDA 2000

Setting the objectives for rural policy and CAP reform

In the years ahead, agriculture will have to adapt to further changes in market evolution, market policy and trade rules. Local economies in rural areas will also be affected by these changes, at a time when many such areas are confronting acute economic development problems. Moreover, rural areas are increasingly required to fulfil important environmental and recreational functions. A prominent role will therefore be given to agri-environmental instruments to support a sustainable development of rural areas and respond to society's increasing demand for environmental services.

Targeted agri-environmental measures should be reinforced and encouraged through increased budget funding and, where necessary, higher part-financing rates. Most relevant are services which call for an extra effort by farmers, such as organic farming, maintenance of semi-natural habitats, alpine cattle keeping, etc. Another possibility which deserves further consideration is to take into account the considerable overlap between less-favoured areas (LFAs) and areas of high nature value, and to gradually transform the related support scheme into a basic instrument to maintain and promote low-input farming systems. Finally, with respect to better integrating the environment into the market organisations, the Commission will make a proposal enabling Member States to make direct payments conditional on compliance with environmental provisions.

As far as the other aspects of sustainable rural development are concerned, the Commission suggests that these developments should be encouraged and supported by a reorganisation of the existing rural policy instruments:

The existing CAP accompanying measures financed by the EAGGF, Guarantee Section (agri-environment scheme, afforestation, early retirement) will be supplemented by the LFAs scheme. All these measures will be applied horizontally and implemented in a decentralised way.

The current approach of integrated development programmes will be maintained in those rural areas, located in regions which are presently eligible under Objective 1 of the Structural funds.

In rural areas eligible under the new Objective 2 of the Structural Funds, rural development measures will be financed as accompanying measures by the EAGGF Guarantee Section. These measures will be implemented together with the Regional and the Social Fund within the same programme at the level of the Objective 2 region.

In all rural areas outside Objective 1, rural policies designed to accompany and complement market policies will be part-financed by the EAGGF Guarantee Section. Rural policy, in this context, will embrace all types of measures supporting structural adjustment and rural development, as presently part-financed by the EAGGF Guidance Section. These will be applied horizontally and implemented in a decentralised way, at the initiative of the Member States.

In this way it should be possible to ensure that the reform of the CAP, in addition to continuing with market and income support, is accompanied throughout the Union by a broad range of rural development measures without neglecting the goal of economic and social cohesion.

This is an EU press release, the full text is on the internet at: http://europa.eu.int/comm/agenda2000/index.htm

comment

What does Agenda 2000 mean for LFA livestock?

by Alastair Rutherford

In July this year the long awaited and much leaked 'Agenda 2000' document was launched by President Santer at the European Parliament in Strasbourg. Immediate response to it by the environment lobby has been quite hostile - expressing disappointment that 'Agenda 2000' is failing to deliver anything concrete for the rural environment. Such reaction is clearly missing the point, and is not setting the proposals for agriculture and rural areas in the wider policy context. The majority of the 'Agenda 2000' document is about the economic and political structure of the European Union in the next century. In it the European commission is responding to a wide range of dramatically changing global and domestic (EU) political events. CAP reform and the development of integrated rural policies must be seen in this broader context.

A radical reform of the CAP has never been on DGVI's (Directorate-General for Agriculture) agenda. Since the publication of its Agricultural Strategy paper in December 1995, DGVI's policies for reform have been evolution not revolution, building on the principles established in the 1992 reform. This process involves a gradual transformation of the CAP to enable it to respond to a wider range of issues but principally concerns over the development of global market and trade policy. To make sense of the proposals within 'Agenda 2000' for the CAP and the rural environment, this economic focus must be recognised as the central thread running through the agricultural and rural package.

However, 'Agenda 2000' also shows that the European Commission recognises a range of other factors that must be taken into account in the development of rural policy and further reform of the CAP. These include: the food safety and animal welfare concerns of consumers; the declining economic relevance of agriculture in the rural economy; the increasing importance of the natural environment; and the simplification and decentralisation of policy mechanisms.

This rationale for much broader and more integrated rural policy has clear links back to the 'Cork Declaration'. However, to understand why 'Cork' is not more prominent in 'Agenda 2000' one need only look at to the very hostile reaction to the 'Cork Declaration' from some very powerful interest groups and in particular COPA, the European farmers organisation. A certain way of sinking any aspirations for integrated rural development would have been to mention 'Cork' within 'Agenda 2000'.

So what are the strengths and weaknesses of 'Agenda 2000'? and how to maximise its potential for integrated rural development and livestock systems? Two issues that have a direct relevance for LSIRD are; the retention of headage payments for beef cattle; and proposals for a transformation of the Less Favoured Areas Scheme (LFAs).

Firstly; the proposals for the beef sector entrench the use of headage payments and this must be viewed with deep disappointment. Headage payments encourage stocking densities that cause environmental damage and prejudices whatever social

.....continued on page 8

EDITORS NOTE: *The LSIRD has begun a discussion page on this subject on the web site. We would like to receive your opinions on the implications of Agenda 2000 for LFA livestock.*

Improved Pastures

The case of dairy sheep farming systems in Sardinia

by Nicola Fois & Maria Sitzia

In Sardinia the sheep industry is based on a local breed of dairy ewes (3.1 million reared on 20,000 farms), managed for late autumn lambing and milked between January and June. The grazing flock is generally fed on natural pastures, characterised mainly by annual grass species. The annual pattern of annual herbage availability and its quality are strongly dependent on soil fertility, usually low, and rainfall distribution and amount which is very variable between years. The flow of nutrients and energy from the pasture to the grazing sheep shows two critical constraints: a shortage of herbage availability in winter and a sharp decrease in herbage quality from spring to the next autumn. The availability of summer pasture residues is rather low. Therefore dairy ewes may suffer from undernutrition during pregnancy - early lactation; the nutritional stress is more severe in flocks grazing the inner upland and the southern lowland.

The improvement of natural pasture has been studied in the last 20 years with the aim to increase the availability and quality of dry matter production. The use of self-reseeding Mediterranean species had shown its value in this field. Nevertheless there is lack of information about grazing management, stocking rate and sustainability of the dairy sheep farming system based on improved pasture.

A three-year research project funded by the E.U. (INTERREG contract n°-92-948), carried on in cooperation with C.N.R. "Centre Study Mediterranean Pastures" (Sassari-Italy), focused on improved pasture (consisting of burr medic, subclover and annual ryegrass managed either by continuous stocking or rotational grazing) and showed that annual ryegrass is more persistent than the other species. No difference between the two adopted grazing management systems was found.

Taking into account these results a new three-year E.U. project was begun in October 1996. The objective is to compare two grazing managements of an annual ryegrass pasture maintained under two different stocking rates (6 and 12 ewes/ha) and hence to evaluate the management and stocking rate effects on sward features and animal performance.

This project enables technicians and farmers to increase their knowledge of livestock farming systems in order to improve farm productivity and at the same time to achieve a better exploitation of the natural resources.

The Istituto Zootecnico e Caseario per la Sardegna, N-W Sardinia, is working on dairy sheep grazing management in the rainfed lowland and, in collaboration with INRA, Corte (Corsica), studying the performance of goats grazing Mediterranean maquis.

Sarda dairy ewes grazing in a natural pasture in Sardinia.

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European Forum on Nature Conservation and Pastoralism

The 6th Forum on
Nature Conservation and Pastoralism
Luhacovice, Czech Republic
6-10 June 1998

The European Forum on Nature Conservation and Pastoralism will be holding its 6th Forum in Luhacovice, in the south-east of the Czech Republic, between Saturday 6 June and Wednesday 10 June 1998. The land surrounding Luhacovice forms part of the White Carpathian Landscape Protection Area and one of the outstanding features of this area is the survival of between 3,000 and 4,000 ha of unimproved hay-meadows.

The theme for the conference is *"Managing high nature conservation value farmland: policies, processes and practices"* and it will focus on practical lessons to be learned from experiences in both the EU and central Europe. We are not only interested in comparing and contrasting policies across these countries but also in considering how successful these policies have been when implemented on the ground in all areas of Europe. In particular we are keen to emphasise why a detailed understanding of the ecological links between farming practices and wildlife value is necessary in order to formulate clear and effective polices.

The programme will consider:

- the success (or otherwise) of the different agri-environment schemes introduced within the EU
- management of marginal and abandoned land (such as alpine meadows and pastures)
- the characteristics of high nature conservation value farming systems in central European countries

Full details of the conference programme, fees and administrative arrangements will be finalised within the next few months. Full details are available from:

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NEW EU organic RESEARCH PROJECT

(FAIR3-1996-1794 - "Effects of the CAP-reform and possible further developments on organic farming in the EU")

The European Commission has funded a research project looking at the influence of the EU policy framework on organic farming in the European Community. Five universities and scientific institutions in the United Kingdom, in Italy, in Denmark and in Germany are working for the first time on a complete inventory of organic farming at a European level.

The general objective of the project is to provide an assessment of the impact of CAP-reform and possible policy developments on organic farming and thus contribute to a better understanding of the effects that current EU policies have on this sub sector. This implies the objective of improving the understanding of the consequences future policy development might have on organic farming and on the contribution organic farming might be able to make to EU policy goals. In detail, the project will focus on the economic performance of organic farms and on marketing conditions in the organic sector with respect to all EU member states plus Switzerland, Norway and the Czech Republic. Environmental consequences of organic farming will also be considered. In addition, the work will assess *ex post* the impact on organic farming of the mainstream and additional CAP Reform measures, as well as regulations defining and controlling trade in organic products and other relevant policies; and to assess the contribution of organic farming to current agricultural and environmental policy objectives. Several computer simulation programmes will be used to assess the further development of organic farming. This will lead to recommendations for policies to influence the rate of con-version, including an evaluation of their effects and of institutional prerequisites for an efficient implementation.

Prof. Dr. Stephan Dabbert, University of Hohenheim, is coordinator of the research team, which includes the University of Wales, Aberystwyth, the University of Ancona, the South Jutland University Centre and the Federal Agricultural Research Centre Braunschweig-Völkenrode (FAL). They will establish an international research network on organic farming in 18 european countries, where the researchers will cooperate with organic farmers, marketing experts, advisors and administration officers. The project started on March, 1st 1997 and is financed by the European Commission with an amount of 1.13m ECU for 40 months.

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FOUNDATION OF THE European Wool Group

On 22 May 1997 representatives of major professional organisations involved in the producing and processing of European wool presented the newly founded **European Wool Group** (EWG) in Brussels. This is the first time that such a Europe-wide inter-professional organisation has been established, covering all parts of the wool production chain from the sheep farmer right through to wool processing and marketing structures.

Wool is one of Europe's oldest resources and was once the most important source of wealth of certain countries, However, the extremely low prices paid for wool and the almost total lack of efficient collection, grading and marketing structures in most EU member states have resulted in this natural resource being severely neglected. Prices often barely cover the cost of shearing and there is no incitement to sheep farmers to increase quality.

The development of quality wool breeds has required centuries of expertise and know-how, much of which is now in danger of being lost. Wool is not considered to be of any commercial value and large quantities are even thrown away. Meanwhile, the vast majority of wool processed by European textile factories is imported from the southern hemisphere.

Wool is not considered to be an agricultural product by the European Union and there has never existed a specific programme of support measures for the sector. Sheep breeding plays an important socioeconomic role, especially in mountain and marginal areas facing decline and rural exodus. The upgrading of the different kinds of European wool would contribute towards the sustainable development of the rural zones concerned, firstly through the increase in farmers' income and secondly through the creation of jobs in local collection and processing structures. In addition, there is a growing demand by consumers for quality products with a guaranteed origin.

The EWG's three main aims are to improve the value of European produced wool, represent members' needs to the EU and other institutions and seek financial aid to improve the sector.

In March 1996 the European Parliament adopted the report prepared by Liam Hyland MEP, in collaboration with the EWG, on *the need for support measures for producers and processors of European wool*. The Parliament then adopted Mr. Hyland's proposed amendment to the 1997 budget introducing a new line for a *research programme to increase the use of wool within the European Union.* The EWG has since made an application to Commissioner Fischler and DGVI for funding for such a research programme.

The following organisations are founder members of the EWG:

Agenzia Lane d'ltalia (Italy)
Asociación Nacional de Criadores de Ganado Merino (Spain)
British Wool Marketing Board (United Kingdom)
Chambre Syndicale des Laines de France
European Association for Study, Liaison, Innovation and Research into Textiles (ATELIER)
Federaçao das Associações Portuguesas de Ovinicultores (Portugal)
Gordet Oy (Finland)
Kooperative Norsk Kjott (Norway)
Nederlandse Wolfederatie (Netherlands)
Schweizerische Inlandwollzentrale (Switzerland)
Sveriges Ull & Skinnrad (Sweden)

(Source: press release, ATELIER, Chantemerle, France, June 1997)

.....continued from page 5

or environmental policy is built upon it. A shift to livestock area payments - reflecting the shift to arable area payments in the 1992 reforms - would have been a major step towards a more integrated livestock support system.

So why did the Commission fail to propose livestock area payments, which are also intrinsically compatible with the aims of its agricultural trade policy? My view is that it is because livestock area payments would, as yet, prove very complex, if not impossible to implement. Before DGVI will consider moving towards livestock area payments they will require robust solutions to two outstanding questions; how to relate area payment rates to the productive capacity of the land? and secondly, how to resolve the problem of applying area payments to land with shared grazing rights? Solve these two problems for the Commission and we would be much closer to a European livestock area payments system.

However, there is much in 'Agenda 2000' that can be welcomed, particularly if one takes a slightly longer term view and accepts that this document is laying important foundations for the development of integrated policy in the future. In this respect the Commission's proposals for the transformation of the LFA scheme into a basic system to maintain and promote low-input farming systems because of their high landscape and nature value must be seen as an exciting prospect. How the Commission proposes to do this is not explained in 'Agenda 2000'. But this leaves opportunities to influence thinking on this using the research and ideas that the LSIRD network aims to encourage.

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The views in this article are personal and cannot be ascribed to the Countryside Commission.

Food Processing in agricultural regions

... a route to prosperity?

A recent economic study indicates that the food processing sector is the key to increasing prosperity in agricultural regions.

The analysis of European Union regional data strongly suggests that agricultural regions should consider expanding the food processing sector to complement the agricultural sector, as there is a synergistic effect between food processing employment and agricultural employment - i.e. output per head is greater in those agricultural regions which enjoy a buoyant food processing sector.

The paper presented to the Annual Conference of the Agricultural Economics Society (Edinburgh, March 1997) describes a comparison between the county of Cornwall, UK and the Departement of Finistère, France. The two regions share many common socio-economic characteristics. They both enjoy a variety of links which operate in the cultural, social and economic domains. Both are located at the "land's end", as peripheral areas.

The economies of the two regions have a significant agricultural base, though the agricultural intensity of Finistère exceeds that of Cornwall. The agri-food industry - *l'industrie agro-alimentaire* - is more developed in Finistère than in Cornwall. Superimposed on the agricultural base is an ownership structure that includes a strong representation of a variety of forms of co-operation. The prevalence of farmer-controlled business is typical of French agriculture. Agricultural co-operation within Cornwall is, in comparison, rather limited.

Given the divergent nature of these two agricultural sub-regions and given the substantially greater prosperity enjoyed by the Bretons compared to the Cornish, the question that arises quite naturally is- what is driving this differential prosperity? What drives the divergent prosperity experienced by agricultural areas?

The approach adopted by the study was to apply the idea of the "internal colony" (Hechter, 1969). The more of an internal colony that the sub-region is, the poorer, and more exploited, that sub-region will be.

Of course agricultural regions are generally poorer, in economic terms, than more industrialised regions. Employment in the agricultural sector is often used as an indicator of economic underdevelopment because the agricultural sector appears to be relatively unproductive in the generation of value-added. The economically strong areas tend to have a well-established manufacturing sector. In spite of specific EU regional aid, an agricultural area may remain poor because the support does not penetrate the value-adding processing sector. Regions with higher levels of agricultural employment tend to have a lower level of GDP per head than the more industrial-service oriented regions. If, however, the agricultural region can break out of the colonial relationship and develop its food processing activity, then it can enjoy the benefits of the value-adding activity and thence experience a higher GDP per head.

Food processing is shown unambiguously to be a good thing for the agricultural region. The implication for institutions charged with fostering regional economic development in agricultural regions is that they might seriously consider using the development of the food processing sector as a lever on regional. Agricultural regions will do well to encourage, facilitate, even subsidise, food processing activity within their domain.

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A new manual for producing management plans for upland....

Special Areas of Conservation SAC

A European workshop on managing upland grazing was held at the Macaulay Land Use Research Institute, Aberdeen, from 1 - 3 October 1997. Experts from across Europe discussed the management of grazing in the uplands to assess the usefulness of a manual which describes a protocol for producing management plans for Special Areas of Conservation in the uplands. The manual is expected to be applicable to a range of sites across Europe.

The workshop is the culmination of a two year Upland Grazing Project which began in January 1966 and is funded under the European Union "LIFE" programme. The project has studied the management of grazing animals for nature conservation purposes at four sites of European nature conservation value in the Scottish uplands. These sites are currently candidate Special Areas for Conservation (SAC) under the European Habitats and Species Directive. Grazing management plans have been produced for these sites and the experience so gained has been used to develop the manual which should enable management plans to be written for any potential upland SAC across Europe.

The management of grazing and conservation in the uplands requires careful planning and the integration of scientific information with practical grazing management. The manual, which was presented in draft form at the workshop, describes a step by step protocol for writing grazing management plans for any upland areas that may be designated under the European Habitats and Species directive. The protocol described in the manual will reflect the best available expertise in Europe in planning grazing management for nature conservation.

The project is headed by the National Trust for Scotland, with Scottish Natural Heritage, Scottish Wildlife Trust, the Institute for Terrestrial Ecology and the Macaulay Land Use Research Institute as partners. The project employs a team of two full-time staff and one part-time member and is based at the ITE station at Hill of Brathens, Banchory.

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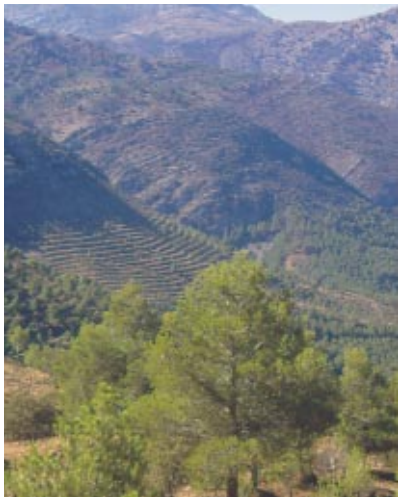
Estimating stocking rates
IN NATURAL PARKS IN ANDALUCIA

by Tim Treacher



Natural Parks cover about 17% of Andalucía. Most are in less-favoured mountainous areas with a tradition of extensive livestock production. Since the introduction of the CAP, the number of sheep and goats in Andalucía has increased by 48%. Systems are also changing, with strong market pressures to produce lambs reared indoors on concentrates, and increased housing of ewes in late pregnancy and lactation.

In 1995, when studies were made of the diverse plant ecosystems of the Sierra Mágina Natural Park in the province of Jáen, a parallel study estimated the stocking rates on three large grazing units, ranging in size from 760 to 1405 ha and consisting of both privately owned land and land rented from the Park Administration. Mean rainfall is 500 mm and altitude varies from 350 to 1200 m, with very steep slopes and shallow soils over calcareous rocks. The lower slopes have *Quercus rotundifolia* and *Q. faginea* trees and a large area replanted with *Pinus* species. The steeper slopes above are dominated by bushes, *Quercus coccifera, Crataegus monogina, Ulex parviflorus, Berberis hispanica* and on the south facing slopes, *Pistacea terebinthus* or cornicabra, whose fruit are an important bird feed in winter. Near the top are mountain pastures. The Sierra Mágina has the most important area of *Pistacea terebinthus* in Spain.

Annual stocking rates, calculated from total sheep numbers and total land areas, were 1.71, 0.87 and 0.86 sheep/ha in the three grazing units, but these make no allowance for the periods when the sheep are housed or for areas that cannot be grazed. As a first step in calculating true stocking rates feed calendars were prepared after extensive interviews with the flock owners to obtain data on the distribution of lambing, periods of housing, use of different grazing areas, and levels of indoor feeding and supplementation at pasture.

The interviews established that, although rams were with the ewes throughout the year, lambing mostly occurred in autumn and spring. Ewes were housed from about one month before lambing until the lambs were weaned at two months of age. Two of the grazing units, which had large areas, 9 and 14% of the total, that could not be grazed, were divided into two or three separate areas. The third unit was grazed as one throughout the year.

Monthly stocking rates were calculated from the feed calendars for each grazing area, using the numbers of sheep actually present and the actual area available for grazing. Data from the first and third grazing units indicates the wide range of stocking rates that can occur in an area of Natural Park. In unit one, the three separate grazing areas were rested for 6, 8 and 10 months, respectively. Monthly stocking rates varied from 4.1-7.1, 5.2-8.8 and 1.4-1.6 sheep/ha, with mean annual stocking rates of 2.71, 2.36 and 0.25 sheep/ha. This gave a new estimate for the annual stocking rate of 1.16 sheep/ha for the whole grazing unit, compared to 1.71 sheep/ha calculated from the total flock size and land area. In unit three, which was not subdivided, removal of the animals to housing resulted in monthly stocking rates of 0.4-0.8 sheep/ha. The mean annual stocking rate was 0.60 compared to the original estimate of 0.87 sheep/ha. Clearly visible overgrazing was not necessarily associated with high stocking rates.

The contribution of grazing to the total annual energy requirements of the flocks was calculated, using the numbers of ewes in each physiological state and the French feeding standards. The energy value of feeds used indoors and at pasture was deducted and the balance was assumed to be the contribution from pasture. This was 62, 38 and 57% in the three grazing areas.

This study indicates that in extensive Mediterranean sheep systems a very clear description of the use of pasture, other grazing and feed resources, and of housing, is needed to assess the true level of stocking. Such studies are an essential prerequisite before overall stocking rates are adjusted to prevent overgrazing of natural pastures.

This work was the final year project of Ignacio Monserrat, supervised by Dr Pilar Fernández of the Forestry Group and Dr Tim Treacher of the Animal Production Department of the Escuela Técnica Superior de Ingenieros Agrónomos y Montes (ETSIAM), University of Córdoba, Spain. Similar work is also being done in the Cabo de Gata and Sierra Norte de Sevilla Natural Parks.

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LUBERON

Husbandry Systems and Pastoral Lands

by Elisabeth Lecrivain

The EU research project on *"Husbandry Systems and Sustainable Social Environmental Quality in Less Favoured Areas"* (EQULFA/1996-1999) aims to promote environmentally sustainable grazing use of land in Less Favoured Areas. The project involves research teams from the UK, Germany, Italy, Greece and France. The research site selected by the French partner is the Luberon Regional Nature Park in Provence, the objective of which is to protect cultural and sensitive landscapes of particular interest for their wildlife and flora. The Park has set up an EU local operation (EU Agri-Environmental Programme (AEP's), Regulation 2078/92) designed to protect rare biotopes. The operation applies to two rare and highly sensitive biotopes, the *Luberon crest* (calcareous grassland) and *garrigue* and involves the combination of grazing with mechanical re-opening of overgrown environments. The operation provides for compensating livestock farmers who participate on a contractual and voluntary basis for any income losses or extra costs incurred by adopting specific husbandry practices required for the upkeep of these areas hit by rural decline. Some 30 sheep farmers have adhered to the operation and signed 5-years contracts (1995-1999) with the French Agricultural Ministry, involving the operation's initiators, i.e. the Luberon Park, the National Forest Service and the local Agricultural Development Agency, to maintain and improve an area of some 2400 hectares.

Given our own research concerns on sustainable grazing systems, we selected this environmental operation to work on its pastoral aspects. We identified research questions which necessarily emerge from the different husbandry situations and set up a range of surveys to monitor these situations (including landscape and socio-economic aspects).

An integrated approach

To monitor environmental and pastoral benefits, we have developed a methodological approach designed to optimise AEP's, rather than attempting to make firm recommendations. We also work on providing frameworks that can be developed into decision support systems. In order to "valorise" the natural areas, i.e. improve their use and value with appropriate grazing systems, we need to explore how such environmental operations may fit in with sheep husbandry practices, and how multiple objectives (husbandry production and landscape maintenance) may be combined. Our project is also concerned with transferring knowledge on new systems to other livestock farms, while preserving a specific environment. Last, we seek to assess the impact of such changes on local agricultural development.

The environmental issue

To understand the environmental issues at stake, we are working on:

- what the different concerned groups in the local community and the policy makers expect from the pastoral activity of farms engaged in the agri-environmental operation,
- the description of the social networks involved in the development and carrying out of the environmental operation (the people concerned : the public, farmers and policy makers), the interactions and regulatory processes between the networks ; the analysis of the way the local operation was set up and the part played by the different actors according to their degree of involvement.

Agricultural activities and landscapes

To explain the links between agricultural activities and landscape dynamics over the last 20 years, we are investigating :

- household activities (part-time farming, green tourism, *etc.*)
- farming activities (extensive farming, diversification, *etc.*)
- forest and land structures, and
- the contribution of direct or indirect environmental outputs to the local development.

Husbandry systems and pastoral territory

To produce appropriate recommendations, we need to identify husbandry systems and the changes to be expected for the sheep farmers engaged in grazing contracts (to what extent is sustainable flock production altered for the benefit of landscape management ?):

- the dynamics of farm organisation (animal production, grazing territory),
- farmer know-how regarding animal management (batching, learning by young animals, social learning),
- farmer know-how relating to pastoral management (combining paddocks and shepherding),
- the steering of animal behavioural abilities (spatial, social and grazing),
- the contribution of the agri-environmental operation to pastoral redeployment,
- the stakes for the husbandry systems and pastoral lands,
- the evolution of land use patterns,
- the animal production and marketing networks.

Finally, the main concerns underlying this research project may be summarised in the following two questions : how can such husbandry systems simultaneously serve the objectives of the farmers and that of maintaining the environment ? To serve this dual purpose, how should they be designed to be viable ?

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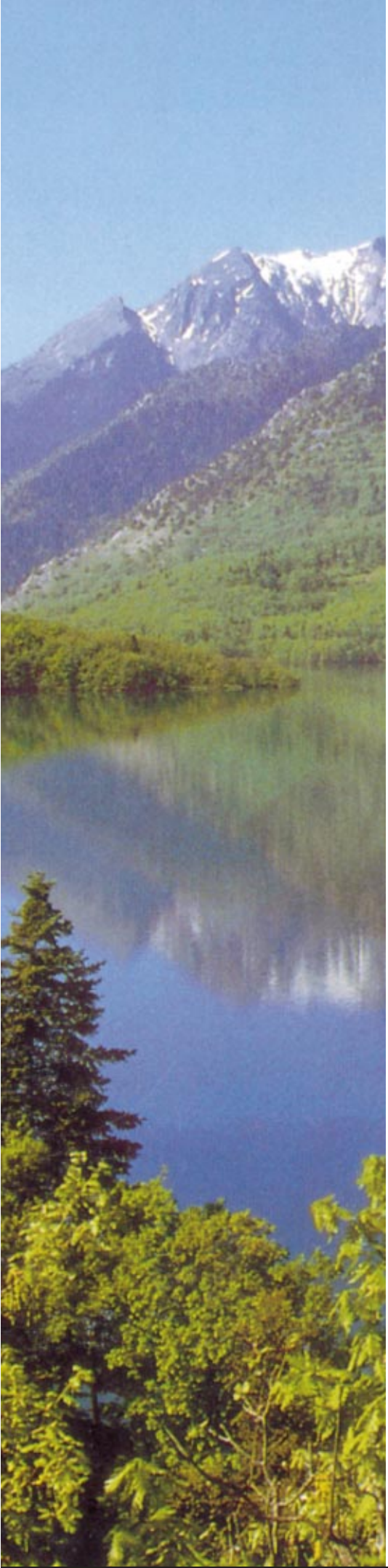

The Plastiras Lake in Karditsa, Central Greece, is an artificial one. It was constructed in 1962 covering a fertile mountainous plateau of 24Km^2. As a result most of the local farmers abandoned the area. The lake area, despite its natural beauty, was not considered as an important resource for the surrounding communities until 1988; then a local development project by the county authorities indicated agritourism as an alternative way to development. Afterwards, the communities took the initiative to build hostels, finished around 1992, and followed by increasing numbers of visitors in the area. ANKA S.A, the development agency of the county, established by local authorities and the agricultural co-operatives in 1989, has contributed significantly to both making the area known through its eco-tourism office and protecting the area through a number of projects within programmes such as LIFE and the national Operational Environmental Programme. In addition, the agency being the consultant of the local authorities, designed the Agritourism project of the area funded by the Regional Operational Programmes. Furthermore, the agency promotes through its work with local communities all measures concerning rural development, mainly through Reg. 2328/91/EU. The basic approach taken is that agritourism can be the lever of the area development by enhancing the production of traditional products as well as their processing and marketing at local level, the development of small hostels or rooms and the protection of the environment.

LIVESTOCK AND Agritourism

by Alex Koutsouris
Development Agency of Kardista

The production system of the area is based on livestock production; sheep and goats increased their numbers by 48% and 12% respectively since 1981 (mainly due to subsidies after the country's accession to the EC/EU). Natural pasturelands increased by 8.6% during the last 25 years while fallow lands increased by 19%. Crop production is limited to maize, vegetables (mainly fresh beans, tomatoes and onions), beans, potatoes and fodder plants (clover or hay & grazing), with arboriculture growing. The population is decreasing and ageing with very few youngsters interested on becoming engaged into primary production. The provision of training is limited; most emphasis is put on home economics (food technology, needlework, dressmaking, agritourism) for women (86% of the trainees) and apiculture for men (39%).

In February 1997 a FAIR3 project under the title "Diversification and re-organisation of the production activities relating to livestock at disadvantaged areas" started under the co-ordination of the Agricultural University of Athens with the participation of ten research teams. The project aims at elaborating tools useful to the services involved in training and advice. One out of the three sub-groups of the project (in which ANKA participates) will be engaged with the relationship between agritourism and livestock. The other two main areas of the project refer to animal nutrition and the modifications of the qualifications for milk. The steps to be taken are as follows: a) longitudinal study of the changes in professions, practices and skills, b) definition of the diversifications as far as materials and methods as well as the function of advice and services are concerned, c) elaboration of theoretical elements relating to the sustainable development of zones currently experiencing a marginalisation process, and d) elaboration and testing of practical tools.

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