



**AN EVALUATION OF THE COMMON
ORGANISATION OF THE MARKETS IN
THE SHEEP AND GOAT MEAT SECTOR**

APPENDIX



**Gobierno de Aragón
Departamento de Agricultura y Medio Ambiente
Servicio de Investigación Agroalimentaria
Unidad de Economía Agraria**

FINAL REPORT

AN EVALUATION OF THE COMMON ORGANISATION OF THE MARKETS IN THE SHEEP AND GOAT MEAT SECTOR

APPENDIX

Prepared for
The Economic Analyses, Forward Studies and Evaluation Directorate
of the European Commission Agriculture Directorate-General

by

SAC
Industry Strategy Consulting
INRA
Diputación General de Aragón

Contact:
Stuart Ashworth
SAC, Auchincruive, Ayr

Tel: +44 1292 525 060
Fax: +44 1292 525 052
Email: s.ashworth@au.sac.ac.uk

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**BACKGROUND TO THE SHEEP SECTOR IN THE EUROPEAN UNION
AND THE CURRENT COMMON MARKET ORGANISATION POLICY¹**

¹ A earlier version of this section was first published in Ashworth *et al.* (1997)

1 SHEEP AND GOAT MEAT PRODUCTION AND TRADE IN THE EUROPEAN UNION

Production of sheep and goat meat

1.1. The EU is a major world player in the production of, and trade in, sheep and goat meat. Statistics published by the Meat and Livestock Commission (MLC) show that for many years the EU was the largest producer of sheep and goat meat in the world. Average production in the EU - 10 increased by some 17% in the decade since the introduction of the sheep and goat meat CMO in 1980, mainly as a result of increased production in Ireland and the United Kingdom (UK). However, since 1990 sheep and goat meat production in the EU has declined partly due to the reform of the CMO in 1992. Consequently, in 1992 China became the largest sheep and goat meat producer in the world and still retained that position in 1998 (Table 1.1). By contrast sheep and goat meat production is the least significant of the livestock enterprises commonly found in the EU (Figure 1.1) accounting for only 3% of meat production by volume.

Table 1.1
Production of sheep and goat meat by Region
(‘000 tonnes)

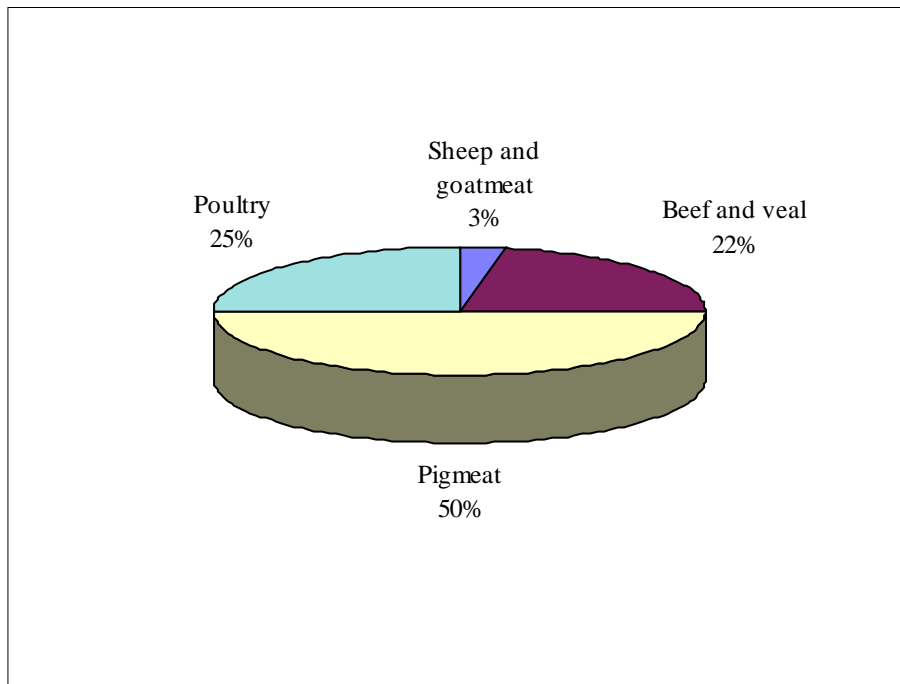
	1979-81 ¹	1985	1990	1995	1998
China	434	595	1068	1999	2400
European Union (15)	919	1013	1152	1175	1122
Former USSR	857	823	1010	766	n/a
Australia	635	561	743	546	615
New Zealand	568	729	584	533	542

¹ Average for 1979-1981

Source: FAO (1988,1993, 1996), MLC (1987, 1996a, 1999)

1.2. In terms of the total agricultural output of the EU, sheep and goat meat production accounted for around 4 bn ECU in 1997. However, although they only accounted for 2% of the total value of agricultural production, sheepmeat and goatmeat producers receive a disproportionately high level of support. In 1997 they received 3.5% (1.4 bn ECU) of the total European Agricultural Guarantee and Guidance Fund (EAGGF) expenditure. This compares with 1.2% on pigmeat, 16.3% on beef and 7.7% on milk (Commission of the European Communities (CEC), 1999). The EU Court of Auditors (CEC, 1995) estimated that, in 1992, each kilo of sheepmeat received 1.7 ECU of support; more than three times the support paid per kilo of beef. By 1997 this gap had declined but it is estimated that support per kilo of meat is 50% greater in the sheep and goat sector at 1.3 ECU per kilo of meat than the beef sector.

Figure 1.1
Meat production in the EU 1998, by volume

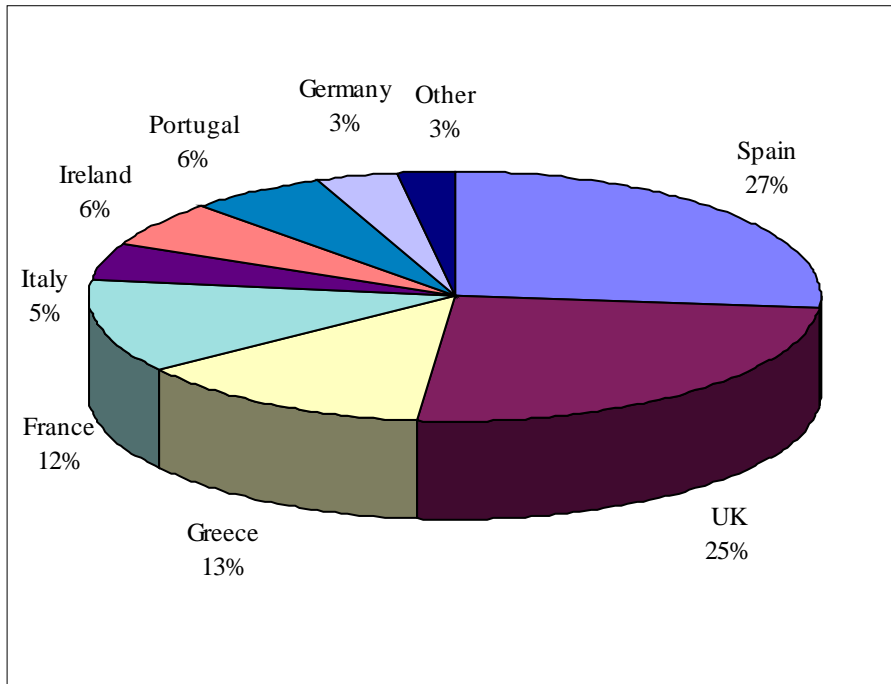


Source: MLC (1999)

1.3. The importance of sheep and goat meat production to individual Member States varies considerably. In 1997 Spain and the United Kingdom together accounted for more than 50% of the total EU production of sheep and goat meat. Greece and France supplied a further 25% of production (Figure 1.2). Hence, four Member States account for more than 75% of total sheep and goat meat production in the Community.

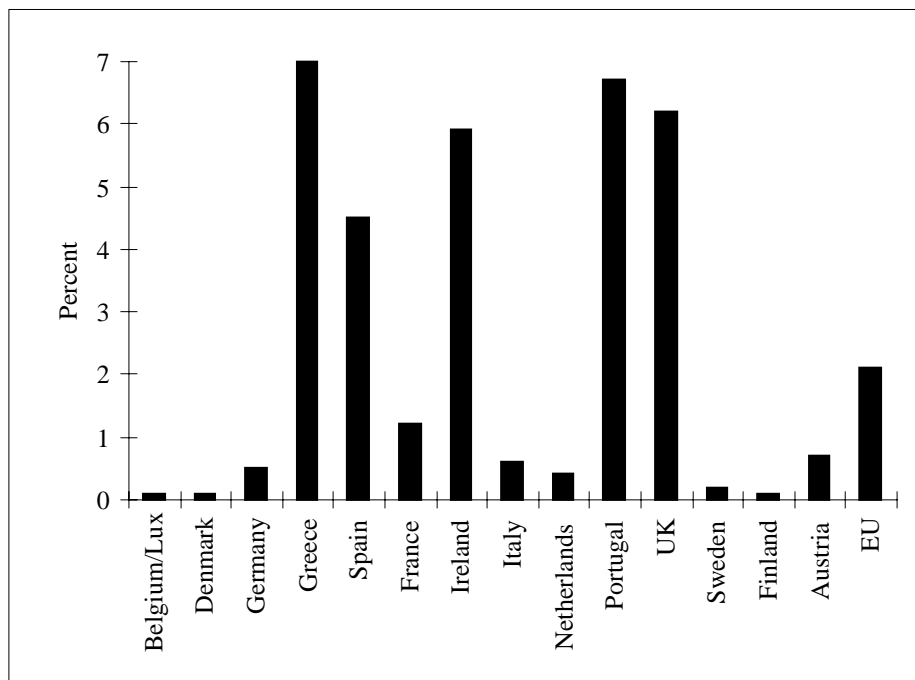
1.4. Equally, although sheep and goat meat only represented 2.1% of agricultural output by value for the EU in 1997, it contributed more than 5% of output in Greece, Portugal, Ireland and the United Kingdom (Figure 1.3). Sheep production is also of greater economic significance in Spain than for the EU as a whole. In contrast, France is the fourth largest producer of sheep and goat meat in the EU, but sheep and goat meat accounted for only 1.2% of French final agricultural production in 1997. Sheep and goat farming is therefore of much greater economic importance to the peripheral southern and north western Member States of the EU than to the central and north eastern ones.

Figure 1.2
Individual Member State contribution to EU sheep and goat meat production 1997



Source: CEC (1999)

Figure 1.3
Sheep and goat meat production as proportion of total agricultural production in EU Member States in 1997



Source: CEC (1999)

Trade in sheep and goat meat

1.5. The gross internal sheep and goat meat production in the EU of 12 Member States was 1.14 million tonnes in 1994 (Table 1.2); this is a slight decline from the peak level of production recorded in 1991. Consumption also declined between 1991 and 1994, but the level of self sufficiency remained broadly unchanged at around 83%. Gross internal production of EU - 15 in 1997 was lower than for EU - 12 in 1994 thus the decline in production has continued beyond 1994. In line with the decline in production, overall self sufficiency has fallen to 81%. The deficit between internal production and consumption is imported from third countries. In 1997 third country imports amounted to 287,000 tonnes (CEC, 1999), while 7,000 tonnes of sheepmeat and goatmeat were exported.

Table 1.2
Trade Balance for EU of 12 Member states
(‘000 tonnes)

	1985	1988	1991	1994	1997 ²
Production	903	1031	1221	1159	1119
Imports	254	247	258	243	287
Exports	6	7	19	7	4
Consumption ¹	1133	1243	1460	1395	1382
Self sufficiency (%)	79.7	82.9	83.6	83.1	81.0

¹ Includes stock change

² EU - 15

Source: CEC (1987, 1990, 1993a, 1999)

1.6. Between October 1980 and July 1995 imports of sheep and goat meat into the EU were heavily influenced by preferential trade arrangements agreed through Voluntary Restraint Agreements (VRA). Since then preferential import terms have been specified by the 1994 GATT trade agreement. New Zealand was the biggest beneficiary under these arrangement. In 1997, New Zealand supplied approximately 83% of all sheep and goat meat imports to the EU in that year. New Zealand trades with most EU Member States, however over half its EU exports are to the United Kingdom, its traditional trading partner. Germany, France and Greece are also significant markets for New Zealand sheepmeat.

1.7. Significant internal trade also takes place within the EU. In 1994 some 240,000 tonnes of indigenous production was traded between Member States (CEC, 1999). The United Kingdom and Ireland were the major exporters of sheepmeat, while France was the major importer (Table 1.3 and 1.4). Internal trade in live sheep also took place, amounting to a further 31,000 tonnes of carcass weight equivalent, with France the major importer and exporter. This level of trade makes the EU the most significant player in world trade of sheep and goat meat. Taking account of trade between Member States, 24% of world exports are sourced from the EU and almost 50% of world imports

are destined for the EU (FAO, 1995). Excluding internal trade between EU Member States, around 33% of sheepmeat entering the world market is imported into the EU.

Table 1.3
Intra-EU trade in sheepmeat in 1998;
Major exporters

Exports of sheepmeat		Exports of live animals	
Member State	'000 tonnes	Member State	'000 head
United Kingdom	96.7	France	887.4
Ireland	49.3	United Kingdom	304.4
Spain	15.5	Netherlands	558.7
France	8.3	Belgium	212.8
Netherlands	4.2	Ireland	180.0

Source: MLC (1999b)

Table 1.4
Intra-EU trade in sheepmeat in 1998;
Major importers

Imports of sheepmeat		Imports of live animals	
Member State	'000 tonnes	Member State	'000 head
France	131.2	France	688.0
Belgium	26.9	Italy ¹	538.7
Italy ¹	15.1	Spain	434.2
United Kingdom	11.3	Netherlands	346.4
Spain	4.2	Belgium	59.3

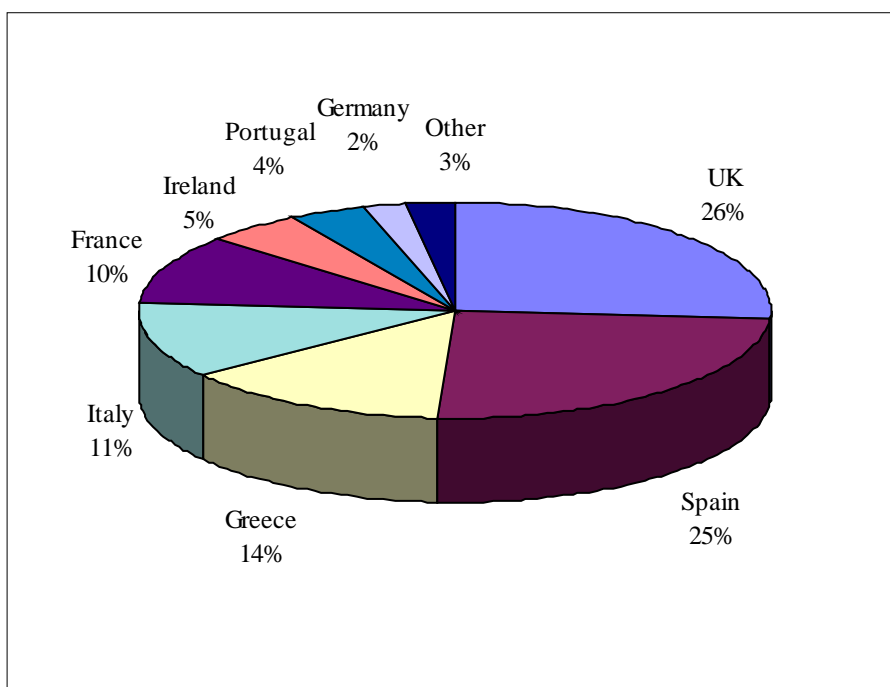
1. Figures for Italy refer to 1994

Source: MLC (1999b)

SHEEP AND GOAT NUMBERS IN THE EUROPEAN UNION

1.8. In 1997, Eurostat reported a population of 96.2 million sheep and 12 million goats in the 15 Member States of the European Union (CEC, 1999). Spain and the United Kingdom have the highest population of sheep and goats of all the EU Member States; they account for more than 50% of the EU sheep and goat population (Figure 1.4).

Figure 1.4
Distribution of EU sheep and goat population 1997

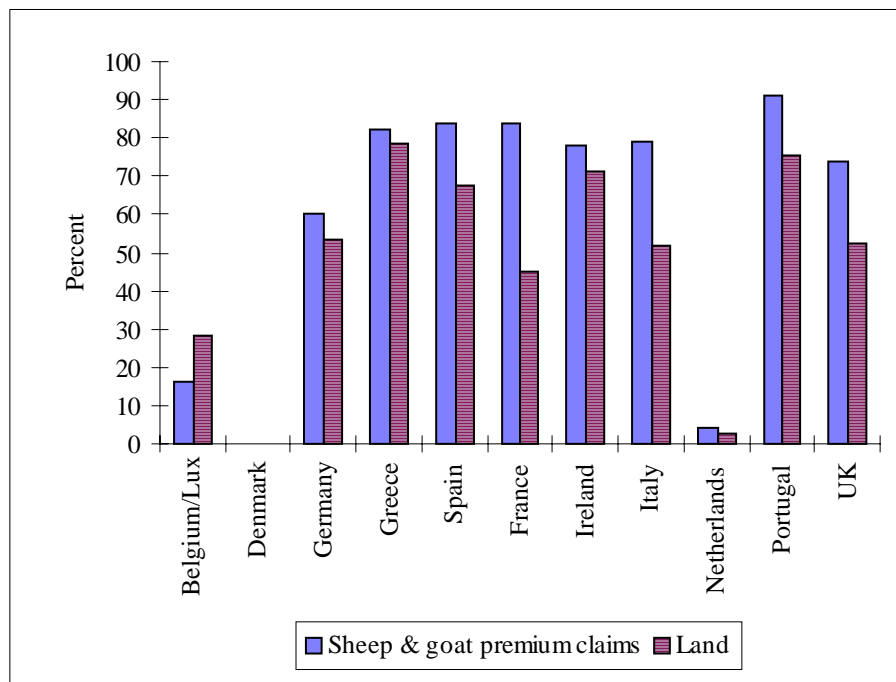


Source: CEC (1999)

1.9. The sheep and goat industry is of particular importance to the Less Favoured Areas (LFA) of the EU where it makes a disproportionately larger contribution to agriculture in these regions compared to other agricultural commodities. In 1995 around 79% of all ewes and goats on which the ewe premium was claimed were located in the LFA. However, the LFA only accounted for 55.1% of the utilised agricultural area of the EU in 1992. There is therefore a higher proportion of sheep in the LFA than would be the case if sheep were distributed evenly across all the agricultural area (Figure 1.5).

1.10. Those Member States with the largest sheep populations namely, Spain, the United Kingdom, Italy and France, show the biggest difference between the percentage of sheep and land classified as in the LFA (Figure 1.5). These Member States have a higher proportion of sheep in the LFA than would be the case if sheep were evenly distributed across the land area. In Greece sheep are evenly distributed across LFA and non-LFA land. It is only in the central northern Member States of the Netherlands, Belgium, Luxembourg and Germany that the percentage of sheep in the LFA is lower than the percentage of land classified as LFA. Thus, not only is sheep and goat production of greater economic importance to peripheral Member States of the EU, but it is also more likely to be located in the LFA of these Member States. As a consequence of the distribution of sheep and goat production, it is likely that any changes to the EU sheep and goatmeat policy will have a disproportionate economic impact on the LFA.

Figure 1.5
Percentage of sheep and goat premium claims and land area in LFA 1995



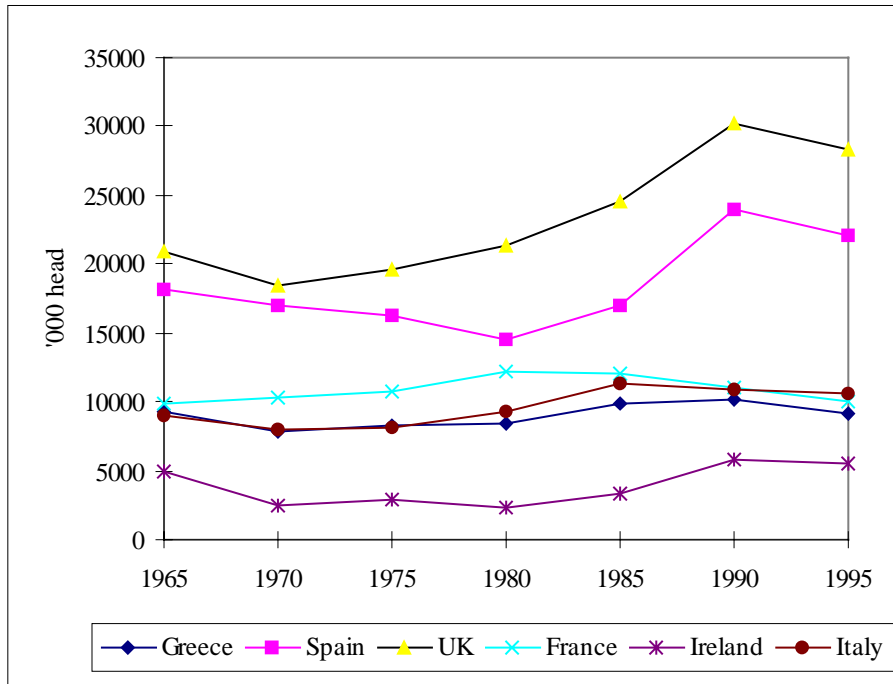
Source: CEC (1993b, 1995)

Change in sheep numbers in the EU since 1965

1.11. The change in sheep numbers is plotted in Figure 1.6 for the six most important sheep producing States of the EU since 1965. Figure 1.7 presents the same data as a net percentage change for the whole period and also as a percentage change for a fifteen year period before and after the adoption of the sheepmeat and goatmeat regime in 1980.

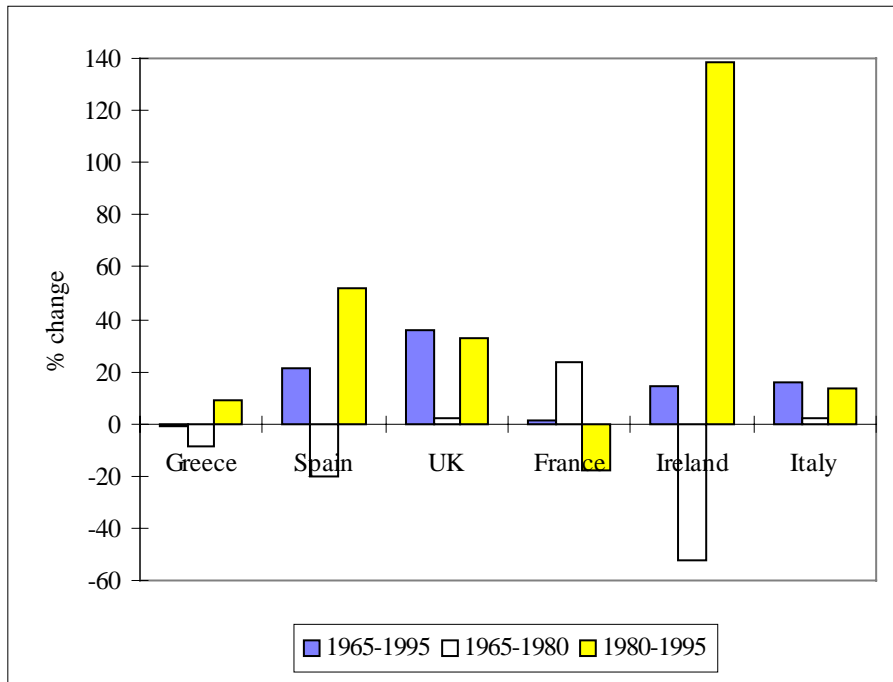
1.12. The general trend over the thirty year period has been of an increase in numbers for these countries with significant populations of sheep and goats. The largest increase has occurred in the United Kingdom where sheep numbers in 1995 were 35% higher than they were in 1965. The smallest changes have been in Greece where numbers are unchanged and in France where the increase since 1965 is less than 2%. Increases of more than 15% are recorded in Italy and Spain; however, the more accurate recording of ewe numbers required for support payments may be a contributory factor in these two countries. In Ireland, the increase in sheep numbers over the thirty year period is 14%.

Figure 1.6
Sheep numbers in key EU Member States 1965-1995



Source: UN (1970), Eurostat (1994,1996a), CEC (1977, 1983)

Figure 1.7
Change in sheep numbers in selected Member States 1965 to 1995



Source: UN (1970), Eurostat

1.13. However, the introduction of the sheepmeat regime in 1980 marked a big turning point in the development of the European industry. Greece, Spain and Ireland all recorded a decline in sheep numbers between 1965 and 1980, while in the United Kingdom and Italy numbers were broadly unchanged. France is the only significant sheep producer in the EU to have increased the size of their sheep flock between 1965 and 1980. However, since the introduction of the sheep and goat meat CMO in 1980, sheep numbers have increased in all Member States except France. Even in Greece and Spain, who joined the EU after the adoption of a sheep regime, sheep numbers have increased since 1980. Equally, however, all the selected Member States have shown a small decline in sheep numbers between 1990 and 1995, a period which includes the most recent reform of the sheepmeat and goatmeat policy.

1.14 Since 1990 there has been a general decline in breeding sheep and goat numbers in the principal sheep and goat producing Member States of the EU. However, production patterns have not always followed the sample profile. In particular the average production per female has increased in Greece, Spain and Ireland, but declined in France and the UK. Overall for the EU-15 the weight of sheep and goat meat produced per female declined by 5% between 1992 and 1997.

Table 1.5
Change in production 1989/91 to 1996/98 in the major
sheep and goat producing Member States

		Number of breeding females (ewes and goats having already kidded or lambed, and mated)	Gross Indigenous Production of sheep and goat meat	Average meat production per female per year
Greece	1989-1991	10.9	127	11.6
	1996-1998	10.1	128	12.7
Spain	1989-1991	20.1	225	11.2
	1996-1998	19.9	229	12.0
France	1989-1991	9.3	166	17.7
	1996-1998	8.5	150	17.5
Ireland	1989-1991	4.4	80	18.1
	1996-1998	4.3	80	18.5
United Kingdom	1989-1991	20.8	397	19.1
	1996-1998	20.0	375	18.8

Source: Eurostat

2 SHEEP AND GOAT PRODUCTION SYSTEMS WITHIN THE EU

2.1 There is considerable variation in the systems of production found within and across the different bio-geographic regions of Europe. This section will provide an overview of the principal production systems found in the EU.

2.2 The production systems used for sheep and goat farming can be heavily influenced by land type. Sheep and goat production is more likely to be found in the LFA of the Community. In these areas, a high proportion of sheep and goats graze semi-natural vegetation and are dominant or co-dominant with other low input extensive grazing livestock. However, sheep production is also important within the cultivated lands of Europe. In those areas where grassland is the major land cover, sheep and goats tend to be co-dominant with cattle or be a minority enterprise with cattle. Within cropping or mixed farming systems, sheep are typically seen as a marginal enterprise. In many regions where intensive arable farming has become dominant (e.g. the Paris basin), sheep are now virtually absent.

2.3 Sheep and goat production systems, therefore, cover a wide range of farming situations from land with poor grazing value to intensively managed land. Furthermore, within Europe, sheep and goats are farmed across an enormous range of climatic conditions. As a consequence, sheep and goat systems continue to be enormously rich in diversity. There are a vast range of breeds used and a wide range of management practices adopted. The breeds used, the product and the management system are all designed to suit local human social needs and the farmed and natural environment. This diversity of production system is in marked contrast to many other sectors, for example the dairy industry where the breed of cow, the management systems and the feeding systems are becoming remarkably uniform across the world. Transhumance and stratification stand out as particular adaptations of sheep and goat farmers to the wide ranges in natural environment, the seasonal variation in climate and the availability of grazed, browsed or conserved feed.

2.4 Transhumance typically involves seasonal grazing of high altitude pastures in the summer and autumn and the grazing of lower altitude pastures, stubbles and woodlands, or the housing of stock, in the winter. Because of the distance between the seasonal grazing resources, transhumance typically involves a full seasonal migration of flocks and their keepers over considerable distances, in some cases of several hundred kilometres. The seasonal flow of animals through transition pastures as snow retreats and returns give this approach local cultural and environmental significance. Transhumance is (or has been) of considerable importance in Greece, Italy, Southern and Alpine France, Spain and Portugal.

2.5 Seasonal movement of stock also occurs in Great Britain, with the commonplace movement of flock replacements, often over hundreds of kilometres from hill and mountain regions to lowland pastures for the winter. This is a different form of migration to that found in the Mediterranean regions as people do not move with the livestock, instead the responsibilities for the stock are, usually, temporarily transferred to the farmer on whose farm the seasonal grazings are taken.

2.6 Although transhumance is found in many parts of Europe, stratification is common only in Great Britain and Ireland. Stratification is the development of a highly

structured sheep industry based on the natural resources of different areas of the Country and the sale and movement of livestock between these different areas. Typically, sheep flow from the most naturally disadvantaged areas, the hills and mountains, to the more favoured areas, the lowlands. In the hills and mountains, sheep are bred to produce livestock which are sold to producers in the more favoured areas for use as breeding stock or for further grazing and sale as finished livestock.

2.7 Although variations in land, climate and cultures in the EU lead to many variations in breeds and production systems, three principal systems can be identified:

- i. systems principally aimed at producing meat;
- ii. systems principally aimed at producing milk and dairy products; and
- iii. systems principally aimed at producing wool and fine fibres.

The primary output from the meat production systems is heavy lamb. These production systems are found throughout the EU and are the dominant small ruminant production system in the Northern European States. For systems geared towards milk production, significant by-products are lambs which are sold at weaning at liveweights of less than 25 kg, and are defined as light lambs. However, a common variation on the basic milk production system is for the lambs to be weaned and intensively reared to heavier weights which allows the producer to be classed as a heavy lamb producer. In this situation the producer gains an added economic benefit, in that he qualifies for the full rate of annual ewe premium. Production systems whose primary output is milk and dairy products, are predominantly found in Mediterranean Europe. Systems for which wool and fibre production are the primary motivation are extremely rare within the EU.

2.8 Goat production systems fall into the same three principal categories as sheep production. However, in the countries of Northern Europe, goat production is not common. In Southern Europe, goat production is almost universally associated with milk production and kids are weaned and finished at a wide range of weights in similar patterns to lambs from dairy sheep flocks as described above.

2.9 It is most appropriate to divide sheep and goat production in Europe into two broad categories; Northern European Systems and Southern and Mediterranean Systems. The former are categorised by significant use of grassland, by seasonal breeding with lambing between January and May and by production of heavy lamb. These systems are found in Eire, UK, Belgium, Holland, Luxembourg, Denmark, Germany, Sweden, Finland and Central and Northern France. Milk production from sheep and meat or milk production from goats are insignificant in Northern Europe.

2.10 Southern European Systems cover the countries of Portugal, Spain, Italy and Greece. Southern France has very similar systems to these other countries. The range of systems in these countries is more complex than for Northern European systems. There are both sheep and goats producing both heavy and light carcasses with a much greater seasonal spread of lambing and kidding than in the north. Dairy systems are also very important.

2.11 Northern European systems are essentially based on grass and rough grazing for meat production, while Mediterranean systems make much greater use of housing,

woodland, arable stubbles and arable by-products for milk and meat production. The level of day-to-day shepherding is also much greater in Mediterranean Systems where the requirement to milk the ewe, and move sheep from over-night housing to supervised grazing of pastures during the day, places a high demand on labour. In Northern European systems, the sheep enterprise is often associated with other substantial livestock or cropping enterprises. In Southern Europe the sheep or goat enterprise is a more discrete self contained enterprise.

2.12 The production systems identified all demonstrate adaptation to the environment in which they are placed. In many situations the resource used by sheep and goats is fragile and bio-diverse and unsuitable for other agricultural activity. Nevertheless, the integration of sheep and goats with other, larger, ruminants can be important in Northern Europe, particularly on moorland, and in Southern Europe where integration of small ruminant systems with low density woodland is important in reducing the risk of fire. Changes to the intensity of management brought about by developments in technology, market requirements and policy influences have the potential to impact on the natural environment.

3 THE CURRENT COMMON MARKET ORGANISATION POLICY

3.1 The sheep meat and goat meat regime of the European Union (EU), which was established in 1980, plays a significant role in the maintenance of the income of sheep farmers. Its rules of operation have the potential to impact on the management decisions of sheep producers and processors and influence the shape and structure of the industry. This section establishes the background to the current regime, the framework and objectives of the regime and identifies the key constituent parts of the regime.

Development of the regime from 1980 to 1985

3.2 The Regulation, as established by Council Regulation 1837/80, set out to create a common organisation of the market in sheepmeat and goatmeat. The regime also set out the principal objectives of the regime as:

- to establish a common organisation of the market;
- to stabilise the market; and
- to ensure a fair standard of living for sheep and goat farmers.

The regime comprised a common price system and a common trading system covering both sheep and goats. The common trading system operated through the establishment of levies, determined monthly, on third country imports. The levy imposed varied between products and effectively prevented imported products reaching the market at prices below those operating in the Community. However, derogation was made for fresh, chilled and frozen sheepmeat and goatmeat imports covered under Voluntary Restraint Agreements negotiated with traditional trading partners and already bound under GATT agreements.

3.3 The price support system introduced the payment of an annual ewe premium and also the option of using Private Storage Aid (PSA) and intervention to support the market. PSA was designed to support the market at 90% of the Basic Price (the “price at which intervention measures will come into operation and which will protect ... against price fluctuations on the world market”) while intervention was designed to support the sheepmeat market at 85% of the Basic Price. The United Kingdom was not eligible for support under the intervention system because it received derogation to continue operating its deficiency payment system (variable premium scheme), which had been applied prior to joining the EEC, up to a price level set at 85% of the Basic Price.

Development of the regime from 1985 to 1992

3.4 At the end of the transition period and ahead of the accession of Spain and Portugal to the European Community in 1986, the sheep and goatmeat regime was reviewed. Several changes to the regime were introduced between 1986 and 1992. The nature of these changes and the reasons for change are described below.

3.5 The review of the regime carried out in 1984 resulted in modifications to the regime being introduced in 1986. Council Regulation 3523/85 recognised that in some areas of the Community the first lambing of ewes did not take place at the normal age because of particularly severe natural and climatic conditions. Therefore, they concluded that the annual premium should be extended to specific breeds of ewes, which were not yet in lamb, in these areas. However, because production costs for ewes which do not lamb at the normal age are lower than for breeding ewes, the rate of payment was set at 80% of the rate paid to ewes. An eligible female sheep other than an eligible ewe was defined by Regulation 3524/85 as a female sheep intended for flock replacement which belonged to a specified breed and already had two replacement incisor teeth on the first day of application for a premium.

3.6 By 1988 the Agriculture Council had become concerned that the expansion in sheep meat production which had occurred since 1980, combined with the EU's commitment to VRAs (cf para. 3.29), was leading to a situation where the market could become unstable through over supply. It was concluded that it was becoming important not to encourage the production of sheepmeat and goatmeat (Council Regulation 1115/88). To this end a stabiliser was introduced whereby for every one percent increase in the number of ewes over the number of ewes in December 1987 the Basic Price would be reduced by one percent. By reducing the Basic Price, the level of support would be reduced and it was hoped that this would reduce the growth in sheep numbers. Two stabilisers were introduced, one for Great Britain, which still operated the variable premium scheme, and a second for the remainder of the Community.

3.7 In 1990 the regime was further consolidated and amended, and a new Basic Regulation, Council Regulation 3013/89, was adopted. Two substantial changes were adopted. Firstly, it was recognised that account must be taken of different specialisations of production systems in the Community and secondly, in order to limit any increase in budget cost, provision should be made for limiting the full rate of the premium to 1000 animals per producer in the LFA and to 500 animals per producer in

other areas. Payment of half rate premium was to be made beyond these limits. Council Regulation 3013/89 established two categories of sheep meat producer; a heavy lamb producer and a light lamb producer.

3.8 Under the terms of Council Regulation 3013/89 Great Britain agreed to phase out the use of the variable premium scheme by the end of 1992 in line with the creation of the Single European Market and the need for the establishment of a single set of policy measures. The new Basic Regulation also ended the use of intervention as a market support option although Private Storage Aid was retained.

3.9 In the Less Favoured Areas (LFA) a further payment to sheep and goat farmers was introduced in 1991. This payment has become known as the LFA supplement, although it is more accurately described as the Rural World Payment (RWP), and is paid only in these areas. This payment was introduced on the basis that measures previously introduced had made provision to reduce the level of support to the industry. Any reduction in support would have unfavourable consequences for the LFA and particularly in those areas where there was no alternative to sheep and goat farming. It is not influenced by market prices although the number of animals for which payment is made is constrained in the same way as the annual ewe premium payment.

3.10 Consequently, at the end of 1992 a common mechanism for supporting the primary sheep producer applied across the EU comprising of an annual ewe premium supported by Private Storage Aid (PSA) in certain circumstances.

Development of the regime since 1992

3.11 The sheep and goat meat regime was completely reviewed as part of the MacSharry reform of the Common Agricultural Policy completed in 1992. At the conclusion of the review the Council of the European Communities observed that the upward trend in ewe numbers was leading to a substantial drop in prices and having serious repercussions on the market balance, and that the increase in production was resulting in a steady increase in support expenditure. They concluded that more severe measures were needed to create a balanced market and control expenditure. As a result Council Regulation 2069/92 was adopted. This regulation imposed finite limits, or quotas, on the number of animals to be supported. This was implemented at the level of the producer. This quota was based on the number of ewes on which an individual producer claimed premium in a given reference year. Each Member State could choose from 1989, 1990 or 1991. In recognition that sheep production is of greater importance in some areas than others, measures were adopted to prevent the movement of support payment rights to producers outside those regions where sheep and goat production is a traditional and important part of the rural economy. These regions have become known as sensitive zones. However, Member States were allowed freedom in defining these areas and making provision for transfer of quota between producers. Measures were also taken to allow limited movement of entitlement rights between producers, and guidance was given on the handling of producer rights when land was sold or tenancies relinquished. Furthermore, to assist new entrants, a system of national reserves was established. The national reserve was created in the first instance by reducing the

reference flock by between 1% and 3% and then fuelled by siphoning a proportion of quota from individual producers who transfer quota without land.

3.12 At the same time (1992), and following from a recognition that difficulties existed in monitoring the definition of an eligible ewe, the definition was simplified to any animal which has lambed once or is over one year old at the end of the retention period. This made it possible for full premium payments to be received on non-productive ewes and ended the reduced rate of payments that applied to a limited number of ewes which did not lamb at the normal age. Previous to this simplification an eligible ewe had been defined as a female sheep which had been put to the ram for the first time or had lambed at least once. The operation of the sheep meat and goat meat regime was further simplified in 1995 by ending the restriction, on individual producers, to half rate premium payments on ewe numbers above given thresholds. This was done by converting the half rate rights into full rate rights by dividing by two the number of ewes to which half rate premium had been applied.

3.13 Increasing concerns about the impact of increasing sheep numbers on the environment resulted in the EU making provision, in 1994 (Council Regulation 233/94), for Member States to introduce penalties on sheep producers in certain circumstances. The penalties imposed would reflect the nature and severity of the environmental damage and could result in the total withdrawal of sheep annual premium payments.

3.14. Following the 1994 GATT agreement the EU sheepmeat and goatmeat trade policy, which had remained unchanged since the introduction of the sheepmeat and goatmeat regime, was reformed. Voluntary Restraint Agreements were replaced by country-specific tariff quotas and additional non-country specific quotas were introduced for other countries. However, although import levies were abolished exports continue to require licences.

3.15. In 1998 the regulations were consolidated into a new Basic Regulation, Council Regulation 2467/98. The key elements of the framework created by this regulation are discussed in the following section.

THE EU SHEEP MEAT REGIME IN 2000 AND ITS MAIN FEATURES

3.16. The Basic Regulation determining the EU policy towards the common organisation of the market in sheepmeat and goatmeat is Council Regulation 2467/98. The regulation restates the objectives of the policy as being:

- to establish a common organisation of the market;
- to stabilise the market; and
- to ensure a fair standard of living for sheep and goat farmers.

The Regulation establishes that the organisation of the EU market in sheepmeat and goatmeat should comprise both price and trading arrangements and cover both sheep and goats. The various arrangements comprise:

- i. **an annual ewe premium, often referred to as the sheep annual premium (SAP);**
- ii. **private storage aid (PSA);**
- iii. **export refunds (currently not applied); and**
- iv. **import duties, which only apply beyond tariff free quota limits.**

This evaluation study will only consider the role of the annual ewe premium.

3.17. The determination of actual Representative Market prices and the annual fixing by the European Commission of a Basic Price are critical features of both the SAP and PSA and are central to the operation of the EU sheep regime. Both these pricing features are briefly described.

Basic Price

3.18. The Basic Price is set each year by the Agricultural Council in the annual farm price negotiations. The price is fixed at the Council's discretion and the following factors are taken into consideration:

- i. the situation on the sheep market during the current year;
- ii. the prospects for the production and consumption of sheep meat;
- iii. sheep meat production costs;
- iv. the market situation in the other livestock product sectors, particularly beef and veal; and
- v. past experience.

The Council also fix seasonally adjusted, weekly Basic Prices to take account of the normal seasonal variations in the Community market for sheepmeat.

3.19. Since 1988 the Basic Price has been reduced by a **budget stabiliser**. This mechanism was an attempt to discourage continued expansion of the sheep flock in view of the changing market balance and the Community's international commitments by reducing the degree of guarantee offered by the SAP (Commission Regulation 1115/88). If the size of the estimated Community flock exceeds the maximum guaranteed number (63.4 million head), then the Basic Price is, in principle, reduced by a corresponding percentage. However, since 1993 the stabiliser has been fixed at 7% of the Basic Price, irrespective of the size of the Community flock (Council Regulation 2069/92). Consequently, the European Commission set the Basic Price each year and then reduce it by 7%.

Representative price

3.20. The representative price is a weekly average weighted price for standard quality sheepmeat carcasses in representative Community markets. It is the price for the most widespread production system, on average, found throughout the Community. The weightings given to each Member State reflect the proportion of total Community production accounted for by the particular State.

3.21. Only specified categories of carcass from lambs under twelve months of age are used in determining the representative price. However, because of the wide variations in standards and interpretations of the quality of sheepmeat in the Community, the specification used to report market prices is different for each Member State. Furthermore, individual Member States may use only a sample of markets, weighted in relation to their importance in the national market balance, when reporting the representative prices. In Great Britain, for example, all auction markets are used, with the weighting of each market varying weekly, but no deadweight centres are included. In contrast, in Spain, for example eight regional markets are used and Ireland uses a mixture of markets and abattoirs. In Great Britain and Ireland prices are reported for lambs in the weight range 12-21.5 kg carcass weight, while in Spain the prices are only reported for lambs between 12-16 kg carcass weight.

3.22. Using both the Basic Price and the Representative Price the, European Commission can determine both:

- i. the value of the aid paid to producers in the form of the ewe premium, from the difference between what is received from the market (the weekly EU reference price) and what is considered by the European Commission to be a reasonable return for the producer's efforts, the seasonally adjusted Basic Price; and
- ii. the point at which the European Commission should intervene, by using PSA, in the normal activity of the market to moderate falls in price.

The calculation of the annual ewe premium is explained below.

Annual ewe premium

3.23. The annual ewe premium, commonly called the Sheep Annual Premium (SAP), is the cornerstone of the sheepmeat and goatmeat regime. The objective of the premium was clearly established in Article 5.1 of Council Regulation 1837/80 as *“To the extent necessary to offset the loss of income which may result from the establishment of the common organisation provided for by this regulation, a premium shall be granted for the benefit of sheepmeat producers”*. The current implementing regulation (Council Regulation 2467/98) replaces original article 5.1 with *“To the extent necessary to offset income loss by sheepmeat producers in the Community during the marketing year, a premium shall be granted. To this end, a single income loss shall be determined which shall be deemed to be any difference, per 100 kilograms carcass weight, between the basic price and the arithmetic mean of the weekly market prices...”*.

3.24. As noted above, the premium is calculated from the annual average difference between the Basic Price, adjusted for the budget stabiliser, as determined by the European Commission, and the market determined representative price. This price comparison gives a value for the income loss per 100 kg of sheepmeat produced. As the compensation is paid to the producer as a premium on the breeding ewe, and not the lamb meat produced, the income loss per 100 kg of sheepmeat needs to be translated through a coefficient into a headage payment per ewe.

3.25. This translating mechanism is known as the **technical coefficient**. The technical coefficient is derived from the average weight of lamb meat produced throughout the Community by a ewe producing a heavy lamb. This is currently estimated at 15.68 kg (Council Regulation 377/99). Thus, because the income loss is measured per 100 kg of lamb meat, the income loss per ewe is obtained by multiplying this loss by 0.1568, which is the technical coefficient.

3.26. The ewe premium is paid to producers of heavy lambs who apply for premium and who meet specific entitlement requirements. Producers must retain the number of ewes on which they have claimed the premium for a **retention period** of 100 days (Council Regulation 2700/93) and the necessary quota, or entitlement, to receive premium on the number of ewes they claim for.

3.27. In recognition of different production systems and physical constraints on production, two supplements or amendments to the basic annual ewe premium apply.

i. Less Favoured Area supplement:

In recognition of the problems faced by sheep and goat producers as a consequence of the physical constraints of farming in the LFA and of the potential impact of previous modifications to the Basic Regulation, an annual supplement introduced in 1991 (Council Regulation 1323/90). This supplement is known as the Rural World Supplement and is currently worth 6.641 euro per ewe. The value of this supplement is independent of the annual ewe premium calculation.

ii. Ewes producing light lambs

For ewes producing light lambs the premium is calculated in exactly the same way as for heavy lamb producers, but it is reduced to 80% of the full premium rate. Council Regulation 3013/89 established that "a producer of light lambs is to be understood as any sheep farmer marketing sheep's milk products based on sheep's milk.". However, the Regulation also established that, as long as a producer can show that at least 40% of his lambs are finished as heavy lambs, then he can claim full premium on all his ewes assuming he meets the other conditions of eligibility. Lambs finished as heavy carcasses require that they are finished at least 45 days after weaning with a minimum average weight at sale of 25 kg liveweight. It is important to note that individual ewes are not classed as heavy or light, but producers are classified as either a keeper of ewes for heavy or light lamb production.

Private Storage Aid

3.28. Apart from the ewe premium, price support is also provided through Private Storage Aid (PSA) which involves a payment to private companies to remove sheepmeat from the market during periods of very low market prices. The scheme may be triggered at a fixed price when market prices in the Member State and the EU fall below 90% of the seasonally adjusted Basic Price. If market prices in the Member State and the EU fall below 70% of the seasonally adjusted Basic Price PSA may operate

through a tender procedure. The meat removed is frozen and stored for an agreed period of between three and seven months, at the end of which the owner is permitted to sell the product on the open market. The main distinction between PSA and the intervention system for beef is that at no time is the lamb purchased by the EU.

Import levies and export refunds

3.29. The Basic Regulation also makes provision for import levies and export refunds to be used to stabilise the Community market by preventing fluctuations in the world market prices from disturbing Community prices. This may occur when the world market price is below the Basic Price. However, the size of the levies and refunds is bound under GATT and under trade agreements with traditional trading partners established under **Voluntary Restraint Agreements (VRAs)**. VRAs were agreements between the EU and its traditional trading partners, whereby the trading partners agreed to restrict their exports to the EU in exchange for a reduction in the customs duty charged.

3.30. Following the GATT agreement of 1994, the EU now operates a system of country-specific tariff quotas in place of the previous VRAs. Imports within the limits of the country-specific tariff quota are allowed in free of customs duty. New Zealand is the main beneficiary of this agreement, as it was under the VRA system, holding 226,700 tonnes, or 78%, of the total allowance. The timing of imports can have an influence on the market and may in the future have a limited influence on production systems. Imports outside the country-specific tariff quotas are charged an import duty.

3.31. Although very little sheep and goat meat is exported out with the EU, any trade which does take place is controlled by the operation of export licences, except for pure bred breeding sheep. Provision exists for payment of export refunds, but none are currently paid.

Limitations on the amount of premium received

3.32. Two limitations may apply to the level of annual ewe premium that a producer may receive. These take the form of an individual quota and an environmental cross compliance measure.

Individual quota

3.33. With effect from the 1993 marketing year the European Commission introduced limits on the amount of annual ewe premium which an individual can receive (Council Regulation 2069/92). Payments of annual ewe premium were limited to the number of animals for which an individual was paid premium in a reference year chosen from 1989, 1990 or 1991. This limit has become known as the individual's quota. However, to provide for changes to the assets or production capacity of the recipient, allowance was made for the transfer of quotas and for the creation of a **national reserve**. The national reserve is to be used to help producers in special circumstances, particularly new entrants, to establish or expand their sheep enterprise. Established producers can buy, sell or temporarily lease quota rights, if they so wish. However, the Regulation

requires that necessary measures to avoid quotas being moved from sensitive zones, or regions where sheep production is especially important to the local economy, be introduced. Thus, each producer is only allowed to trade entitlement rights in specifically defined areas; a principle which has become generally known as “ring-fencing”.

3.34. Although there is general agreement that the “ring-fence” principle is valid, there are some concerns that they may result in some environmental damage (CEC, 1996). The concern arises from a view that accumulation of rights within the ring-fenced areas may be leading to localised environmental damage. Equally it may be asserted that the application of ring-fencing can prevent the movement of rights to other zones which may benefit from increased sheep numbers, for example some lowland areas of Britain.

Environmental cross-compliance

3.35. Council Regulation 233/94 introduced the option for Member States to limit or abolish payments under the premium scheme for producers of sheepmeat and goatmeat, if the producer does not comply with rules fixed by the Member States with respect to the environment. Currently the United Kingdom is the only Member State to apply environmental cross-compliance criteria to the application of the sheepmeat and goatmeat regime.

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APPENDIX TO CHAPTER 1

Figure a1.1.1
Farm Net Value Added per Agricultural Work Unit - UK

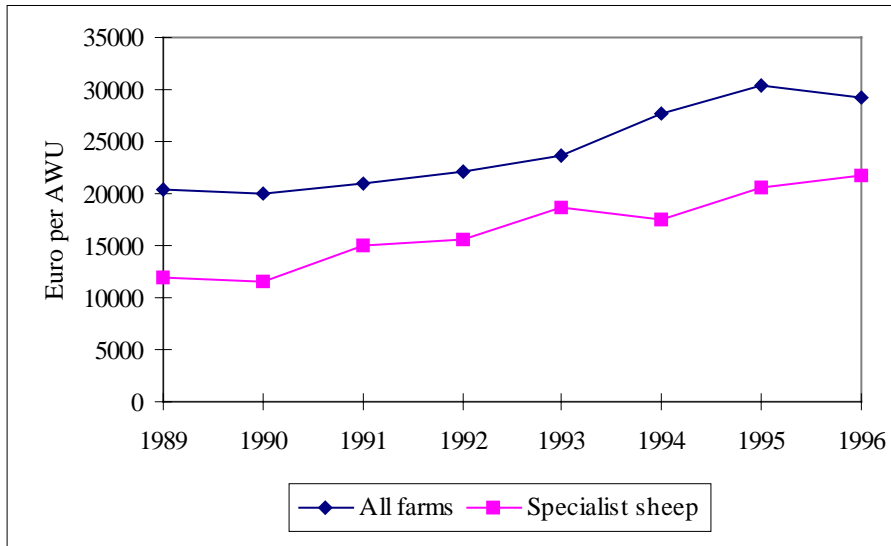


Figure a1.1.2
Farm Net Value Added per Agricultural Work Unit - Ireland

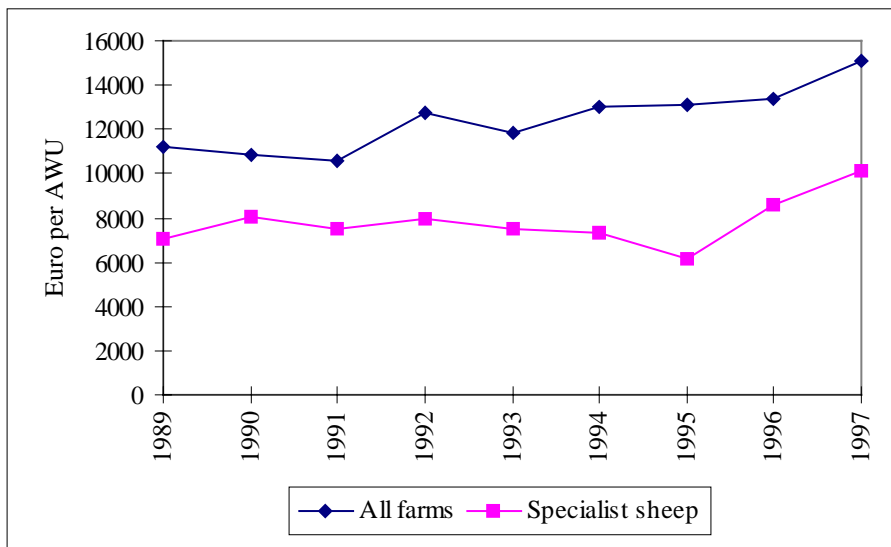


Figure a1.1.3
Farm Net Value Added per Agricultural Work Unit - France

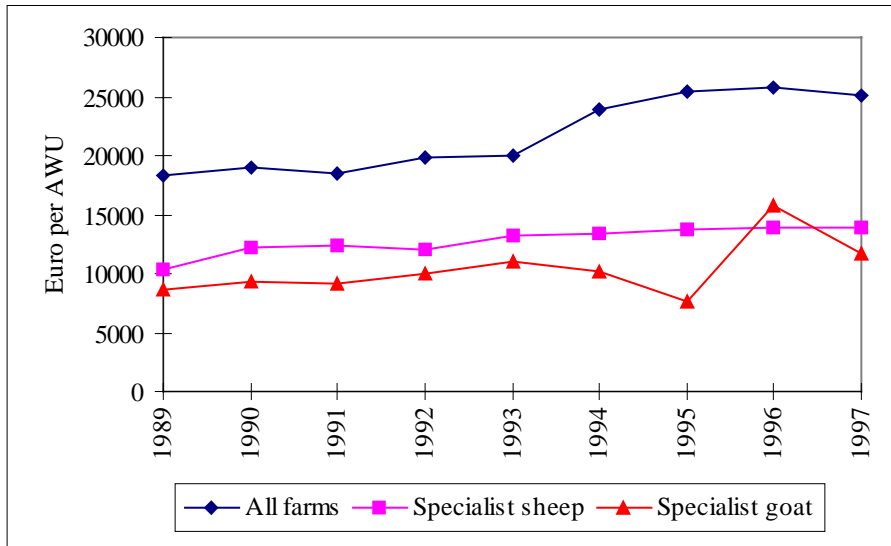


Figure a1.1.4
Farm Net Value Added per Agricultural Work Unit - Spain

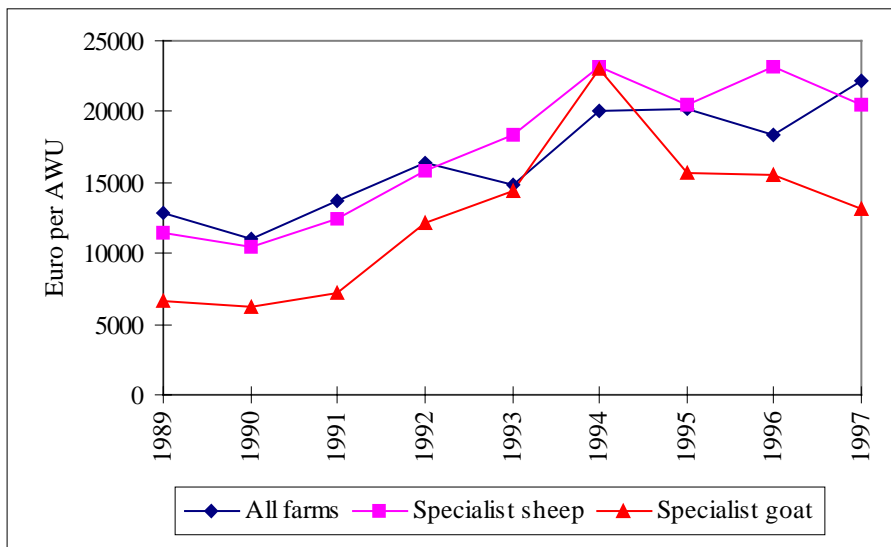


Figure a1.1.5
Farm Net Value Added per Agricultural Work Unit - Greece

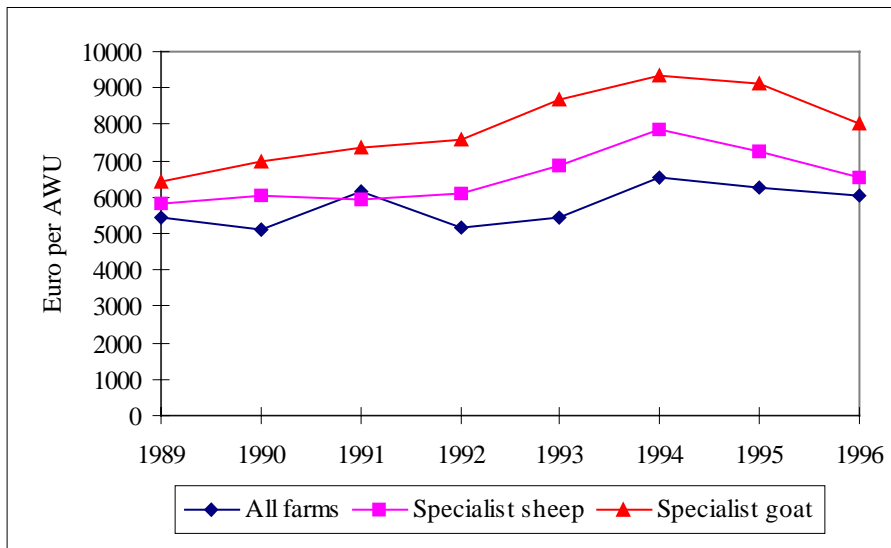


Figure a1.2.1
Farm Net Value Added per Agricultural work unit categorised by farm location.
United Kingdom

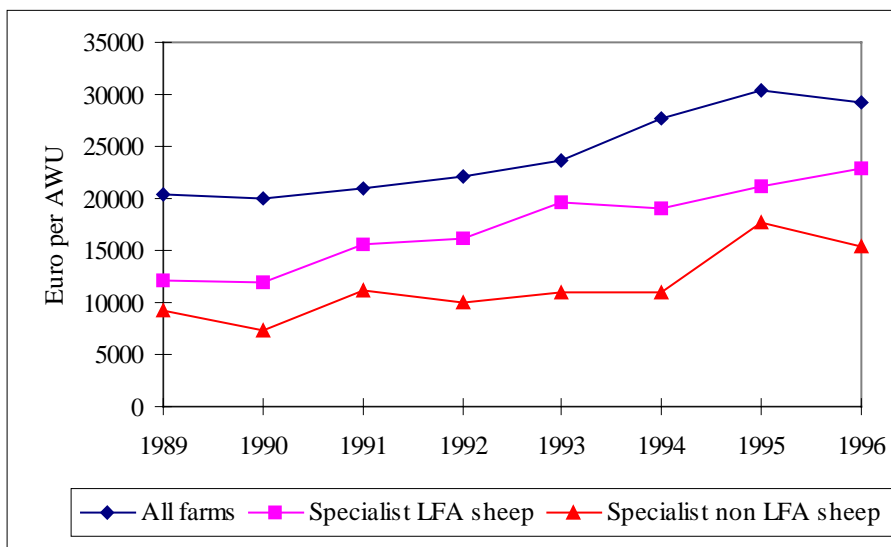


Figure a1.2.2
Farm Net Value Added per Agricultural work unit categorised by farm location.
Ireland

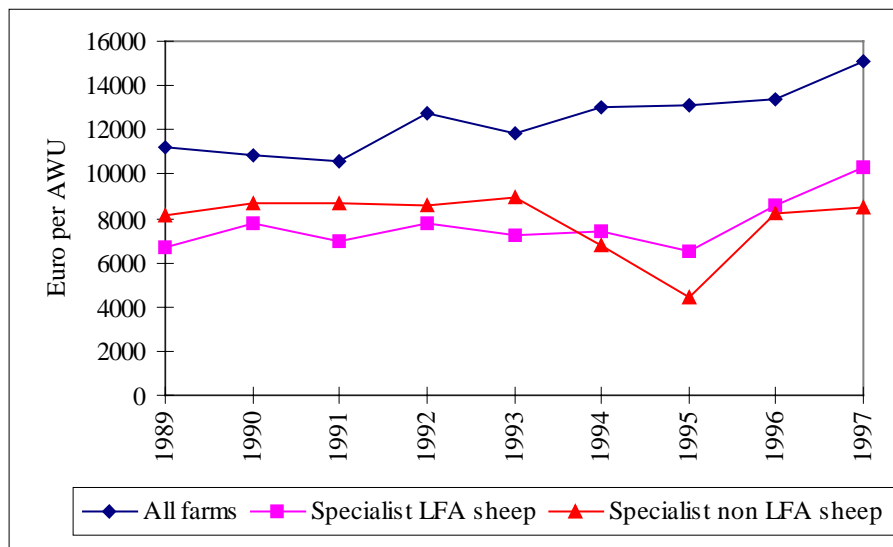


Figure a1.2.3
Farm Net Value Added per Agricultural work unit categorised by farm location
France

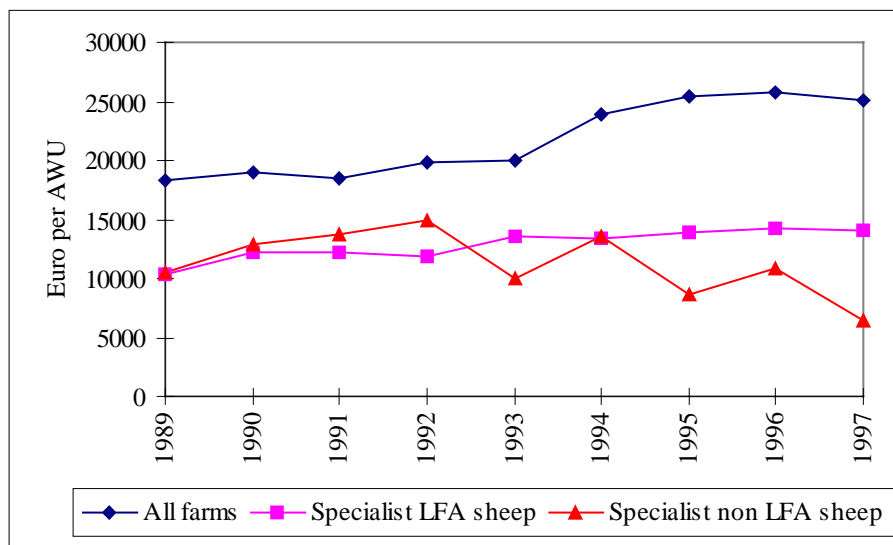


Figure a1.2.4
Farm Net Value Added per Agricultural work unit categorised by farm location
Spain

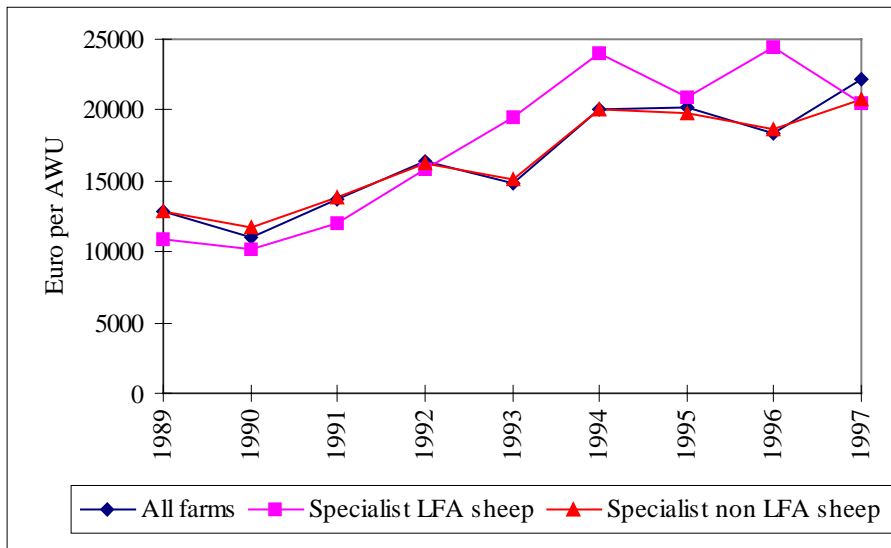
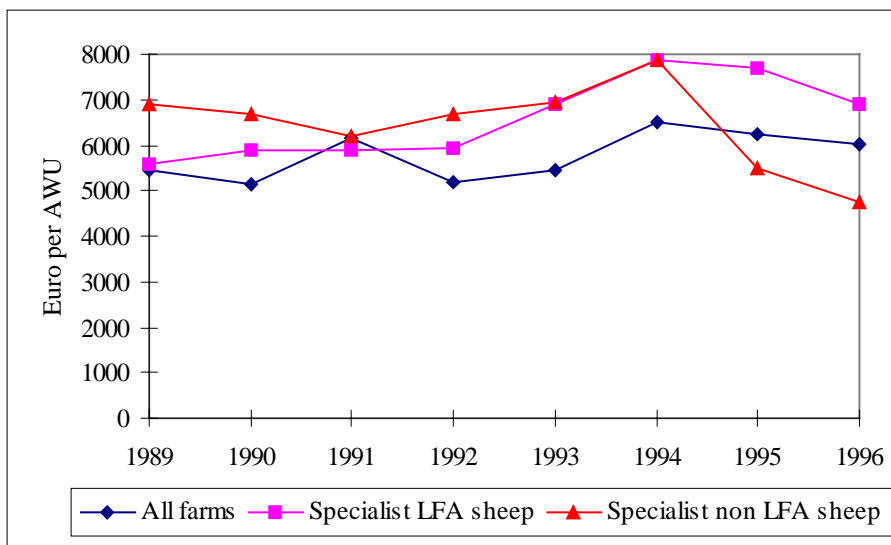


Figure a1.2.5
Farm Net Value Added per Agricultural work unit categorised by farm location
Greece



GLS Study

In a study published in May 1999, “Typologie des systèmes d’élevage herbivore dans l’Union Européenne” by F. Colson, V. Chatellier, M.-A. Fuentes, INRA / LERECO, Nantes, May 1999. Contrat VI / A3 / 002 Commission Européenne - Direction Générale VI Agriculture - Analyses économiques - Prospectives. Unité Analyse de la situation des exploitations agricoles (VIA.3), the typology of livestock grazing systems is different from the one (based on Technico - economic orientation (TEO)) generally used in the presentation of the results of FADN. In this study all (1.6 million) the farms with grazing animals are involved. Using the TEO classification for grazing livestock farms only 844,000 are identified. It can be concluded therefore, that approximately 820,000 farms hold grazing livestock as a secondary activity. These farms are included in the GLS study farm types. The key for the distribution of farms in the different farm types is presented in Table 1 below.

Table 1
Indicators for Grazing Livestock Systems

	Grazing animals (CU)	Cattle (CU)	Dairy cows (CU)	Sheep & Goats (CU)	Sheep & Goats CU / Total Grazing CU	S & G milk & dairy Gross product / Total S & G Gross Product	Sheep dairy Gross Product / S & G dairy Gross Product
Farm with grazing animals	>1						
Dairy Cattle	≥ 5	≥ 3	≥ 3				
Dairy Cattle with Dairy Sheep & Goats	≥ 5	≥ 3	≥ 3		≥ 20%	≥ 50%	
Dairy Cattle with Meat Sheep & Goats	≥ 5	≥ 3	≥ 3		≥ 20%	<50%	
Beef Cattle	≥ 5	≥ 3	<3				
Beef Cattle with Dairy Sheep & Goats	≥ 5	≥ 3	<3		≥ 20%	≥ 50%	
Beef Cattle with Meat Sheep & Goats	≥ 5	≥ 3	<3		≥ 20%	<50%	
Sheep & Goats	≥ 5	<3	<3	≥ 3			
Meat Sheep & Goats	≥ 5	<3	<3	≥ 3		<50%	
Dairy Sheep	≥ 5	<3	<3	≥ 3		≥ 50%	≥ 50%
Dairy Goats	≥ 5	<3	<3	≥ 3		≥ 50%	<50%
Small size Grazing Husbandry	1 - 4						

CU= Cattle Units

Source GLS Study

Table 2
Some characteristics of EU-15 farms with sheep and goats (1995)

	Economic size (Economic size units)	Net value added per Labour Unit (ECU)	Labour Unit / Farm	Animal husbandry subsidies / Labour Unit	Permanent Grass area as a percent of Total permanent grass area	Sheep and Goats CU as a percent of Total Sheep and Goats Units
All farms	26	15 293	1.6	1 058		
Farm with grazing animals	30	16 208	1.7	2 021	100	100
Dairy Cattle	41	20 382	1.9	1 031	46	8
Dairy Cattle with Dairy Sheep & Goats	21	12 600	2.0	1 022	-	1
Dairy Cattle with Meat Sheep & Goats	46	19 328	2.1	3 994	2	4
Beef Cattle	28	13 350	1.5	4 897	42	36
Beef Cattle with Dairy Sheep & Goats	23	12 802	1.8	2 779	1	3
Beef Cattle with Meat Sheep & Goats	31	16 805	1.6	9 416	18	30
Sheep & Goats	18	11915	1.6	1 931	11	54
Meat Sheep & Goats	22	14 451	1.5	3 999	8	31
Dairy Sheep	13	9 956	1.7	1 774	2	18
Dairy Goats	15	10 065	1.8	1 999	1	5
Small size Grazing Husbandry	9	4 942	1.5	273	1	2

Source : GLS Study.

APPENDIX TO CHAPTER 2

Figure 2.2.1
Seasonal pattern of goats slaughtered - EU (1992-98 av)

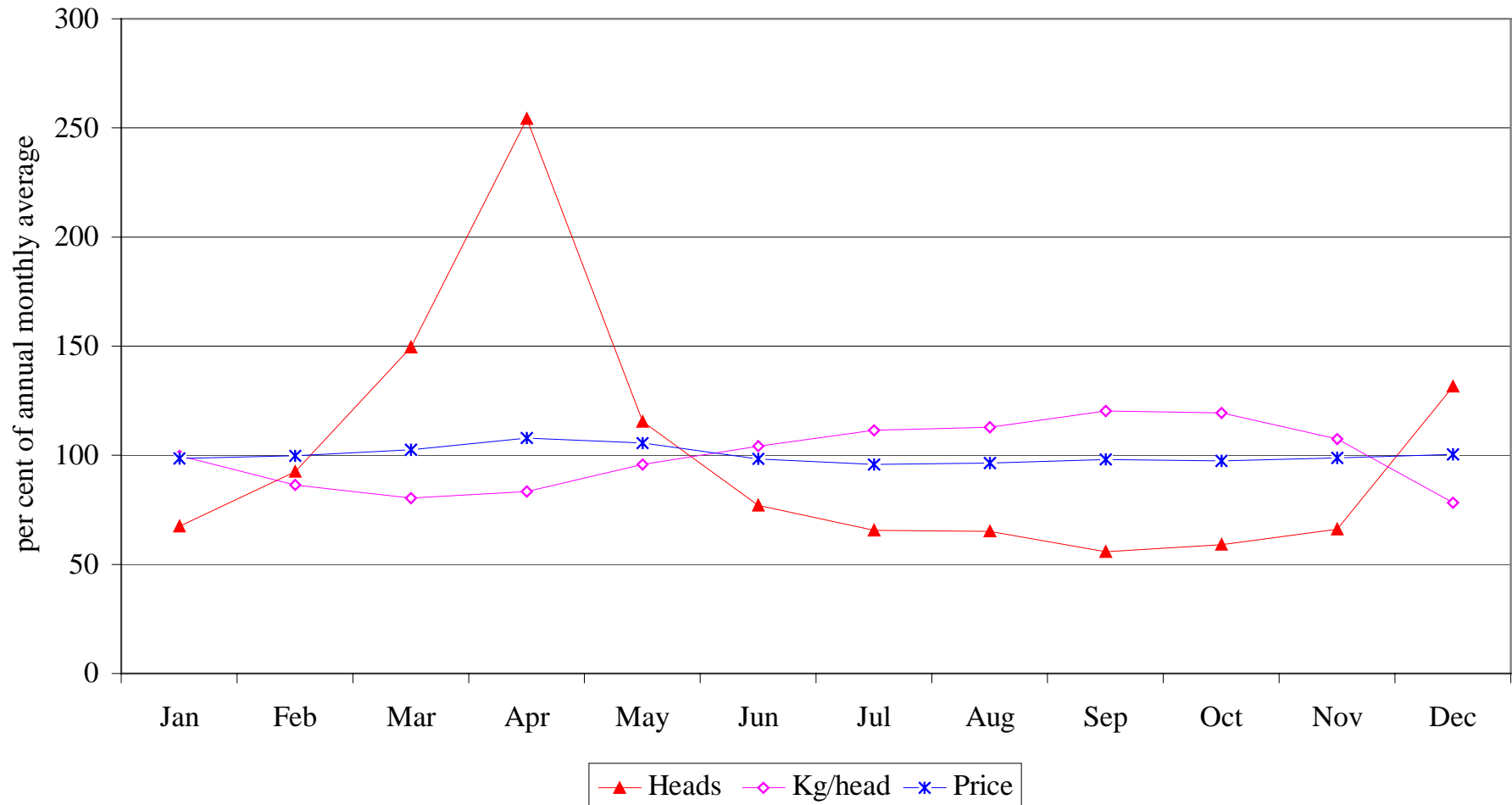


Figure 2.2.2
Seasonal pattern of goat slaughtered - Greece (1992-98 av)

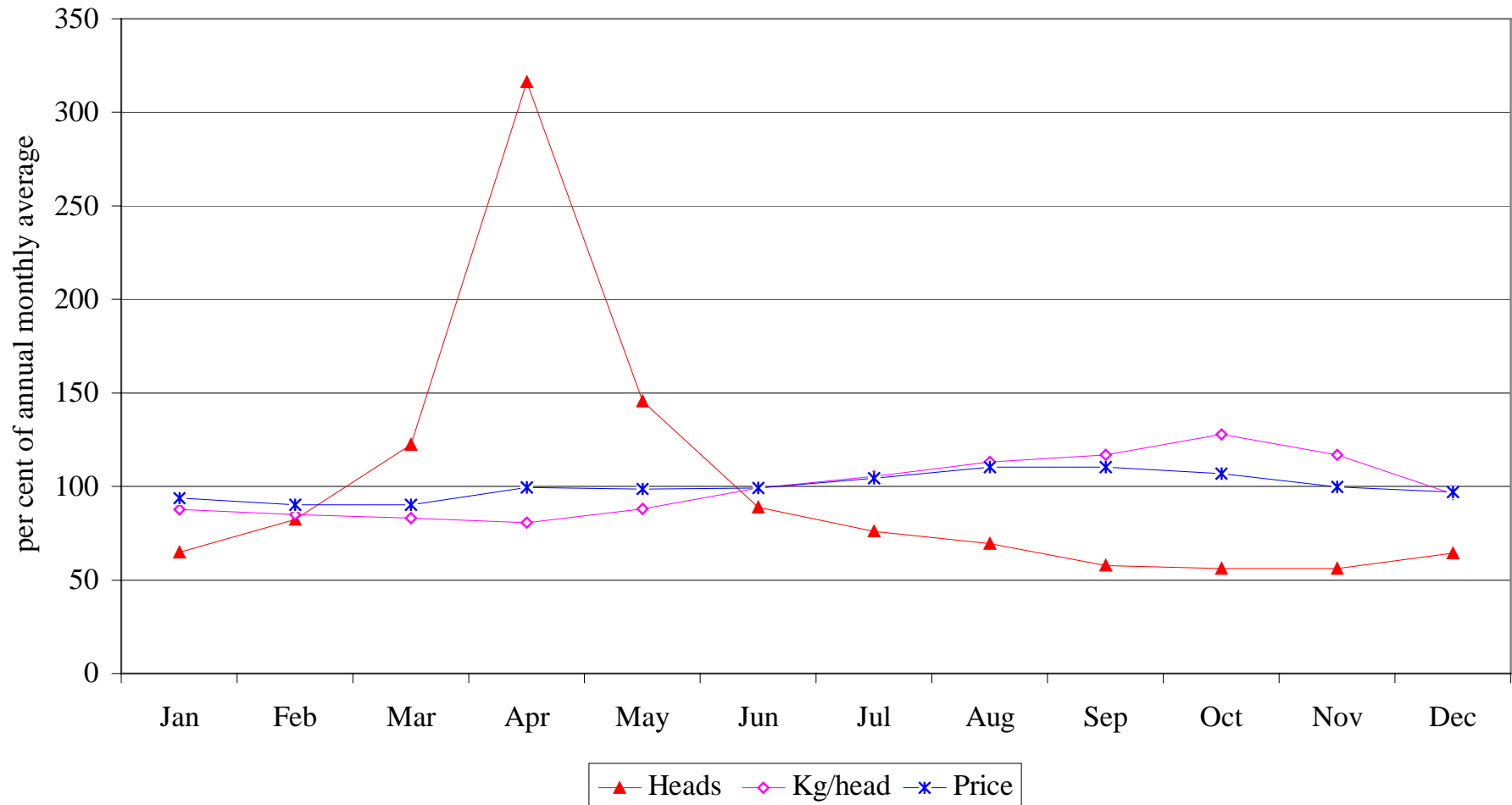


Figure 2.2.3
Seasonal pattern of goat slaughtered - Spain (1992-98 av)

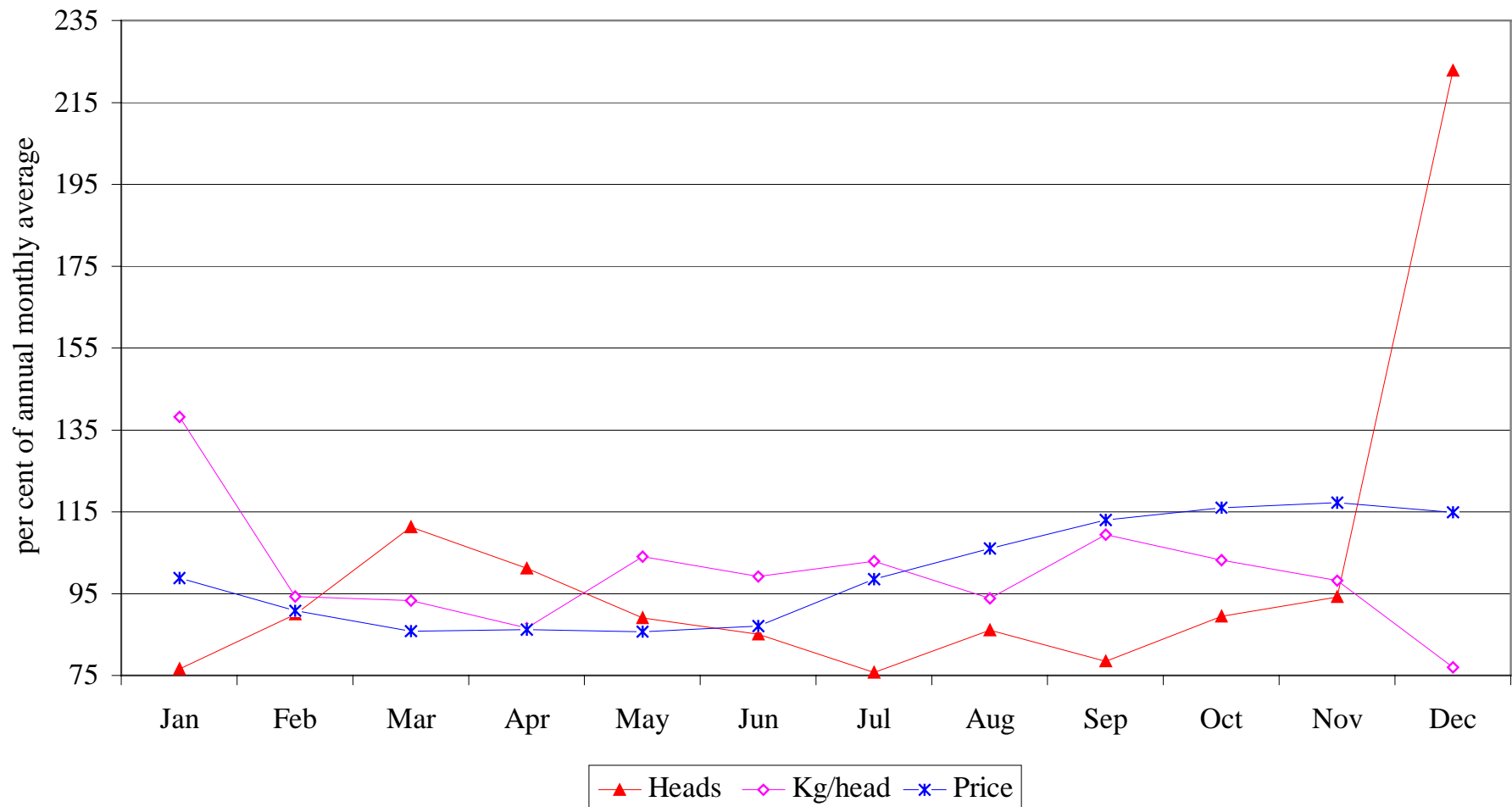


Figure 2.2.4
Seasonal pattern of goat slaughtered - France (1992-98 av)

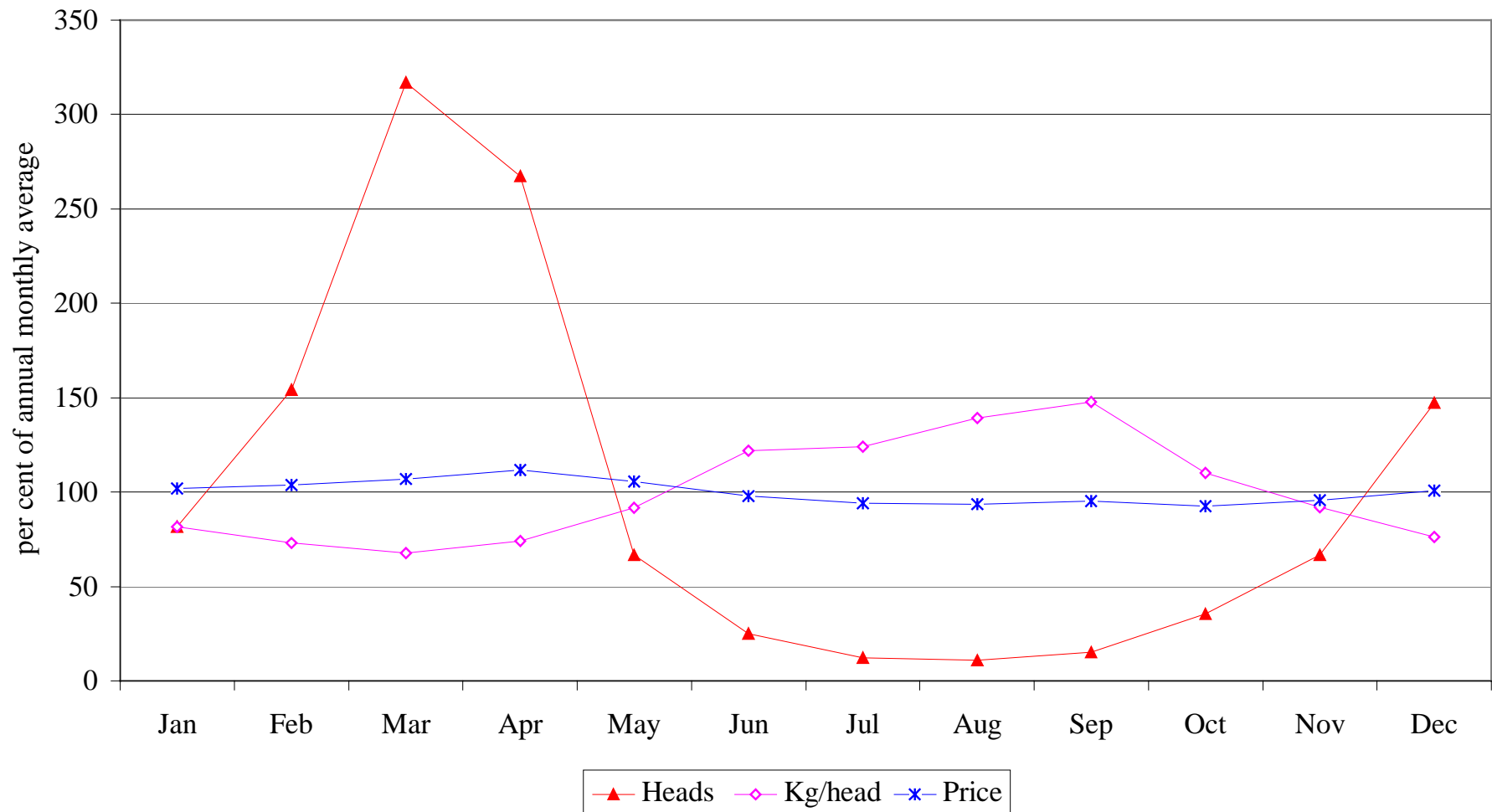


Figure 2.2.5
Seasonal pattern of goat slaughtered - Italy (1992-98 av)

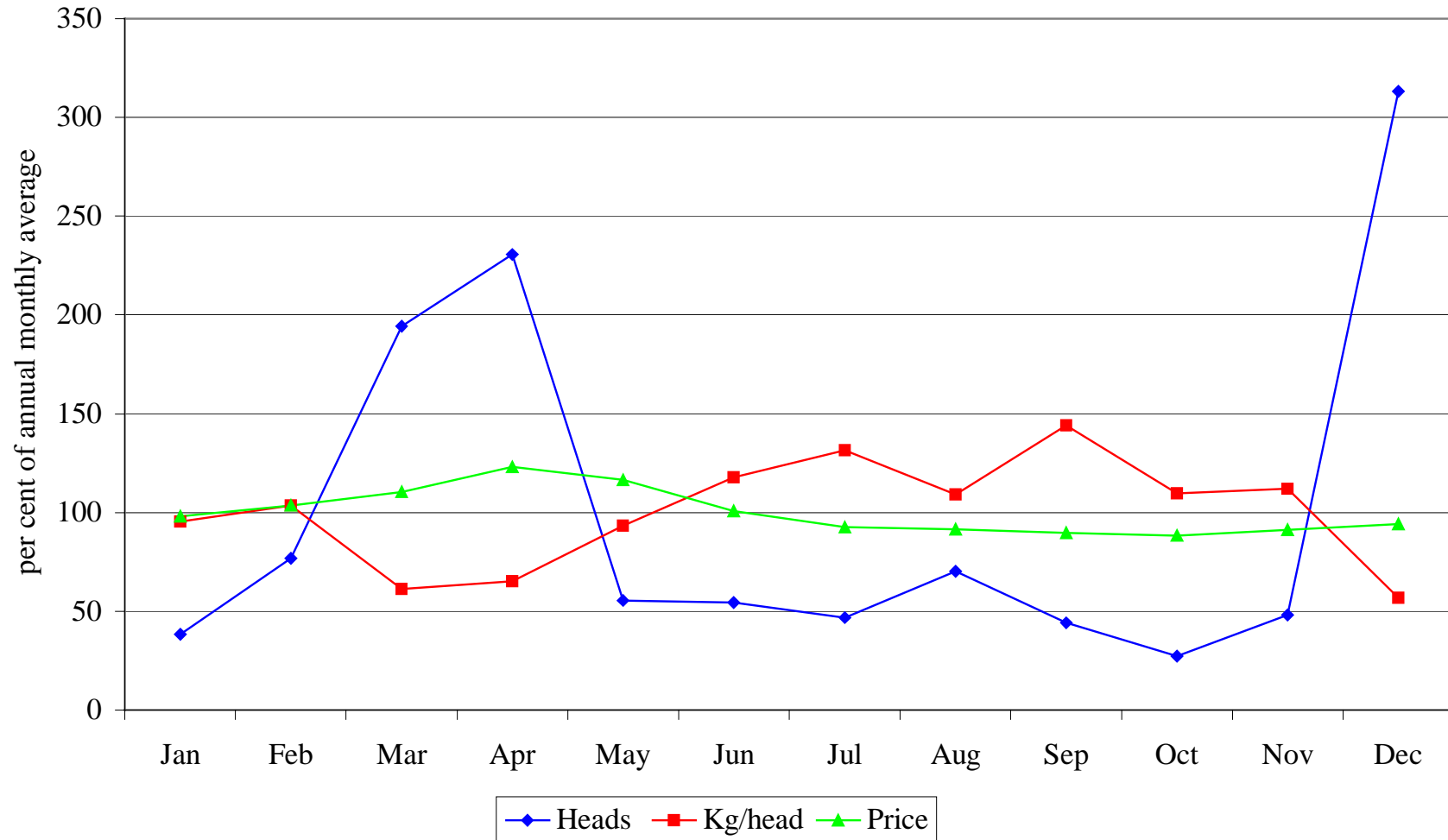
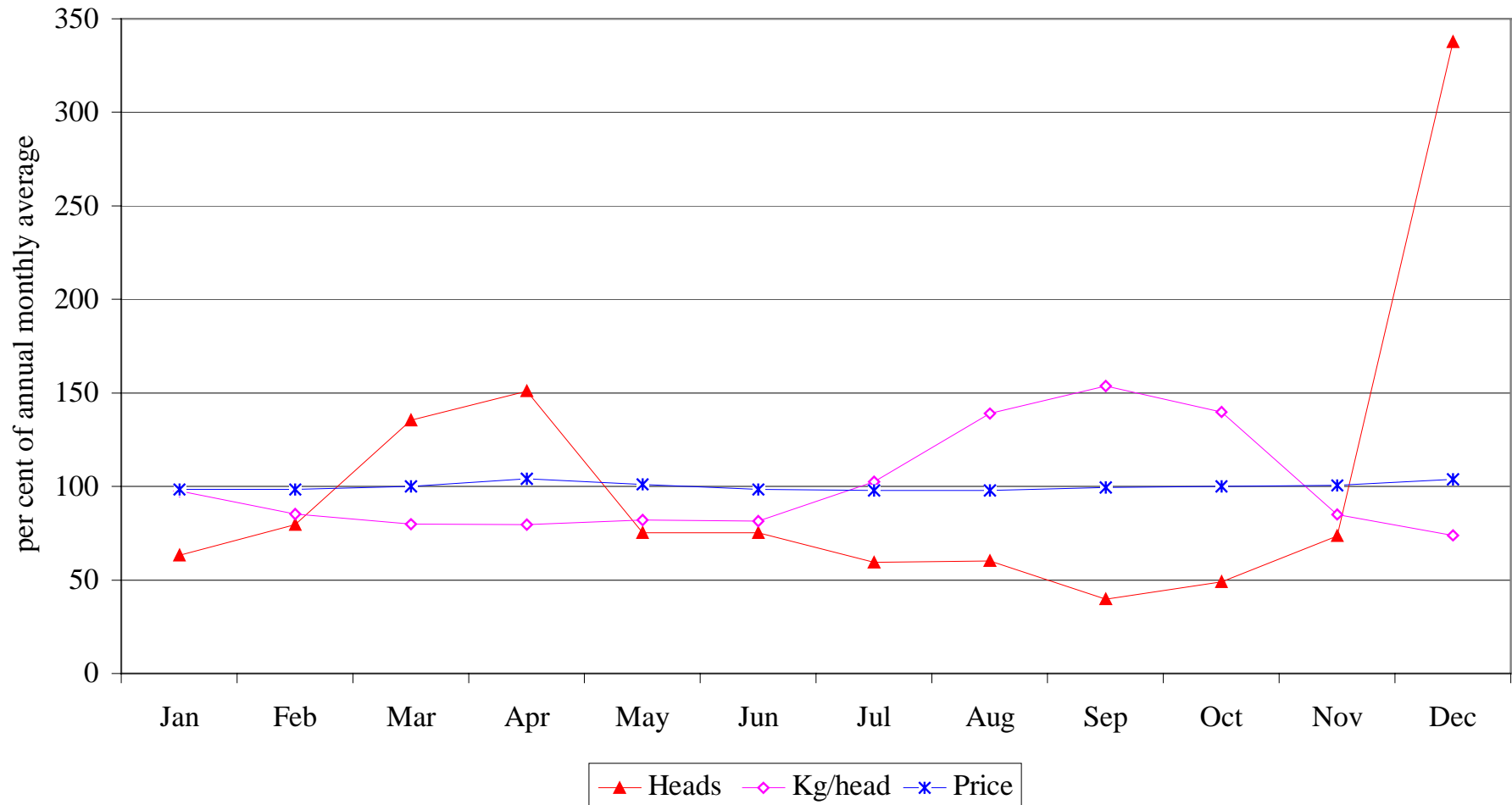


Figure 2.2.6
Seasonal pattern of goat slaughtered - Portugal (1992-98av)



APPENDIX 2.2

Estimation of short- and long-run supply elasticities

A2.2.1 To calculate supply elasticities, a simple regression approach has been followed relating net lamb meat production and prices received by farmers in real terms. The analysis has been carried out at EU level and for the main producer countries: France, Greece, Ireland, Italy, Spain and UK. The sample period covers annual data from 1983 to 1998. Although it is expected that other determinants have an influence on quantities supplied, they have not been considered in this study. The idea is only to establish a starting point in which it is possible to know farmers' reactions to price changes. On the other hand, the approach followed here is more flexible than simply calculating correlations between prices and quantities. As it is expected that some lags will exist in the reaction to changes in prices, up to three lags have been considered for prices. Finally, as some persistence in production patterns is expected, the dependent variable was introduced lagged one period as an additional explicative variable. Thus the specification of the regression is as follows:

$$QS_t = \beta_0 + \beta_1 QS_{t-1} + \sum_{i=1}^3 \alpha_i P_{t-i} + u_t \quad (1)$$

where: QS_t is the net meat production; P_t is the price received by farmers; and u_t is the error term.

A2.2.2 Several specifications of model (1) have been tested in order to find the regression which best fitted the data. Two alternative ways of specification have been followed. The first one has been to select the appropriate price lag. Using the AIC (Akaike, 1969) procedure, in all cases the model with the price only lagged one period was chosen. The second step was to select between alternative functional forms. In fact the linear versus the double log specification were tested. The Likelihood Ratio test indicated that in all cases, the double log specification outperforms the linear one. Thus the final estimated model for each country was the following:

$$LQS_t = \beta_0 + \beta_1 LQS_{t-1} + \alpha_1 LP_{t-1} + u_t \quad (2)$$

where the L indicates that the variable has been defined in log terms.

A2.2.3 The estimated parameters are shown in Table A2.2.1. First of all, it seems that the model is properly specified as the absence of autocorrelation is not rejected (see the values of BG and compare with the critical value of 3.84 at the 5% level of significance). As the model is in double log form the parameters can be directly interpreted as elasticities.

Table A2.2.1
Estimated parameters from the supply equation

	β_0	α_1	β_1	R^2	BG(1)
Greece	5.38*	0.21	0.25*	0.60	0.5
France	2.02	0.02	0.59*	0.55	1.2
Ireland	2.33	0.20	0.73*	0.74	2.3
Italy	2.92	0.25	0.64*	0.59	1.1
Spain	1.10	0.06	0.79*	0.66	0.9
UK	2.74	0.11	0.64*	0.65	0.7
UE	5.76	0.27	0.40*	0.67	1.2

An * indicates that the coefficient is significant at the 5% level

BG (1) is the Breusch Godfrey statistic for autocorrelation of order 1. Critical value at the 5% level is 3.84

A2.2.4 The long-run supply elasticity is calculated as follows:

$$\frac{\alpha_1}{1 - \beta_1}$$

A2.2.5 Results are shown in Table A2.2.2

Table A2.2.2
Short-run and long-run supply elasticities

	Short-run elasticity	Long-run elasticity
Greece	0.21	0.84
France	0.02	0.04
Ireland	0.20	0.27
Italy	0.25	0.39
Spain	0.06	0.08
UK	0.11	0.17
UE	0.27	0.67

APPENDIX TO CHAPTER 3

Figure 1
Farm Net Value Added per Annual Work Unit sheep producers in the UK
categorised by farm location

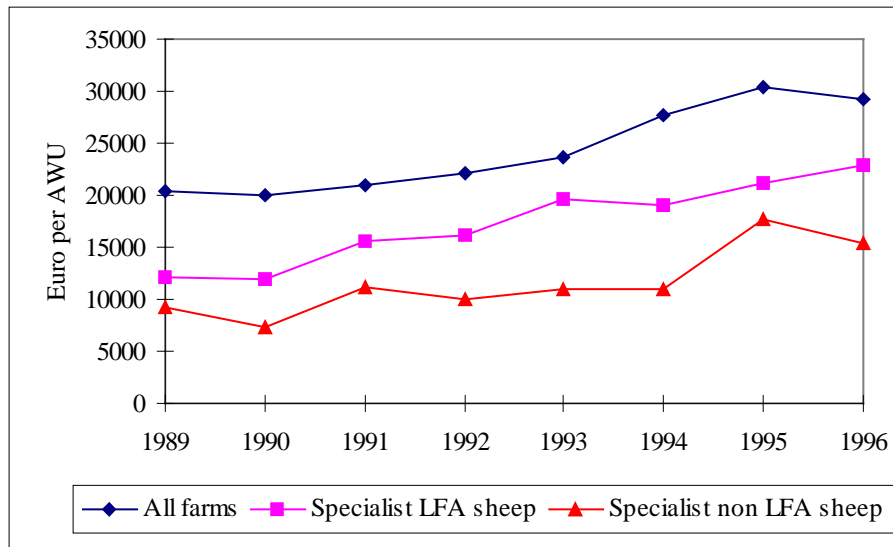


Figure 2
Farm Net Value Added per Annual Work Unit sheep producers in Ireland
categorised by farm location

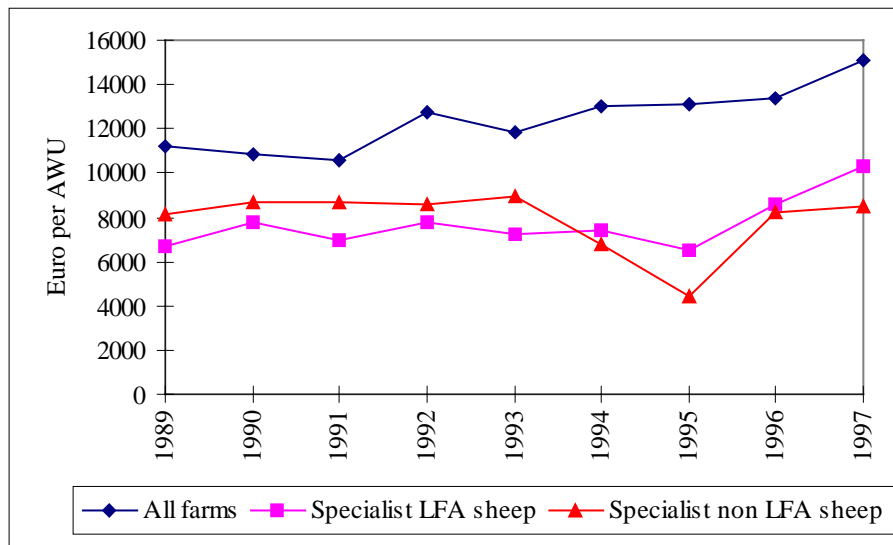


Figure 3
Farm Net Value Added per Annual Work Unit in sheep producers France
categorised by farm location

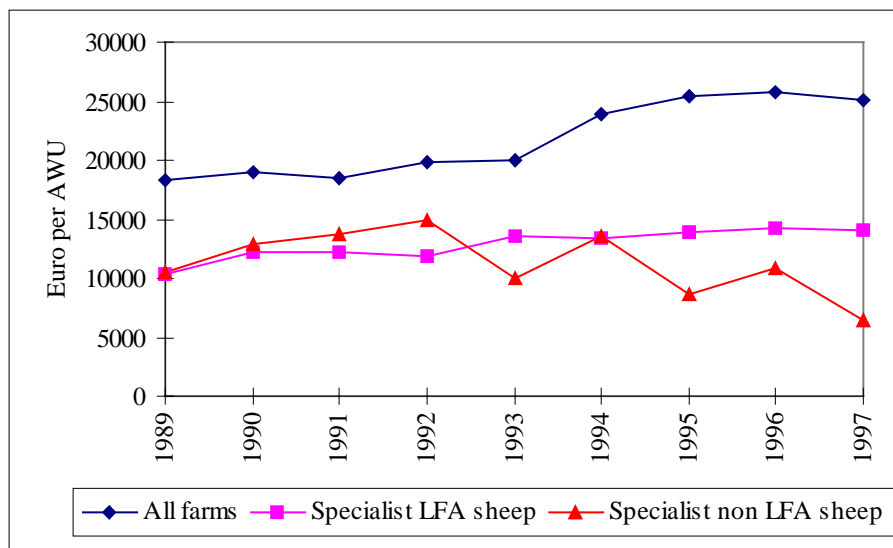


Figure 4
Farm Net Value Added per Annual Work Unit in for sheep producers Spain
categorised by farm location

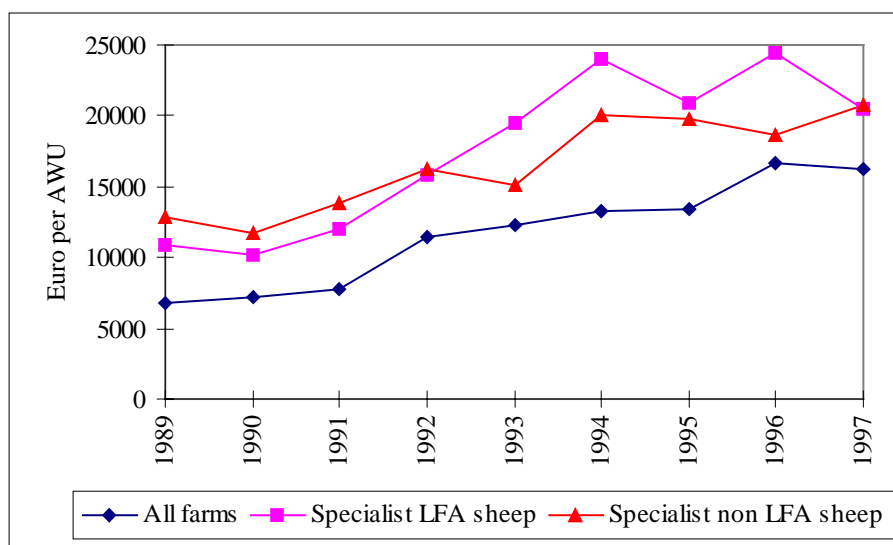


Figure 5
Farm Net Value Added per Annual Work Unit for sheep producers in Greece
categorised by farm location

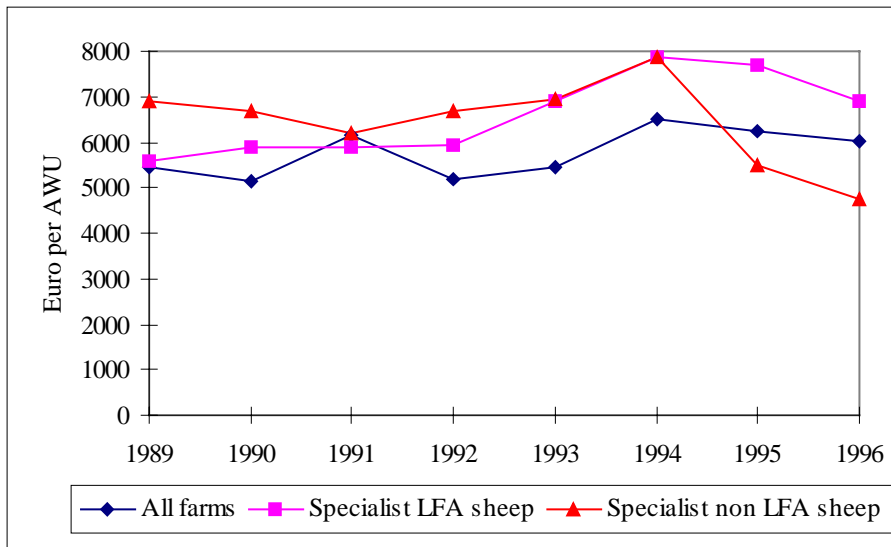
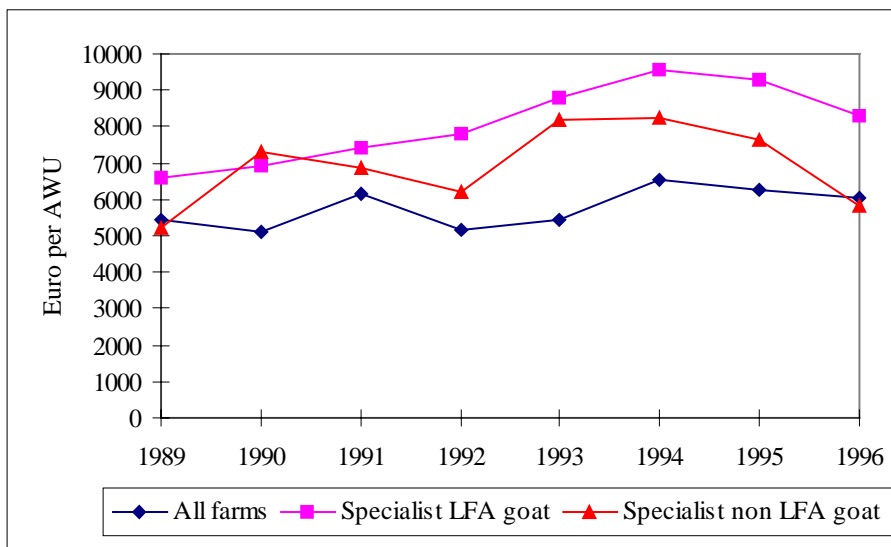


Figure 6
Farm Net Value Added per Annual Work Unit for goat producers in Greece
categorised by farm location



STATISTICAL ANNEX

Table A4.1
FNVA per Annual Work Unit - All Farms

	UK	Ireland	France	Spain	Greece	EU
ECU/Euro per Annual Work Unit						
1989	20345	11199	18253	6741	5454	11602
1990	20061	10884	19025	7261	5123	11352
1991	20960	10617	18460	7705	6146	11902
1992	22048	12753	19903	11494	5179	12232
1993	23617	11870	20036	12226	5430	12482
1994	27786	13023	23899	13343	6512	14594
1995	30405	13068	25504	13378	6253	15728
1996	29291	13382	25828	16689	6025	16276
1997	n/a	15107	25065	16261	n/a	n/a

Source: FADN

Table A4.2
FNVA per Annual Work Unit - Specialist Sheep Farms

	UK	Ireland	France	Spain	Greece	EU
ECU/Euro per Annual Work Unit						
1989	11835	7073	10321	11422	5850	9321
1990	11526	8063	12200	10483	6059	9111
1991	15042	7497	12331	12414	5947	10181
1992	15594	7974	12076	15872	6096	11835
1993	18717	7547	13209	18351	6895	12584
1994	17486	7287	13437	23113	7858	13433
1995	20640	6131	13687	20543	7251	13159
1996	21771	8577	13953	23215	6528	14194
1997	n/a	10122	13842	20547	n/a	n/a

Source: FADN

Table A4.3
FNVA per Annual Work Unit - Specialist Goat Farms

	France	Spain	Greece	EU
ECU/Euro per Annual Work Unit				
1989	8608	6702	6435	6552
1990	9259	6248	6979	6532
1991	9153	7244	7350	6503
1992	9993	12106	7573	7618
1993	10941	14348	8687	9014
1994	10174	23031	9337	9097
1995	7698	15640	9103	8783
1996	15833	15513	8034	8537
1997	11681	13166	n/a	n/a

Source: FADN

Table A4.4
FNVA per Annual Work Unit - Specialist LFA sheep farms

	UK	Ireland	France	Spain	Greece	EU
ECU/Euro per Annual Work Unit						
1989	12203	6714	10304	10904	5850	8877
1990	12014	7814	12158	10180	6059	9060
1991	15501	6997	12218	12038	5947	10047
1992	16232	7779	11888	15764	6096	11799
1993	19652	7258	13483	19548	6895	12977
1994	19077	7397	13418	24070	7858	13849
1995	21237	6468	13978	20837	7251	13687
1996	22861	8632	14167	24428	6528	14605
1997	n/a	10322	14115	20482	n/a	n/a

Source: FADN

Table A4.5
FNVA per Annual Work Unit - Specialist non-LFA sheep farms

	UK	Ireland	France	Spain	Greece	EU
ECU/Euro per Annual Work Unit						
1989	9174	8147	10536	12838	6889	11170
1990	7219	8672	12865	11686	6680	9351
1991	11110	8659	13801	13809	6216	10843
1992	10066	8621	14865	16203	6672	11995
1993	10905	8916	10051	15167	6959	10777
1994	10959	6772	13605	20016	7887	11577
1995	17745	4456	8651	19754	5473	11026
1996	15444	8248	10888	18641	4769	11486
1997	n/a	8491	6468	20819	n/a	n/a

Source: FADN

Table A4.6
FNVA per Agricultural Work Unit excluding sheep and goat subsidies for specialist sheep and goat producers compared with the all farm FNVA per Annual Work Unit

	All	Sheep ex sub	Goat ex sub
ECU/Euro per Annual Work Unit			
1989	11602	7253	5542
1990	11352	6526	5382
1991	11902	6489	5274
1992	12232	7893	5965
1993	12482	6783	7180
1994	14594	6863	6930
1995	15728	6224	6418
1996	16276	8195	6199

Source: FADN

Table A4.7
FNVA per Annual Work Unit at constant 1996 ECU values

	Specialist Sheep Farms	Specialist Goat Farms	Specialist Sheep Farms ex sub	Specialist Goat Farms ex Sub
ECU/Euro per Annual Work Unit				
1989	11363	7987	8842	6756
1990	10592	7593	7587	6257
1991	11267	7196	7181	5837
1992	12739	8199	8496	6421
1993	13545	9703	7301	7729
1994	14139	9576	7225	7295
1995	13684	9133	6472	6674
1996	14193	8536	8195	6199

Source: FADN

Table A4.8
FNVA per Annual Work Unit and FNVA excluding subsidies per Annual Work Unit - Specialist Sheep Farms

	UK		Ireland		France		Spain		Greece		EU	
	Total	ex. subs	Total	ex. subs	Total	ex. subs	Total	ex. subs	Total	ex. subs	Total	ex. subs
ECU/Euro per Annual Work Unit												
1989	11835	4858	7073	2599	10321	n/a	11422	9335	5850	4648	9321	7253
1990	11526	2737	8063	796	12200	n/a	10483	7960	6059	4652	9111	6526
1991	15042	2334	7497	1140	12331	n/a	12414	8506	5947	4424	10181	6490
1992	15594	1694	7974	398	12076	n/a	15872	10950	6096	4264	11835	7893
1993	18717	1889	7547	1725	13209	n/a	18351	11994	6895	5016	12584	6783
1994	17486	1292	7287	1745	13437	n/a	23113	15399	7858	5855	13433	6864
1995	20640	1922	6131	933	13687	n/a	20543	12352	7251	5143	13159	6224
1996	21771	6098	8577	2783	13953	n/a	23215	16388	6528	4228	14194	8196
1997	n/a	n/a	10122	4785	13842	n/a	20547	14669	n/a	n/a	n/a	n/a

Source: FADN

Table A4.9
Sheep enterprise gross margins in Ireland 1988 -1997

	Hill blackface		Mid season	
	Total	ex. sheep support	Total	ex. sheep support
	IR£/ewe			
1988	39	14	63	44
1989	31.4	8.7	54.2	36.8
1990	40.6	5.4	52.6	21.2
1991	36	3.2	47.9	24.3
1992	30.4	1.1	43.7	22.3
1993	37.8	3.6	54.5	29.5
1994	36.9	0.1	52.6	30.1
1995	36.7	2.1	45.7	23.9
1996	45.5	6.7	58.1	33.3
1997	41	12.1	56.6	40.3

Source: National Farm Survey, TEAGASC

Table A4.10
Total sheep enterprise gross margins and enterprise gross margins excluding CMO support for Upland and Lowground systems in the UK

	Upland		Lowland	
	Total	Ex. CMO payments	Total	Ex. CMO payments
	£/ewe			
1988	39.9	34.4	36.2	30.1
1989	38.2	32.9	34.6	28.9
1990	35.9	28.4	31.8	23.9
1991	37.8	26	32.8	22.9
1992	39.8	22.1	33.9	20.9
1993	51.7	27.7	44.6	26.9
1994	48	25.8	43.4	26.3
1995	51.9	28.7	45.2	27.3
1996	61	38.3	53.3	34.6
1997	50.3	30.9	43.4	31.6

Source: MLC

Table A4.11
Proportion of dairy ewes, meat ewes and goats in the Less Favoured Areas

	% dairy sheep in LFA		% meat sheep in LFA		% Goats in LFA	
	1991	1995-97	1991	1995-97	1991	1995-97
Belgium	0.00	39.91	14.71	16.75	0.00	0.00
Denmark	0.00	0.00	0.00	0.00	0.00	0.00
Germany	0.00	32.23	73.47	60.07	0.00	0.00
Greece	73.77	78.82	66.77	87.36	88.88	91.22
Spain	76.47	88.39	78.57	87.71	75.00	83.09
France	100.00	99.20	81.25	81.09	100.00	99.76
Ireland	0.00	12.93	63.43	78.70	0.00	0.00
Italy	74.36	76.68	72.78	77.02	91.69	89.84
Luxembourg	0.00	0.00	100.00	100.00	0.00	0.00
Netherlands	0.00	12.94	2.23	5.16	0.00	0.00
Portugal	89.53	89.13	90.91	92.15	46.11	59.83
U. Kingdom	0.00	25.57	99.96	71.83	0.00	0.00
EU	76.66	81.07	82.16	77.15	81.56	89.13

Source: Derived from EU DG Agriculture personal communication

Table A4.12
Proportion of dairy ewes in total ewe population

	% Dairy ewes in total ewes	
	1991	1995-97
Belgium	8	1
Denmark	0	1
Germany	0	0
Greece	95	94
Spain	19	19
France	17	21
Ireland	0	0
Italy	87	89
Luxembourg	0	0
Netherlands	1	0
Portugal	25	24
U. Kingdom	0	0
EU	30	30

Source: Derived from EU DG Agriculture personal communication

Table A4.13
Seasonal pattern of lamb prices in the EU
(Average of monthly price 1992 to 1998)

	EU	Greece	Spain	France	Ireland	Italy	Portugal	UK	
	Euro/Kg carcase weight								Variance
Jan	3.08	3.39	3.42	3.40	2.53	3.22	4.04	2.70	0.22
Feb	3.11	3.26	3.15	3.46	2.68	3.22	3.77	2.92	0.11
Mar	3.20	3.26	2.97	3.57	2.86	3.27	3.47	3.14	0.06
Apr	3.37	3.60	2.99	3.72	3.18	3.40	3.42	3.38	0.05
May	3.29	3.57	2.97	3.52	3.01	3.31	3.39	3.36	0.05
Jun	3.07	3.60	3.02	3.26	2.60	3.22	3.42	2.93	0.09
Jul	2.99	3.78	3.41	3.14	2.39	3.20	3.49	2.58	0.21
Aug	3.01	3.99	3.67	3.12	2.36	3.20	3.63	2.49	0.33
Sep	3.06	4.00	3.91	3.18	2.31	3.26	3.92	2.43	0.44
Oct	3.04	3.87	4.02	3.08	2.28	3.27	4.01	2.38	0.47
Nov	3.08	3.61	4.06	3.20	2.35	3.29	4.09	2.47	0.42
Dec	3.14	3.51	3.98	3.36	2.43	3.39	4.18	2.56	0.37

Source: EUROSTAT - Agricultural Markets

Table A4.14
Average seasonal variation in price pattern

	EU	Greece	Spain	France	Ireland	Italy	Portugal	UK
	Monthly price as a percent of annual average							
Jan	98.61	93.69	98.84	101.99	97.96	98.54	108.06	97.27
Feb	99.85	90.10	90.80	103.74	103.72	98.45	100.95	104.93
Mar	102.60	90.14	85.85	106.96	110.57	99.98	92.95	112.95
Apr	108.00	99.49	86.18	111.67	123.08	104.04	91.62	121.59
May	105.62	98.58	85.73	105.59	116.49	101.03	90.78	120.77
Jun	98.29	99.33	87.09	97.79	100.84	98.49	91.46	105.55
Jul	95.73	104.30	98.55	94.19	92.60	97.80	93.30	92.95
Aug	96.60	110.30	105.98	93.64	91.44	97.88	97.16	89.71
Sep	98.02	110.50	112.99	95.26	89.55	99.54	104.88	87.40
Oct	97.33	106.79	115.95	92.48	88.39	99.93	107.29	85.75
Nov	98.80	99.81	117.19	95.82	91.16	100.59	109.55	88.84
Dec	100.54	96.96	114.84	100.87	94.20	103.73	112.00	92.28

Source: Derived from EUROSTAT - Agricultural Markets

Table A4.15
Seasonal pattern of lamb slaughterings (Average of 1992 - 1998)

	EU	Greece	Spain	France	Ireland	Italy	UK
Monthly slaughterings as a percentage of annual monthly average							
Jan	74	96	84	84	68	93	104
Feb	200	101	91	83	61	76	76
Mar	206	130	118	124	66	149	72
Apr	107	320	116	133	91	156	75
May	72	114	99	115	128	39	66
Jun	69	60	96	106	122	28	86
Jul	77	52	96	106	135	23	127
Aug	75	47	101	102	129	35	114
Sep	70	36	81	87	122	46	120
Oct	76	43	79	83	107	69	145
Nov	63	72	79	78	91	110	110
Dec	111	129	160	99	81	376	103

Example: Average EU slaughterings in January are 74% of the annual monthly average

Source: Derived from EUROSTAT - Agricultural Markets

Table A4.16
Seasonal pattern of lamb weights (Average of 1992 - 1998)

	EU	Greece	Spain	France	Ireland	Italy	UK
Monthly slaughter weights as a percentage of annual monthly average							
Jan	106	104	96	98	101	76	90
Feb	92	99	99	99	101	127	98
Mar	72	95	98	98	100	86	103
Apr	88	100	102	97	100	75	97
May	100	100	101	100	98	83	115
Jun	103	104	105	101	100	87	121
Jul	101	104	103	102	100	97	95
Aug	103	112	103	100	100	95	101
Sep	106	104	102	104	100	119	108
Oct	101	102	101	103	100	106	85
Nov	144	88	98	102	100	192	93
Dec	86	88	91	95	100	57	93

Example: Average EU carcass weight in January is 106% of the annual monthly average carcass weight.

Source: Derived from EUROSTAT - Agricultural Markets

Table A4.17
Seasonal pattern of lamb and goat price (Average of 1992 - 1998)

	EU	Greece	Spain	France	Ireland	Italy	UK
Monthly prices as a percentage of annual monthly average							
Jan	99	94	99	102	98	99	97
Feb	100	90	91	104	104	98	105
Mar	103	90	86	107	111	100	113
Apr	108	99	86	112	123	104	122
May	106	99	86	106	116	101	121
Jun	98	99	87	98	101	98	106
Jul	96	104	99	94	93	98	93
Aug	97	110	106	94	91	98	90
Sep	98	111	113	95	90	100	87
Oct	97	107	116	92	88	100	86
Nov	99	100	117	96	91	101	89
Dec	101	97	115	101	94	104	92

Example: Average EU price in January is 99% of the annual monthly average price
Source: Derived from EUROSTAT - Agricultural Markets

Table A4.18
Seasonal pattern of goat slaughterings (Average of 1992 - 1998)

	EU	Greece	Spain	France	Italy	Portugal
Monthly slaughterings as a percentage of annual monthly average						
Jan	68	65	77	82	38	63
Feb	92	82	90	154	77	80
Mar	150	122	111	317	194	135
Apr	254	316	101	267	231	151
May	115	146	89	67	56	75
Jun	77	89	85	25	54	75
Jul	66	76	76	12	47	60
Aug	65	69	86	11	70	60
Sep	56	58	78	15	44	40
Oct	59	56	89	36	27	49
Nov	66	56	94	67	48	74
Dec	132	64	223	147	313	338

Example: Average EU slaughterings in January are 68% of the annual monthly average.

Source: Derived from EUROSTAT - Agricultural Markets

Table A4.19
Seasonal pattern of goat weights (Average of 1992 - 1998)

	EU	Greece	Spain	France	Italy	Portugal
Monthly carcase weights as a percentage of annual monthly average						
Jan	100	88	138	82	95	98
Feb	86	85	94	73	104	85
Mar	80	83	93	68	61	80
Apr	83	81	87	74	65	80
May	96	88	104	92	93	82
Jun	104	99	99	122	118	81
Jul	112	105	103	124	132	102
Aug	113	113	94	139	109	139
Sep	120	117	109	148	144	154
Oct	119	128	103	110	110	140
Nov	107	117	98	92	112	85
Dec	78	96	77	76	57	74

Example: Average EU carcase weight in January is 100% of the annual monthly average carcase weight

Source: Derived from EUROSTAT - Agricultural Markets

Table A4.20
Number of mated ewe-lambs and ewes

	Greece	Spain	UK	France	Ireland	Italy	EU 12
	'000 head						
1986	7031	12559	18194	8958	2663	8826	62178
1987	7019	16250	19174	8685	3120	8802	67232
1988	7219	16885	20167	8662	3600	8870	69854
1989	6954	17255	20618	8432	4148	8836	71026
1990	6860	17612	20722	8476	4488	8134	71382
1991	6769	17994	20475	8071	4625	7698	71217
1992	6723	18304	20824	7734	4806	7691	71438
1993	6744	18119	20486	7920	4676	7765	70783
1994	6009	17603	20309	7755	4545	7898	69244
1995	6359	15741	19796	7880	4372	8518	67898
1996	6101	18172	19353	7651	4312	8650	67694
1997	6217	18118	20061	7580	4372	8740	68349
1998	6155	17551	20329	7533	4460	8020	67233

Source: Eurostat Agriculture yearbook 1994,1997,1998

Table A4.21
Number of goats which have kids or are mated

	Greece	Spain	France	Italy	Portugal	EU-12
	'000 head					
1988	4105	2549	870	988	604	9169
1989	4076	2835	1046	998	616	9629
1990	4106	2781	1035	992	616	9587
1991	4067	2109	939	984	622	8773
1992	4067	2005	905	1010	619	8658
1993	4015	2064	888	1037	605	8658
1994	3830	2170	900	1071	593	8610
1995	4000	2170	943	1071	581	8811
1996	3988	2042	940	1150	569	8732
1997	3987	2034	961	1144	572	8739
1998	4076	1855	941	1155	561	8630

Source: Eurostat

Table A4.22

Sheep and goat production

	Greece	Spain	France	Ireland	Italy	UK	EU 12
	'000 head slaughtered						
1988	11794	21030	9714	2134	8433	17104	70209
1989	12049	19957	10490	2776	9126	19616	74014
1990	12213	21006	11265	3887	9602	20012	77985
1991	12114	22333	10913	4215	9629	20916	80120
1992	12491	22845	10004	4336	9755	19151	78582
1993	12458	22304	9796	4700	8901	18863	77022
1994	12476	22565	9257	4416	8552	18961	76227
1995	12531	21976	8753	4298	8442	19331	75331
1996	12419	21637	9125	4367	8359	18071	73978
1997	12027	21644	8843	3770	8105	16674	71063
1998	11992	21700	8551	4067	7805	18697	72812

Source: Eurostat

Table A4.23
Sheep and goat production - kg/head carcass

	Greece	Spain	France	Ireland	Italy	UK	EU 12
	kg per carcass						
1986	10.74	11.43	17.27	n/a	8.29	18.91	13.87
1987	10.22	11.42	17.44	23.19	8.89	19.20	14.18
1988	10.60	10.94	16.88	22.96	8.66	18.83	13.85
1989	10.87	10.92	17.05	21.97	8.66	18.71	13.75
1990	10.60	11.00	17.20	22.00	9.90	18.50	14.40
1991	10.57	10.85	16.98	21.94	8.80	18.45	14.21
1992	10.57	10.81	17.16	21.69	8.82	18.64	14.05
1993	10.35	10.68	16.62	21.00	9.08	18.53	13.95
1994	10.36	10.79	16.66	20.96	9.13	18.56	13.97
1995	10.21	11.01	16.87	20.82	9.00	18.87	14.13
1996	10.54	10.99	16.81	20.61	9.28	19.12	14.22
1997	10.61	11.40	16.85	20.95	9.35	19.30	14.27
1998	10.54	11.29	16.74	20.55	9.39	18.78	14.27

Source: Eurostat