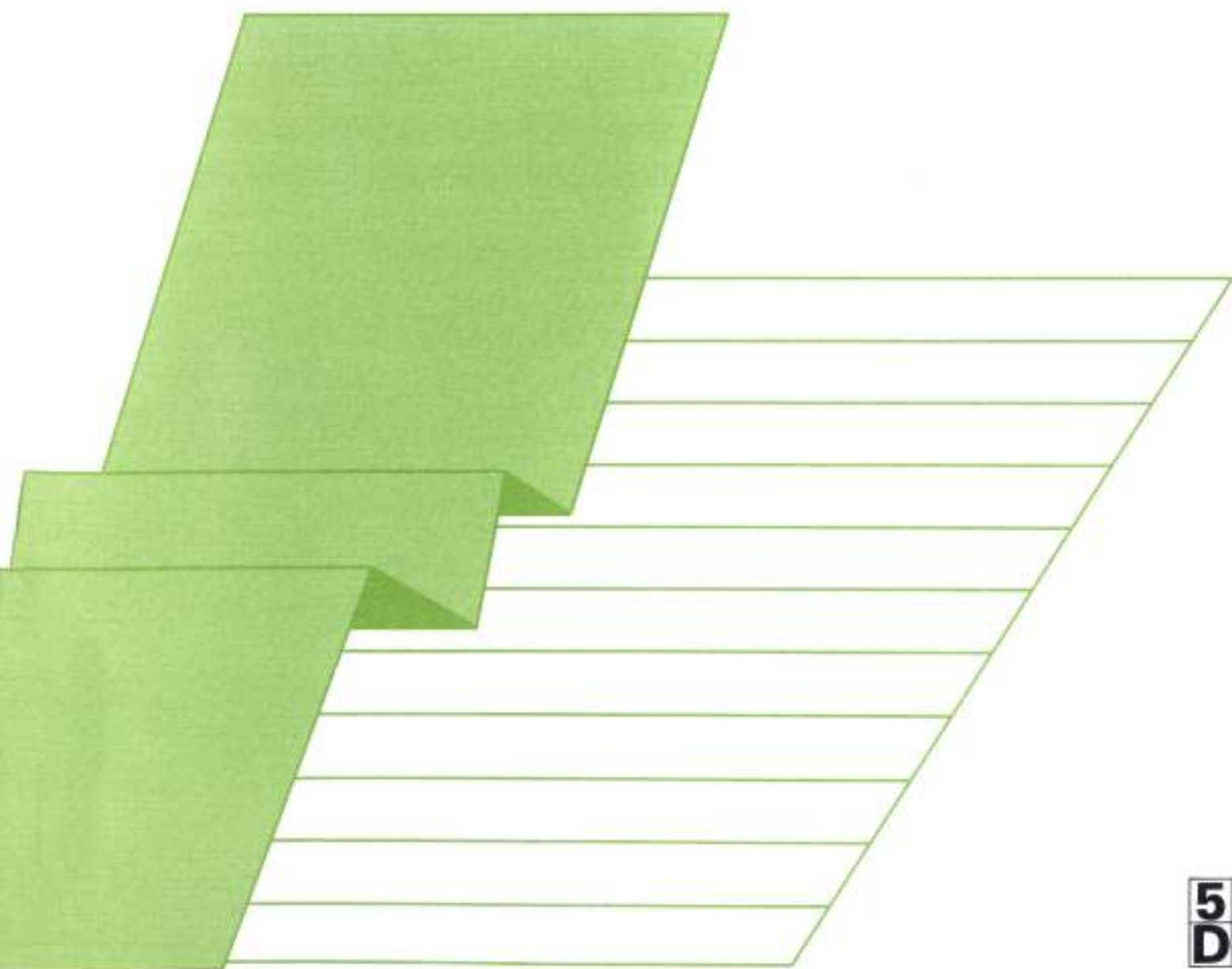


**FARM STRUCTURE
1985 survey: analysis of results**

**REGIONAL STRUCTURE
OF AGRICULTURAL PRODUCTION**





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FARM STRUCTURE
1985 survey: analysis of results

REGIONAL STRUCTURE
OF AGRICULTURAL PRODUCTION

Cartographic analysis
in accordance with the Community typology
for agricultural holdings

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for Social and Economic Geography
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Cataloguing data can be found at the end of this publication.

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FOREWORD

This study is a detailed analysis of the main types of farming in the various regions of Europe.

The cartographic representation and the use of standard gross margins (SGMs) as the unit of measurement constitute an original approach to this analysis, enabling complex results to be presented in a simple and systematic form.

The study is one of a series of analyses of the results of the Community farm structure survey conducted in 1985 and is shortly to be followed by a similar study of the results of the 1987 survey.

Eurostat is grateful to Professor Van Hecke and his team at the Institute for Social and Economic Geography, Catholic University of Louvain, for making this study ^{*)} available to Eurostat.

*)The conclusions expressed by Professor Van Hecke in this study do not necessarily represent those of Eurostat.

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1. METHODOLOGY

1.1 Introduction

To define the entire range of agricultural activities means analysing a great many figures. No method of representation is better suited to the regional study of agriculture than a series of maps. Agricultural activity is, however, so diverse in character that the series of maps required for such analysis is inevitably extensive. The units used in traditional analysis are hectares for crops or numbers of animals for livestock. As the economic value of a hectare or an animal varies enormously according to the type of production, the different maps cannot give a clear idea of the total economic size of different regions or regional production structures.

The aim of this publication is precisely to highlight production structures and the economic size of regional agricultural production. In an analysis of this kind, all agricultural production, whether crop or animal, must be expressed in a single unit of measurement. This enables production to be totalled to determine the overall economic size of the holding and the relative structures to be calculated, i.e. the proportion of the overall economic size represented by specific types of production or production sectors.

1.2 The unit of measurement: the Standard Gross Margin (SGM)

In practice, the only unit capable of expressing all types of production is the monetary unit. This has the advantage of yielding the economic size of production after aggregation.

Economic size can be calculated on the basis of final value or added value.

Use of the final value allows the size of the agricultural sector to be assessed; use of the final value with specific costs deducted (fertilizers, feedingstuffs purchased etc.) allows more accurate assessment of value added for each holding. The latter system is used in the farm accountancy data network (FADN) to determine the economic size and type of farming of each holding. The criterion used is the "STANDARD GROSS MARGIN (SGM)", which is defined as the difference between the standardized monetary value of gross production and the standardized monetary value of certain special costs; at regional level, this difference is determined for each type of production either per hectare of utilized agricultural area for crops, or per head of livestock for animals.

The SGMs used here are based on production and direct cost values determined for the period 1981-1983 (SGM "1982"). The SGMs are average or standardized values calculated by region.

1.3 Economic size of holdings and regions

The economic size of the holding is its total Standard Gross Margin, which equals the sum of the values obtained for each activity by multiplying the unit SGM by the corresponding number of units. By extension, moving from micro to macro level, the economic size of a spatial unit can be defined as the sum of the values obtained for each activity by multiplying the SGM per unit by the corresponding number of units: area for crops, number of animals for livestock, this time calculated by region.

The data thus collected (units of area and numbers of animals) are taken from the structure surveys. By definition, aggregating holdings according to their size class for a given spatial unit will give the economic value of that spatial unit, just as will regional aggregation of crops and animals multiplied by their respective SGMs.

1.4 Economic size and production structure

Calculation by region allows the importance of different types of production to be supplied in absolute figures (SGM) or in relation to the total economic size of the region. It is thus possible to consider regional production structures in exactly the same way as production structure per holding is considered in the farm accountancy data network (FADN), being defined as follows:

the type of farming of a holding is its production system as characterized by the relative contribution of each specialized activity to the total standard gross margin of the holding. By analogy, the type of farming of a region may be defined as the relative contribution of each specialized activity within that region to the total standard gross margin of that region.

1.5 Some methodological considerations

Since calculation was carried out at regional level, neither fodder nor piglets were taken into account. It follows that there can be neither surplus nor shortfall of fodder or piglets at regional level. A $SGM=0$ was therefore applied to all headings associated with fodder or piglets, these products being included in the final product (SGM for cattle; SGM for fattening pigs).

Where Member States defined SGMs by district, these were weighted on the basis of structure survey data available at district level (Germany, Italy) at a date as close as possible to 1985 or,

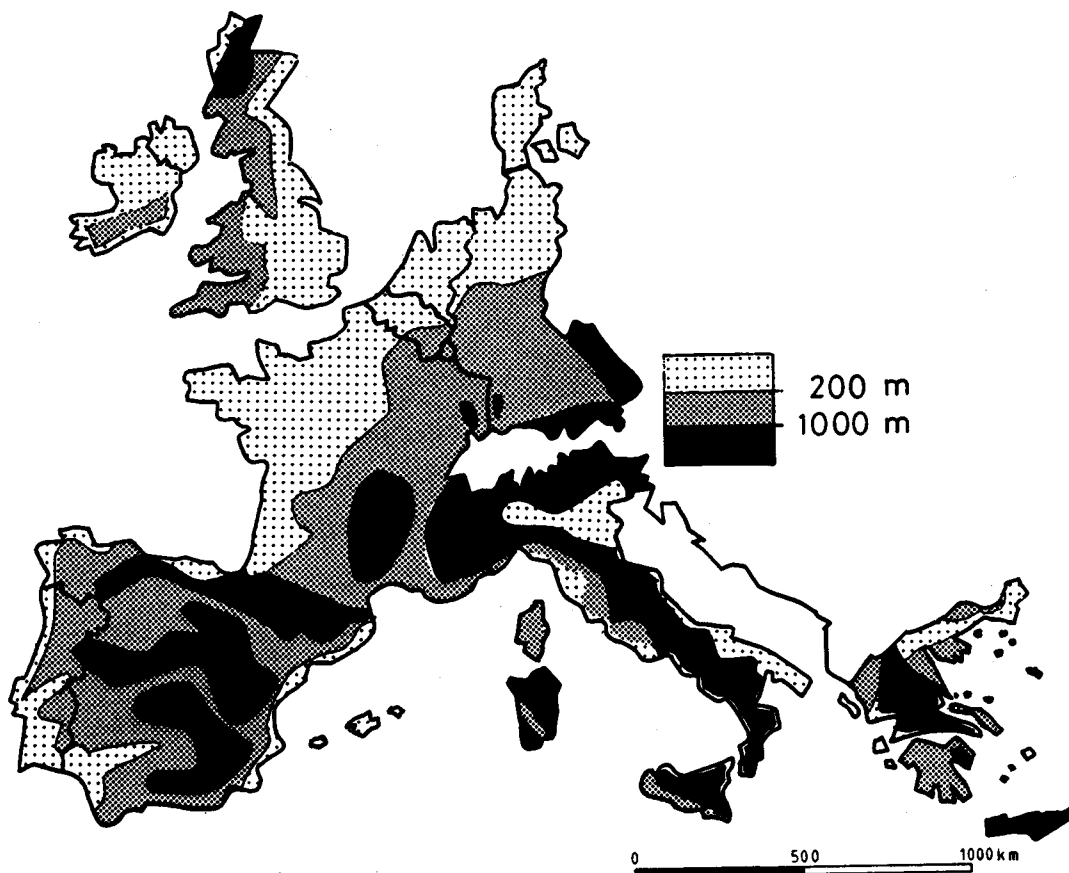


Figure 1A: Relief map

in the absence of structure survey data, national data by district were used to weight the SGMs (Greece) so as to obtain regional values.

The scope of the analysis was broadened by adding the available data for Portugal (1979) and Spain (1982). The SGMs used were also those of 1982, and comparison was therefore valid. In the case of Portugal, the arithmetic mean of the SGMs per district was used to calculate SGMs by region. The results correspond to the sum of the country's regions. Figures were calculated on a national rather than regional basis for Portugal (regional divisions would be much smaller than in other countries). In order to keep the maps consistent, and given that the data involved (both the figures for area and the SGM) are the first of their type available, we felt this approach was more likely to produce reliable results. For Spain, the regional SGM for dry and irrigated crops were weighted with the data for areas corresponding to dry and irrigated farming by region taken from the national statistics. It was thus possible to apply a weighted SGM to the data in the 1982 structure survey. In the case of Spain and Portugal, national data were also taken into account (regional accounts, agricultural censuses) in order to minimize certain statistical discrepancies between the survey structures (and the SGM used) and the national data.

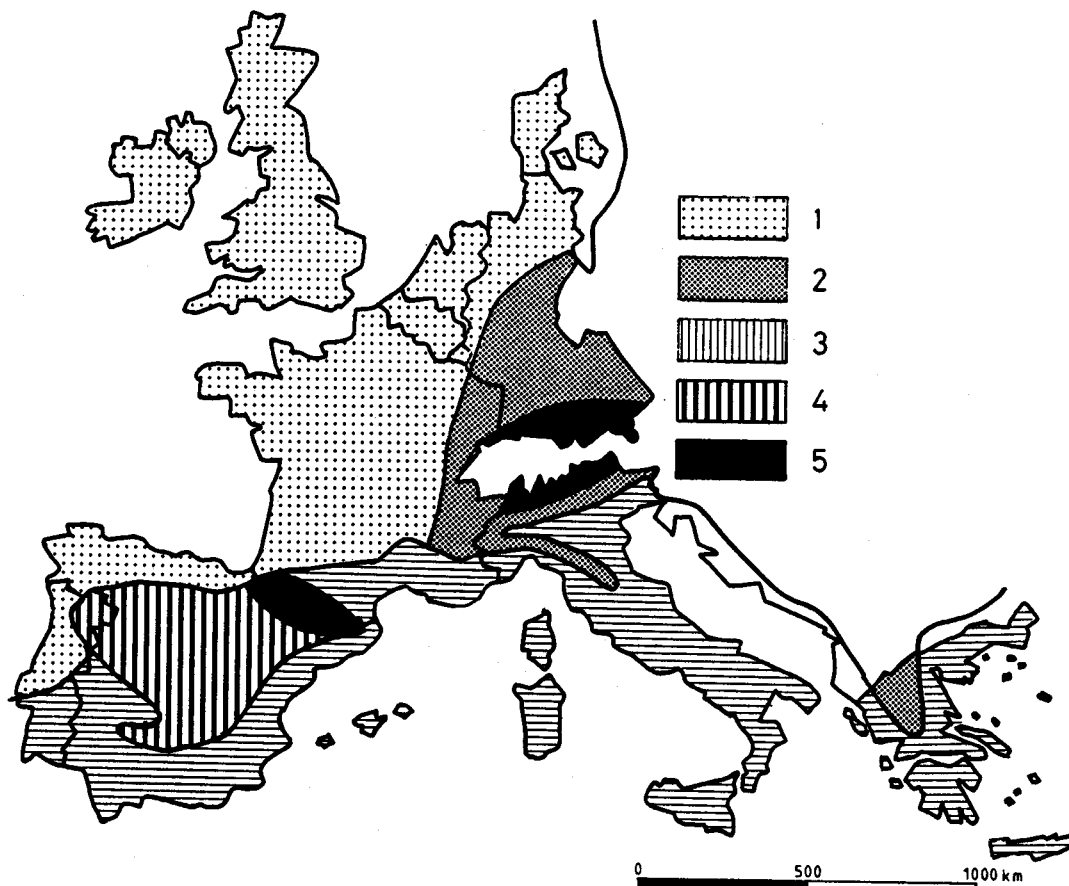


Figure 1B: Climatic zones:

1. Oceanic
2. Transitional
3. Mediterranean
4. Continental
5. Mountain

1.6 Cartographic representation: the various types of map

The first series of maps shows absolute values: number of hectares, value of a production sector or total value. The information is represented by symbols, their size being proportional to the area or production value represented (here SGM). The maps give a good indication of the spatial distribution of the phenomenon under consideration. They show which regions within the Community are important for a given type of production.

The second series of maps shows the proportion of total production represented by the different production sectors. By showing production structure they enable important sectors in regional production to be highlighted. They are a useful reference for determining the impact of certain decisions or events on the regional economy.

A third series of maps shows the size of different production sectors in relation to total agricultural area or the area of the sector under consideration. In the latter case, the map shows production intensity for that particular sector, the value depending on the type of product (industrial crops, for example, have a higher SGM than cereals) and production intensity: the level of production is shown in the SGM and depends on the physical environment and differences in management (cattle selected, use of fertilizers). The maps are concrete examples, giving the regional SGM for specific types of production.

When considered as a proportion of total agricultural area, the production level of each sector is directly related to production intensity within each sector and the proportion of total production the sector represents. As each sector is expressed as a proportion of total area, the importance of the sector can easily be established and different regions and sectors compared.

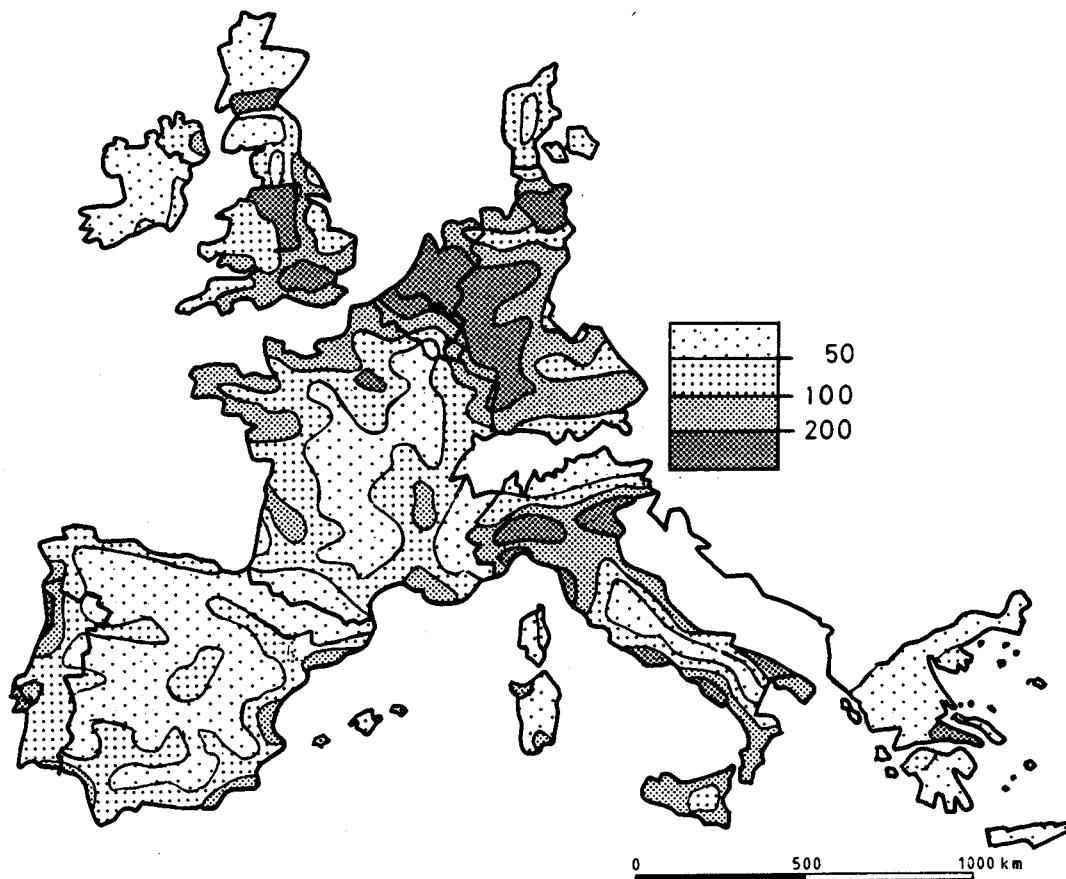


Figure 1C: Population density: inhabitants by km²

1.7 The interpretation framework

The interpretation of agricultural activities is highly complex. The following are only some of the geographical and agrarian factors influencing agriculture: relief (Figure 1), soil, climate; population density, local markets; the relative importance of other economic activities; average area per holding (Figure 2) or per work unit; the structure of upstream and downstream activities (agronomic research, marketing infrastructure, size of the food processing sector, etc.), production techniques (irrigation: Figure 3; utilization of fallow land: Figure 4).

In the north of the Community, an initial distinction can be made on the basis of relief. Certain handicaps - unfavourable climate, poor soil - are characteristic of the ancient massifs. Woodland and grassland are the usual cultivation of such areas. As few of the other economic sectors are represented, agriculture plays a key role both socially and in terms of upkeep of utilized agricultural land in the face of a marked depopulation trend. Population density having been reduced, agricultural holdings in these areas are either medium-sized (Massif Central; Germany) or large (Scotland).

Agricultural activity in the low plateaux or plains is largely determined by soil conditions: south-east England, the central Bassin Parisien, mid-Belgium, certain German plateaux and eastern Denmark, all with loamy soils, are highly fertile and ideal for arable farming. Agrarian structure varies according to differences in population density and historical factors: holdings in England and the Bassin Parisien have large average areas, while those in the remaining regions are

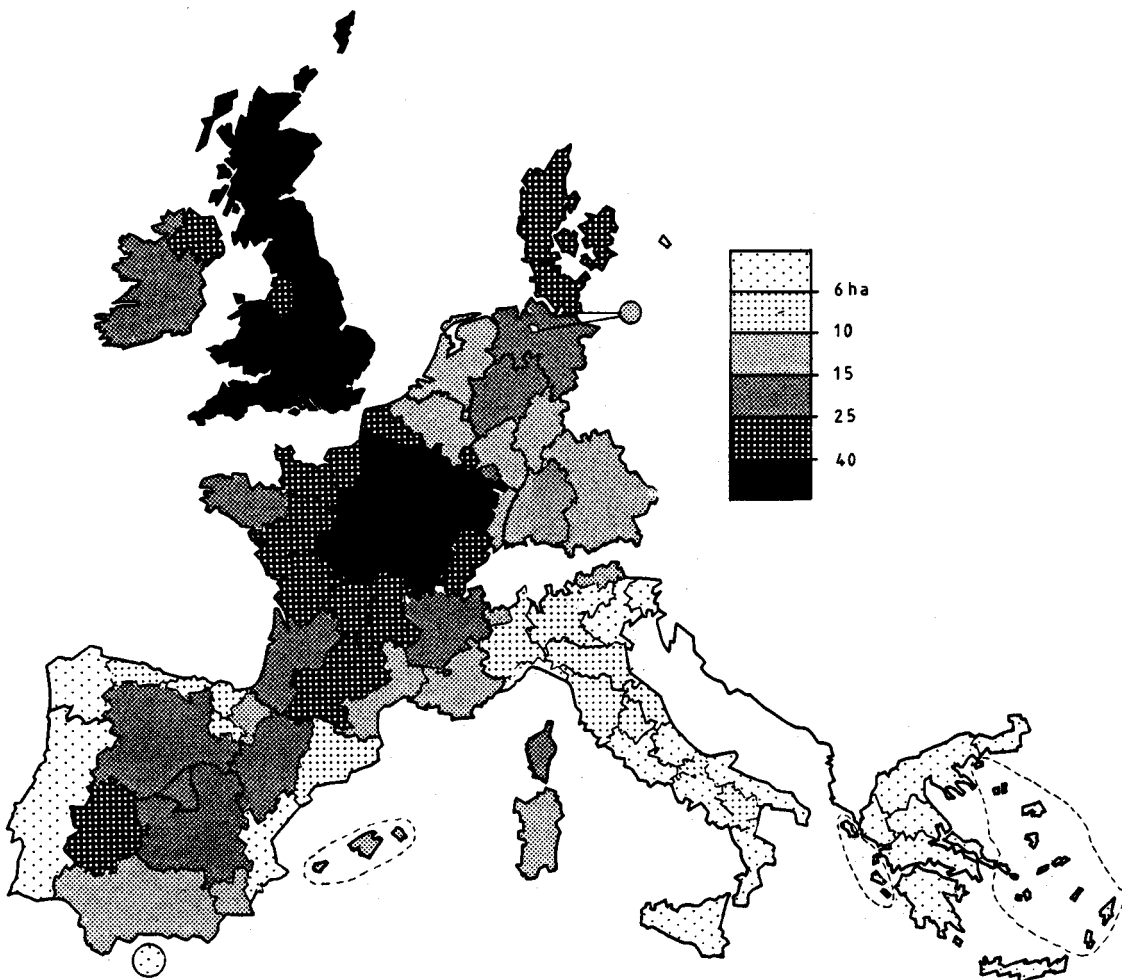


Figure 2: Average area: ha of UAA by holding (1985)

smaller, but still larger than those in the plains, which have sandy, less fertile soils. In these regions (northern Belgium (Flanders), south-east Netherlands, northern Germany, western Denmark) farmers have moved towards more intensive cultivation (horticulture, "landless" rearing) to compensate for the shortcomings of the land. Relatively infertile soil explains why grassland produces the best economic performance where basic production is concerned (field crops, grazing livestock).

The Polders bordering certain north-west coastal regions are, on the whole, fertile; either field crops or grassland dominate according to the degree of humidity and economic considerations.

In the south of the Community there are often greater physical limitations: the incidence of rough hilly terrain, shallow soil in mountain areas and dry summers, particularly in areas far from the coast which have a continental climate (mesetas in Castilla). Coastal or river plains with irrigation (which may or may not be provided by the river itself; sources of water supply are many and varied) achieve considerably higher productivity than dry mountain areas. Poor grassland and permanent crops dominate in the hilly areas and field crops, permanent crops and market gardening in the plains, with or without irrigation. When considering the southern area of the Community, it is important to stress that, given the often very specific location of the more fertile zones in narrow bands running alongside coasts and rivers, there is little correspondence between agro-geographic zones and administrative regions. Regional figures therefore comprise arithmetic means for production structures which are completely different in the plains and mountain areas of one region.

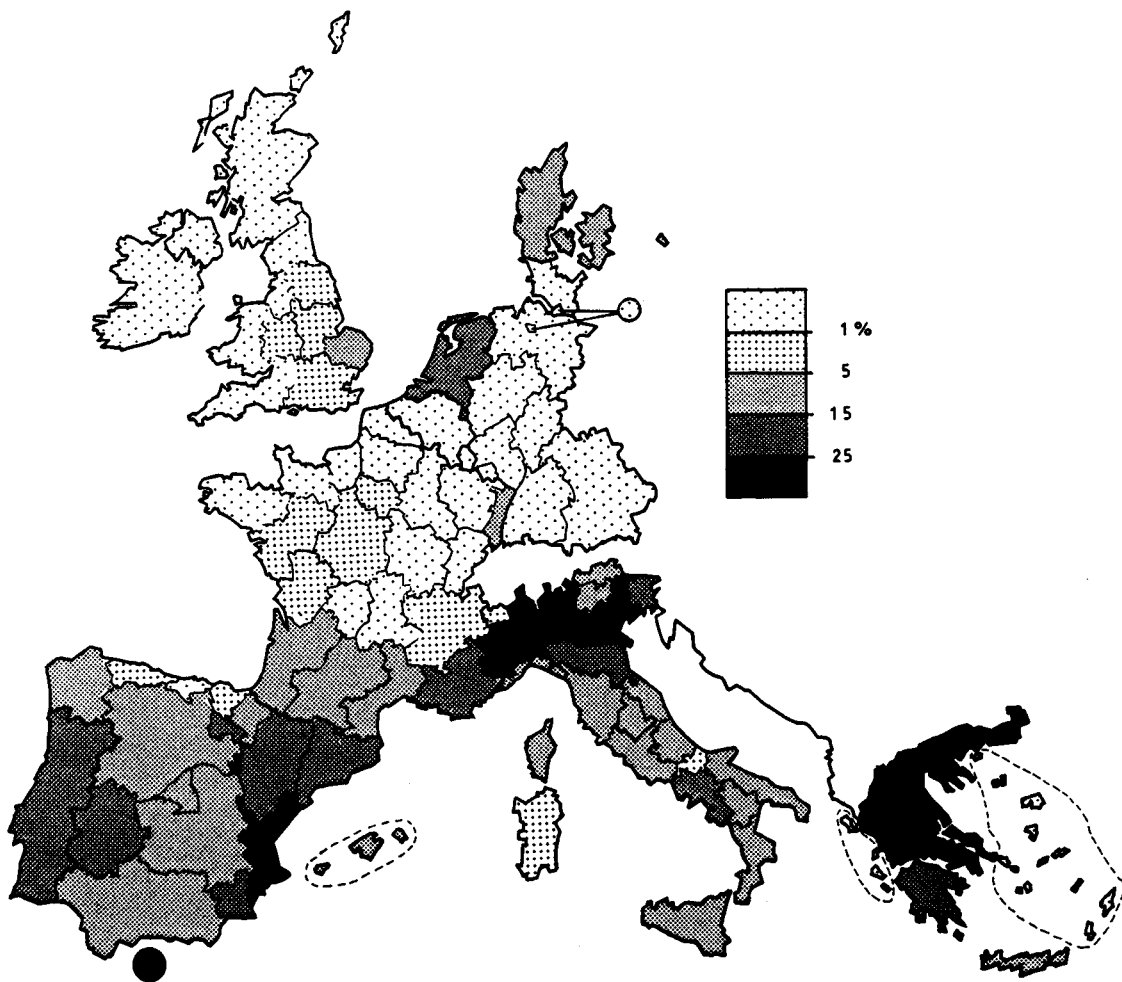


Figure 3: Irrigated area as a percentage of total UAA (1985)

One or the other of these structures will predominate in the average figures for the region, depending on its geographical structure. Production intensity as well as structure is affected, as profitability varies enormously between different geographic environments. The degree of irrigation shown in Figure 3 is a useful guide for interpreting production intensity figures. The degree of irrigation is highest in the Greek regions (except the islands), northern Italy, north-eastern Spain, and Portugal and the Extremadura on the western side of the Iberian Peninsula. It is worth noting that certain northern regions (Netherlands, Denmark, East Anglia) are not without irrigation despite their completely different climate: in these areas, the system essentially acts as a safety back-up, but nevertheless contributes to an improved yield. At the present stage of economic development, a large percentage of the active population in the south of the Community is still employed in agriculture, with the result that the average area of holdings is relatively small (Figure 2). Once again this is affected by geographical conditions, the average size being larger in inland, non-irrigated areas. In the case of Spain (and Portugal) this size difference is also influenced by a strong regional prevalence of one of two types of holding: small family farms and large estates.

A further characteristic of production method is the importance of fallow land (Figure 4), defined in the structure surveys as "land under a system of rotation, whether worked or otherwise, not giving any harvest during the whole accounting year". Fallows should not be confused with catch crops and non-utilized agricultural area. The essential characteristic of fallow land is that it is left unseeded, generally for a period of one crop year, to allow it to regain fertility.

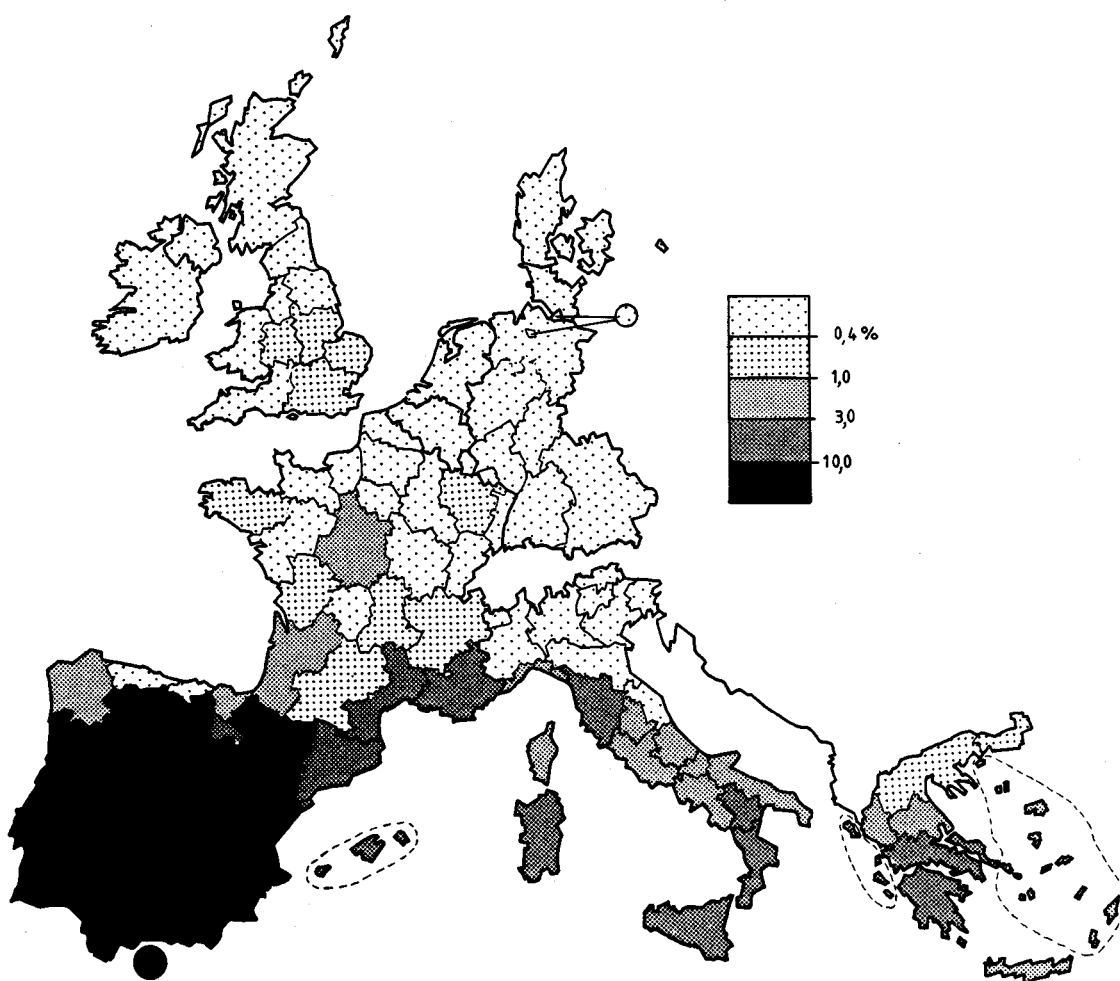


Figure 4: Fallow land as a percentage of total UAA (1985)

Fallow land accounts for practically a third of Portugal's agricultural area. The proportion is also high (10-25%) in most of the Spanish regions except the north east and Cataluña. The figure is much lower in the rest of the Mediterranean, mostly fluctuating between 1% and 5%, except in Peloponnisos and Sicilia, where the proportion is between 5% and 10%. In northern Italy and Greece, fallow land is practically non-existent, as is the case in the rest of the Community.

2. THE PRODUCTION SECTORS

2.1 Introduction

Alongside the methodology used to establish the Community typology of agricultural holdings, five production sectors will be considered:

-Field crops

-Horticulture (market gardening, floricultural products grown in the open or under glass, also including fresh vegetables grown in the open)

-Permanent crops

-Grazing livestock (cattle, goats and sheep)

-Granivores (intensive husbandry: pigs and poultry).

The only divergence from the Community typology concerns fresh vegetables grown in the open. In the typology of holdings, these are included under field crops, which is reasonable given that fresh vegetables - often destined for industry - are often grown on holdings specializing in field crops. Certain vegetable crops in certain regions do not, however, always readily fall into the category of "market gardening" or "fresh vegetables grown in the open". For the purpose of our sectoral approach, we have therefore concentrated all vegetable production into the horticultural sector.

Table 1 shows production structure by country, while Table 2 shows production by sector and total production of each country as a proportion of overall Community production. Tables 1a and 2a present the same data by region.

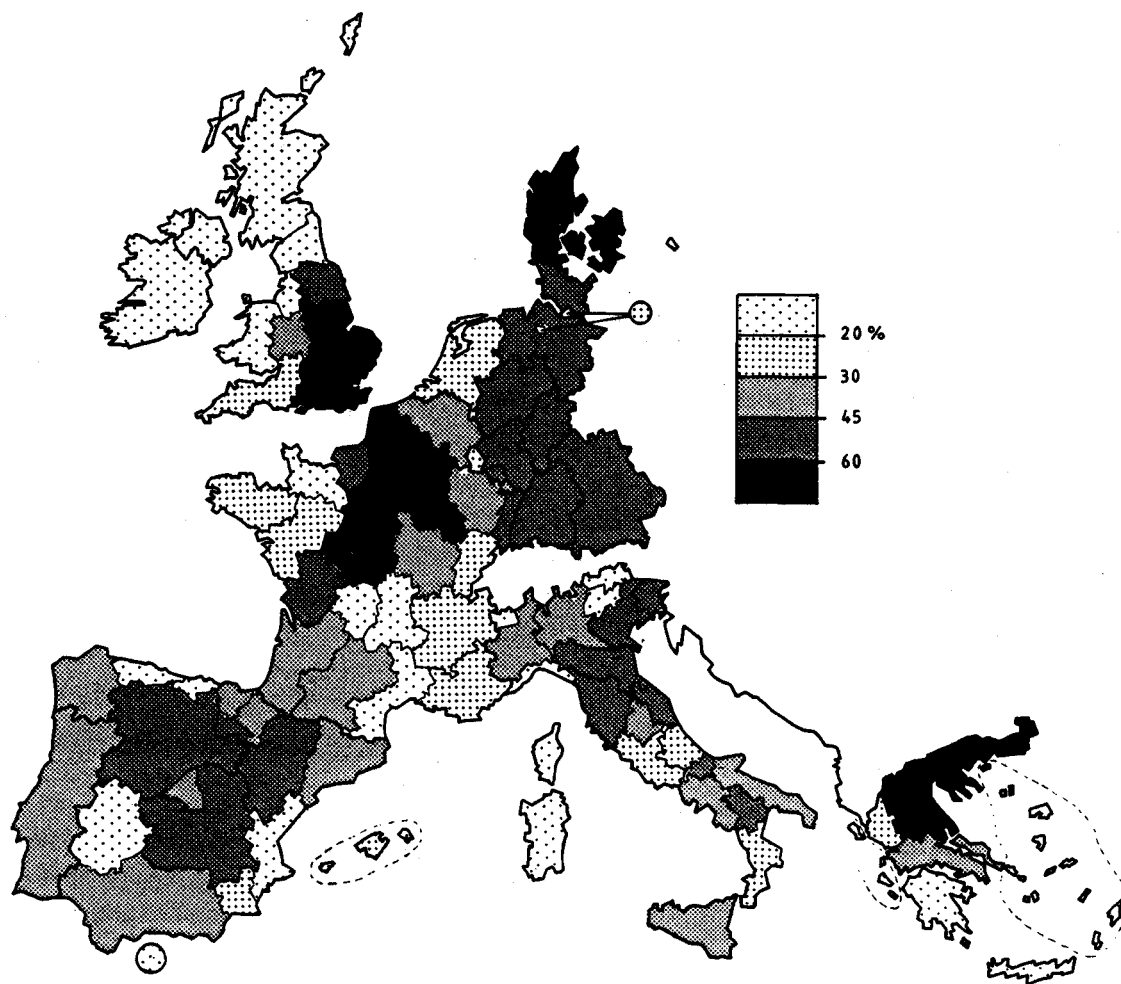


Figure 5: Field crops (excluding temporary fodder crops and fallows): area as a percentage of total UAA (1985)

2.2 Field crops

Figure 5 shows the percentage of utilized agricultural area (UAA) given over to field crops. Four zones stand out with over 60%: northern Greece, the central Bassin Parisien, south-east England and Denmark. Three of these regions have little high ground and two, south-east England and the central Bassin Parisien, are extremely fertile. The regions of north-eastern Greece have more lowland plains than the rest of the country but are not completely without hilly areas. Another distinguishing feature of northern Greece is that the average area of its holdings is only 5 hectares, while the average for the other three zones is over 30.

Figure 5 shows only those areas to which an economic value has been attributed for calculation purposes. The area given over to horticulture, fodder crops (including temporary grassland) and fallows is not shown; the map is concerned with the area given over to field crops.

If arable land in the strict sense is extended to include fallows, Portugal and the central regions of Spain (Castilla, Aragon) join the four zones already highlighted in Figure 5 with a proportion of over 60%. If fallows are considered part of arable land, Figures 4 and 5 must be combined.

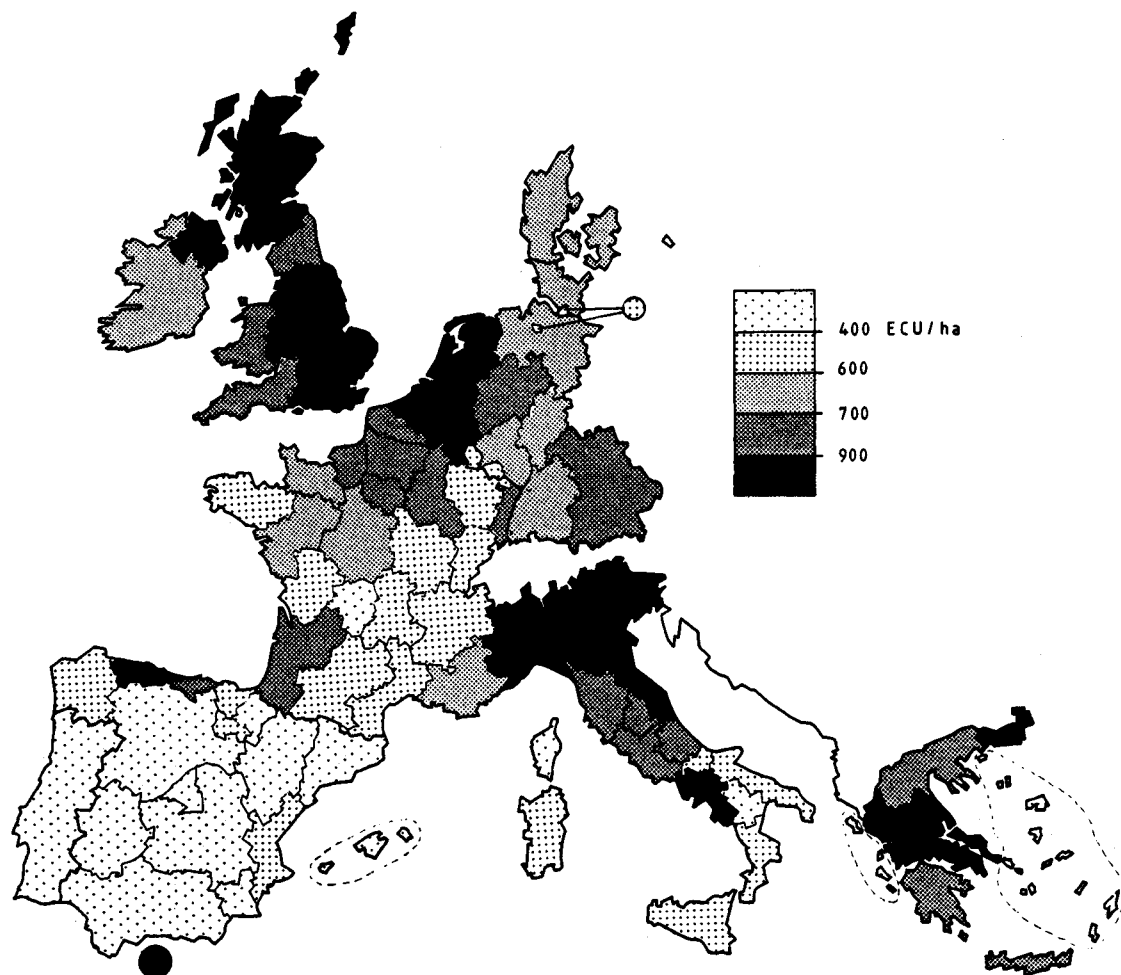


Figure 6: Field crops: Production (SGM in ECU) by ha of field crops (1985)

Figure 6 shows production (in SGMs) per hectare of field crops. Taking arable land in its broader sense, i.e. including fallow land (but not fodder crops), differences in production intensity are even more marked, particularly between the Iberian Peninsula and the rest of the Community; the high values for Greece and northern Italy remain constant, since there is very little fallow land in these areas.

As we have seen, the information in Figure 6 is derived from two variables: the SGM per hectare of the various crops, and the type of crop. Given that certain specialised crops have a particularly high value per hectare (cotton, tobacco), it is evident that if these account for a significant share of the total area under field crops, the average SGM per hectare will increase accordingly.

To illustrate the effect on the SGM, maps have been drafted for two crops to highlight regional differences more effectively. The SGM/ha for wheat (Figure 7) exceeds 1000 ECU/ha in the Netherlands, Great Britain, Belgium, Schleswig-Holstein, Lombardia and Veneto, but is below 200 ECU/ha in the continental regions of Spain and only slightly higher in Puglia and Peloponnisos. The map gives a general idea of crop-growing conditions: fertility of the land, use of fertilizers, extent of irrigation, without being able to show how far each of these factors affects the overall result. The combination of extensive use of fertilizer and fertile soils explains the high crop yield in the north-west, modern farming methods being an additional factor in the north of Italy. The differences between northern and southern France system from differences in soil and climate and probably from less extensive use of fertilizer. One reason for the difference between the continental regions of Spain and both the coastal regions of Spain and Greece is the difference in irrigation.

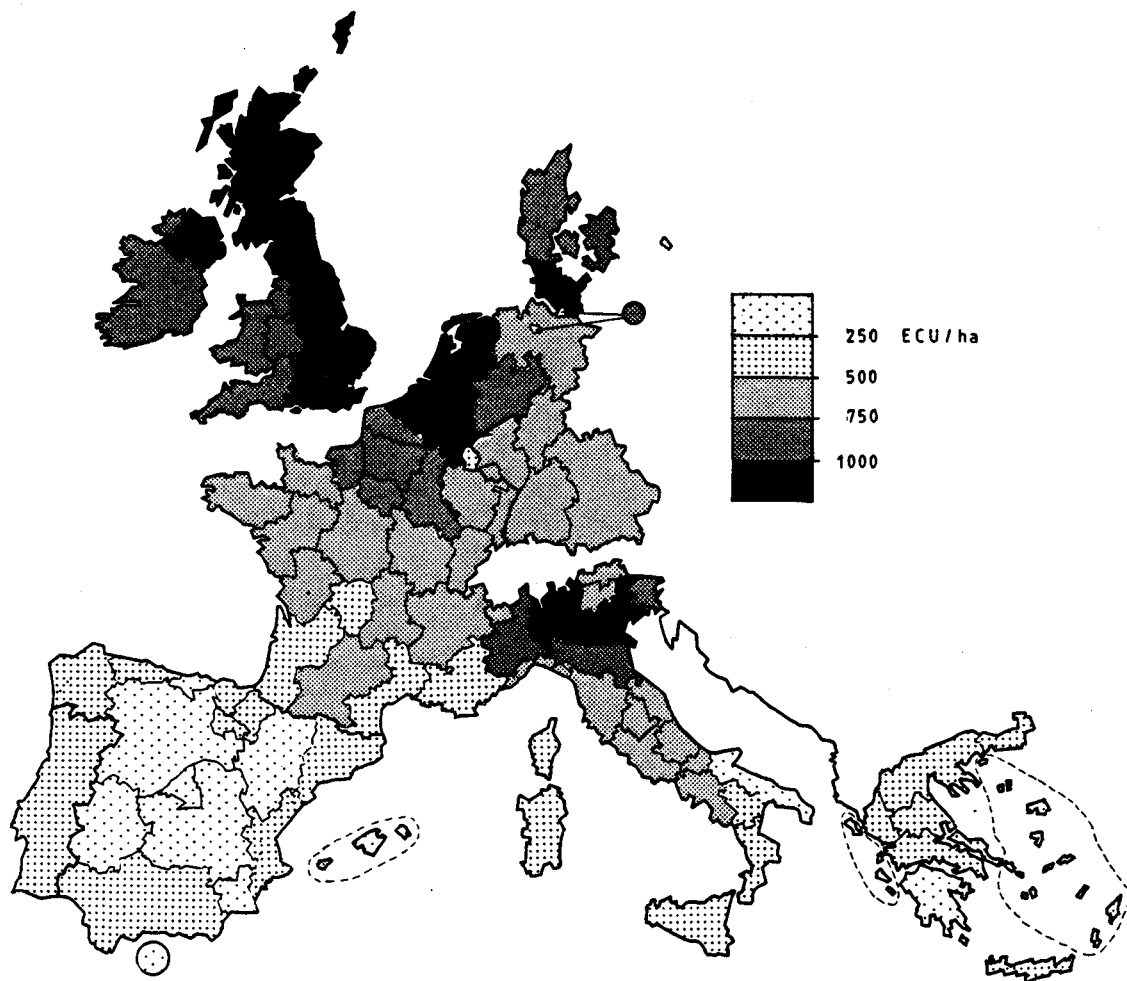


Figure 7: Common wheat: Production (SGM in ECU) by ha of common wheat area (average 1981-1983)

The difference between Greece and Spain and central Italy can be attributed to differences in the use of fertilizer, but other factors may also play a role, such as the use of superior varieties. The absence of relevant data means analysis cannot be carried out at this level of detail. It would also be misleading to regard the differences in SGM/ha for a given culture as representative for the entire field crop sector. In fact, certain crops are better adapted to certain soils and certain climatic conditions, etc.

This is illustrated by the map showing the SGM/ha for grain maize (Figure 8). It can be seen that regional differences in the SGM are less pronounced than for wheat, simply because the maize yield is slightly lower in the north-west but considerably higher in the south of the Community. Maize can therefore be added to the list of crops showing two specific characteristics: more or less systematically higher yields in the north-west of the Community, northern Italy and Greece, where irrigation is more extensive; and the less pronounced and less systematic regional variations arising from the specific relationship between crop type and environmental conditions (e.g. potatoes).

It is impossible to produce maps showing the contribution of all the different types of cultivation, and one or two regional structures have therefore been given by way of example. In Thessalia, two-thirds of the SGM of the field crop sector is from non-cereal crops (especially cotton, another main contributor being tobacco) while in the Centre region (France) cereals account for over 80%. The SGMs of the various cereals are generally higher in Centre than in Thessalia, but the overall average per hectare field crops is considerably higher in Thessalia as it is boosted by the high SGM for cotton and tobacco.

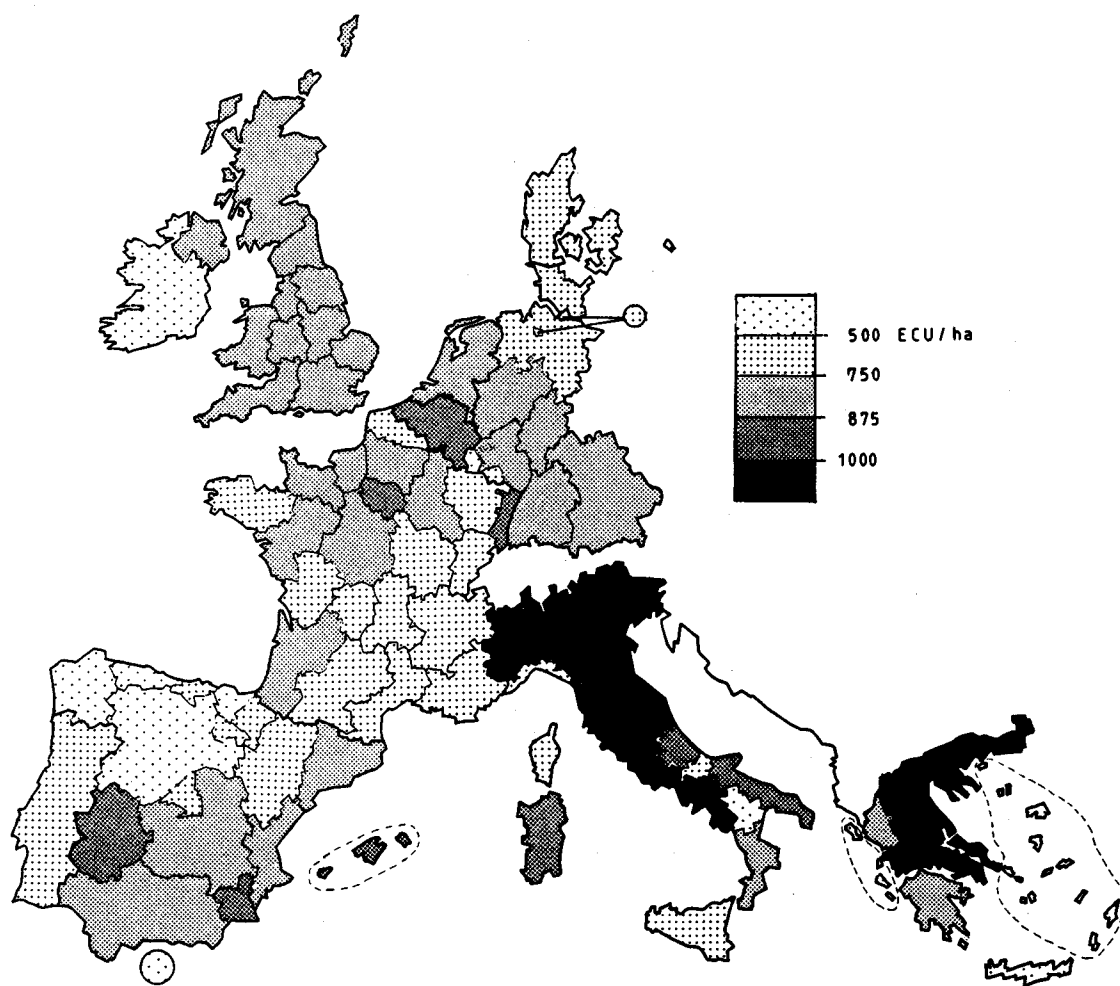


Figure 8: Maize: Production (SGM in ECU) by ha of maize area (average 1981-1983)

In just under two-thirds of the regions, cereals account for over two-thirds of the SGM of the field crops sector. The regions in which non-cereal crops account for over half the SGM for field crops are Greece (industrial crops, particularly cotton and tobacco; potatoes in Kriti), Campania (tobacco), Liguria, Valle d'Aosta, Bolzano, Trento (potatoes), north-eastern Spain (potatoes) the Netherlands and Belgium (potatoes and sugar-beet).

Map 9 shows field crop production as a proportion of total UAA. As explained in the methodological introduction, this enables production intensity to be compared between sectors and between regions. The map has been compiled from two of those already discussed: the proportion of total UAA represented by field crops, and the SGM/ha field crops.

The highest values are found in the south-east of Great Britain, the north of the Bassin Parisien, Denmark, northern Italy and northern and central Greece. With the exception of northern Italy, these are all regions in which field crops represent a significant proportion of total UAA and have a high SGM/ha. Northern Italy is in the high production intensity group because its field crops have a particularly high SGM/ha, although the sector occupies a proportionally lower area than in the other high-production regions.

The intermediate group, still with a high level of production intensity, includes Germany, the Netherlands, Belgium, central Italy, and some regions in the Bassin Parisien. The area utilized for field crops in these areas is still extensive and the average SGM/ha high, but both less markedly so than in the category above: Germany and central Italy fall into this category, while in the Netherlands and Belgium the proportionally lower area is offset by high SGMs for field crops.

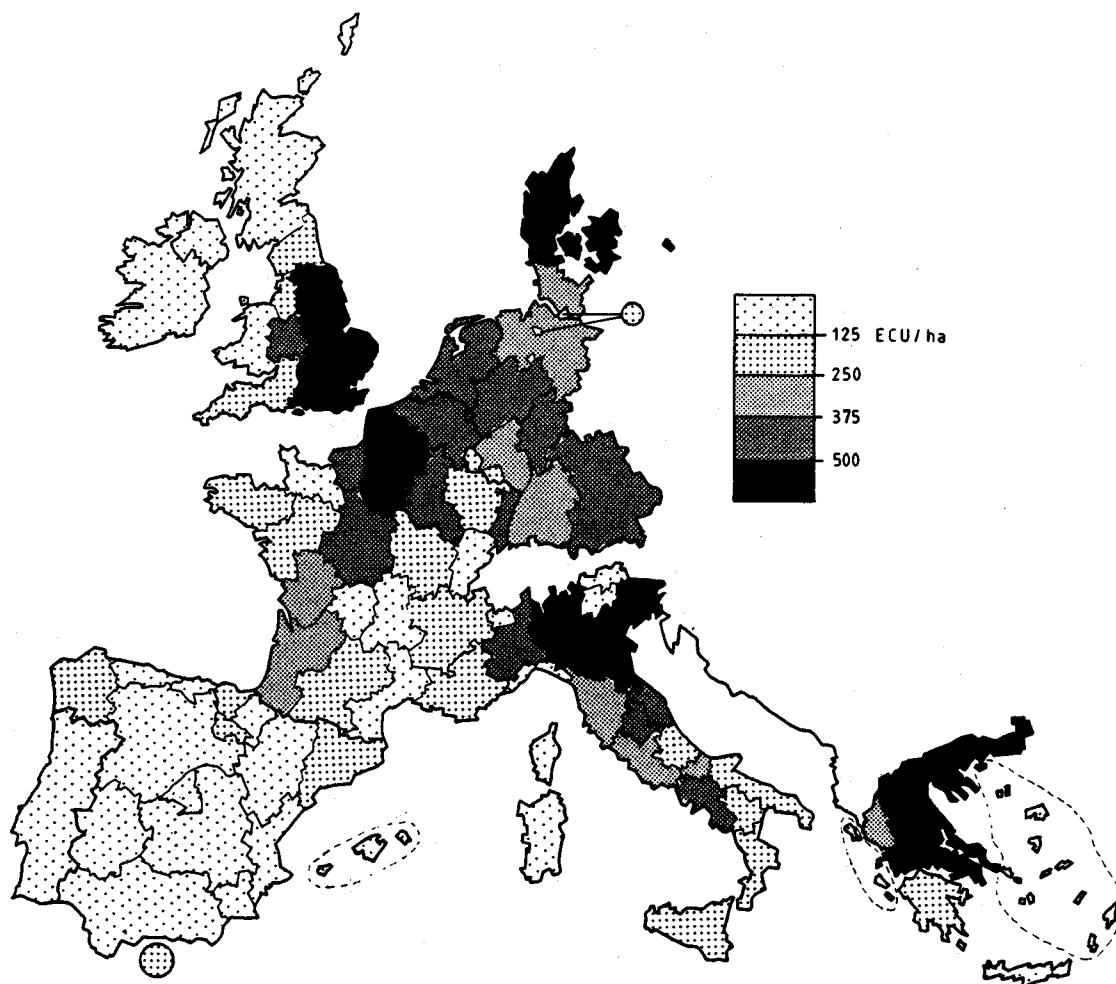


Figure 9: Field crops: Production (SGM in ECU) by ha of total UAA (1985)

The lowest values are found in the Iberian Peninsula, southern Italy, south-eastern France, the western tip of France, Ireland, Scotland and Wales. In the first of these, the Mediterranean regions, the area given over to field crops is frequently large, but yields are relatively poor and fallow land represents a considerable proportion of the total UAA. The other regions in the group tend to have a limited area of arable land. The field crops sector is of minor importance both in economic terms and in terms of space occupied. The Mediterranean areas of the small regions in northern Italy (Bolzano-Bozen, Trento, Valle d'Aosta, Liguria), Corsica, Sardegna and the Greek Islands belong to the group in which field crops are of lesser importance.

Figure 10 shows field crop production in absolute figures per region. This sector is represented in all regions of the Community, although it is evident from the map that production volume in SGM is considerably higher in the north than in the south. As in the previous map, the values depend on the share of field crops in the total UAA, and their SGM per hectare, which explains the concentration in the north of the Community and the interior of northern Italy, with lower values in Spain. Since field crops are grown in most regions of the Community, differences in regional concentration are not very pronounced (Table 4). Over 3% of the Community's field crop production is concentrated in the following regions (listed in descending order): Denmark, Bayern, Centre, Niedersachsen, Netherlands, south-east England, Picardy. 2-3% are produced in: Scotland, East Midlands, East Anglia; Belgium; Nordrhein-Westfalen; Castilla-Leon; Lombardia, Veneto, Emilia-Romagna; Makedonia.

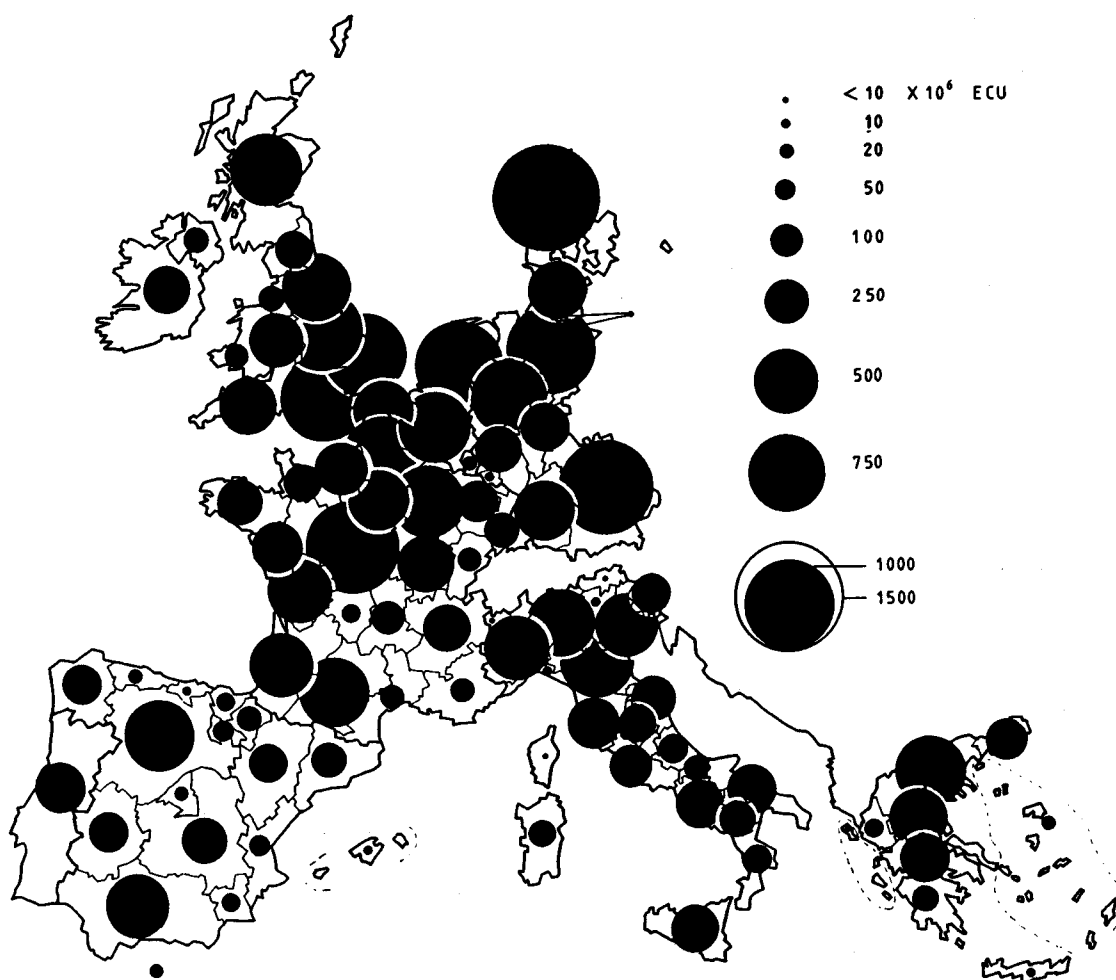


Figure 10: Field crops: Absolute production (SGM in ECU) (1985).

Finally, Figure 11 indicates the share of field crops in the total economic size (in SGM) of the region. Whether farming is intensive or extensive, the map enables the specific contribution of the sector to overall agricultural production to be identified.

Comparison of this map with that showing value per ha of UAA does not give identical results: certain similarities may be noted, for example, in the south-east of Great Britain, the Bassin Parisien, Denmark or Northern Greece, but elsewhere there are divergences falling into two categories: either a fairly high relative value despite a very low absolute figure for SGM/ha, which is the case for the extensive agriculture of continental Spain; or the opposite example of the Netherlands, where the SGM/ha total UAA is high, but the sector has only a limited share of the total because of the country's intensive and diverse agriculture and very high production level of which field crops form only a small part, even though their production is high in absolute terms.

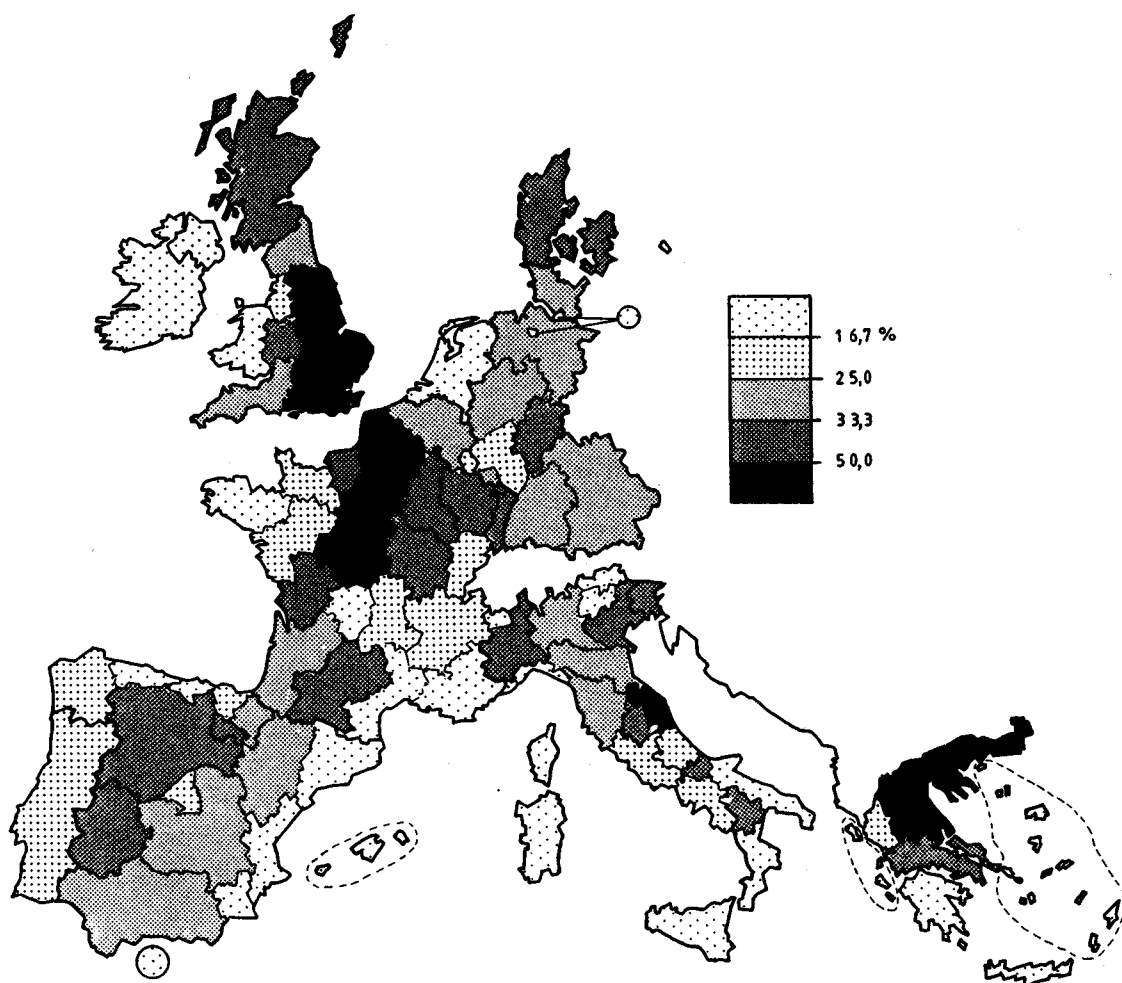


Figure 11: Field crops: Production (SGM) as a percentage of total production (1985)

2.3 Horticulture

Figure 12 shows the percentage of utilized agriculture area given over to horticulture. Only five spatial units stand out with over 4%: the Netherlands, East Anglia, Campania, Provence-Alpes-Côte d'Azur and Liguria.

Regions with less than 1% form two large groups: the first comprises the Mediterranean basin (except inland Spain and certain regions of Italy and Greece) and the second a number of regions in the north-west of the Community, on both sides of the Channel. The latter are characterized by high population density, and horticulture has a long history linked to the large conurbations situated both in the production regions themselves and in Germany. A proportion of the produce is therefore exported, historically to other northern regions but latterly to the south as well, owing to well-organized production and marketing strategies which enable these regions to compete with those of the Mediterranean, where the better climate ought in theory to mean lower production costs.

Climatic conditions in the Mediterranean mean that vegetable production in the summer is dependent on irrigation, which explains the absence of these crops in the continental areas.

The existence of horticulture coincides, in the Mediterranean, with those regions in which the average area of holdings is small, but this relationship is less consistent in the north-west, e.g. in northern France and Great Britain, where the average area of holdings is larger. There are two possible explanations: horticultural production is generally carried out on small holdings,

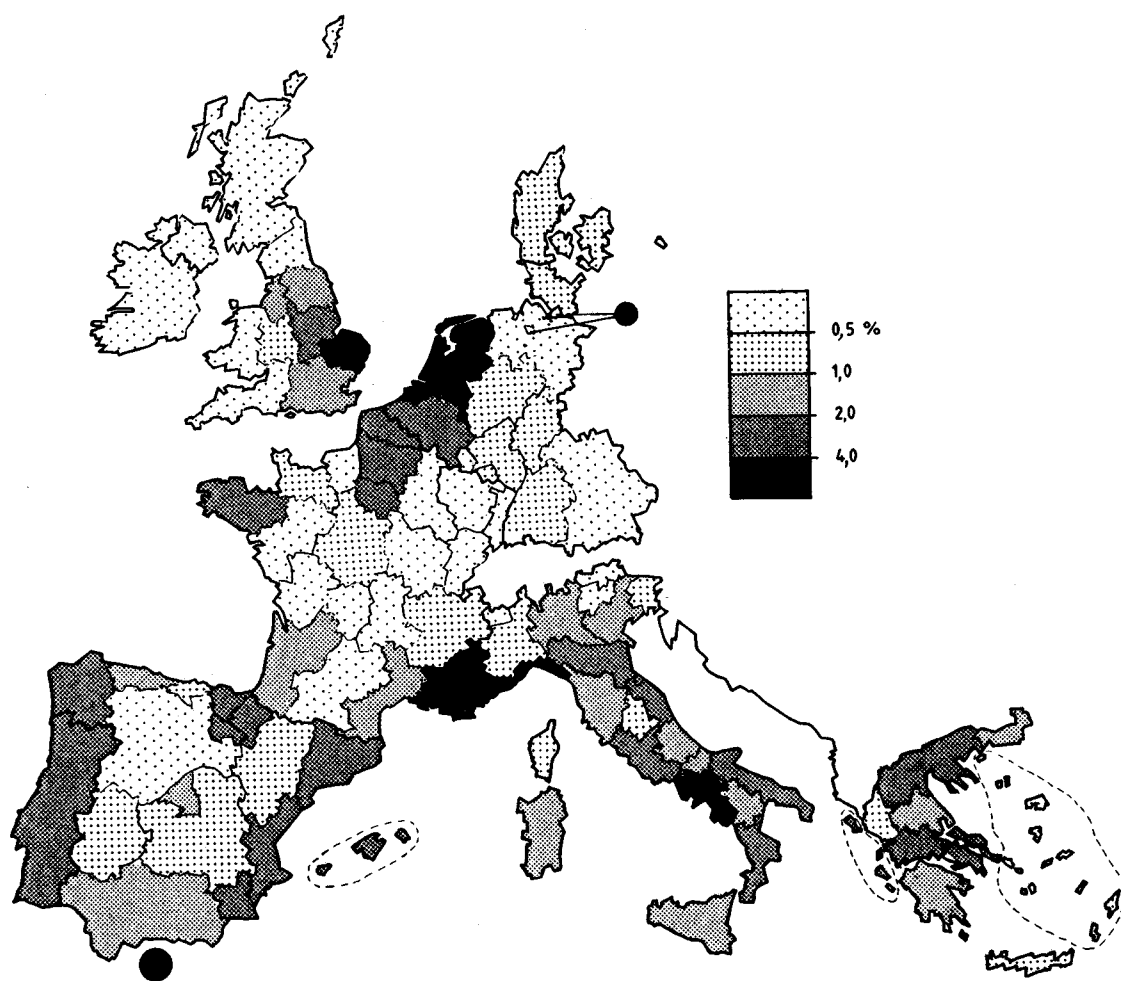


Figure 12: Horticulture: Area as a percentage of total UAA (1985)

whilst holdings engaged in other sectors are considerably larger, affecting the average area. Furthermore, some crop production is highly mechanized, particularly that of vegetables for the canning industry, which is best suited to large holdings.

It should not be forgotten that the apparently small share of horticulture in the total area as seen from the map can lead to underestimation of the importance of the sector. It is therefore important to take account of an aspect of methodology: the area shown here is that at a given point in time (that of the survey). When considering agricultural activity over a year, account must be taken of the fact that some of the area included in the survey will be used for two or three different crops during that period.

Figure 13, showing the value per hectare of area utilized for horticulture, is not easy to interpret because of the wide variety of production methods: open field crops, market gardening crops grown in the open or under glass, single or successive crops throughout the year. The SGM for successive crops would be several times higher than that for a single crop. Irrigated crops also have a higher SGM/ha, and there are certain disparities between different regions, which may be due to calculation of the regional average having been based on incomplete or insufficiently representative data.

It is, however, possible to establish certain broad trends from Figure 13: the higher values are found in Benelux, Germany, the regions of south-eastern France (irrespective of the size of the area utilized for horticulture), the west coast and north of Italy, Epiros and Kriti. The type of farming found in these areas is generally intensive market gardening (with several crops a year)

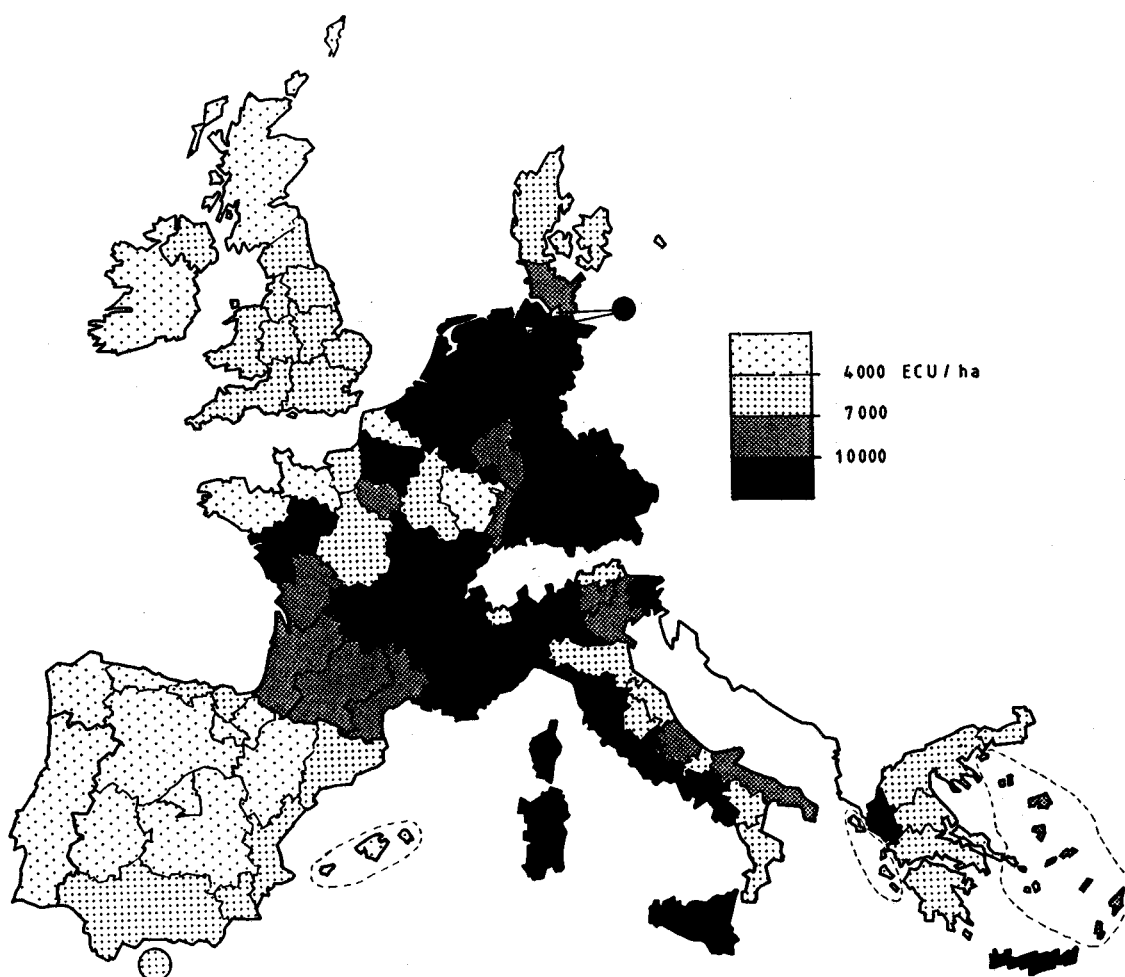


Figure 13: Horticulture: Production (SGM in ECU) by ha of horticultural area (1985)

or, in the north, crops grown under glass. The values for the rest of the Mediterranean are lower, the lowest being found in inland Spain and Portugal. In the north, the lowest values often correspond to the regions with a preponderance of open field crops.

The value of the horticultural sector distributed over the total UAA of the region is given in Figure 14, obtained by combining Figures 12 and 13. Despite the small area involved, the high SGM per hectare for horticulture means that in several regions it represents a considerable share of the total UAA. The two main areas shown in Figure 12 (% area) emerge again here, but within them certain centres of gravity have appeared. Assessed on the share of total area and production intensity, the highest production relative to total UAA is found in the Netherlands, Campania and Provence-Côte d'Azur, and above all in Liguria (3140 ECU/ha UAA).

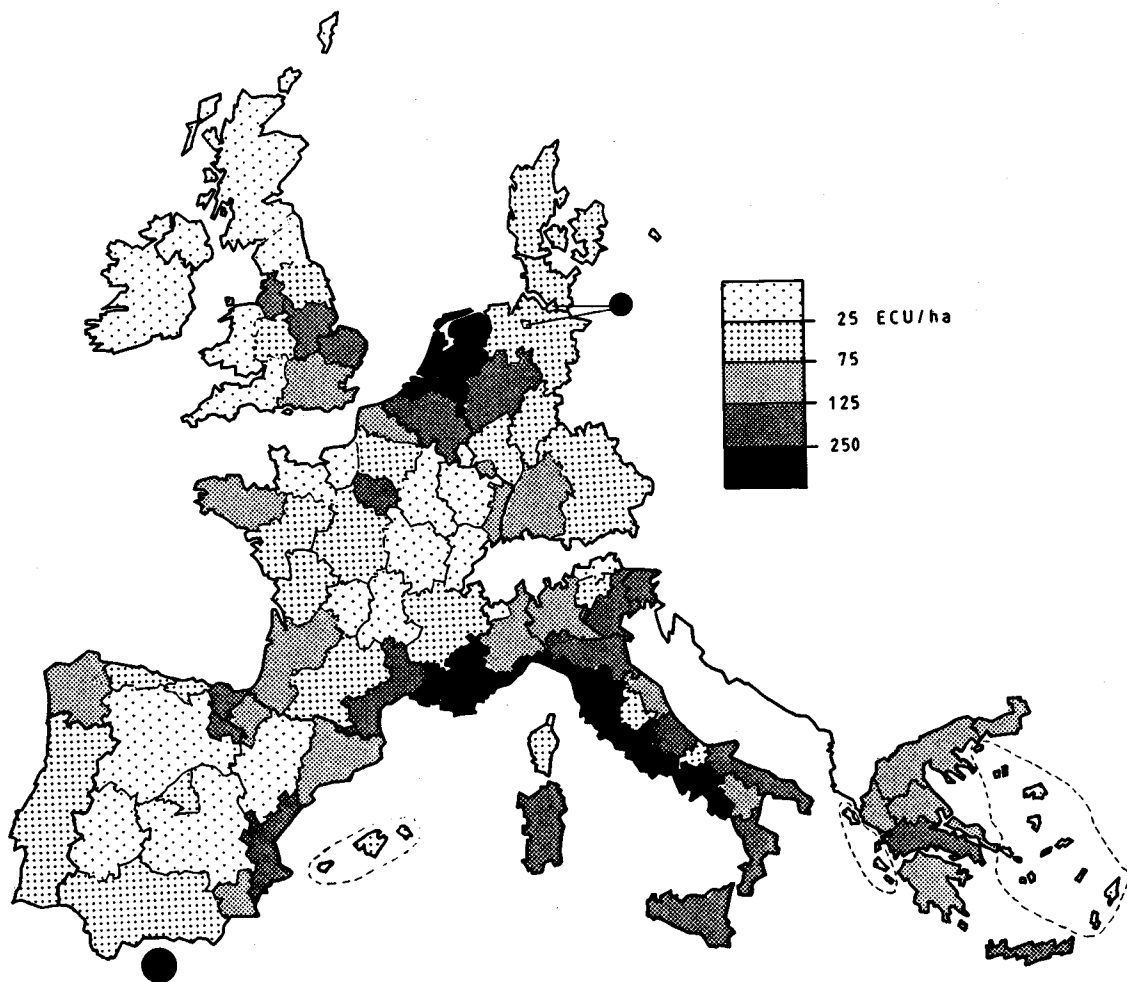


Figure 14: Horticulture: Production (SGM in ECU) by ha of total UAA (1985)

Figure 15 shows the absolute SGM for total horticulture. Overall the distribution is similar to that in the previous map. Five regions each contribute more than 3% to total Community horticultural production (Table 4): Campania (5.2%), Provence-Côte d'Azur (4.2%), Sicilia (3.8%), Puglia (3.5%) and Liguria (3.3%). Certain other regions contribute 2-3%: Andalucia, Lazio, Toscana, Portugal and Sardegna.

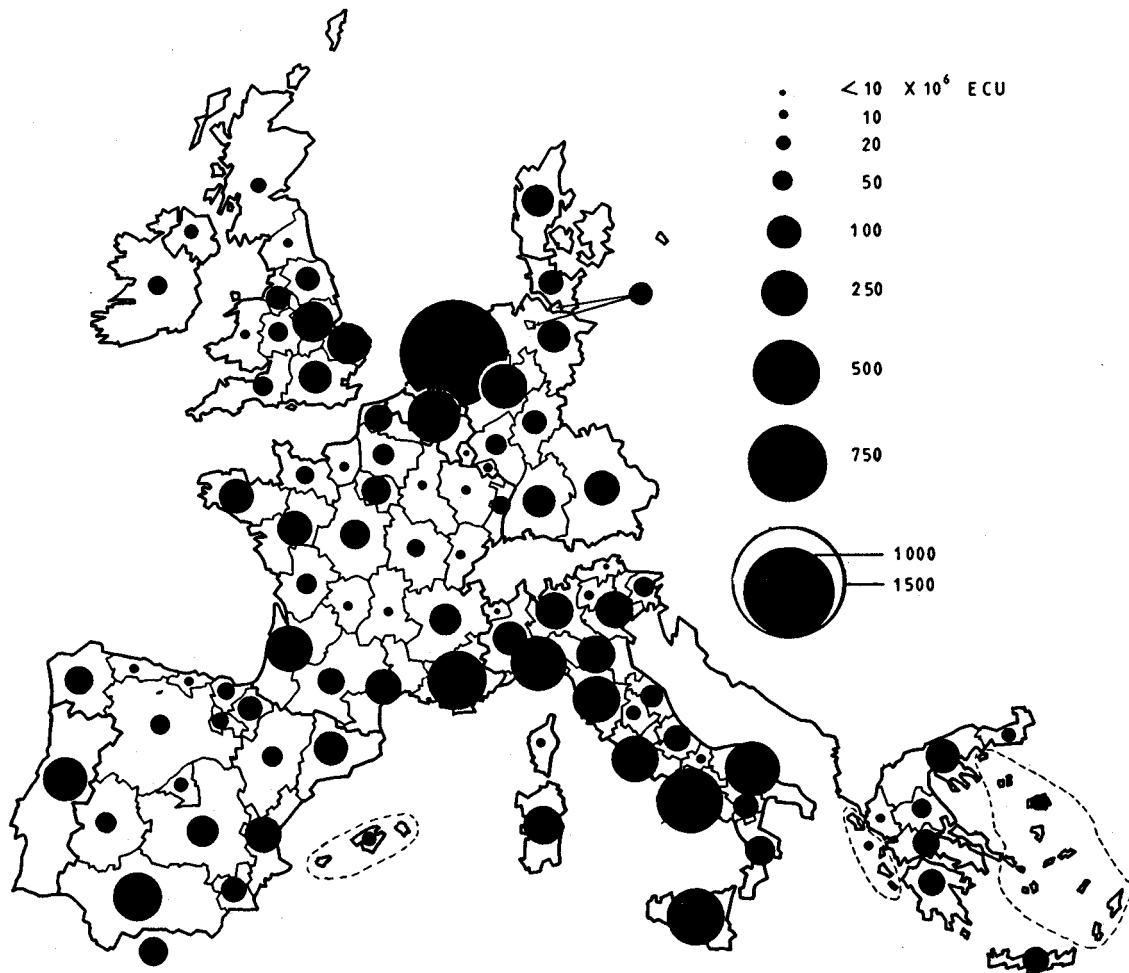


Figure 15: Horticulture: Absolute production (SGM in ECU) (1985)

Finally, map 16 shows the horticultural sector's contribution to total economic size. The sector is seen to be most prominent in the Mediterranean region, which here emerges clearly ahead of the north-western concentration highlighted in the other maps. The Netherlands head the list (with the exception of the urban Hamburg-Bremen-Berlin region), horticulture representing 23% of total production.

Horticulture accounts for less than 5% of total production in many regions of the Community. Many of these are ancient massif regions, sparsely populated and with high rainfall, while others again are typified by an emphasis on field crops, low population density and a large average area of agricultural holding.

Direct comparisons cannot be drawn between this map showing relative production and that giving the value per ha of UAA, particularly for the key areas in the north-west which stand out less clearly on the map of relative production because of the intensity of the other sectors. In the south, the opposite is true of several regions of Spain, which are more prominent on the relative production map than on that showing values per ha, this time because the other sectors are less important (as compared with Italy, for example).

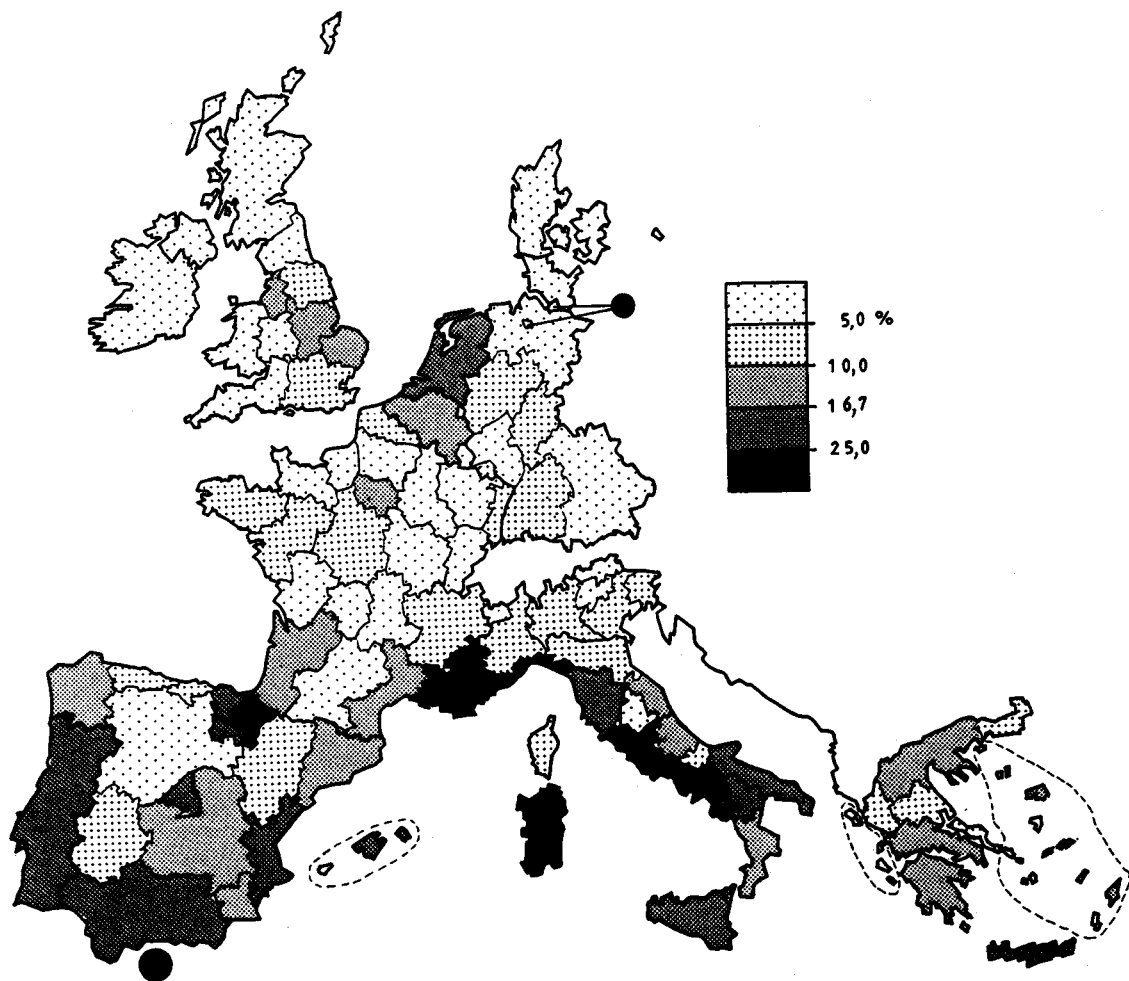


Figure 16: Horticulture: Production (SGM) as a percentage of total production (1985)

2.4 Permanent crops

The permanent crops sector includes crop types with widely differing climatic requirements, the main five being fruit trees, citrus fruit, vines, olive trees and nursery plants. The fruit tree category is itself diverse, including seed fruit, stone fruit and nuts, the latter being typical of the Mediterranean regions, particularly Spain.

Figure 17 shows the percentage of agricultural area set aside for permanent crops. Permanent crops are characteristic of the south of the Community. In the north they occupy over 5% of the total UAA in only two regions: Hamburg-Bremen-Berlin (7.4%) and, most strikingly, Rheinland-Pfalz with 10.3%. They become increasingly widespread the further south one goes, but the east coast of Spain is also a major area.

Areas with a high proportion of permanent crops generally have a fairly small average area of holding, but there are exceptions to the rule. The two Castillas provide a further example of this: the average area of holding is the same in both, but in Castilla Leon, 2% of the total area is occupied by permanent crops as opposed to 21% in Castilla la Mancha. Physical conditions often strongly influence the geographical distribution of this agricultural activity.

The average value for permanent crops given in SGM per hectare of occupied area is shown in Figure 18. There is a striking contrast between the north and south of the Community. In almost all the northern regions (which have a smaller area) the SGM exceeds 4000 ECU/ha. The type of farming involved is fruit production and, in certain regions, vines producing quality wine. In the south, values differ greatly from one region to another.

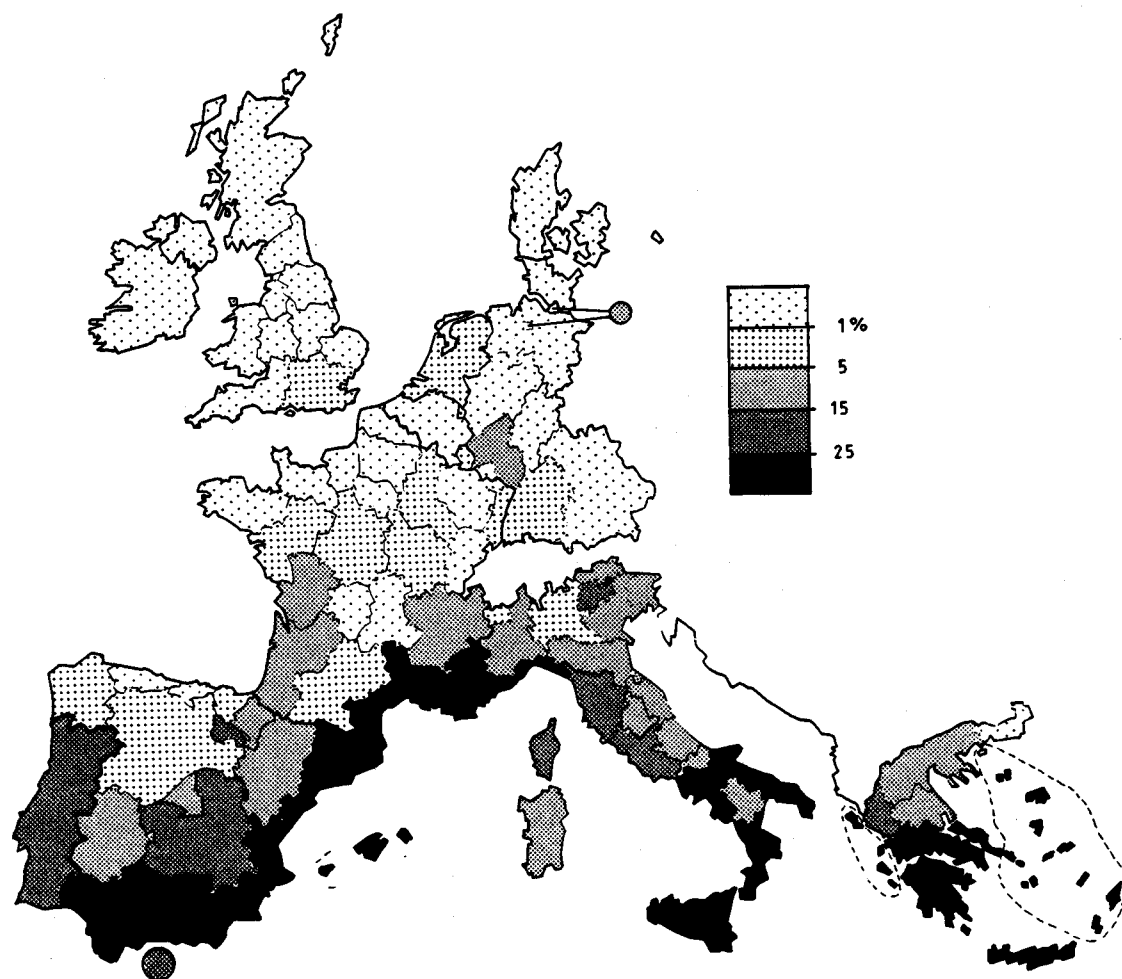


Figure 17: Permanent crops: Area as a percentage of total UAA (1985)

The differences in ECU/ha within the permanent crops sector are influenced by two factors: the relative importance of different types of crop within the sector, and regional differences in productivity for the same type of crop. The SGM/ha does, in fact, vary enormously between different types of crop, nursery plants being at the top of the list, followed by vines for quality wine, citrus fruit, fresh fruit, vines for table wine, olives and nuts. The relative values of the SGM for the different products are obviously not constant between different regions, reflecting regional variations in productivity. Both climate and farming methods (e.g. use of irrigation for fruit but not other permanent crops) can affect the results. The high values in the north of the Community are due to high productivity for fruit in the Netherlands, Belgium and north-western France. The SGMs for fruit are lower in Germany, Great Britain and north-eastern France, but in certain regions of Germany and north-eastern France the average is inflated by the high SGM of vines for quality wine and nursery plants.

The lower values in the south are therefore due to the predominance of produce with a lower SGM: olives, table wine. This also explains why northern Italy shows better results than the rest of the country. In northern Italy, fresh fruit production is high relative to other sectors, and productivity is another contributory factor: the SGM/ha for fresh fruit is distinctly higher in the north. By the same token, lower productivity and the presence of crops with a lower SGM explain the lower SGM/ha for the sector overall in Spain and Portugal, particularly in the interior of the Iberian Peninsula.

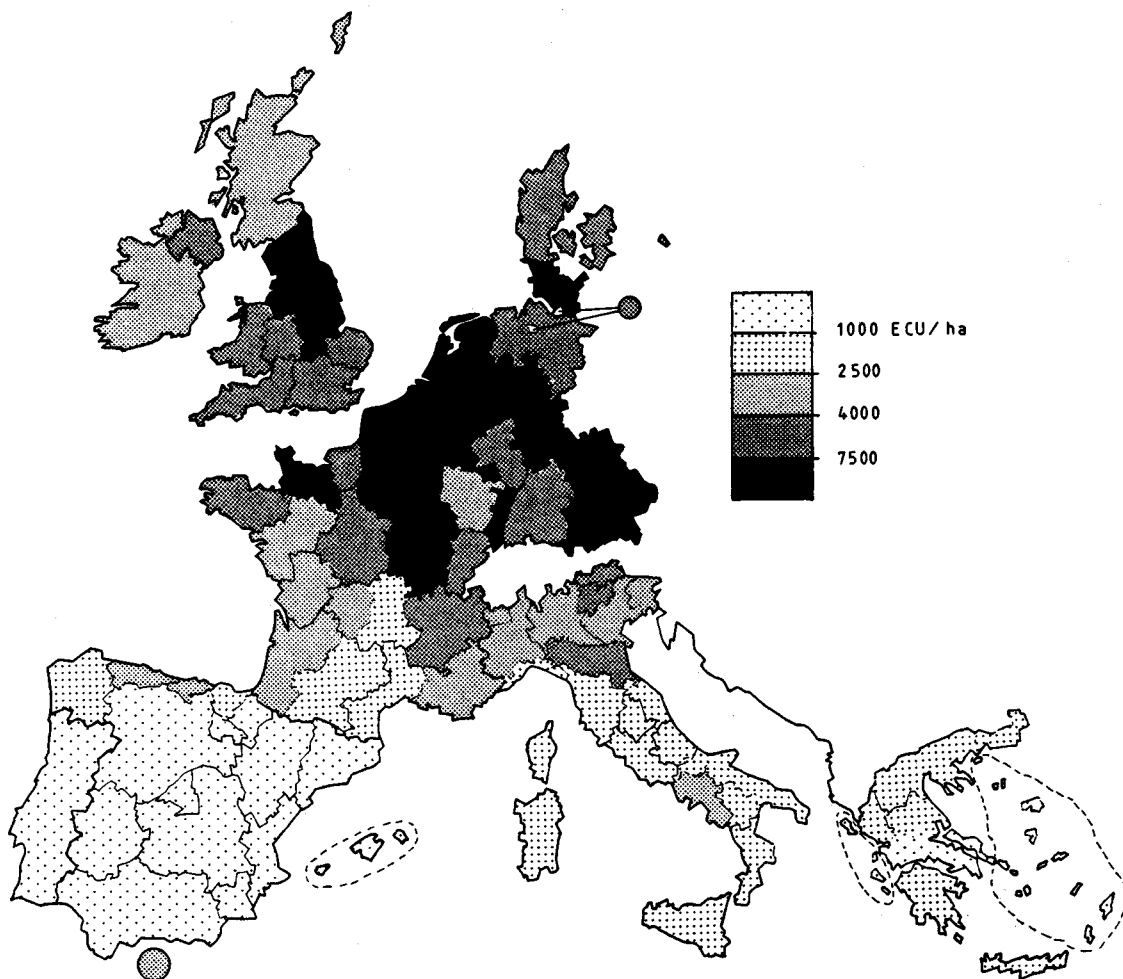


Figure 18: Permanent crops: Production (SGM in ECU) by ha of permanent crop area (1985)

Figure 19 shows the value of the permanent crops sector per hectare of total UAA, the data having been taken from the two preceding maps. Regional differences in the SGM/ha result in differences between this map and the map showing area: Spain and Portugal are seen to have the lowest intensity in southern Europe, while production values for the north are higher than on the area map.

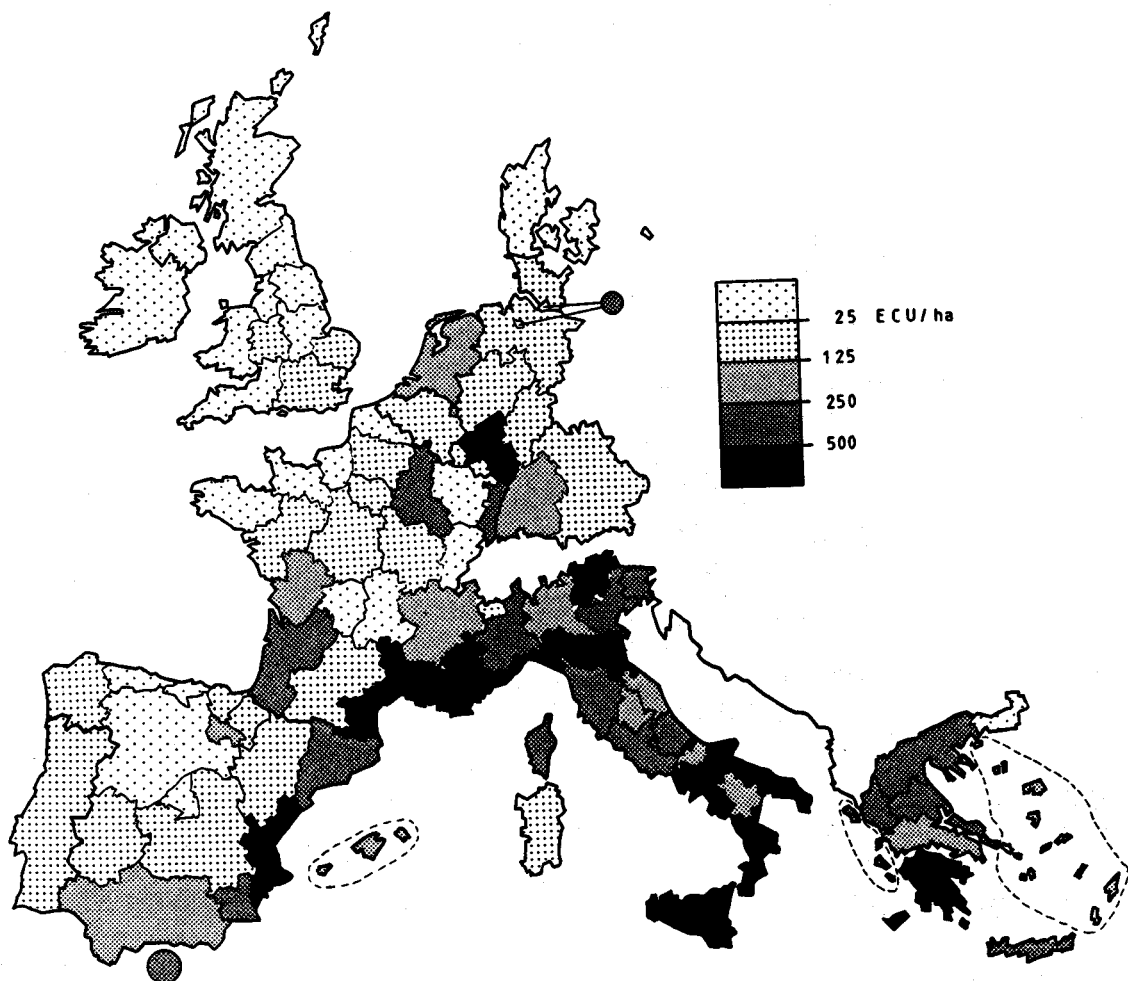


Figure 19: Permanent crops: Production (SGM in ECU) by ha of total UAA (1985)

Scrutiny of Figure 20, showing absolute values in SGM for the permanent crops sector by region, leads to similar conclusions to those drawn from the previous map, i.e. high productivity in this sector in terms of value is not confined to the Mediterranean area, as suggested by the map showing area. Intensive fruit-growing areas (such as the Netherlands) and still more notably the wine-growing regions of the "north" also emerge near the top of the list: Rheinland-Pfalz, Champagne, and Pays de la Loire, Centre, Bourgogne, Baden-Württemberg. In the southern half, the Italian regions predominate, but with the addition of the areas extending westwards from Provence to Bordeaux via Languedoc (Aquitaine region with Poitou-Charentes), and along the eastern and southern coast of Spain. There are three important regions in Greece: Peloponnisos, Makedonia and Kriti.

Regional concentration is fairly pronounced, in that many regions contribute only marginally to Community production, while certain others are worthy of individual mention. In descending order, the percentage of the total SGM for this sector in the Community as a whole contributed by individual regions is as follows : Sicilia (6.2%), Puglia (6.0%), Languedoc (5.6%), Emilia Romagna (4.9%), Andalucia (3.8%), Valenciana (3.5%), Champagne-Ardenne (3.6%), Campania (3.3%), Calabria (3.2%), Rheinland-Pfalz (3.1%), these ten regions together providing 43% of Community production.

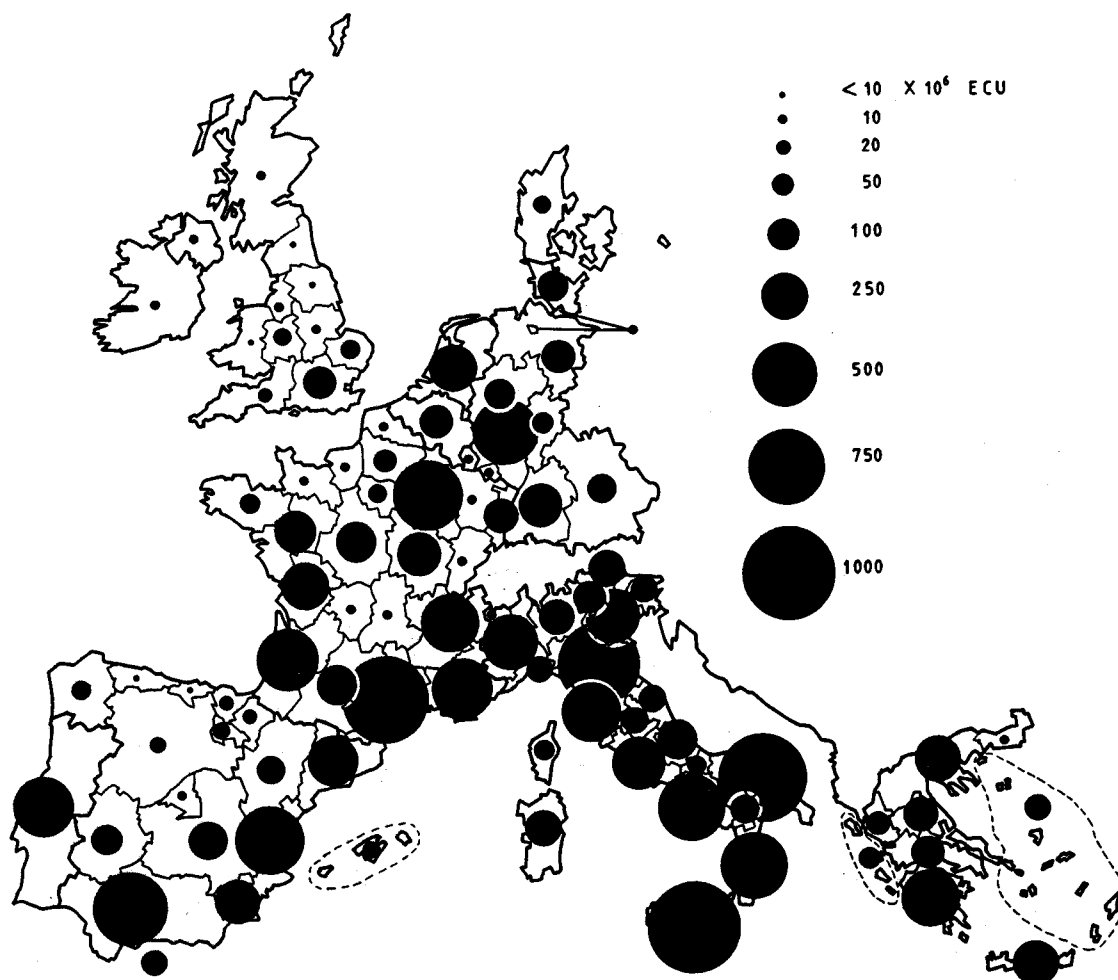


Figure 20: Permanent crops: Absolute production (SGM in ECU) (1985)

Finally, Figure 21 shows the relative contribution of permanent crops to total economic size. Logically, the spatial distribution and interpretation of this map must be along the same lines as for the other maps of this sector: concentration in the south of the Community but prominence of certain northern regions. In these regions, permanent crops are a significant part of total production.

The importance or otherwise of the sector is often determined by physical conditions, the average area of holdings being a further consideration.

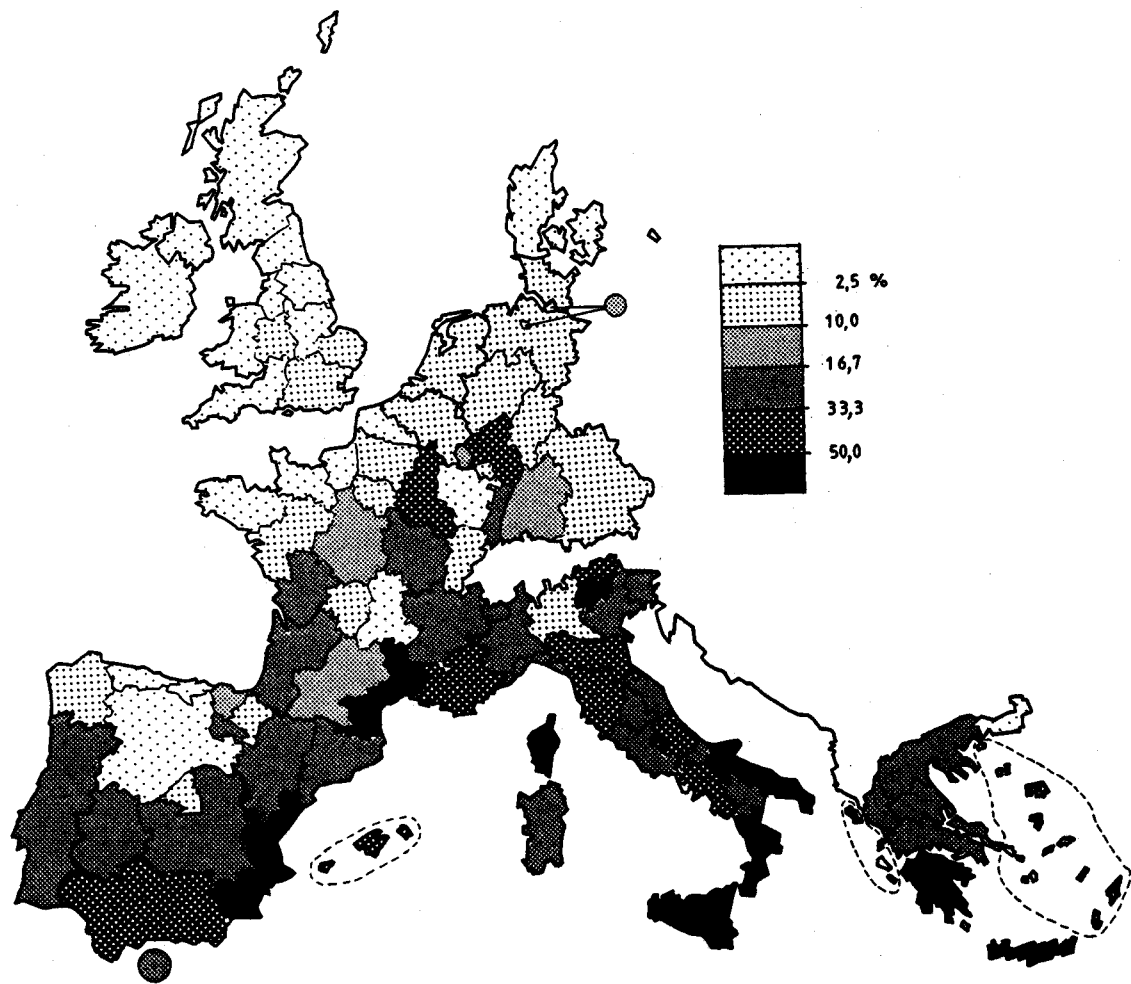


Figure 21: Permanent crops: Production (SGM) as a percentage of total production (1985)

2.5 Grazing livestock

The grazing livestock sector is the largest in total Community agricultural production, both economically and in terms of area occupied.

The sector can be divided into two: area of permanent pasture (including rough grazing) and other fodder crops including temporary grassland, green fodder (fodder maize, lucerne) and forage roots and tubers. The proportion of total fodder crops represented by each group varies according to the region of the Community. Generally speaking, there is a preponderance of permanent grassland, particularly in the north. In Spain, a large proportion is classed as rough grazing, whereas in Italy, Greece and some regions of France (Bretagne, Poitou-Charentes and Pays de la Loire) there is a high proportion of other fodder crops, sometimes exceeding the area of permanent grassland.

The total area of grassland and fodder crops (Figure 22) represents the highest proportion of total UAA in regions coinciding with ancient massifs, often with high rainfall, or, in the case of the Netherlands, with polders, which largely explain this type of land use.

Within the grazing livestock sector, bovine animals (cattle) are largely prevalent, although there are considerable numbers of sheep and goats in certain regions. Even where this is not the case, the SGM for cattle is not always 100% of the total SGM for the sector, as this also includes an SGM for Equidae (horses, donkeys etc.).

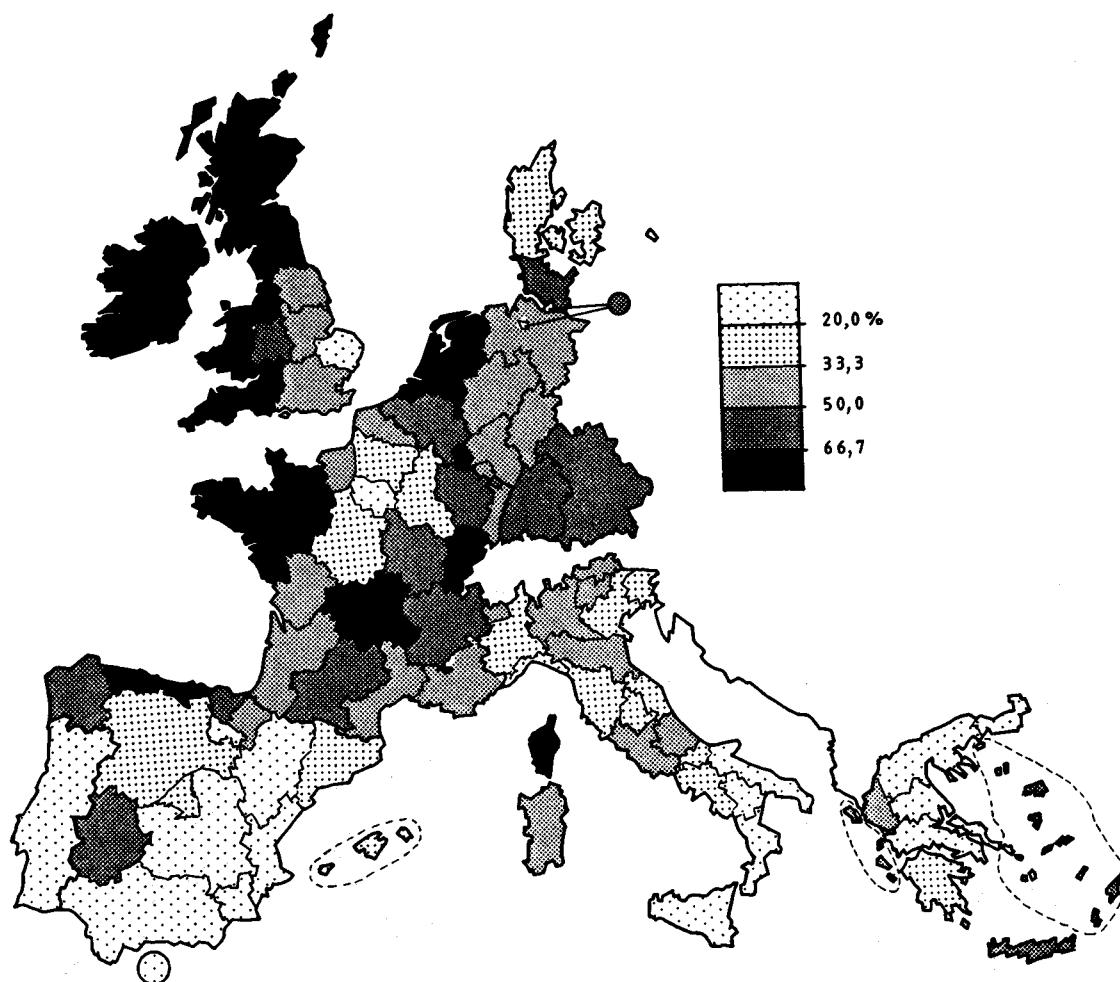


Figure 22: Fodder crop area (permanent grassland and forage plants) as a percentage of total UAA (1985)

Figure 23 shows the percentage share of bovine animals in the grazing livestock sector. There are large homogeneous zones. In the entire northern area except Great Britain, livestock is almost exclusively bovine. This is also true of Northern Italy, and Galicia and Cantabria. The lowest values of under 30% are found in Castilla la Mancha and Aragon, and most particularly in Greece (except Makedonia), where the figure plummets to below 5% for the Athens region (Kentriki Ellas), Peloponnisos and Kriti.

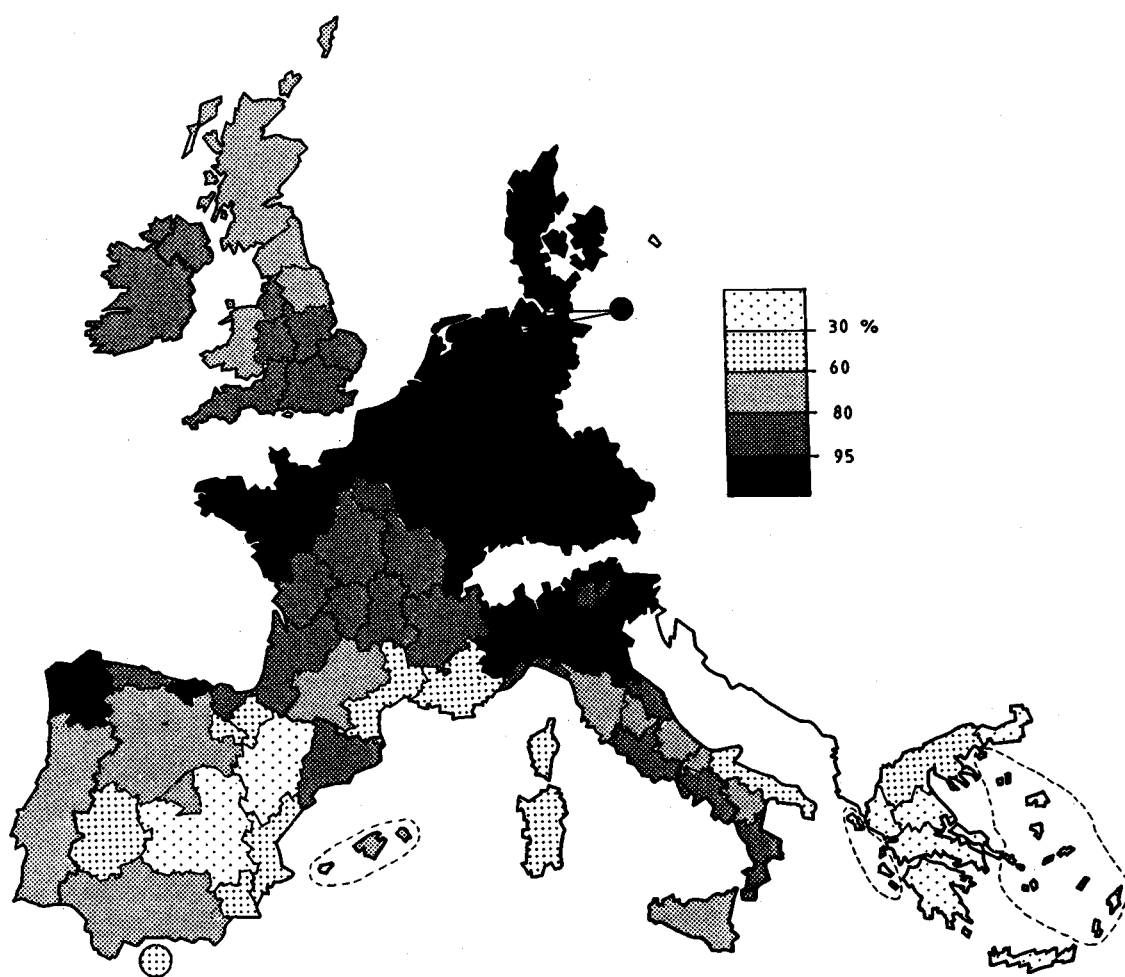


Figure 23: Bovine animals (SGM) as a percentage of total grazing livestock production (1985)

Figure 24 shows grazing livestock production in relation to the area of permanent grassland and fodder crops. In certain regions the SGM exceeds 1000 ECU/ha, with far and away the best result - 2 084 ECU/ha - being registered in the Netherlands.

Low values are generally to be found in the Mediterranean regions, but are also characteristic of practically all of France south of Paris. There are many exceptions within the Mediterranean area, however, which may be due to supplementary sources of fodder outside the holding, such as grassland at the roadside and mountain pasture not included in the area of the holding, or agricultural waste used as fodder. To interpret the map correctly the two variables on which it is based must be taken into account: the density of grazing livestock and the SGM per animal.

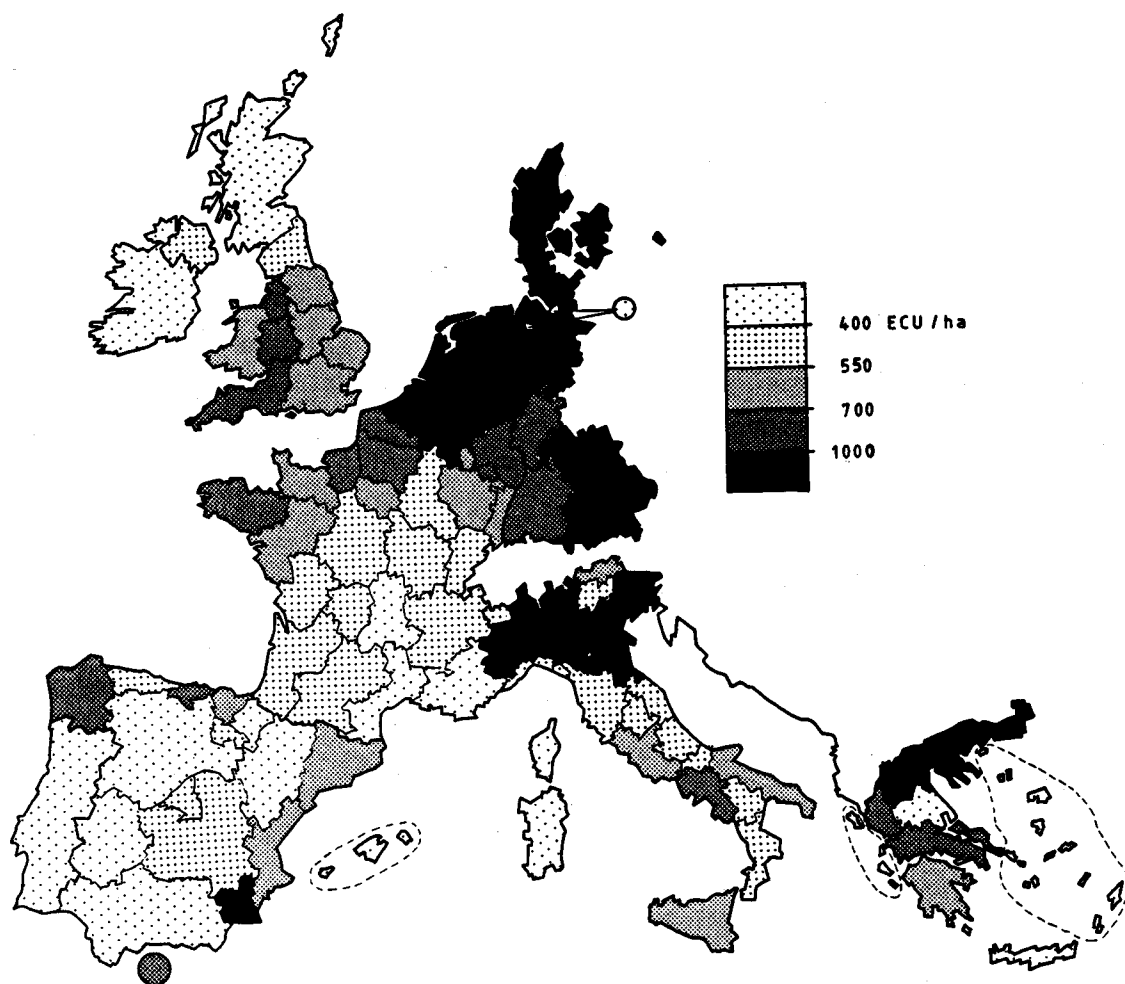


Figure 24: Grazing livestock: Production (SGM in ECU) by ha of fodder crops (1985)

The density of grazing livestock (given in LU) per ha of grassland and fodder crops is shown in Figure 25. Two types of region show the highest density: the Netherlands (276 LU per 100 ha), Belgium, Denmark and three regions in northern Italy - all areas well known for high productivity attributable to favourable physical conditions and modern farming methods - and by contrast, Greece, for which no ready explanation can be found.

The lowest figures are found in Scotland (33), Languedoc (39), Provence-Alpes-Côte d'Azur (47) and Corsica, certain regions in central Italy, the Greek islands, Navarra and Extremadura.

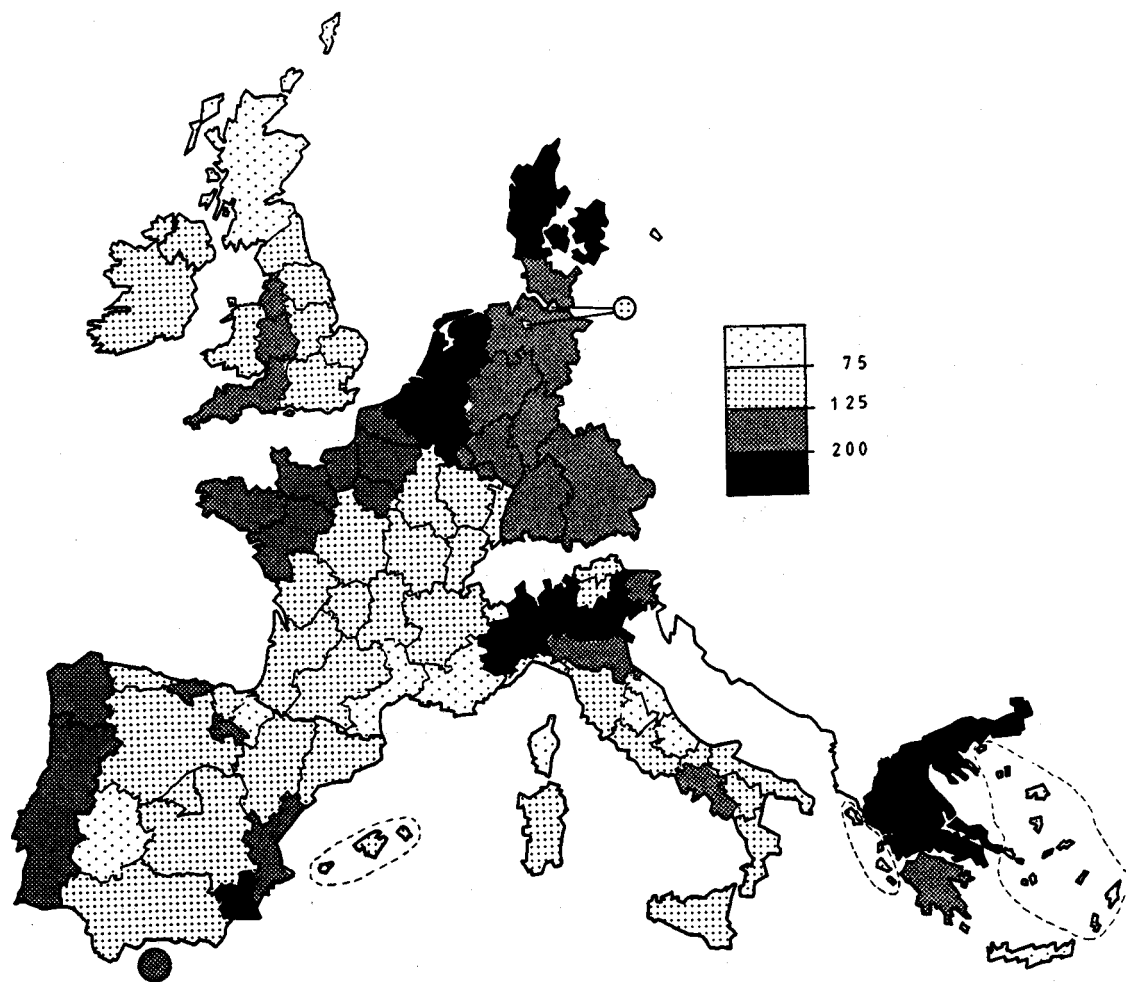


Figure 25: Density of grazing livestock: Livestock units (LU) by 100 ha of fodder crops (1985)

Figure 25 reflects the influence of two variables: fertility (or natural productivity of grassland) and the intensity of land management. The concepts of intensity and modernity are illustrated still more effectively by the SGM per dairy cow shown in map 26. The highest values are found in the Netherlands (900 ECU/dairy cow), Denmark, several regions of Germany, northern Italy, England and Catalunya. The SGM is low in Ireland and much of Spain, and lowest in Portugal, Extremadura, the extreme south of Italy and the whole of Greece, where it hovers around a quarter of the figure for the Netherlands.

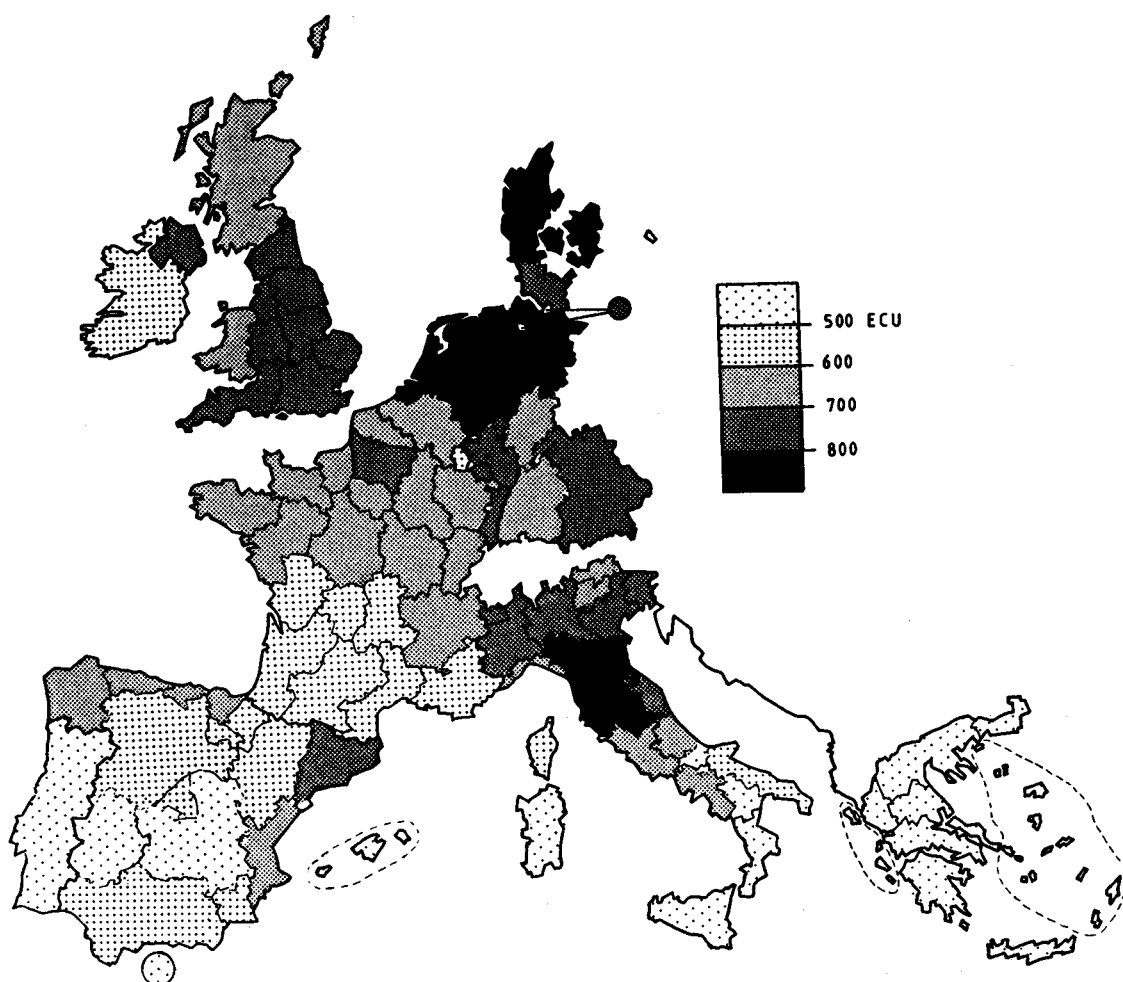


Figure 26: Dairy cows: Production (SGM in ECU) by head (average 1981-1983)

Figure 27 shows the SGM in ECU per ha total UAA, and arises from two factors: the large area of grassland and fodder crops, and the productivity of these areas and of livestock. This may be due to a high percentage of grassland and fodder crops in the total UAA, high production of these per hectare, or both. The former explanation would apply, for example, to England, the north-western tip of France and north-western Spain, and the latter to Germany. A combination of the two accounts for the extremely high value in the Netherlands. Other regions, however, show only an average SGM/ha UAA despite the importance of pasture land. This is true of Ireland and Scotland, where grassland sustains only low productivity per hectare.

The lowest values are found in regions where physical conditions do not favour grassland productivity (Scotland; the Mediterranean, where this factor accounts for the incidence of extensive farming), or regions in which conditions are better suited to other types of production: south-east England, the Bassin Parisien; regions under permanent crops better suited to the physical conditions in numerous Mediterranean regions; regions with small holdings for which grazing livestock is not profitable.

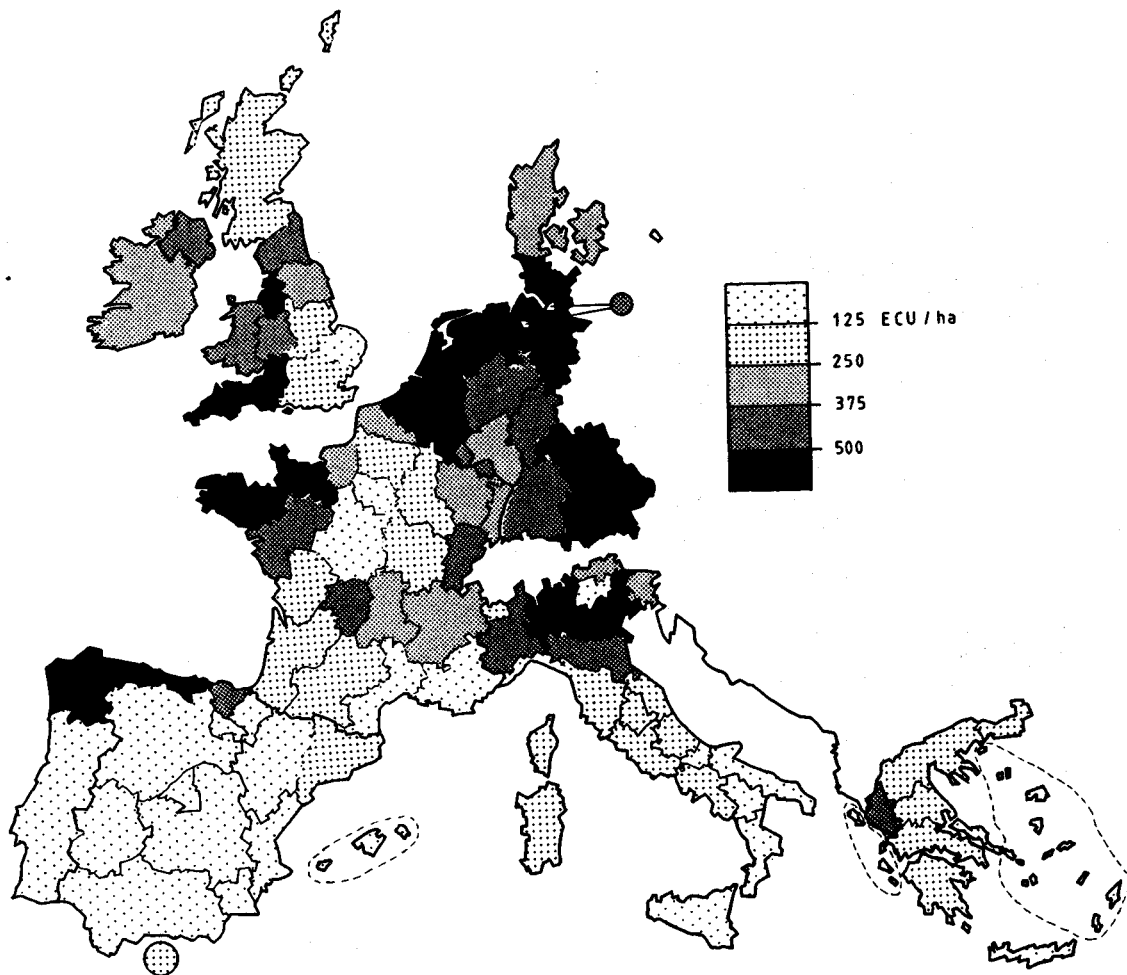


Figure 27: Grazing livestock: Production (SGM in ECU) by ha of total UAA (1985)

The superiority of north over south in this sector is illustrated still more clearly in Figure 28, which shows the SGM per region in absolute figures. The lower absolute values in the south of the Community are easily explained by the generally limited share of grassland and fodder crops in the UAA of the area, the lower density of cattle and lower SGM/livestock unit.

Nonetheless, the northern bias is extreme (Table 2a), the Netherlands alone accounting for 8.5% of the total Community SGM for the sector! Bayern follows with 6.3%, then Ireland (5.1%), Niedersachsen (4.1%) and Bretagne (3,4%). The five highest producers represent as much as 27.4% of Community production, and the fifteen highest producers 53.5%!

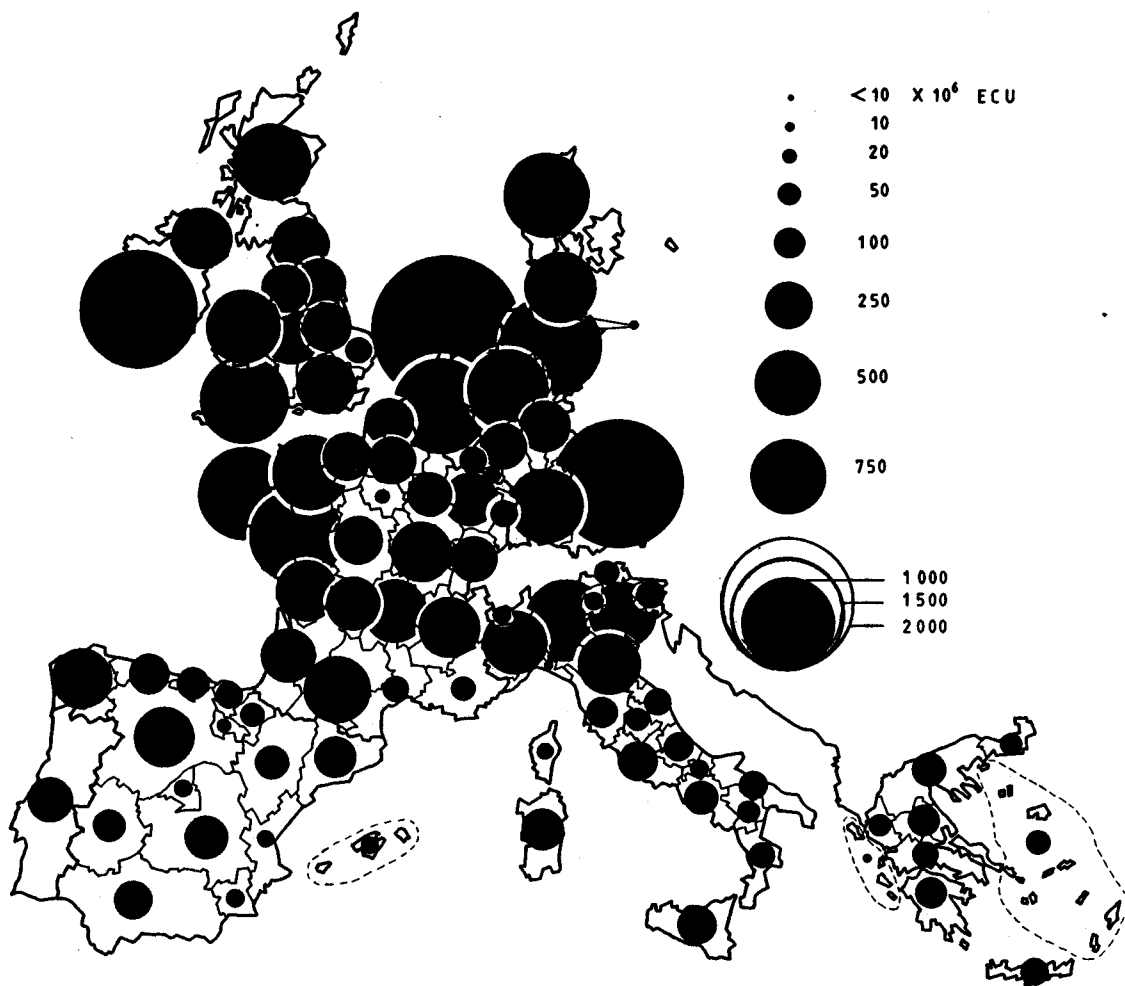


Figure 28: Grazing livestock: Absolute production (SGM in ECU) (1985)

Finally, Figure 29 shows the percentage of regional economic size represented by the grazing livestock sector. In certain Community regions this sector is typologically dominant, or in other words accounts for at least two-thirds of total production expressed in SGMs. This applies to the North of England, Wales and Northern Ireland, Ireland (8.2%); Limousin, Auvergne, Basse-Normandie and Franche-Comté in France; Valle d'Aosta in Italy, and Asturias and Cantabria in Spain. Almost all of these are regions with high relief and relatively high rainfall. In nine further regions the sector accounts for between half and two-thirds of total production. With the exception of Bayern, these are adjacent to those with highest productivity.

In 16 regions the sector accounts for between one-third and two-thirds of the total. Like those mentioned above, these are almost all in the north of the Community. In the south the grazing livestock sector represents, in general, less than a third of the total economic size of the region.

It will be seen that this map is not in complete agreement with the map of sectoral intensity in relation to total UAA. In Ireland and the Auvergne, for example, numbers of grazing livestock/ha of UAA are below average, but the sector still dominates because of the extensive farming methods in which the other sectors are insignificant. The reverse is true of the Netherlands, Belgium, most regions of Germany and northern Italy, where numbers of grazing livestock/ha of UAA are higher but the sector accounts for only half of the total economic size. These are regions of intensive agriculture, where the percentage is reduced by the presence of other production sectors.

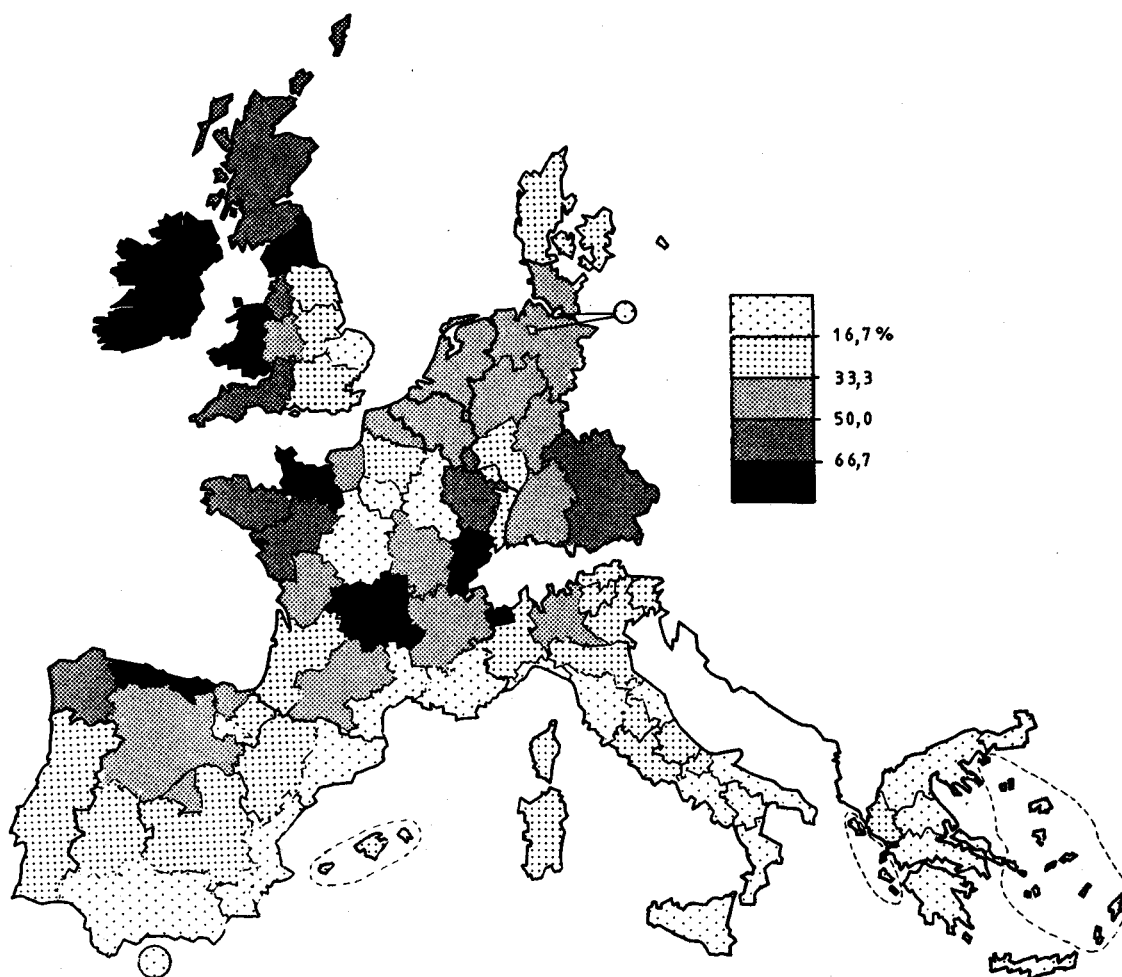


Figure 29: Grazing livestock: Production (SGM) as a percentage of total production (1985)

2.6 Granivores

The granivores sector comprises two main categories: pigs and poultry (roilers, laying hens, other poultry). For the purpose of the structure survey, the total value of the sector also includes rabbits and bees. In Greece, bees are a significant entity in the overall figure, whilst their value is zero or negligible for the other countries.

As this sector involves "landless" production, the economic size cannot be expressed in relation to a specified area, as was the case for the other sectors. Nevertheless, for the purposes of comparison it is most conveniently expressed in relation to total UAA, since the sector is considered along with the others in the analysis of total production given below.

Figure 30, which gives economic size in relation to total UAA, shows the concentration of the sector. The value per ha of UAA exceeds ECU 250 in four regions: the Netherlands ECU 445/ha of total UAA, followed by Bretagne, Nordrhein-Westfalen and Cataluña with ECU 250-300. High values in Belgium, Denmark and Niedersachsen complete the concentration in the north, with the addition of Baden-Württemberg. Another nucleus emerges in the north of Italy, comprising Lombardia, Veneto and Emilia Romagna. In Greece, Epiros has a noticeably higher value.

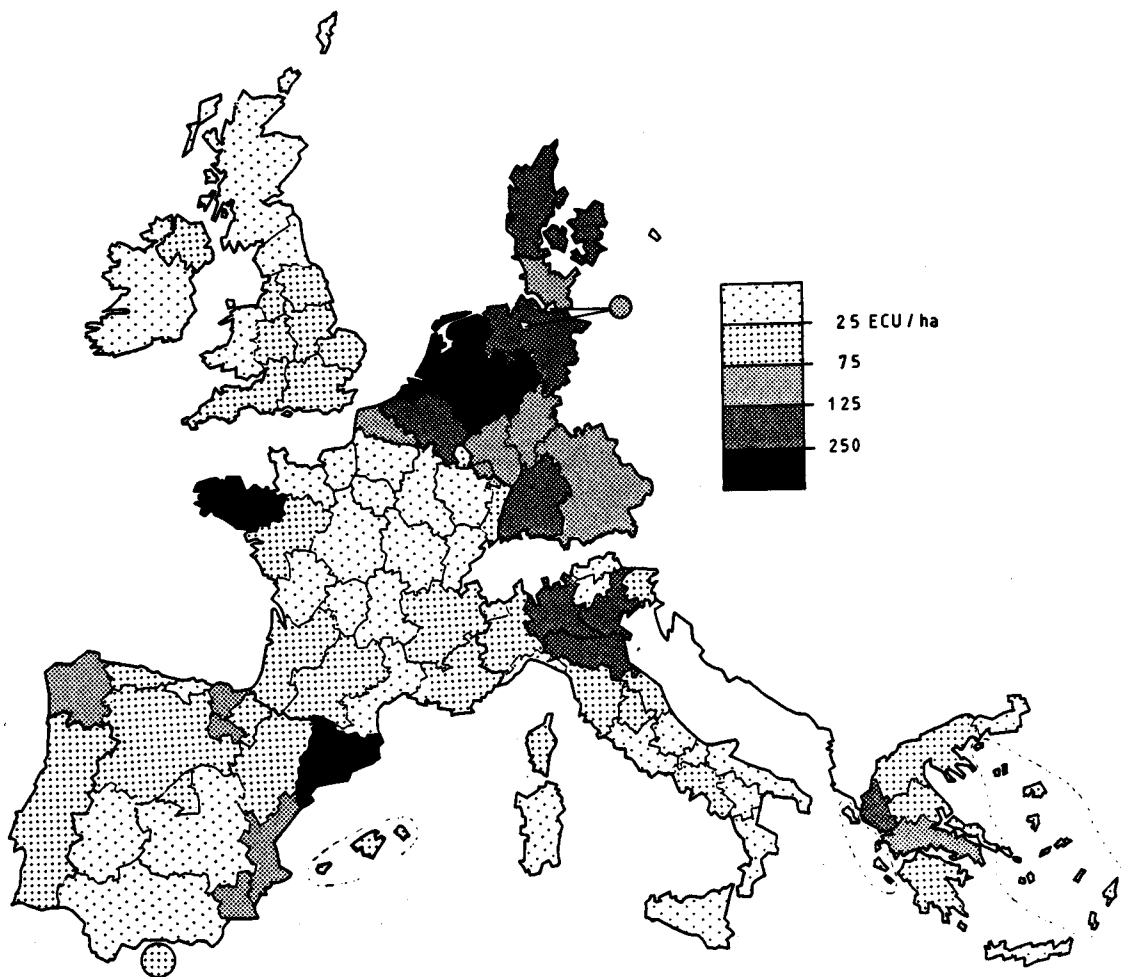


Figure 30: Granivores: Production (SGM in ECU) by ha of total UAA (1985)

The large producing regions in the north are characterised by a fairly small average size of holding, this type of intensive farming enabling small and medium-sized holdings to supplement their income, but the latter does not always imply the former: the average size of holding in Ireland is the same as in the north of England or Bretagne, but production in Ireland is low. In the north, production is generally lower in hilly regions (less-favoured areas) or fertile areas specializing in field crops. The sector is barely represented in the Mediterranean regions, despite the limited size of holdings.

Figure 31, showing economic size by region in absolute figures, confirms the distribution pattern shown in the last map. The north of the Community, Bretagne, the Po Valley and certain regions of Spain are most prominent. The most important regions are the Netherlands (12% of the Community SGM for the sector), Denmark (7.8%), Bretagne (6.9%), Niedersachsen (6.3%) and Nordrhein-Westfalen (6.0%), which together produce 39% of Community output.

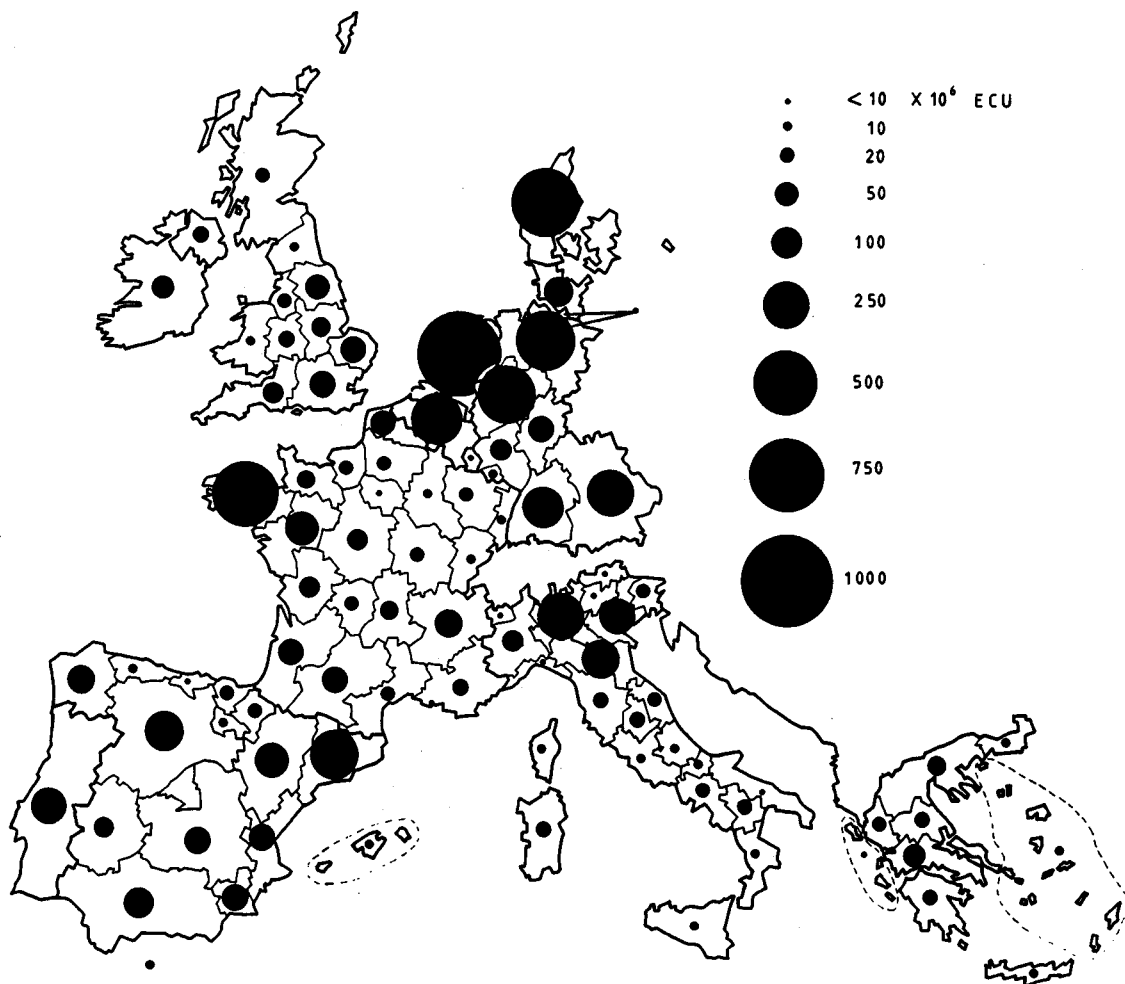


Figure 31: Granivores: Absolute production (SGM in ECU) (1985)

Finally, Figure 32 shows the percentage of total economic size represented by the granivore or "landless" production sector. It differs from the map showing the value per hectare in that the concentration in the north is still obvious but the numerical difference between this area and Spain and south-western France is less pronounced in terms of the scale given in the key. This may once again be attributed to regional differences in overall production intensity: values per hectare appear higher in regions with a relatively low total value.

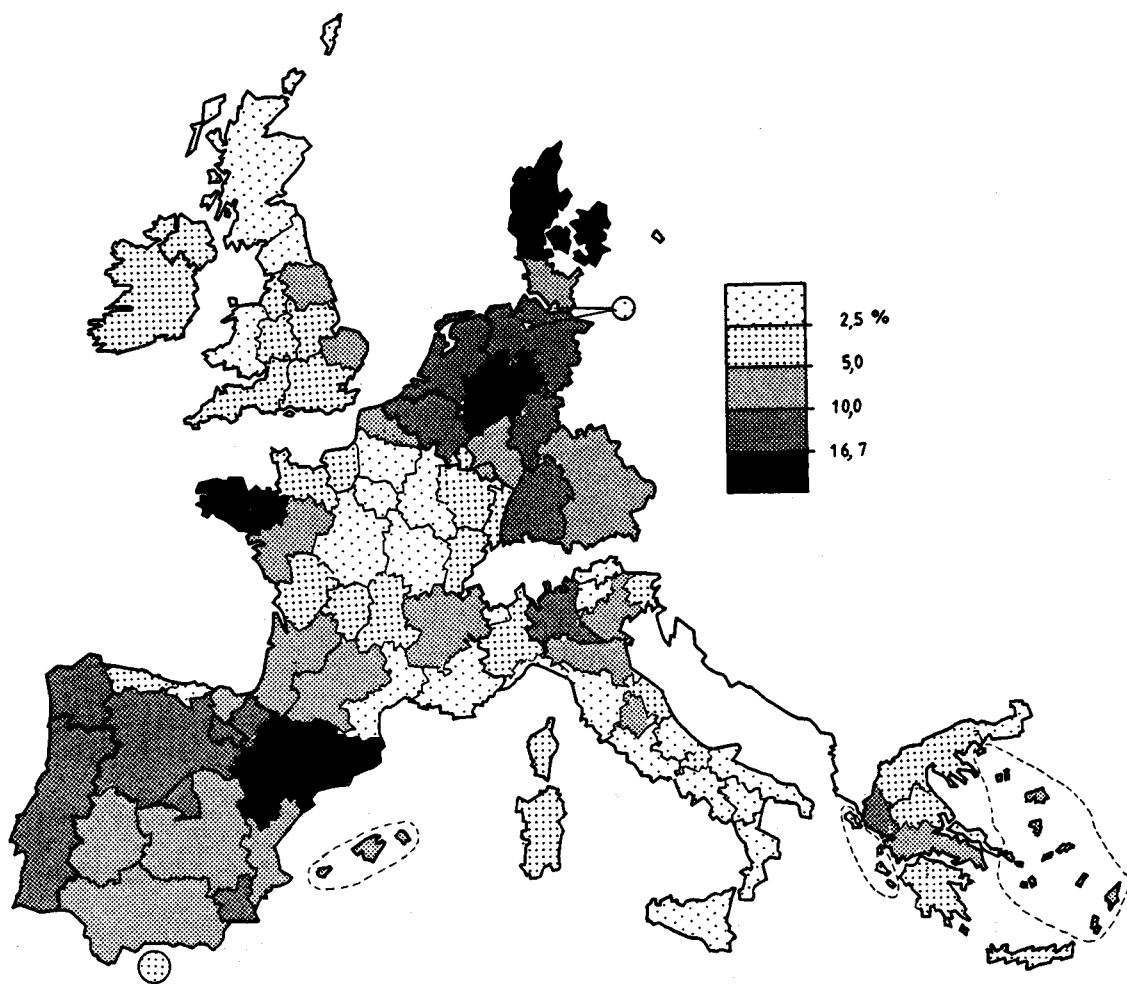


Figure 32: Granivores: Production (SGM) as a percentage of total production (1985)

Table 1: Production structure (% of SGM) by Member State and in total (1985)

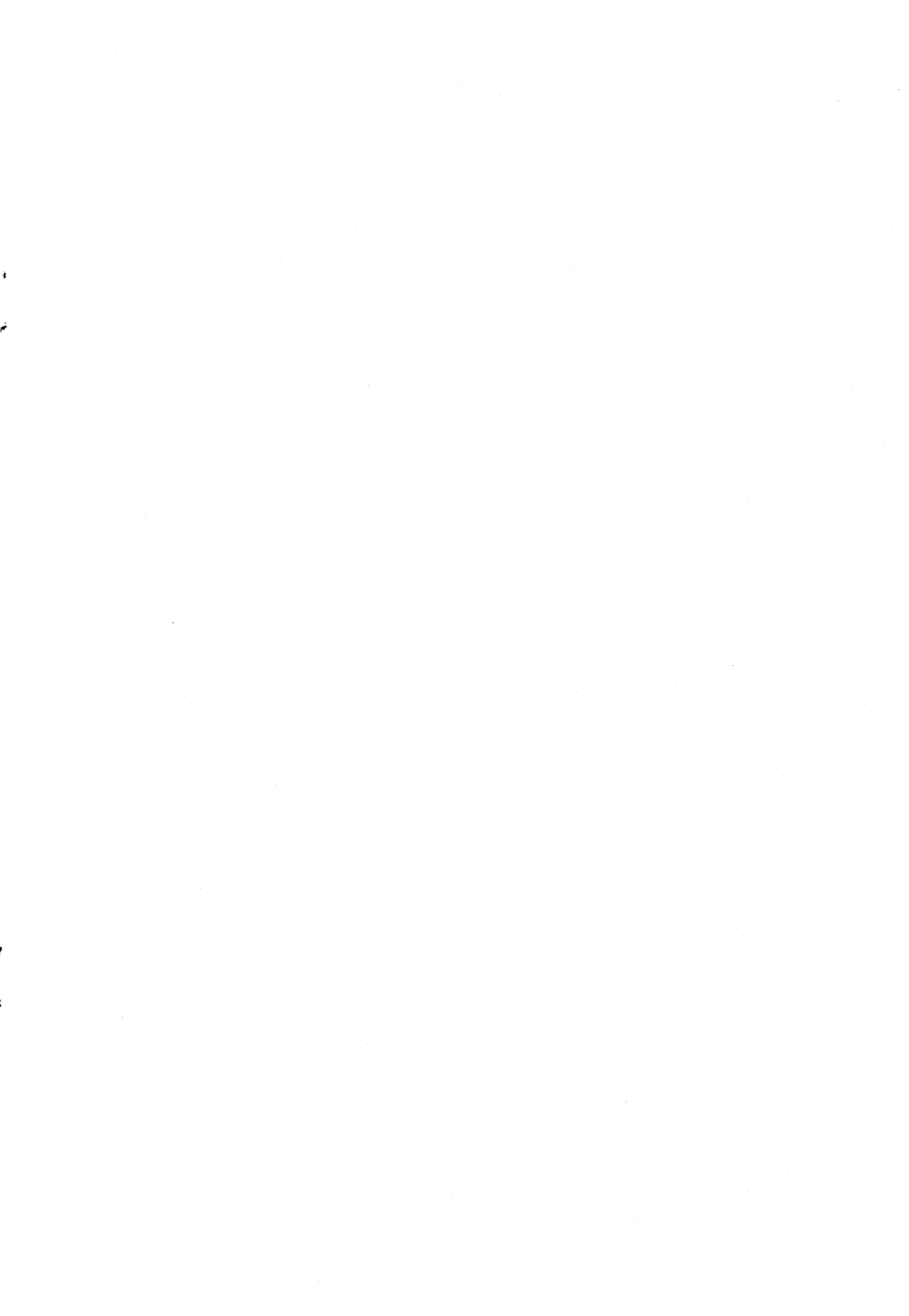
Member State	Field crops	Horti-culture (1)	Permanent crops	Grazing livestock	Granivores	Total
Germany	30,08	5,66	8,74	43,65	11,87	100,00
France	33,19	7,54	18,27	35,44	5,56	100,00
Italy	25,17	16,99	33,67	20,09	4,08	100,00
Netherlands	14,75	23,30	3,97	43,93	14,05	100,00
Belgium	25,40	13,47	4,27	43,49	13,57	100,00
Luxembourg	17,96	0,71	12,06	65,04	4,23	100,00
United Kingdom	43,31	6,59	2,14	44,63	3,33	100,00
Ireland	12,66	1,74	0,48	82,34	2,78	100,00
Denmark	45,71	4,14	1,47	29,89	18,79	100,00
Greece	39,79	10,36	30,45	14,98	4,42	100,00
Spain	25,27	13,15	25,17	24,33	12,08	100,00
Portugal	23,33	17,30	30,79	16,93	11,65	100,00
EC total	30,25	10,81	17,27	33,98	7,69	100,00

(1) Including fresh vegetables in open field

Table 2: Member States in Community production (% of SGM) (1985)

Member State	Field crops	Horti-culture (1)	Permanent crops	Grazing livestock	Granivores	Total
Germany	14,29	7,25	7,27	18,46	22,17	11,37
France	26,04	16,56	25,10	24,75	17,13	23,73
Italy	16,69	31,51	39,10	11,86	10,62	20,05
Netherlands	3,20	14,16	1,51	8,50	12,00	6,57
Belgium	2,14	3,20	0,63	3,28	4,52	2,57
Luxembourg	0,06	0,01	0,07	0,18	0,05	0,09
United Kingdom	16,81	7,15	1,46	15,42	5,07	11,74
Ireland	0,88	0,34	0,06	5,11	0,76	2,11
Denmark	4,80	1,21	0,27	2,79	7,75	3,18
Greece	5,90	4,29	7,91	1,98	2,57	4,48
Spain	8,15	11,89	14,23	6,99	15,31	9,76
Portugal	1,04	2,15	2,40	0,67	2,03	1,34
EC Total	100,00	100,00	100,00	100,00	100,00	100,00

(1) Including fresh vegetables in open field



3. TOTAL PRODUCTION AND PRODUCTION STRUCTURE

3.1 Total economic size, how it is structured, and production intensity

Figure 33 shows economic size by region. The overall picture which emerges shows a higher regional production per unit area for Europe of the Nine than for more recent members, particularly Spain and Portugal. Within EUR 9, the highest concentration is in the north-west, in the areas bordering the Channel: the Netherlands, Belgium, south-east England, the north-west of the Bassin Parisien and north Germany, compared to lesser values in Ireland, Scotland and the southern and eastern central areas of France. In Italy, the highest production areas are concentrated in the north. Tables 2 and 2a confirm these findings.

Figure 34 shows economic size of agricultural production in relation to total UAA. The results are a function of production structure and the SGM per ha or per head of livestock for the various types of production, the SGM being dependent on natural fertility and farming method. It is a cartographic synthesis of the spatial intensity distribution of regional agricultural systems. As it is largely dependent on the production structure shown in Figure 33, the two maps have been analysed together.

Production in regions with a higher SGM/ha (more than ECU 1 250/ha) is often diverse: the Netherlands, Belgium and, to a lesser extent, Nordrhein-Westfalen have a high proportion of horticulture and granivore production, while the grazing livestock sector (mostly dairy cattle) has a high SGM per head. Wine-growing accounts for the good results in Rheinland-Pfalz, where permanent crops represent 47% of total economic size.

The high values in northern Italy can be attributed to a diverse agriculture including intensive farming (granivores, permanent crops, particularly in Emilia Romagna, and some horticulture) but also, as in the north of the Community, to intensive dairy farming and sectors with a high SGM in general. In Campania and Provence-Côte d'Azur the emphasis is on horticulture and permanent crops, which together account for over two-thirds of total production, and in Liguria the horticultural sector accounts for 79%.

Epiros and Thessalia also have varied types of farming, but in Thessalia, field crops account for 57% of production. The high production intensity is the result of a high proportion of specialized crops (cotton, tobacco).

The average area of holdings is higher in the northern concentration than in the south (with the exception of Provence-Côte d'Azur). Within the southern region, holdings are larger in Italy than in Greece.

There are many regions with a production per hectare of 1000-1250 ECU/ha of UAA. These have widely diverse average areas of holding: approximately 4 ha in Greece, 15-25 ha in Germany, over 60 ha in the United Kingdom. In the northern regions, three-quarters or more of total production comes from the grazing livestock and field crop sectors. In Germany and Denmark, granivores are predominant in the intensive sectors. In the southern regions, permanent crops are the most intensive sector, followed by horticulture, together representing almost 60-80% of total production in Italy, Valenciana, Languedoc and Peloponnisos. These sectors are less important in the other regions of intensive farming in Greece, where arable farming predominates.

Amongst the regions with the lowest production per ha (below 500 ECU/ha of UAA) the average size of the holding differs widely: 4 ha in Portugal, 14 ha in Andalucia, 20-25 ha in inland Spain and Ireland and 170 ha in Scotland. The type of farming also varies enormously: basic sectors in Ireland and Scotland, but some emphasis on permanent crops and horticulture, and even granivores in the southern regions, where these sectors account for over half of total production, except in the two Castillas, where the two basic sectors predominate.

Analysis of the figure 33 showing production intensity and production structure shows that the same total intensity may be obtained with completely different production structures. This can be explained by the frequently high SGM achieved for the basic sectors in the north (high crop yield, high milk production per cow), while the SGM for the sectors labelled "intensive" can be low

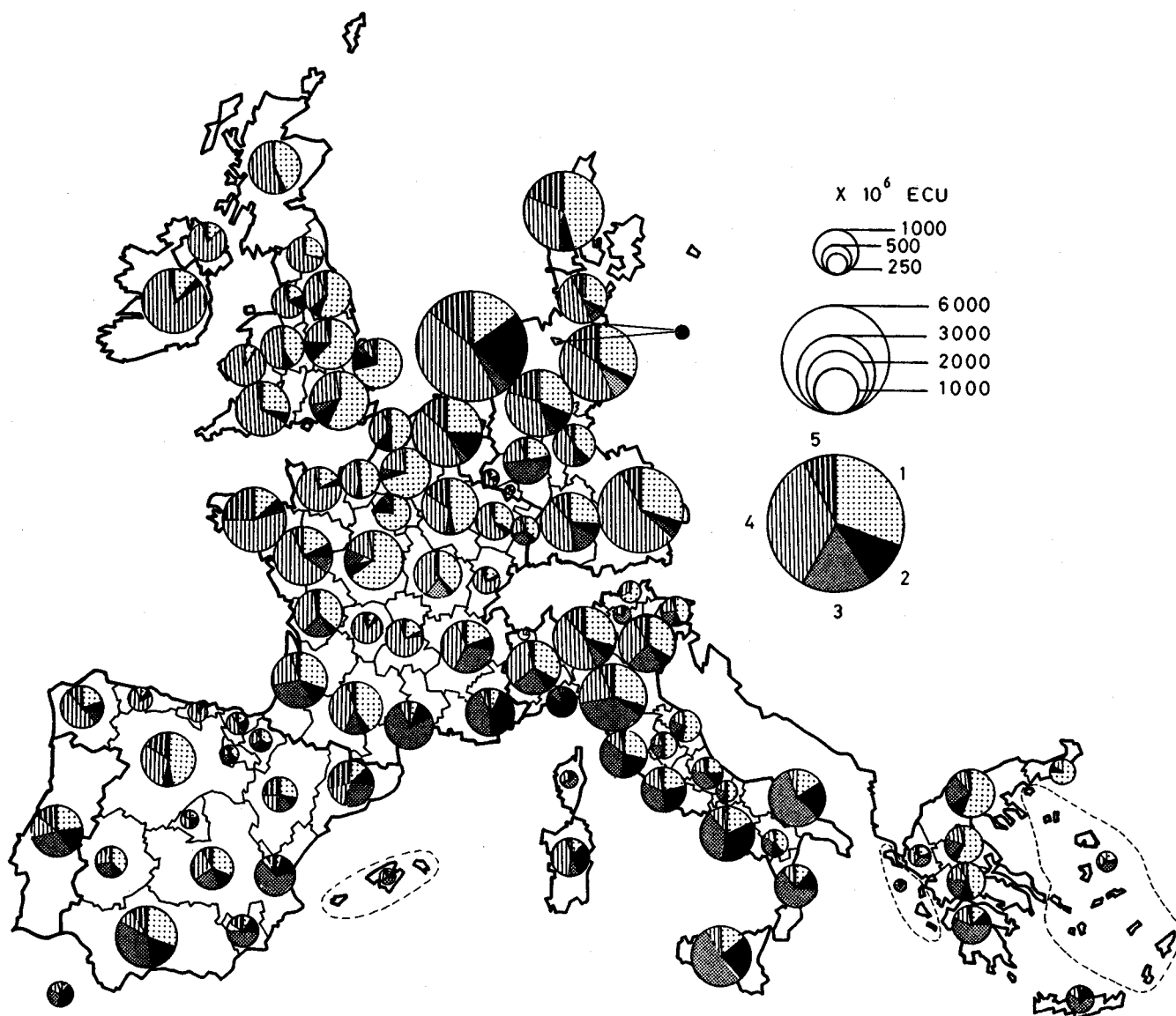


Figure 33: Absolute total production (SGM in ECU) and production structure (1985)

- 1 = Field crops
- 2 = Horticulture
- 3 = Permanent crops
- 4 = Grazing livestock
- 5 = Granivores

in the south. A hectare of cereals in the Netherlands and Belgium has an SGM of around 900 ECU/ha, and fruit almost 6 000 ECU/ha. In Castilla-Mancha the SGM for cereals is between 60 and 107 ECU/ha, 80 ECU/ha for olives, 684 ECU/ha for irrigated fresh fruit crops and 222 ECU/ha for nuts on non-irrigated land. Permanent crops, which in the north represent the intensive sector (fruit, vines for quality wine) as opposed to grazing livestock and field crops, can be non-intensive or less intensive in the south (olives, vines for table wine and nuts).

That the same intensity may be achieved by different production structures is a fact but is not in itself a problem. A more important consideration is the relationship between the area of holding, and production intensity per hectare. These two factors provide the basis for calculation of the economic size of the holding, which is an indirect indication of its viability. A comparison of the maps showing average area per holding and intensity per hectare clearly shows that there is no direct inverse relationship, in that regions with the same average area of holding can have different intensities. With an average area of around 15 ha, intensity in the Netherlands reaches ECU 3166/ha UAA, around ECU 1100 in southern Germany, ECU 914 in Navarra and only ECU 388 in Andalucia. The economic size can, then, evidently differ enormously. The usual assumption is that a small surface area is compensated for by highly intensive production, while a large area allows a different production structure, extensive production sometimes being imposed by poor environmental conditions. An extreme example of compensation can be seen in a comparison of Scotland (169.8 ha, 272 ECU/ha) with the Netherlands (14.9 ha, 3166 ECU/ha).

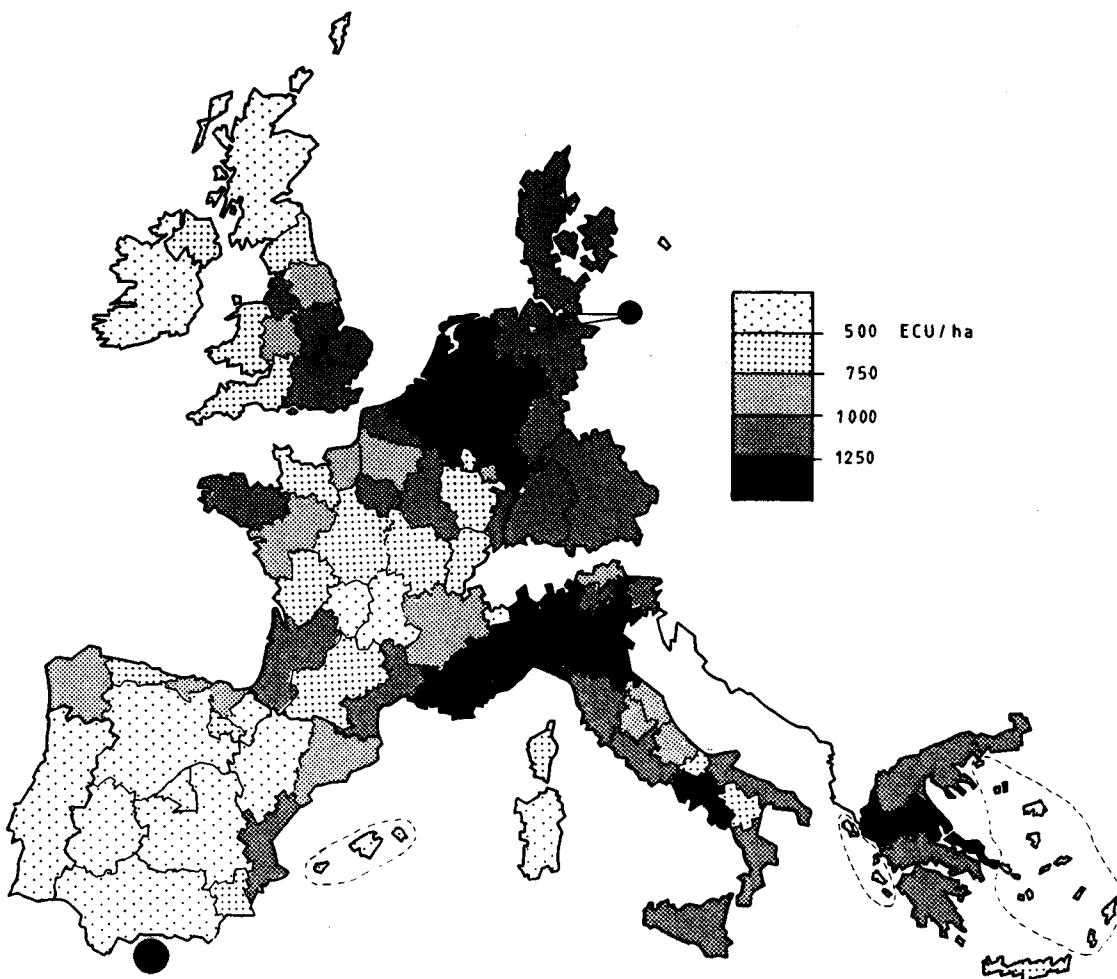


Figure 34: Total production (SGM in ECU) by ha of total UAA (1985)

3.2 Economic size per holding

Figure 35 shows economic size per holding. Distribution is regular, with a gradual reduction in economic size per holding radiating outwards from the nucleus of the Netherlands, a large part of Great Britain and the centre of the Bassin Parisien.

Care must be taken not to confuse the economic size of a holding with its income, and certainly not with the farmer's income. The fact that the number of workers, expressed in annual work units (AWU), differs widely between regions is an essential consideration. The extremely high values for Great Britain are due to the large holding size and a relatively high SGM/ha, but this must be seen in context: the number of AWU per holding may exceed 2 units while the average for the south of the Community is generally below 1 unit as many holders are not permanently employed in agriculture. The map therefore accentuates regional variations in structure in the Community. In fact, capital is an increasingly important factor in agriculture, and large holdings are in a better position to acquire funds.

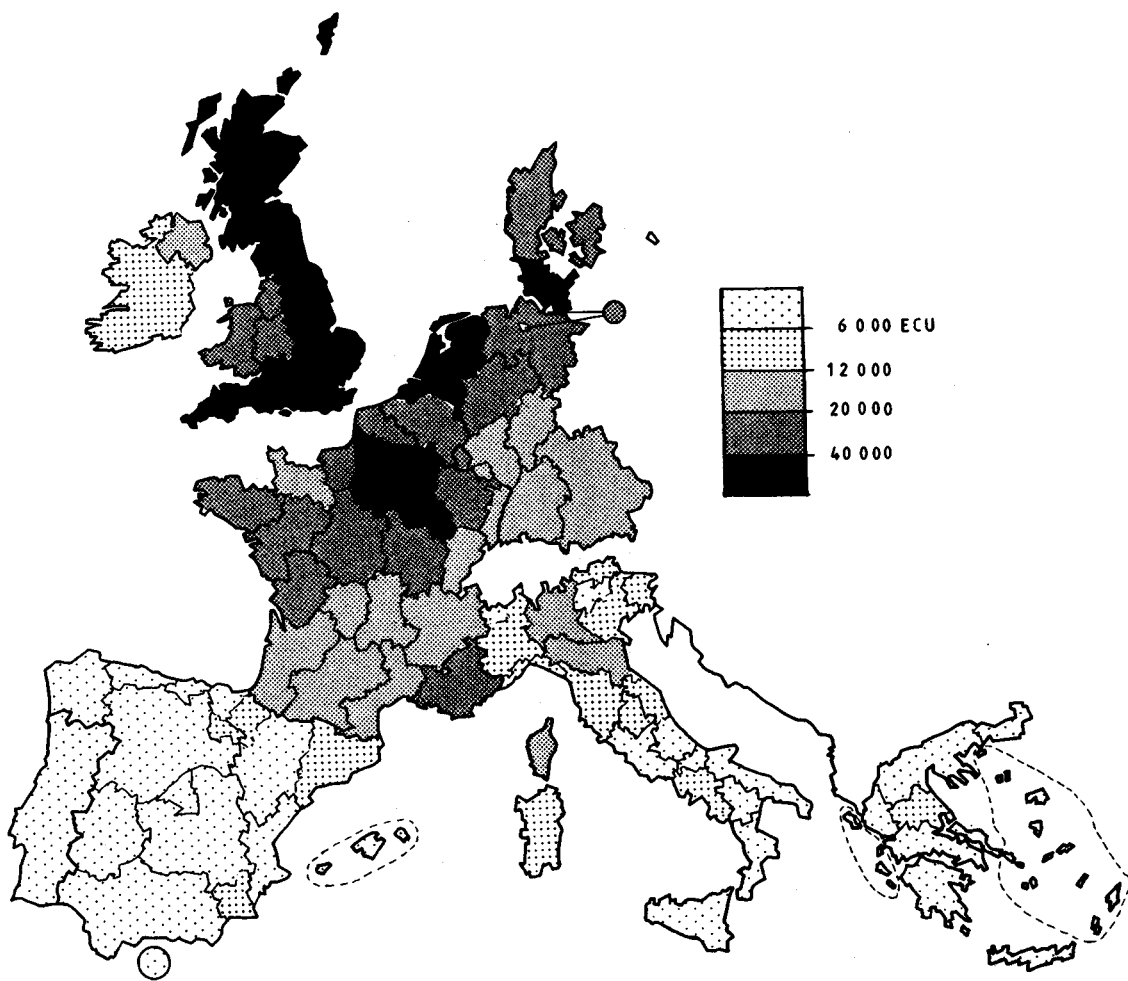


Figure 35: Economic size (SGM in ECU) per holding (1985)

3.3 Economic size per work unit

Figure 36 shows agricultural production per annual work unit (AWU). The overall distribution is similar to that shown in the previous map, but numerical differences are less pronounced as economic size is here expressed in terms of a comparable unit.

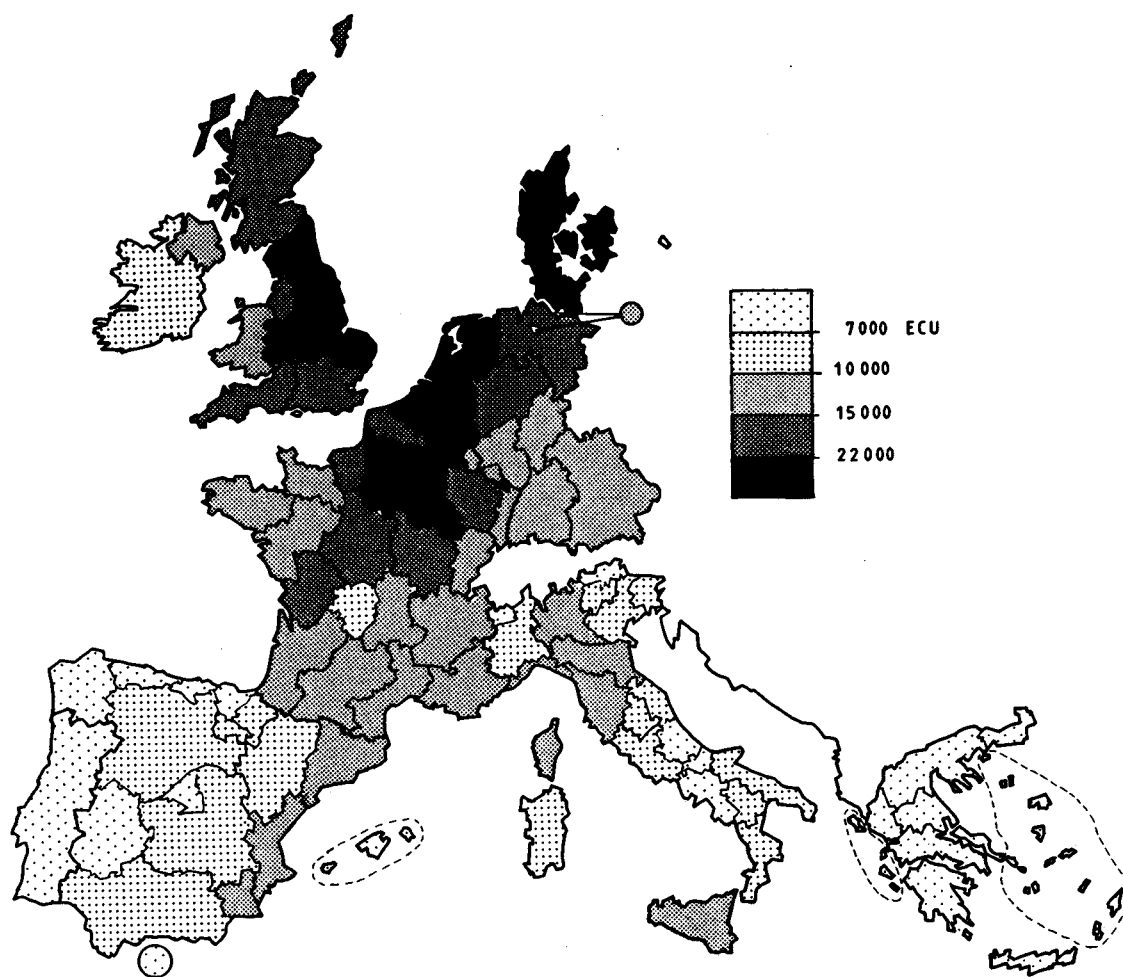
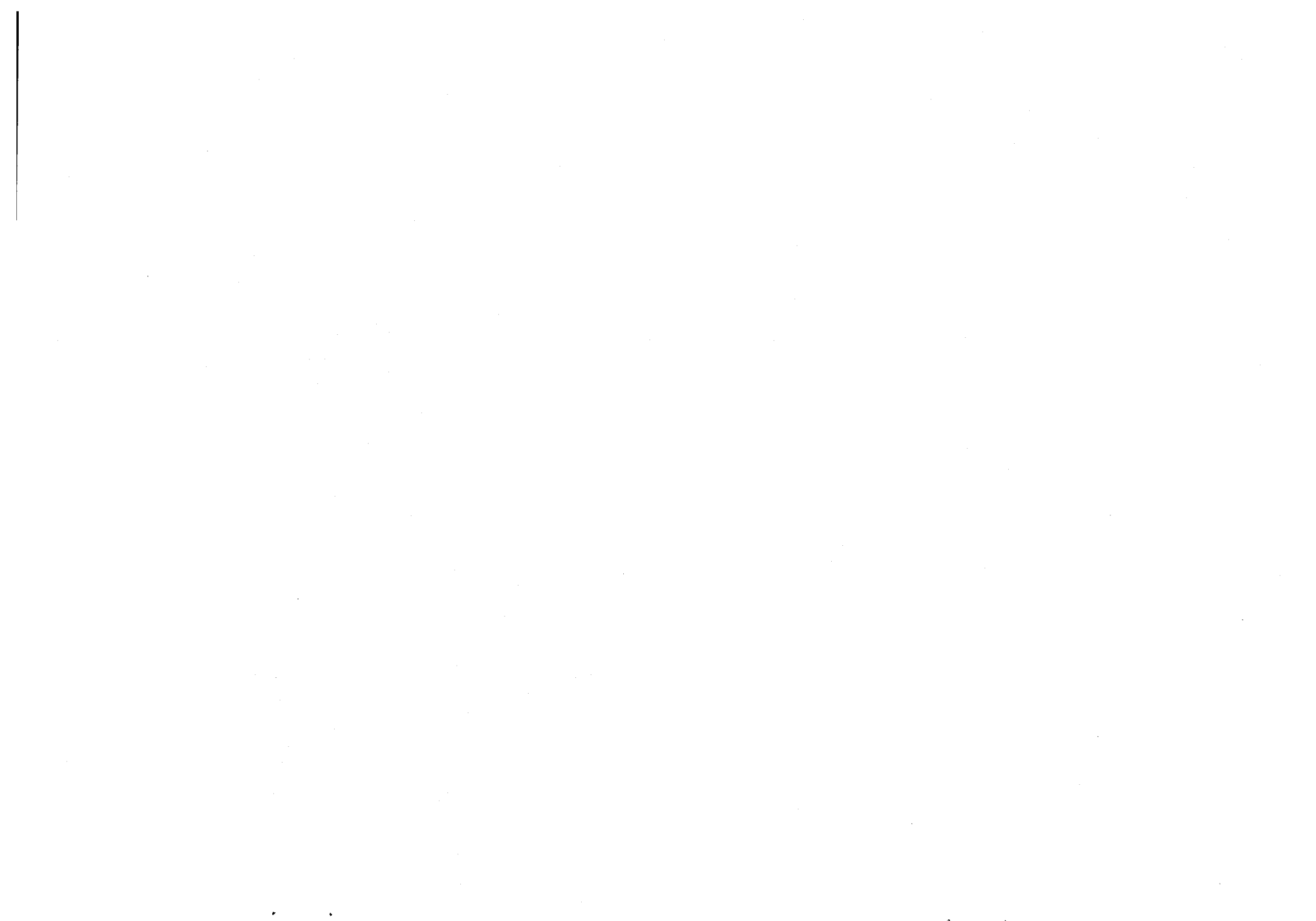


Figure 36: Economic size (SGM in ECU) per annual work unit (1985)



4. TYPOLOGY OF REGIONS AND HOLDINGS

4.1 A typology of regions

The Community has here been broadly divided into spatial units, and the fact that administrative boundaries do not generally correspond to geographical regions is a major factor influencing the heterogeneity within the administrative regions. Another factor is the varied size of holdings within a region, which generally dictates the type of farming. Considered at regional level, the structure may appear heterogeneous whereas individual holdings may be highly specialized. Production structure by administrative region can, however, be a useful source of reference and is shown in detail in Figure 37. Generalisations can be made on the basis of an appropriate typology. Obviously, such a typology should be drawn up along the lines of the Community typology of agricultural holdings. The type of farming for a region, as for an individual holding, can be defined by the relative contribution of each sector to its final standard gross margin.

In view of the above, it is not surprising that the Community has few regions classed as "specialized" within the meaning of the typology, i.e. with two-thirds of the total SGM derived from a single sector.

The specialized regions:

- Five regions specialize in **field crops** (code 1): East Anglia, Picardie, Région Parisienne, Centre, Traki.
- Two regions specialize in **horticulture** (code 2): Liguria, Hamburg-Bremen-Berlin.
- Five regions specialize in **permanent crops** (code 3): Calabria, Trento, Languedoc-Roussillon, Valenciana, Ionioi Nissoi.
- Twelve regions specialize in **grazing livestock** (code 4): Ireland, Northern Ireland, North of England, Wales, Basse-Normandie, Luxembourg, Franche-Comté, Limousin, Auvergne, Asturias, Cantabria, Valle d'Aosta.
- No region specialize in "intensive" husbandry (**granivores**) (code 5).

Combined regions

Within this classification a distinction is made between holdings combining two sectors, each contributing a third or more to the final standard gross margin, and combined holdings with a dominant type of farming in which the main sector represents between one-third and two-thirds of the final standard gross margin, no other sector exceeding one-third.

Combined regions with partial domination:

- In 17 regions, **field crops** (code 605) are partially dominant: Yorkshire and Humberside, East Midlands, South-East England, Denmark, Nord, Alsace, Veneto, Friuli-Venezia, Umbria, Marche, Molise, Basilicata; Kentriki Ellas Kai Evia, Thessalia, Makedonia; La Rioja, Extremadura. These are either transitional regions bordering on zones specializing in field crops (France, United Kingdom) or in the Mediterranean area.

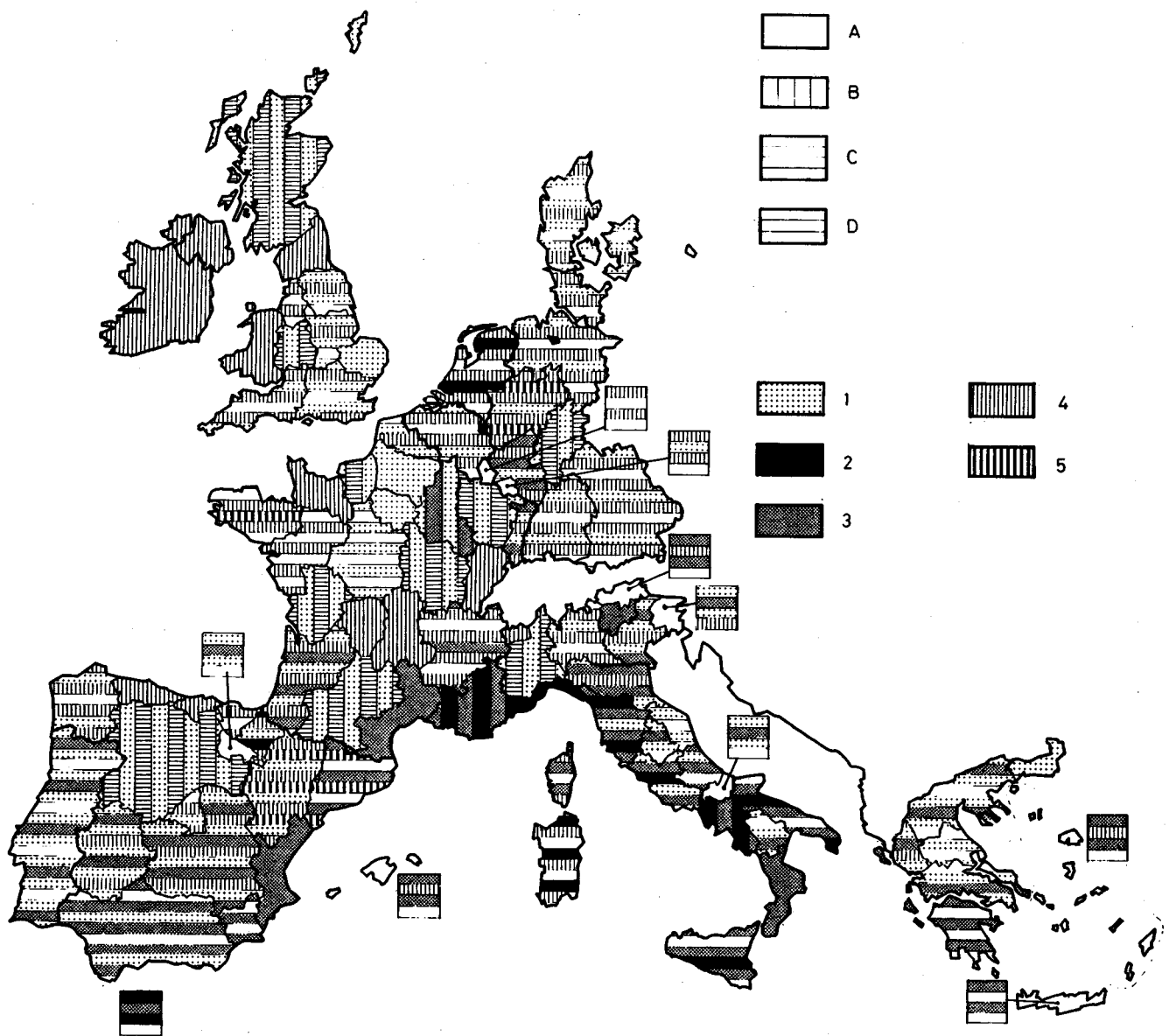


Figure 37: Structure of regional production by sector (1985)

Sectors: 1. Field crops 2. Horticulture 3. Permanent crops
 4. Grazing livestock 5. Granivores

- A. Specialized region: one sector more than 2/3 of regional SGM
- B. Combined "bipolar" region: two sectors between 1/3 and 2/3 of regional SGM
- C. Combined region with partial domination: one sector between 1/3 and 2/3 of regional SGM (two out of four lines) and no other sector more than 1/3; sectors between 1/5 and 1/3 are also represented: one line in four.
- D. Other combined regions: no sector more than 1/3 of regional SGM; sectors between 1/5 and 1/3 are also represented: one line in three.

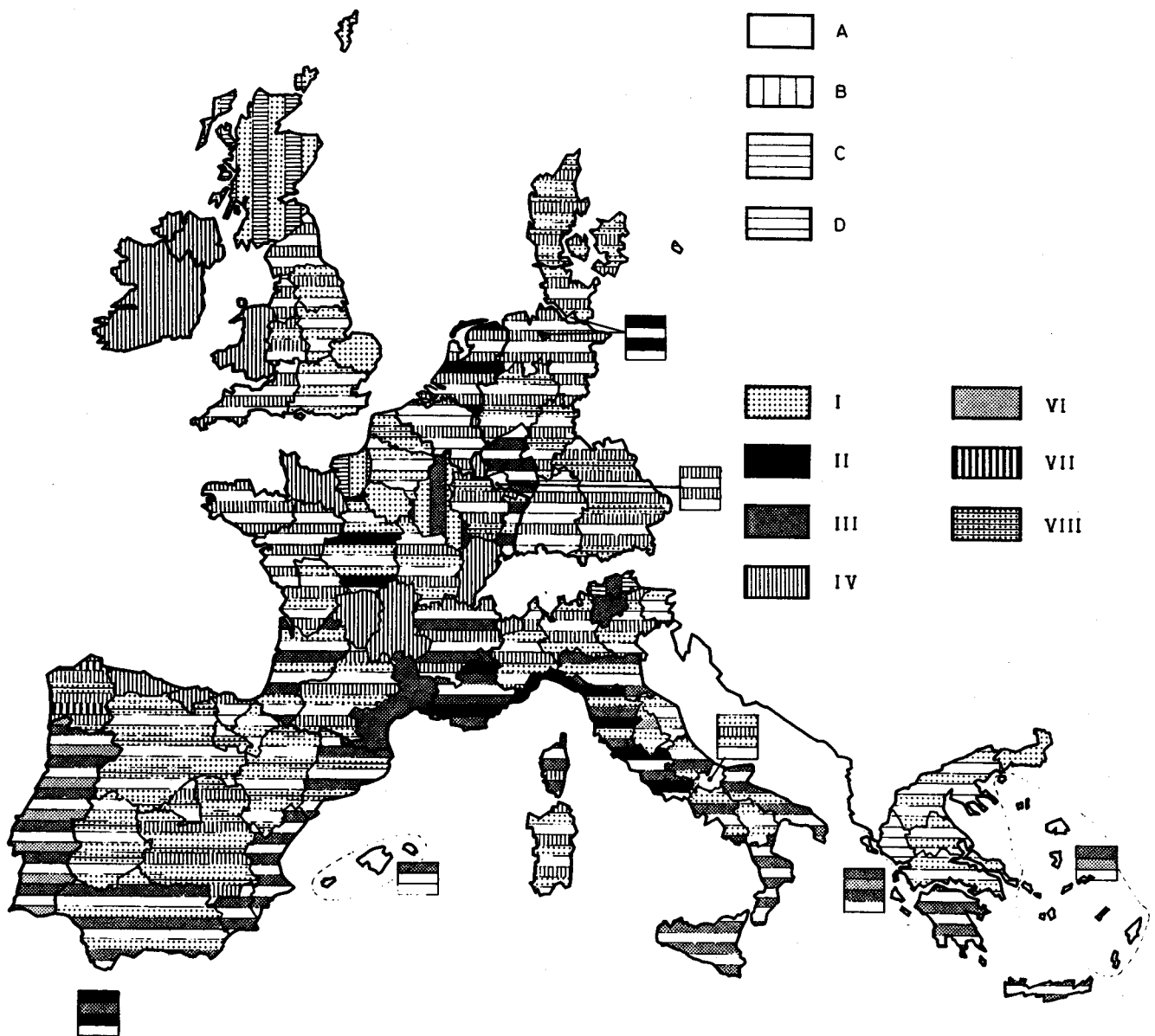


Figure 38: Structure of regional production by type of farming (1985)

Types of farming (TF):

- | | | | |
|-----|-------------------------------------------|------|------------------------------------|
| I | Holdings specialized in field crops | V | Holdings specialized in granivores |
| II | Holdings specialized in horticulture | VI | Mixed cropping holdings |
| III | Holdings specialized in permanent crops | VII | Mixed livestock holdings |
| IV | Holdings specialized in grazing livestock | VIII | Combined crop/livestock holdings |

- A. Specialized region: one TF produces more than 2/3 of regional SGM.
- B. Combined "bipolar" region: Two TFs each produce between 1/3 and 2/3 of regional SGM.
- C. Combined region with partial domination: one TF produces between 1/3 and 2/3 of regional SGM; other TFs each produce between 1/5 and 1/3 of regional SGM (one line in four).
- D. Other combined regions: One or more TFs each produce between 1/5 to 1/3 of regional SGM (one line in three).

- In only one region **horticultural** production (code 606) is partially dominant: Canarias
- In 14 **mixed cropping** regions, permanent crops (also code 606) are partially dominant: Rheinland-Pfalz; Corsica; Emilia Romagna; Toscana, Abruzzi, Puglia, Sicilia, Bolzano-Bozen; Peloponnisos, Nissoi Aigaiou, Kriti; Baleares, Murcia, Andalucia. With the exception of Rheinland-Pfalz these are all Mediterranean regions.
- In 17 regions, **grazing livestock** (code 71) is partially dominant: north-west and south-west England; the Netherlands; Belgium; most of Germany: Schleswig-Holstein, Niedersachsen, Nordrhein-Westfalen, Baden-Württemberg, Bayern, Saarland; Pays de la Loire, Bretagne, Rhône-Alpes; Lombardia; Galicia, Pais Vasco, Madrid. Most of these regions are in the north of the Community.
- **Granivores** do not account for more than a third of the total economic size of any region.

Combined "bipolar" regions:

- There are no **mixed livestock** regions, i.e. regions in which grazing livestock and granivores each account for a third of the total SGM.
- **mixed crop** combinations are relatively rare: two regions combine horticulture and permanent crops (code 601) : Provence-Côte d'Azur and Campania. One region, Champagne-Ardenne, combines field crops with winegrowing (code 603).
- **Crop/livestock** combinations are more common. Ten regions combine field crops and grazing livestock (code 81): West Midlands, Scotland; Hessen; Haute Normandie, Bourgogne, Lorraine, Poitou-Charentes, Midi-Pyrénées; Piemonte; Castilla Leon.

Non-specialized regions:

- In nine regions, production is sufficiently diverse to prevent any one of the five sectors from supplying one-third of the region's total SGM. The sectors accounting for at least 20% of the total are shown in brackets in descending order:
 - Aquitaine (permanent crops, field crops, grazing livestock)
 - Ipiros (permanent crops, grazing livestock, field crops)
 - Portugal (permanent crops, field crops)
 - Lazio (permanent crops, horticulture, field crops)
 - Sardegna (grazing livestock, horticulture)
 - Navarra (field crops, horticulture, grazing livestock)
 - Aragon (field crops, granivores, grazing livestock)
 - Cataluña (permanent crops, granivores)
 - Castilla la Mancha (field crops, grazing livestock, permanent crops).

The following method of illustration has been used:

- For the specialized regions, homogeneous hatching representing the sector covers the whole area.
- For the combined "bipolar" regions, alternate hatching representing each sector covers the whole area.

- For the combined regions with partial domination, the hatching representing the main sector (between 1/3 and 2/3 of total production) is applied to alternate lines, so that it covers about half the region's total area. To provide more detailed information, however, sector(s) with over 20% (and less than one-third, in which case the region would be "bipolar") are also shown. The spaces between the lines of hatching for the dominant farming type are filled in with the relevant marking (one line in four for each sector). If only one other sector accounts for 20%, this is shown by filling in every fourth line and leaving the rest of the space blank. If no other sector accounts for 20%, all the remaining spaces are left blank: for example, where the dominant sector has a particularly high value (Pays de la Loire, where the grazing livestock sector alone accounts for 58.6%, or Murcia, where permanent crops account for 51.3%).
- For the non-specialized regions (no sector accounting for one-third of the total), the sectors with 20% are shown alternately by filling in three lines in succession, one for each sector, and filling all the space (if three sectors exceed 20%, the illustration reflects 60% of production which is approximately equivalent to the other types). If only two sectors exceed 20%, the two types of hatching have a blank space in between to distinguish them from the bipolar regions in which each sector accounts for at least a third of total production.

4.2 A typology of holdings

The typology of holdings includes eight main types: holdings specialized in field crops, horticulture, permanent crops, grazing livestock and granivores (pigs and poultry), mixed cropping holdings, mixed livestock holdings and combined crop/livestock holdings.

To identify the specialization of a region at holding level, the same system of classification and thresholds has been used as in the classification of regional production (Figure 38) (Tables 3 and 3a).

Regions with homogeneous specialization of holdings:

In some Community regions, at least two-thirds of the SGM are produced by holdings specializing in one main type of farming.

- In East Anglia, the Paris region and Traki, over two-thirds of the region's total SGM are produced on holdings specializing in **field crops**.
- In Liguria 79%, and in Hamburg-Bremen-Berlin 66% of the total SGM is produced on holdings specializing in **horticulture**.
- In Languedoc 71%, and in Trento 68% is produced on holdings specializing in **permanent crops**.
- Holdings specializing in **grazing livestock** are predominant in 11 regions: Ireland; Northern Ireland; Wales; Luxembourg; Basse-Normandie, Limousin, Auvergne, Franche-Comté; Valle d'Aosta; Asturias; Cantabria.

Regions in which one-third to two-thirds of the total SGM is produced on holdings specializing in the same type of farming:

- In 15 regions holdings specialize in **field crops**: Yorkshire and Humberside, East Midlands, South-East England; Nord, Centre, Picardie; Castilla Leon, Navarra; Umbria, Marche, Molise, Basilicata; Makedonia, Thessalia, Kentriki Ellas Kai Evia. In some cases a second group of holding accounts for between 20% and 33% of the total SGM: horticulture in Centre; combined crops/livestock in Nord and Castilla Leon; mixed cropping in Umbria and Molise; grazing livestock in Yorkshire and Humberside. In the remaining eight regions, no farming type other than the main specialism accounts for more than 20% of the total SGM. The types of holding on which the dominant type of farming accounts for a high percentage of the total SGM are, then, quite diverse.
- In 11 regions holdings specialize in **permanent crops**: Rheinland-Pfalz; Provence-Côte d'Azur, Corsica; Puglia, Calabria, Sicilia; Peloponnisos, Nissoi Ionioi, Kriti; Castilla la Mancha, Murcia; this applies to horticulture in one region (Canarias). A second type of specialized holding accounts for 20 to 30% of the total SGM in some of these regions: horticulture in Provence-Côte d'Azur and Sicilia; field crops in Emilia Romagna and Puglia; grazing livestock in Corsica; mixed cropping in Nissoi Ionioi, and permanent crops in Canarias.
- In 14 regions holdings specialize in **grazing livestock**: Schleswig-Holstein, Niedersachsen, Bayern, Saarland; Lorraine, Bretagne, Pays de la Loire; Lombardia; Netherlands; North, South-East, West Midlands and North-West of England; Galicia. 20-33% of the total SGM is produced on holdings specializing in a second type of farming in: Schleswig-Holstein, West Midlands, Lombardia (field crops); Bayern, Lorraine, Galicia (crops/livestock; in Galicia a third type, mixed livestock, accounts for over 20%); the Netherlands (horticulture).

Table 3: Production of holdings (SGM) as a percentage of their type of farming (TF)

I	Holdings specialized in field crops
II	Holdings specialized in horticulture
III	Holdings specialized in permanent crops
IV	Holdings specialized in grazing livestock
V	Holdings specialized in granivores
VI	Mixed cropping holdings
VII	Mixed livestock holdings
VIII	Combined crop/livestock holdings

	I	II	III	IV	V	VI	VII	VIII
Germany	14,2	4,3	7,9	34,9	2,9	4,3	11,9	19,5
France	25,0	6,0	15,8	29,1	2,8	5,2	4,8	11,4
Italy	24,3	13,6	24,2	15,7	2,8	10,5	2,7	7,2
Netherlands	14,1	21,6	3,4	42,1	8,7	2,1	4,7	3,4
Belgium	12,9	10,9	4,0	31,4	7,5	5,0	9,5	18,9
Luxembourg	1,1	1,1	9,9	68,1	0,0	1,1	7,7	9,9
United Kingdom	38,3	3,0	1,4	36,8	1,8	4,3	1,2	13,2
Ireland	6,5	0,4	0,2	80,4	2,0	1,6	1,6	7,3
Denmark	28,8	3,6	1,3	24,0	7,9	3,1	7,3	24,1
Greece	40,6	3,6	24,6	9,9	1,8	10,9	2,3	6,3
Spain	17,9	5,7	16,1	19,4	6,3	8,4	6,1	20,2
Portugal	6,6	3,4	20,0	3,6	9,3	31,8	12,6	12,9
EC total	23,4	7,9	13,8	27,1	3,7	6,7	5,1	12,3

Regions in which two categories of specialized holding each account for one-third to two-thirds of the total SGM (bipolar type):

Few regions fall into this category: Haute-Normandie and Scotland, in which field crops and grazing livestock each account for this proportion of the total SGM, Champagne-Ardenne with field crops and permanent crops, and Bolzano-Bozen with permanent crops and grazing livestock.

Regions in which no particular specialism accounts for at least one-third of the total SGM:

32 regions fall into this category. They are spread throughout the Community but include nine of the 17 Spanish regions. More details can be found in Figure 38 or Table 3a. Within the group, there are six regions in which a single main type of farming accounts for 20% of the total SGM: Belgium, Baden-Württemberg, Friuli-Venezia, La Rioja, Balears, Portugal. In Epiros no type of farming accounts for at least 20 % of total SGM.

The production structure in all regions in this category is thus highly varied when assessed on the basis of the holding.

4.3 Comparison of regional production structure and the production structure of holdings

4.3.1 Introduction

Direct comparisons cannot be drawn between the typology of regional production and the specialization of holdings: the typology of the former is based on five sectors, whereas eight main farming types are used to categorize holdings. Furthermore, as we have seen, even the standard gross margins of specialized holdings are not homogeneous, holdings being regarded as specialized when at least two-thirds of the total SGM is supplied by the same type of farming. The analysis below is twofold, including on the one hand a comparison of dominant types of holding with dominant production sectors, and on the other a sectoral analysis comparing production from a particular type of farming with the production from holdings specializing in that type.

To ensure that the comparison is valid, we have included vegetables grown in the open in the field crop category, as is the case in the Community typology. Horticultural production is therefore proportionately lower and field crop production proportionately higher, and there are certain discrepancies between the figures given in section 4.1 and those in Table 4. This has affected the typology of eleven regions, almost all in the south of the Community. In four of them, specialization has become bipolar (permanent crops - field crops) instead of partially dominant (permanent crops) - Emilia Romagna, Toscana, Abbruzzi, Puglia); and in four others "field crops" appear as a specialization although no sector accounts for a third of the total (Sardegna, Aquitaine, Navarra, Castilla la Mancha). In Campania, the bipolar specialization horticulture/permanent crops becomes field crops/permanent crops. In Canarias the horticultural sector no longer accounts for a third, with the result that there is no specialization. East Midlands moves from partially dominant in field crops to specialized (over two-thirds) in field crops.

4.3.2 Comparison of the typology of regional production and the typology of holdings

A comparison of Figures 37 and 38 with Table 4 enables the differences between overall structure and type of holding to be determined.

Of the 95 regions covered, 53 have an overall production structure identical to their characteristic type(s) of holding, i.e. if "field crops" account for over two-thirds of the region's total SGM, over two-thirds of the SGM is produced on holdings specializing in field crops. If grazing livestock account for one-third to two-thirds of the total SGM, one-third to two-thirds of the SGM is produced on holdings specializing in grazing livestock etc. Of these 53 regions, five have neither a production sector exceeding one-third of the total SGM nor specialized holdings representing a third of the total SGM.

In the other 42 regions, the overall structure does not correspond exactly to the characteristic type of holding for the reason given above: a proportion of the production comes from holdings with combined types of farming. Numerous examples of this may be cited. In seven regions production is dominated by a single sector (more than two-thirds), while the structure of holdings is such that those specializing in this type of farming have an SGM below $2/3$, fluctuating between $1/3$ and $2/3$. In other regions the production structure is "bipolar", while on the holdings only one specialization exceeds $1/3$ of the total SGM. Three regions fall into this category. Much more common is a "bipolar" production structure but with holdings on which neither specialization accounts for $1/3$ (10 regions). A similar situation encountered is a production structure in which one of the five sectors is partially dominant ($1/3$ to $2/3$ of the total SGM) but no sector accounts for $1/3$ of the total SGM on the specialized holdings (20 regions). The regions in which this applies are characterized by highly diverse types of holding.

It can therefore be concluded that the map showing principal types of holding is a less accurate version of that showing overall production structure, having been affected by the shift of some production into the combined sector.

Table 4: Comparison of the typology of regional production and the typology of holdings

	Number of regions with characteristic type of production	Number of regions with characteristic type(s) of holding
More than 2/3 of the regional SGM supplied by a <u>single</u> type of farming or by holdings practising this type:		
Field crops	6	3
Horticulture	2	2
Permanent crops	5	2
Grazing livestock	12	11
1/3 to 2/3 of the regional SGM supplied by a <u>single</u> type of farming or by holdings practising this type:		
Field crops	20	15
Horticulture	0	1
Permanent crops	10	11
Grazing livestock	17	14
1/3 to 2/3 of the regional SGM supplied by <u>two</u> types of farming or by holdings practising these two types:		
Horticulture and permanent crops	1	0
Field crops and vines	1	1
Field crops and permanent crops	5	0
Field crops and grazing livestock	10	2
Permanent crops and grazing livestock	0	1
No type of farming accounting for 1/3 of the regional SGM	6	32

4.3.3 Distribution of production between combined and specialized holdings

It can be seen from Figure 39 that there are regional differences in the proportion of production by specialized holdings. The highest proportion is found in central and northern England, the Netherlands, the centre of the Bassin Parisien, Lombardia, Thessalia and Traki, massif regions with a preponderance of grazing livestock (Wales, Ireland, Limousin, Franche-Comté, the small Italian Alpine regions) and certain Mediterranean areas. The highest proportions produced on combined holdings are found in most of Germany, Denmark, Belgium, south-western France, Portugal and most regions of Spain. These are obviously the regions in which the differences between Figures 37 and 38 are most apparent. The types of farming represented on combined holdings vary, the most frequent combination being mixed crops/livestock. Mixed livestock is rare except in certain German regions, Bretagne, Belgium, Galicia, Pais Vasco and Andalucia. Mixed cropping is most common in the Mediterranean regions, but does not represent a high proportion in all of them.

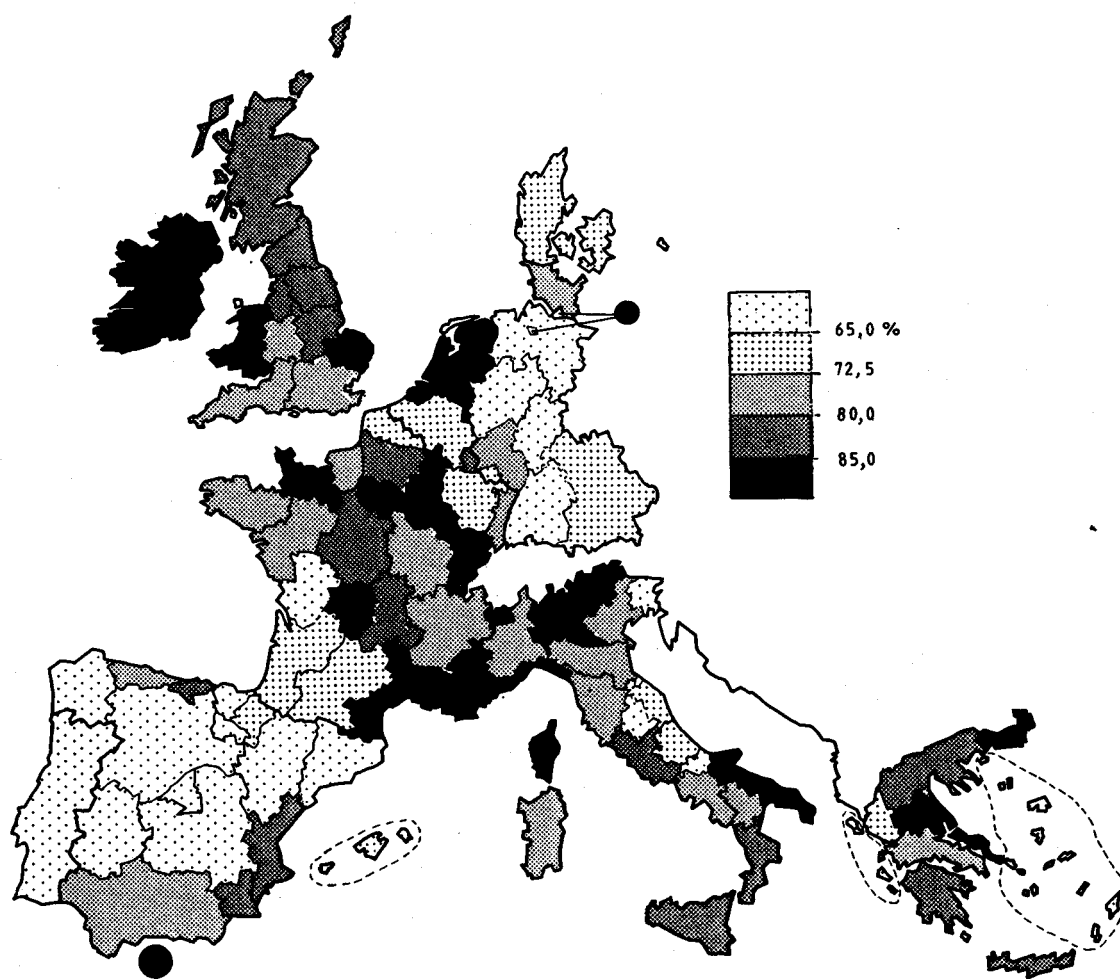


Figure 39: Production (SGM) from specialized holdings as a percentage of total economic size (1985)

4.3.4 Comparison of the SGM of the five production sectors with the SGM of the five main specialized types of farming

Where these two values more or less coincide, production of that particular sector is more likely to be concentrated on holdings specializing in that type of farming. For the purpose of this comparison, "fresh vegetables in the open field" have been included in the "field crops" sector and the horticultural sector therefore corresponds to intensive market gardening in line with the classification of agricultural holdings. The figures for regional distribution of each sector and production structure used to define types of farming at the level of the holding are therefore fully comparable. Taking the Community as a whole, the most striking difference (see Table 3) is found in the pigs and poultry sector.

Figures 40-44 show the differences between production structure and specialization of holdings.

It can be seen from Figure 40 that in Scotland, south-east England, the centre of the Bassin Parisien, the Netherlands, Greece and certain regions of Italy and Spain a large proportion of agricultural production is from holdings specializing in field crops. With the exception of the Netherlands, these are all areas in which field crops account for a significant proportion of the total regional SGM. The next highest concentration of production on specialized holdings for this sector is found in northern Italy and a larger area of the Bassin Parisien.

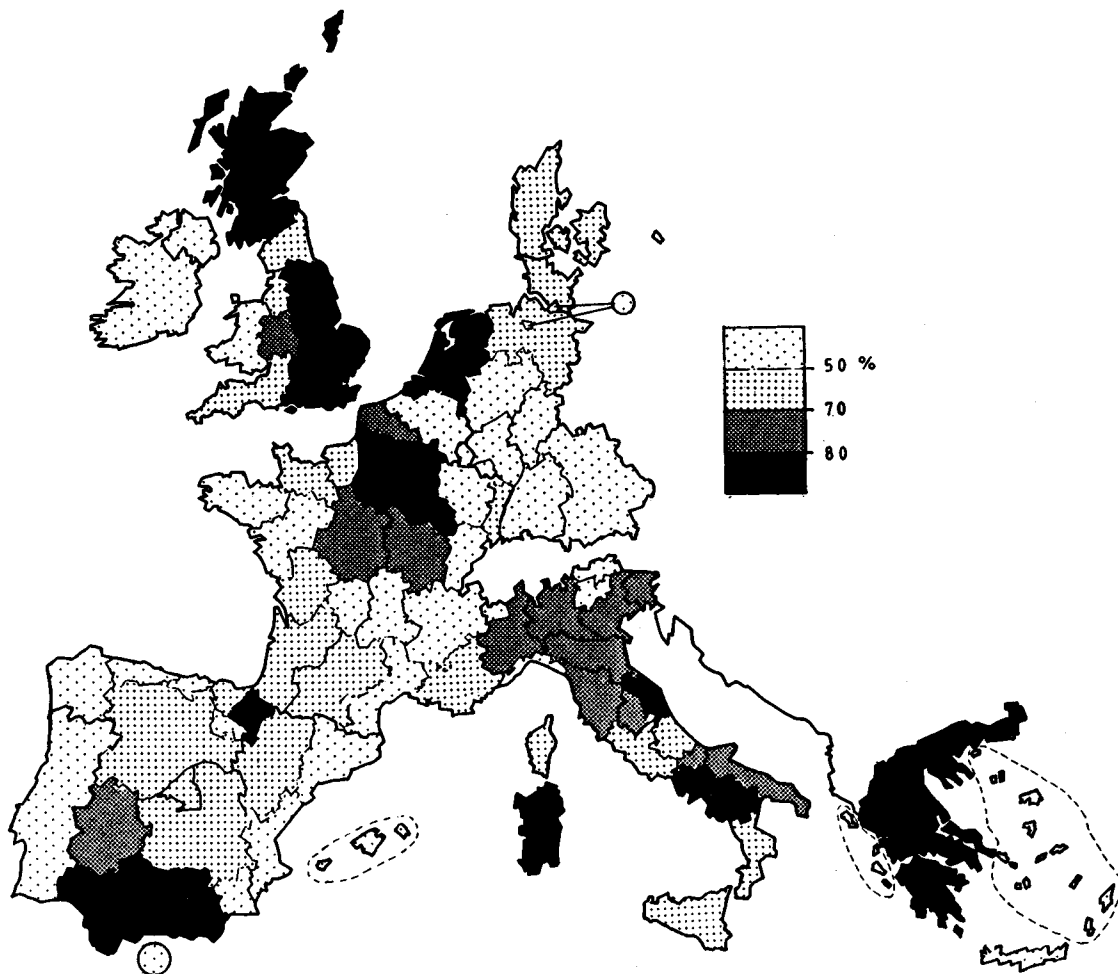


Figure 40: Field crop production (SGM) in specialized holdings as a percentage of total field crop production (1985)

The lowest proportions are found in Germany, Belgium, Ireland, Wales and Northern Ireland, the Massif Central, several peripheral regions of the Bassin Parisien, south-eastern France, the east and north-west coasts of Spain, and Portugal. Some of these are regions in which the proportion of the total SGM represented by field crops is negligible: the massif areas in the north of the Community or the Pyrenees, where grazing livestock production is dominant; permanent crop regions on the east coast of Spain and the Greek islands. In the remainder, the production structure is such that a considerable proportion of field crops is combined with grazing livestock on the holdings: Germany, Belgium, peripheral regions of the Bassin Parisien. These regions have smaller holdings than those specializing in field crops, and combining production with cattle-rearing is essential to increase revenue per hectare.

Figure 41 gives an idea of horticultural specialization on holdings. There is most specialization in Italy, the Netherlands, Provence-Côte d'Azur, the centre of the Bassin Parisien and certain regions of England, Germany, Denmark and Belgium. Market gardening and flowers seem to be distributed among other types of holding in many regions of Spain and one or two others spread across the Community.

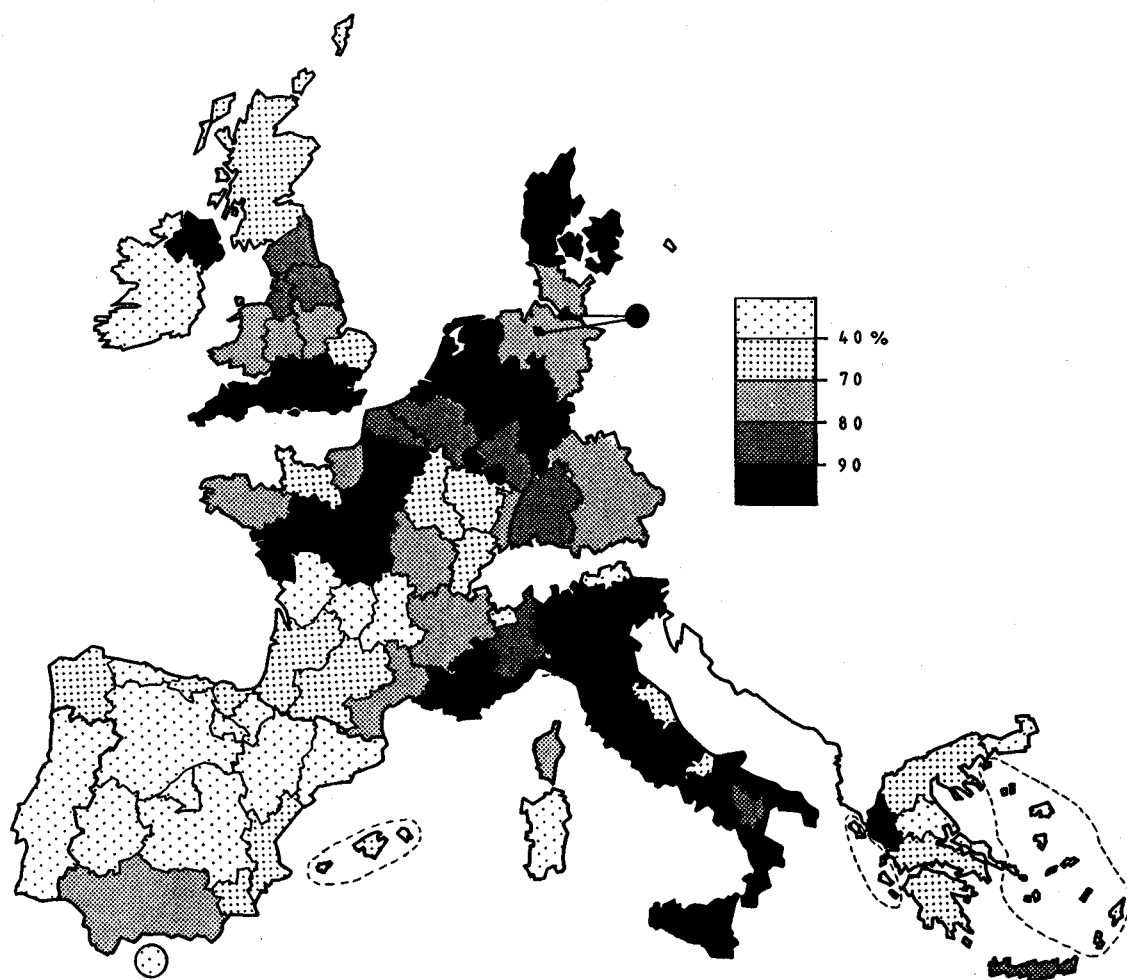


Figure 41: Horticultural production (SGM) in specialized holdings as a percentage of total horticultural production (1985)

Regarding permanent crops (Figure 42), it can be observed that, in the north of the Community (except the United Kingdom and Ireland) and the valley of the Rhône, Aquitaine, Lombardia and the small Alpine regions, the SGM for the sector is not much higher than the SGM for holdings specialized in this type of farming. Fruit production and winegrowing is therefore carried out mainly on specialized holdings except in the United Kingdom, where fruit production is also found on other types of holding. This is also true of three-quarters of the western half of France. In the Mediterranean area, the situation varies enormously from region to region: in Spain, this specialism does not seem to feature among holdings in the interior or the north-west, but in those regions in which the sector is important (Andalucia and eastern areas) a significant proportion of production is carried out on specialized holdings. The same applies to the south of France. In Italy, however, (except Sicilia and Calabria) and Greece (except Peloponnisos and Kriti), where the emphasis is on permanent crops, a larger proportion of production is carried out on combined holdings.

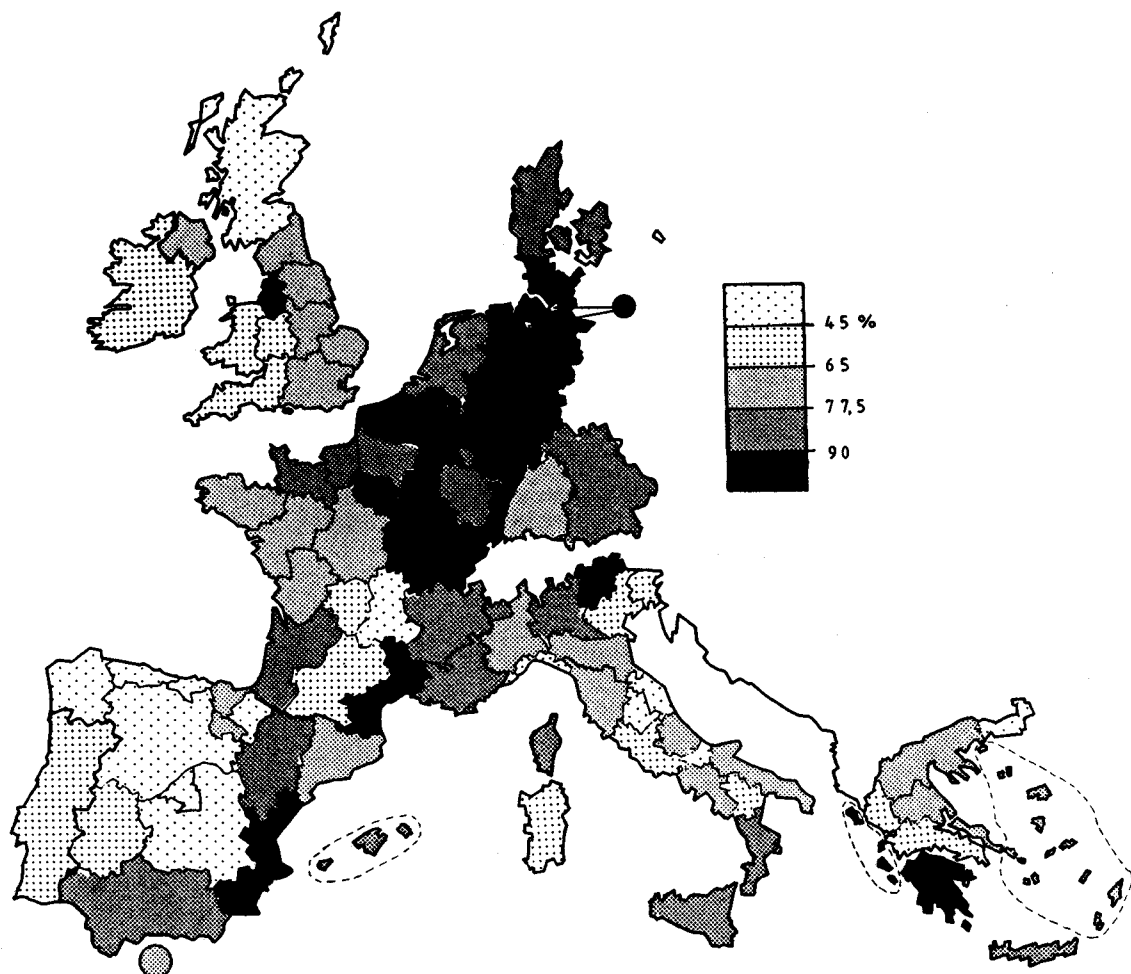


Figure 42: Permanent crop production (SGM) in specialized holdings as a percentage of total permanent crop production (1985)

The distribution of the SGM supplied by the grazing livestock sector in relation to the SGM of holdings specializing in this sector (Figure 43) shows regional variations. The results for entire regions specializing in grazing livestock (Ireland, Wales, Limousin, Asturias, Bolzano) are very similar, as are those for other types of region: the Netherlands, Denmark, Schleswig-Holstein, Bayern, the western tip of France, Lorraine and Bourgogne. In major "field crop" regions in south-east England and the Bassin Parisien, almost half grazing livestock production takes place on holdings not specializing in this sector. In most regions of Germany and in south-western France, a considerable proportion of livestock production also takes place on other types of holding.

In the Mediterranean area, almost half of grazing livestock production takes place on holdings not specializing in this type of farming, with a few exceptions: Valenciana, Murcia, Madrid, La Rioja, Languedoc, Provence-Côte d'Azur, Corsica; Sardegna; Kriti and Thessalia, regions in which the SGMs of the sector and the holdings are equivalent. In all of them apart from Sardegna, the sector is of negligible importance. In the northern regions of Italy (Piemonte, Lombardia, Trento) grazing livestock production (which is considerable) is often found on holdings specializing in this type of farming.

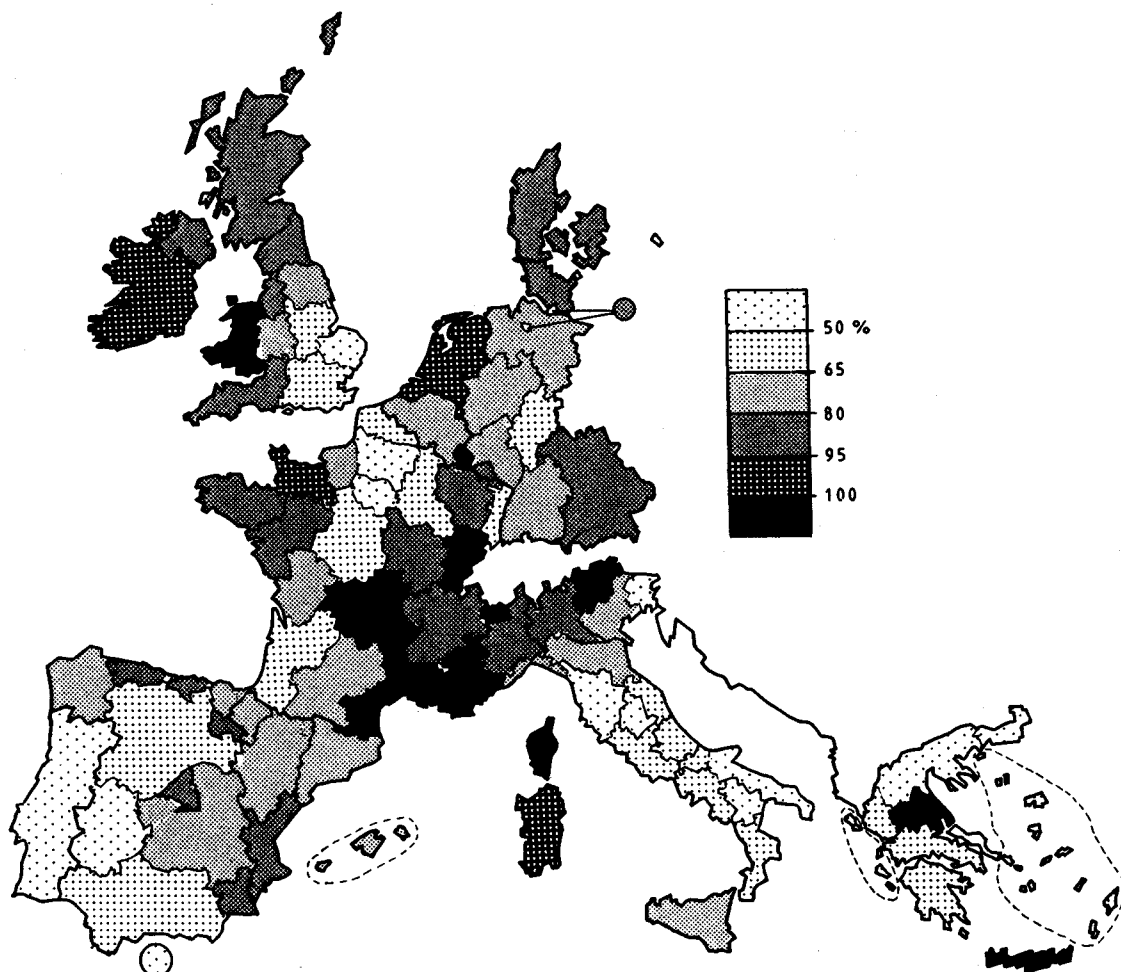


Figure 43: Grazing livestock production (SGM) in specialized holdings as a percentage of total grazing livestock production (1985)

In the Community overall, the **granivores** sector is least concentrated on specialized holdings (the SGM of specialized holdings is 49% the total SGM for the sector), but there are significant regional differences (Figure 44): concentration on specialized holdings is highest in Ireland, Northern Ireland, Bretagne, Valenciana, Portugal, northern Italy and Campania, followed by the Netherlands, Belgium, Vallée du Rhône, certain regions of Spain, Epiros and Kentriki Ellas Kai Evia.

Lower down the scale, the proportion is around a quarter or even less in Germany, part of the Bassin Parisien, the Massif Central, certain regions of Greece, many areas of Southern Italy, Liguria, Valle d'Aosta and Bolzano Bozen, Extremadura and north-western Spain. All these regions thus have relatively few holdings specializing in pigs and poultry compared with the size of the sector. There is no correlation between the importance of the pigs and poultry sector in total production and the concentration found on specialized holdings. In regions where this type of farming is strongly represented it can be found both on specialized holdings (e.g. Bretagne) or on holdings combining several different farming types (Niedersachsen, Nordrhein-Westfalen). The same pattern can be observed in regions in which the sector barely features.

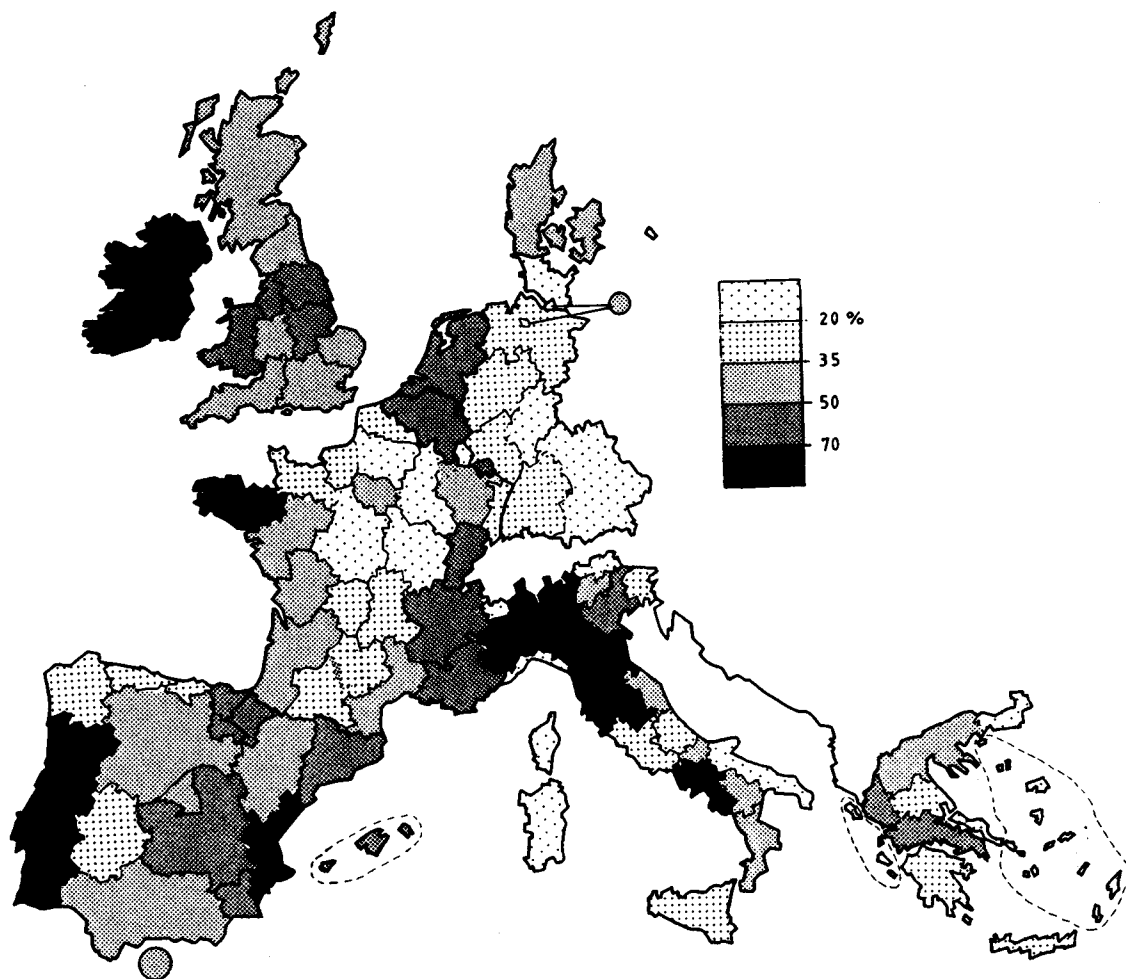


Figure 44: Granivore production (SGM) in specialized holdings as a percentage of total granivore production (1985)

5. SUMMARY

The regional differences in the structure and intensity of production are highlighted in a series of maps based on calculations of production in terms of standard gross margins.

Where production structure is concerned, the maps show a wide diversity: there are regions with homogeneous production and, more frequently, regions where production is based on different sectors. Since five production sectors are identified, the possible production structures are numerous (Figures 33 and 37). Moreover, each type of product can be produced under very different conditions, on large or small holdings and with various degrees of intensity. Usually the area of the holding (Figure 2) and the production intensity (Figure 34) balance each other out, but this is not always the case. The result is a variation in the economic size of holdings (production in SGMs by holding) (Figure 35) or, still more precisely (because of the difference in the number of AWU per holding) in production by AWU (Figure 36). Specialization at regional level (Figure 37) is more diversified than specialization at holding level (Figure 38): because of their size, *inter alia*, holdings may favour one sector or another within the same region.

Interpretation of the map of production structure is an extremely complex business. The influence of the physical environment is often evident in the distribution of production.

Differences in climate show that there is a Mediterranean group of regions which contrast with the oceanic climate prevailing in the north of the Community. Because of this, products such as olives, citrus fruits and cotton appear only in the southern half of the Community. The large size of Spain brings a continental element to the country's interior, drought being one of the factors responsible for low yields.

Differences in relief also affect production within each climatic region. In the south of the Community, the hillier areas differ from the plains through a lower production of field crops. Permanent crops are often more prevalent here. Because the relief is more fragmented, its influence often fails to emerge clearly from maps showing regional statistics, so that the extent of irrigation and its effects on productivity are not always clear. In cooler regions with higher rainfall, cattle production dominates areas at higher altitude such as north-western Spain and the Italian Alps. In the north of the Community, agriculture in hilly areas tends towards grazing livestock production, mostly cattle (Massif Central) but also sheep in the United Kingdom.

Whilst field crops are localized in the plains, cattle production is not confined to the hills. It is encountered in low-lying areas where holdings are too small to support profitable field crop production, and where lower fertility means more grassland. Field crops thus dominate in the Bassin Parisien and East Anglia, fertile areas with large-scale holdings. In Denmark, the Netherlands, north Germany, northern Belgium and Bretagne, holdings are smaller in area and the soil sometimes less fertile: agriculture is intensive and diversified here. Where even dairy farming is not sufficiently intensive to make small holdings viable, horticulture and granivore production can bring a much-needed intensification. In Ireland the average area of holdings means that the intensification is inadequate, so that its production value (in SGMs) per AWU is the lowest of all regions in the northern half of the Community.

Production value/AWU in the northern half exceeds the Community average in both large and small holdings. South-east Germany and the south of France already have lower production values, but even these are equalled in the south of the Community only in northern Italy and a very few other regions. These low production values per AWU are due either to an area/AWU which is too small and inadequately compensated for by the degree of intensification, or to extensive or under-modernized farming on the more extensive holdings. Whereas horticulture and "landless" livestock rearing compensate for lack of area in the north, the situation is less clear in the south, where granivore rearing is far less widespread, horticulture tends to predominate in coastal zones and, in Greece, some "field crops" (tobacco, cotton) may also be regarded as intensive. This intensive production is nevertheless inadequate and holdings are often too small to yield a good production value/AWU in these southern regions.

The average area per holding varies regionally for historical reasons, which explains the large holdings which occur alongside small ones in southern Spain and Portugal and certain regions of central Italy. These large holdings are characterized by mediocre production (particularly in Spain), with fallowing still widespread. The extensive system yields a production value/AWU which is no higher than in regions with smallholdings. The other Mediterranean regions are dominated by smallholdings, but the average area is still larger in northern Italy, which also has the most intensive production system. Because of this, production per AWU here and in the south of France is the highest in the Mediterranean basin.

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Table 1a: Production structure (% of SGM) by region (1985)

		Field crops	Horticulture	Permanent crops	Grazing livestock	Granivores
<u>Germany</u>						
001	Schleswig-Holstein	31,6	4,3	7,6	48,8	7,7
003	Niedersachsen	32,3	3,9	3,8	44,6	15,4
005	Nordrhein-Westfalen	30,9	9,9	4,4	34,7	20,1
006	Hessen	37,0	6,6	6,3	38,5	11,6
007	Rheinland-Pfalz	22,6	3,3	47,1	21,8	5,2
008	Baden-Württemberg	26,4	7,0	13,8	41,6	11,2
009	Bayern	30,4	3,3	2,6	55,7	8,0
010	Saarland	26,7	8,7	9,9	45,8	8,9
012	Hamburg/Bremen/Berlin	4,4	67,7	14,5	11,1	2,3
<u>France</u>						
011	Région Parisienne	76,1	14,7	5,1	3,4	0,7
021	Champagne-Ardenne	47,6	0,9	36,0	14,6	0,9
022	Picardie	70,2	3,3	3,9	20,9	1,7
023	Haute Normandie	48,4	2,3	2,1	44,2	3,0
024	Centre	65,6	5,5	10,6	15,8	2,5
025	Basse Normandie	17,2	3,5	1,0	75,3	3,0
026	Bourgogne	38,0	3,0	19,1	38,0	1,9
031	Nord	50,6	8,9	1,1	32,4	7,0
041	Lorraine	34,1	2,3	2,1	58,2	3,3
042	Alsace	35,7	6,7	29,2	25,2	3,2
043	Franche-Comté	17,3	1,7	3,8	73,0	4,2
052	Pays de la Loire	18,1	7,1	9,5	58,6	6,7
053	Bretagne	11,8	7,0	1,6	54,5	25,1
054	Poitou-Charentes	37,2	3,8	20,9	34,6	3,5
072	Aquitaine	30,3	10,7	31,3	22,6	5,1
073	Midi-Pyrénées	40,5	4,9	11,7	37,7	5,2
074	Limousin	8,6	2,8	2,6	81,7	4,3
082	Rhône-Alpes	19,4	7,6	30,6	35,7	6,7
083	Auvergne	19,0	2,0	1,6	72,5	4,9
091	Languedoc-Roussillon	5,7	12,5	74,7	5,8	1,3
092	Provence-Côte d'Azur	7,4	41,4	43,9	4,9	2,4
094	Corse	1,0	9,8	59,4	26,1	3,6

			Field crops	Horticulture	Permanent crops	Grazing livestock	Granivores
<u>Italy</u>							
001	Piemonte		33,4	8,1	22,1	33,3	3,1
002	Valle d'Aosta		5,0	1,8	18,0	74,7	0,5
003	Lombardia		29,8	6,8	7,4	43,7	12,3
005	Veneto		33,4	7,6	21,0	29,6	8,4
006	Friuli Venezia		43,0	8,7	20,8	23,2	4,3
007	Liguria		1,9	78,9	16,0	3,0	0,2
008	Emilia Romagna		29,7	7,2	35,5	20,5	7,1
009	Toscana		29,1	22,0	35,6	11,0	2,3
010	Umbria		49,8	4,9	20,3	17,6	7,4
011	Marche		52,8	11,1	16,8	15,9	3,4
012	Lazio		21,3	27,7	32,0	17,6	1,4
013	Abruzzi		24,5	15,5	39,2	19,0	1,9
014	Molise		48,4	7,1	23,8	17,7	3,0
015	Campania		18,4	34,9	35,9	9,2	1,6
016	Puglia		15,9	21,0	57,7	5,2	0,2
017	Basilicata		39,5	16,4	29,0	13,8	1,3
018	Calabria		12,0	11,9	66,3	9,0	0,8
019	Sicilia		14,6	21,1	55,2	8,7	0,4
020	Sardegna		12,2	32,1	19,3	32,8	3,6
021	Bolzano-Bozen		1,9	0,9	63,3	33,1	0,8
022	Trento		3,4	3,5	71,7	20,5	0,9
<u>Netherlands</u>			14,7	23,3	4,0	43,9	14,1
<u>Belgium</u>			25,2	13,5	4,3	43,4	13,6
<u>Luxembourg</u>			18,0	0,7	12,1	65,0	4,2
<u>United Kingdom</u>							
001	North		28,9	0,9	0,2	68,5	1,5
002	Yorkshire Humberside		55,0	7,8	0,4	29,7	7,1
003	East Midlands		61,8	13,5	0,7	21,4	2,6
004	East Anglia		70,6	14,3	2,9	7,1	5,1
005	South East		56,9	8,3	6,8	24,6	3,4
006	South West		27,5	2,9	1,3	65,3	3,0
007	West Midlands		41,0	4,7	3,9	47,6	2,8
008	North West		19,3	12,1	1,3	63,0	4,3
009	Wales		8,7	0,9	0,4	88,9	1,1
010	Northern Ireland		12,5	1,2	1,7	80,0	4,6
011	Scotland		42,8	1,9	0,7	53,0	1,6
<u>Ireland</u>			12,7	1,7	0,5	82,3	2,8
<u>Denmark</u>			45,7	4,1	1,5	29,9	18,8

		Field crops	Horticulture	Permanent crops	Grazing livestock	Granivores
<u>Greece</u>						
001	Kentriki Ellas K.E.	44,4	12,2	21,1	13,8	8,5
002	Peloponnissos	12,6	11,7	57,3	15,0	3,4
003	Ionioi Nissoi	6,2	8,8	67,0	12,7	4,7
004	Ipiros	20,7	7,1	30,6	30,2	11,4
005	Thesslia	57,0	5,4	18,3	15,7	3,6
006	Makedonia	55,3	10,0	20,3	11,6	2,8
007	Thraki	75,1	8,0	0,9	14,2	1,8
008	Nissoi Agaiou	12,0	13,6	39,9	27,7	6,8
009	Kriti	2,7	17,5	63,3	13,3	3,2
<u>Spain</u>						
001	Galicia	20,9	11,1	5,3	52,0	10,7
002	Asturias	10,8	5,7	1,0	78,1	4,4
003	Cantabria	3,5	5,9	0,4	88,1	2,1
004	Pais Vasco	18,7	18,1	11,9	42,3	9,0
005	Navarra	29,7	27,1	9,1	23,9	10,2
006	La Rioja	33,4	19,1	23,1	13,3	11,1
007	Aragon	29,3	7,3	17,2	21,4	24,8
008	Cataluna	13,3	12,0	29,6	16,6	28,5
009	Baleares	10,4	17,7	38,4	24,5	9,0
010	Castilla Leon	47,3	3,8	1,8	33,9	13,2
011	Madrid	20,0	16,9	8,6	39,4	15,1
012	Castilla la Mancha	31,8	13,2	20,4	26,4	8,2
013	C. Valenciana	4,9	17,0	66,9	3,5	7,7
014	R. de Murcia	8,9	16,1	51,3	8,2	15,5
015	Extremadura	37,7	9,7	23,0	22,8	6,8
016	Andalucia	30,4	17,0	36,6	10,2	5,8
017	Canarias	8,6	45,9	29,9	11,2	4,4
<u>Portugal</u>		23,3	17,3	30,8	16,9	11,7

Table 2a: Regions in Community production (% of SGM) by sector and in total (1985)

		Field crops	Horticulture	Permanent crops	Grazing livestock	Granivores	Total
<u>Germany</u>							
001	Schleswig-Holstein	1,343	0,507	0,565	1,848	1,298	1,287
003	Niedersachsen	3,329	1,125	0,680	4,094	6,261	3,119
005	Nordrhein-Westfalen	2,341	2,109	0,584	2,347	6,000	2,296
006	Hessen	1,000	0,498	0,298	0,925	1,234	0,817
007	Rheinland-Pfalz	0,846	0,346	3,090	0,725	0,770	1,133
008	Baden-Württemberg	1,500	1,111	1,370	2,103	2,503	1,718
009	Bayern	3,866	1,192	0,574	6,312	4,010	3,851
010	Saarland	0,051	0,047	0,033	0,078	0,067	0,058
012	Hamburg/Bremen/Berlin	0,014	0,586	0,078	0,031	0,028	0,094
<u>France</u>							
011	Région Parisienne	1,542	0,834	0,183	0,061	0,056	0,613
021	Champagne-Ardenne	2,572	0,135	3,403	0,704	0,181	0,633
022	Picardie	3,062	0,407	0,300	0,810	0,297	1,320
023	Haute Normandie	1,042	0,137	0,080	0,849	0,254	0,652
024	Centre	3,862	0,903	1,100	0,827	0,576	1,781
026	Bourgogne	1,403	0,308	1,235	1,247	0,274	1,116
031	Nord	1,577	0,779	0,062	0,900	0,860	0,944
041	Lorraine	0,687	0,127	0,075	1,041	0,262	0,608
042	Alsace	0,482	0,254	0,692	0,304	0,171	0,409
043	Franche-Comté	0,214	0,060	0,082	0,806	0,203	0,375
052	Pays de la Loire	1,163	1,275	1,074	3,352	1,698	1,945
053	Bretagne	0,821	1,380	0,195	3,394	6,885	2,114
054	Poitou-Charentes	1,572	0,444	1,551	1,303	0,581	1,279
072	Aquitaine	1,584	1,570	2,861	1,049	1,037	1,579
073	Midi-Pyrénées	1,991	0,681	1,008	1,649	0,997	1,487
074	Limousin	0,124	0,113	0,065	1,042	0,241	0,433
082	Rhône-Alpes	0,863	0,948	2,379	1,411	1,162	1,343
083	Auvergne	0,433	0,129	0,064	1,472	0,441	0,670
091	Languedoc-Roussillon	0,243	1,494	5,565	0,221	0,211	1,287
092	Provence-Alpes-Côte d'Azur	0,267	4,204	2,796	0,160	0,340	1,099
094	Corse	0,003	0,073	0,277	0,062	0,038	0,081

		Field crops	Horticulture	Permanent crops	Grazing livestock	Granivores	Total
<u>Italy</u>							
001	Piemonte	1,760	1,187	2,042	1,560	0,637	1,592
002	Valle d'Aosta	0,004	0,005	0,028	0,059	0,002	0,027
003	Lombardi	2,030	1,299	0,883	2,655	3,280	2,061
005	Veneto	2,034	1,286	2,243	1,606	2,002	1,841
006	Fr. Venezia	0,579	0,329	0,489	0,279	0,229	0,407
007	Liguria	0,028	3,288	0,416	0,039	0,015	0,450
008	Emilia Romagna	2,354	1,613	4,930	1,448	2,207	2,400
009	Toscana	1,149	2,434	2,466	0,388	0,357	1,196
010	Umbria	0,554	0,152	0,395	0,175	0,323	0,337
011	Marche	0,909	0,532	0,507	0,243	0,230	0,520
012	Lazio	0,720	2,619	1,898	0,530	0,189	1,023
013	Abruzzi	0,355	0,630	0,996	0,245	0,106	0,439
014	Molise	0,260	0,107	0,224	0,085	0,063	0,162
015	Campania	0,973	5,157	3,327	0,435	0,323	1,599
016	Puglia	0,948	3,503	6,025	0,277	0,044	1,803
017	Basilicata	0,446	0,520	0,575	0,139	0,059	0,342
018	Calabria	0,327	0,910	3,177	0,218	0,091	0,827
019	Sicilia	0,944	3,820	6,249	0,503	0,101	1,956
020	Sardegna	0,277	2,053	0,773	0,666	0,321	0,690
021	Bolzano Bozen	0,014	0,019	0,811	0,215	0,023	0,221
022	Trento	0,017	0,050	0,644	0,094	0,018	0,155
<u>Netherlands</u>		3,204	14,164	1,510	8,497	12,000	6,571
<u>Belgium</u>		2,138	3,200	0,635	3,285	4,524	2,566
<u>Luxembourg</u>		0,056	0,006	0,066	0,181	0,052	0,095
<u>United Kingdom</u>							
001	North	0,569	0,051	0,007	1,203	0,117	0,596
002	Yorkshire Humberside	1,901	0,754	0,024	0,912	0,962	1,045
003	East Midlands	2,724	1,662	0,055	0,839	0,445	1,332
004	East Anglia	2,897	1,637	0,210	0,259	0,818	1,240
005	South East	3,150	1,281	0,663	1,212	0,730	1,674
006	South West	1,401	0,408	0,116	2,959	0,600	1,539
007	West Midlands	0,310	0,546	0,037	0,903	0,268	0,487
008	North West	0,310	0,546	0,037	0,903	0,268	0,487
009	Wales	0,229	0,068	0,016	2,075	0,114	0,793
010	Northern Ireland	0,250	0,065	0,058	1,420	0,359	0,603
011	Scotland	2,082	0,261	0,059	2,299	0,306	1,473
<u>Ireland</u>		0,883	0,340	0,059	5,114	0,762	2,110
<u>Denmark</u>		4,800	1,217	0,270	2,795	7,752	3,176

		Field crops	Horticulture	Permanent crops	Grazing livestock	Granivores	Total
<u>Greece</u>							
001	Kentriki Ellas K.E.	0,985	0,758	0,823	0,273	0,741	0,672
002	Pelopponissos	0,300	0,779	2,393	0,319	0,320	0,721
003	Ionioi Nissoi	0,015	0,054	0,255	0,025	0,040	0,066
004	Ipiros	0,133	0,127	0,344	0,173	0,289	0,195
005	Thessalia	1,411	0,373	0,793	0,347	0,347	0,749
006	Makedonia	2,206	1,115	1,418	0,414	0,443	1,207
007	Thraki	0,741	0,221	0,016	0,125	0,070	0,299
008	Nissoi Aigaiou	0,071	0,227	0,417	0,417	0,159	0,180
009	Kriti	0,035	0,640	1,448	0,155	0,164	0,395
<u>Spain</u>							
001	Galicia	0,576	0,858	0,256	1,278	1,160	0,835
002	Asturias	0,088	0,130	0,015	0,564	0,140	0,245
003	Cantabria	0,019	0,089	0,004	0,423	0,045	0,163
004	Pais Vasco	0,121	0,327	0,135	0,243	0,229	0,196
005	Navarra	0,217	0,554	0,116	0,156	0,294	0,221
006	La Rioja	0,149	0,239	0,180	0,052	0,196	0,135
007	Aragon	0,588	0,412	0,603	0,381	1,954	0,606
008	Cataluna	0,471	1,196	1,840	0,523	3,979	1,074
009	Baleares	0,039	0,186	0,253	0,082	0,133	0,114
010	Castilla Leon	2,213	0,495	0,146	1,409	2,424	1,413
011	Madrid	0,066	0,155	0,050	0,116	0,196	0,100
012	Castilla la Mancha	0,849	0,986	0,953	0,626	0,863	0,807
013	C. Valanciana	0,149	1,437	3,545	0,094	0,913	0,915
014	R. de Murcia	0,128	0,653	1,300	0,106	0,885	0,438
015	Extremadura	0,610	0,436	0,652	0,329	0,432	0,489
016	Andalucia	1,183	2,836	3,813	0,539	1,350	1,800
017	Canarias	0,060	0,897	0,367	0,070	0,122	0,212
<u>Portugal</u>		1,037	2,150	2,396	0,670	2,034	1,344

Table 3a: Production (SGM) by holdings as a percentage of their type of farming (TF)

- I Field crops
- II Horticulture
- III Permanent crops
- IV Grazing livestock
- V Granivores
- VI Mixed cropping
- VII Mixed livestock
- VIII Combined crop/livestock

		I	II	III	IV	V	VI	VII	VIII
<u>Germany</u>									
001	Schleswig Holstein	20,6	2,6	7,5	43,8	1,3	2,7	4,6	16,9
003	Niedersachsen	18,7	2,4	3,5	34,0	4,1	3,4	15,9	18,0
005	Nordrhein-Westfalen	13,9	8,6	4,1	22,7	6,2	3,9	19,1	21,5
006	Hessen	14,7	5,1	6,0	22,3	1,9	6,0	14,9	29,1
007	Rheinland-Pfalz	8,7	2,3	44,7	17,0	1,6	9,7	4,2	11,8
008	Baden-Württemberg	8,1	5,8	10,7	31,5	2,9	7,1	14,5	19,4
009	Bayern	13,0	2,2	2,2	50,1	1,2	2,8	7,4	21,1
010	Saarland	9,4	7,0	10,0	41,2	4,6	3,4	7,8	16,6
012	Hamburg/Bremen/Berlin	1,9	66,1	14,2	10,3	1,0	1,9	1,8	2,8
<u>France</u>									
011	Région Parisienne	77,2	11,7	4,7	0,9	0,3	2,4	0,0	2,8
021	Champagne Ardenne	43,6	0,4	34,1	8,8	0,2	3,2	0,4	9,3
022	Picardie	63,6	4,5	3,4	10,1	0,2	1,7	0,9	15,6
023	Haut Normandie	34,1	1,3	1,9	34,5	0,8	2,3	1,6	23,5
024	Centre	48,2	20,0	8,0	8,0	0,4	3,6	2,0	9,8
025	Basse Normandie	11,4	0,6	0,8	73,9	1,0	0,6	3,3	8,4
026	Bourgogne	27,0	2,0	18,2	30,9	0,4	3,4	2,2	15,9
031	Nord	40,9	3,5	1,0	18,4	1,7	5,7	5,2	23,6
041	Lorraine	15,6	1,4	1,7	49,8	1,3	1,2	4,5	24,5
042	Alsace	25,6	3,5	28,1	15,9	0,7	6,4	3,5	16,3
043	Franche Comté	6,5	1,0	3,5	74,3	2,4	0,6	2,8	8,7
052	Pays de la Loire	7,0	7,2	7,3	55,4	3,0	3,1	7,0	10,0
053	Bretagne	6,1	2,4	1,2	48,1	18,0	1,1	16,1	7,0
054	Poitou Charentes	24,3	1,3	14,8	22,9	1,7	13,3	4,3	17,4
072	Aquitaine	23,9	3,5	27,0	12,8	1,9	10,8	5,4	14,7
073	Midi-Pyrénées	28,7	1,6	7,1	28,2	1,4	10,1	8,8	14,1
074	Limousin	0,5	0,7	1,6	85,4	1,2	0,8	6,3	3,5
082	Rhône-Alpes	9,2	4,3	26,3	29,6	3,7	8,0	6,2	11,4
083	Auvergne	8,9	0,5	0,7	73,4	1,3	1,9	6,6	6,7
091	Languedoc Roussillon	4,5	5,7	70,9	7,0	0,6	9,0	0,6	1,7
092	Provence A. C. d'Azur	7,2	32,0	38,8	6,1	1,4	10,9	0,9	2,7
094	Corse	0,9	6,4	50,1	30,2	0,7	4,2	3,2	4,3

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- VII Mixed livestock
- VIII Combined crop/livestock

		I	II	III	IV	V	VI	VII	VIII
<u>Italy</u>									
001	Piemonte	26,5	3,5	16,0	27,8	2,3	7,7	4,1	12,1
002	Valle d'Aosta	1,4	0,0	14,1	76,1	0,0	2,9	0,4	5,1
003	Lombardia	22,8	6,1	6,1	39,4	11,2	1,9	2,7	9,8
005	Veneto	28,3	10,4	12,6	21,1	4,5	8,9	4,2	10,0
006	Friuli Venezia	32,0	10,0	11,7	9,2	1,4	12,0	5,4	18,3
007	Liguria	2,2	79,2	9,6	2,2	0,0	4,7	0,8	1,3
008	Emilia Romagna	25,2	11,0	23,4	14,3	5,2	13,5	1,9	5,5
009	Toscana	23,8	21,5	23,5	4,9	1,6	15,6	2,9	6,2
010	Umbria	41,4	3,7	6,2	7,6	5,5	21,3	4,8	9,5
011	Marche	54,0	1,4	5,9	8,7	1,6	18,4	2,2	7,8
012	Lazio	19,7	29,8	20,1	11,0	0,5	9,9	3,1	5,9
013	Abruzzi	24,4	3,9	27,6	11,7	0,6	17,3	5,4	9,1
014	Molise	43,3	0,2	8,1	9,1	1,4	21,3	3,9	12,7
015	Campania	31,4	17,0	24,1	4,7	1,6	13,9	2,2	5,1
016	Puglia	24,8	17,0	41,6	2,5	0,0	10,7	0,7	2,7
017	Basilicata	50,8	0,4	17,6	5,9	0,5	13,0	3,4	8,4
018	Calabria	10,1	7,8	56,9	5,3	0,4	11,2	2,2	6,1
019	Sicilia	10,8	19,8	47,3	6,1	0,1	9,7	1,1	5,1
020	Sardegna	30,1	2,2	9,6	31,4	0,5	9,7	6,3	10,2
021	Bolzano Bozen	0,0	0,2	57,2	38,5	0,0	0,0	1,2	2,9
022	Trento	1,0	3,1	67,8	21,7	0,5	1,2	0,6	4,1
<u>Netherlands</u>									
		14,0	21,6	3,4	42,1	8,7	2,1	4,7	3,4
<u>Belgium</u>									
		12,9	10,9	3,9	31,4	7,5	5,0	9,5	18,9
<u>Luxembourg</u>									
		1,6	0,7	9,9	68,9	0,5	0,8	7,8	9,8
<u>United Kingdom</u>									
001	North	19,5	0,5	0,1	61,7	0,7	1,2	0,6	15,7
002	Yorkshire Humberside	56,7	2,3	0,3	20,7	3,7	3,7	1,2	11,4
003	East Midlands	61,3	5,5	0,5	13,3	1,4	7,1	0,4	10,5
004	East Anglia	76,7	3,5	1,9	1,6	2,5	7,2	0,5	6,1
005	South East	49,6	5,9	4,9	12,5	1,7	7,9	0,8	16,7
006	South West	16,6	2,2	0,8	56,5	1,4	1,9	2,3	18,3
007	West Midlands	30,5	2,5	2,2	37,0	1,4	5,5	1,5	19,4
008	North West	13,2	7,9	1,2	58,8	2,6	5,9	2,0	8,4
009	Wales	2,8	0,5	0,2	89,3	0,7	0,5	0,5	5,5
010	Northern Ireland	6,1	1,0	1,2	74,8	4,3	0,6	3,8	8,2
011	Scotland	35,3	0,3	0,2	44,4	0,8	1,7	0,7	16,6

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		I	II	III	IV	V	VI	VII	VIII
<u>Ireland</u>		6,5	0,4	0,3	80,4	2,0	1,6	1,5	7,3
<u>Denmark</u>		28,8	3,6	1,3	23,9	7,9	3,1	7,3	24,1
<u>Greece</u>									
001	Kentriki Ellas K.E.	48,1	3,5	11,0	7,4	5,2	15,4	2,4	7,0
002	Peloponn.	14,5	3,6	53,6	8,3	0,7	13,0	2,4	3,9
003	Ionioi Nissoi	0,7	0,5	61,9	5,6	0,0	25,0	3,5	2,8
004	Ipiros	18,1	5,9	18,3	17,8	7,8	12,2	6,7	13,2
005	Thessalia	53,6	0,9	13,3	17,0	0,9	6,7	2,3	5,3
006	Makedonia	58,8	2,0	15,5	5,3	1,3	10,0	1,0	6,1
007	Thraki	78,7	1,3	0,2	5,0	0,2	4,9	0,3	9,4
008	Nissoi Aigaiou	4,6	3,0	30,9	17,3	0,2	21,9	9,2	12,9
009	Kriti	0,5	15,0	54,5	13,8	0,9	8,4	2,0	4,9
<u>Spain</u>									
001	Galicia	3,1	1,9	1,1	40,7	3,4	6,6	21,7	21,5
002	Asturias	0,3	0,4	0,1	70,9	1,2	0,6	5,5	21,0
003	Cantabria	0,4	1,8	0,1	80,1	0,5	0,4	2,9	13,8
004	Pais Vasco	12,7	8,5	8,5	27,7	4,8	7,2	10,7	19,9
005	Navarra	36,2	5,8	3,9	18,1	6,1	14,5	2,6	12,8
006	La Rioja	16,7	2,3	17,3	11,5	7,4	15,3	2,5	26,0
007	Aragon	20,6	1,1	13,9	15,8	12,0	9,4	5,1	22,1
008	Cataluna	6,7	3,5	21,3	11,1	17,4	7,6	5,9	26,5
009	Baleares	1,0	8,3	32,1	18,7	5,7	14,7	8,0	11,5
010	Cast. Leon	33,2	0,6	0,2	19,8	5,7	5,3	5,3	29,9
011	Madrid	16,8	3,6	2,4	31,9	7,4	4,5	2,5	30,9
012	Cast. Macha	20,6	1,6	6,4	20,5	5,1	10,8	4,4	30,6
013	C. Valenciana	2,5	8,9	60,2	3,1	6,7	9,2	1,1	8,3
014	R. de Murcia	5,4	8,4	49,4	7,1	10,2	8,6	3,9	6,9
015	Extremadura	28,8	0,7	11,9	7,6	2,3	10,8	7,6	30,3
016	Andalucia	30,3	11,7	29,0	6,3	2,6	1,9	12,3	5,4
017	Canarias	3,3	54,5	20,8	5,4	1,6	7,6	1,3	5,5
<u>Portugal</u>		6,6	3,4	20,0	3,6	9,3	31,8	12,6	12,9

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