The Italian Rural Systems Atlas

MARIA GEMMA GRILLOTTI DI GIACOMO

Translation
Simon D. Richardson

Collaborating bodies:

Gaetana Agostaro
Franca Battigelli
Giovanna Bellencin Meneghel
Marina Bertoncin
Alma Bianchetti
Leonardo Bonollo
Carmensilva Castagnoli
Girolamo Cusimano
Piero Di Carlo
Paola Falcioni
Franco Farinelli
Maria Fiori
Anna Maria Frallicciardi
Mario Fondi
Ugo Formentini
Dino Gavinelli
Enrica Lemmi
René Georges Maury
Alberto Melelli
Lidia Moretti
Liberata Nicoletti
Mauro Pascolini
Maria Prezioso
Andrea Riggio
Mauro Spotorno
Aldo Telleschi
Isabella Varraso

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983, pp. 535-560.

Basilicata

Regional agricultural systems

M.G. GRILLOTTI DI GIACOMO

Right down to its basic elements, agriculture in Basilicata is distinct from the rest of the Mezzogiorno. Structural features combine to form agricultural systems based on the prevalence of medium-large farms. These farms are more (Potenza) or less (Matera) under pressure from microfarms. The pulverised microfarms highlight the strength of the larger farms on more fertile and gently sloping land (province of Matera), leaving the inner mountain marginal areas to smaller farms (province of Potenza) (see fig. 1).Whereas the countryside in the surrounding regions is organised by small and very small farms, in Basilicata, nothing has dented the centuries old practice of subdivided estates, that spread uncontrasted from the lowland band to the hill band, only leaving a few mountain areas to medium size farms. The phenomenon lives on despite the aged origins of local population and the scattering of communities, despite the controversial agrarian reform and despite the reclamation projects at the beginning of the XX century. The only evolutionary tendency of note in the last few decades has been the growth in the concentration of larger farms in areas where natural conditions are more suited to agricultural activity. From 1970 to 1990 at Matera, just as in many provincial territories in northern Italy, the agricultural system based on medium-large farms led to a form of polarisation, with larger farms increasing their areas even more and, the simultaneous proliferation of farms in the smallest size class (pulverisation) (see figs. 1 & 3).
In this context, where large farms dominate the panorama, the three altimetric bands of regional territory (see fig. 2) trace the progressive thinning of crop density. The endeavours of farmers give way to the difficult environmental conditions of the inland hill and the mountains. The high percentage of cultivated area on the coastal plains (high density) falls drastically on the steepest slopes (medium density) and further, to decidedly lower levels in the mountain band (inadequate density) (see fig. 4).
Nevertheless, the presence of huge farms in the area provides some relief to agriculture that is marginal and under threat and faces the challenge of the new roles of providing services and promoting natural and historical regional heritage.

Key
figs. 1; 3 & 4

- medium-big high cultivation density
- medium-big weak cultivation density
- medium-big inadequate cultivation density
- big weak cultivation density
- big inadequate cultivation density
- pulverization
- provincial boundaries
- limits of altimetric bands

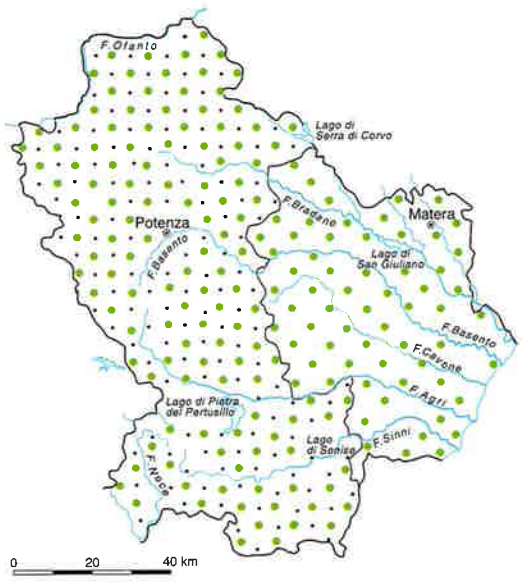
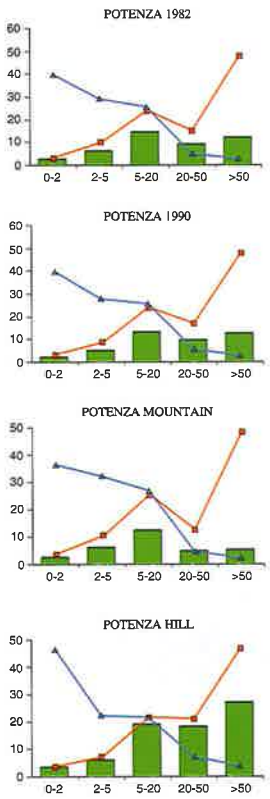


Fig. 1 Basilicata agricultural systems in 1970



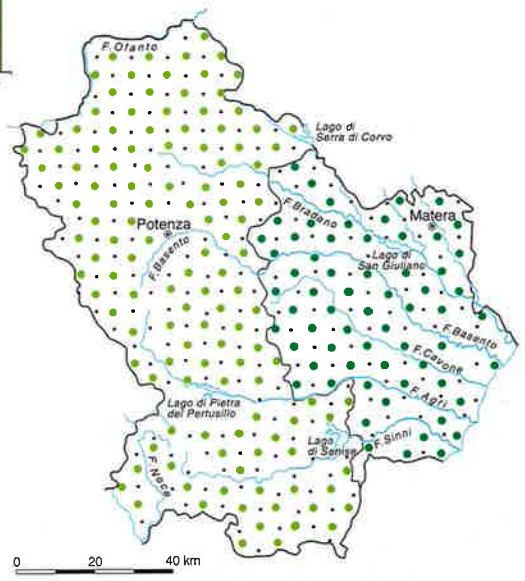
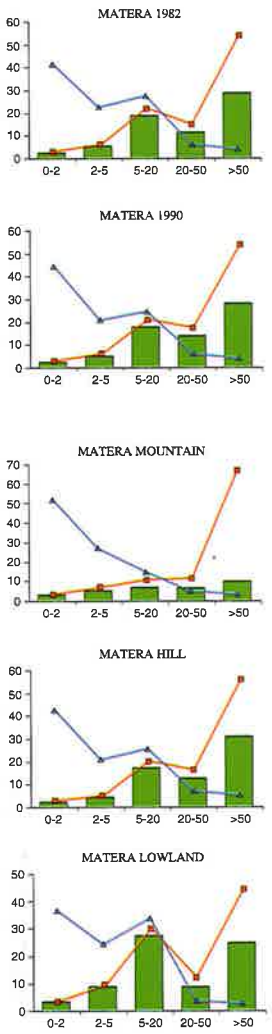


Fig. 3 Basilicata agricultural systems in 1990

Graphs of provincial and sub-provincial agricultural systems

- CAA quotas
- Farm quotas
- Farm area quotas

X= farm size classes
Y= percentage values



- mountain
- hillina
- lowland

Fig. 2 Altimetric bands in regional territory

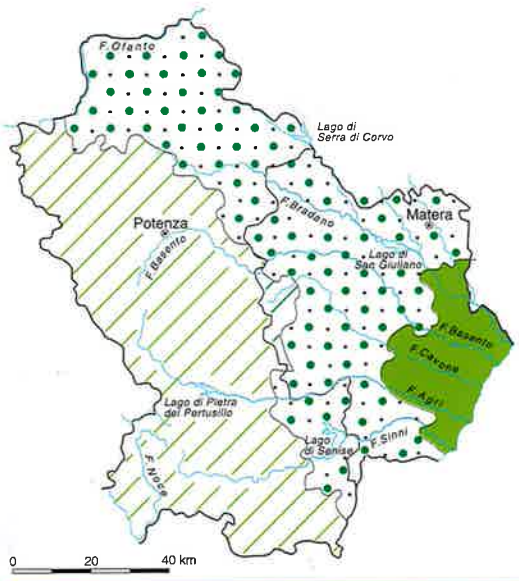
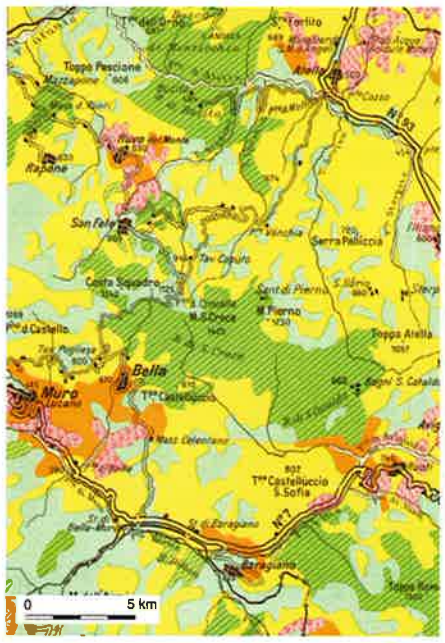


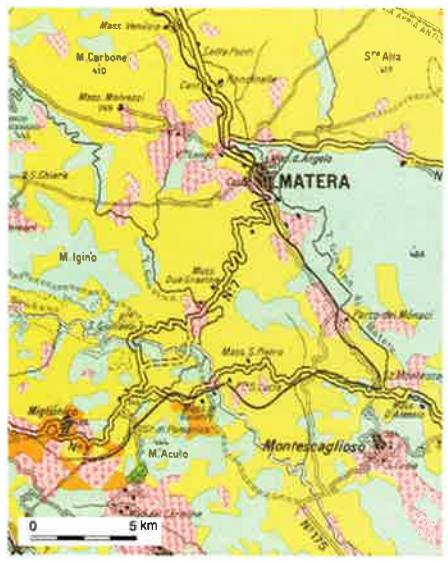
Fig. 4 Basilicata agricultural systems in 1982 across altimetric bands

History and evolution of agricultural countryside

A. RIGGIO

After the splendours of the Magna Grecia and the resulting settlements at Metaponto Siris and Heraclea and the integration of the Greeks with the local populations (Lucanians and Apulians), followed by the hydraulic works and settlement of the Ionic coast, the following centuries held little in store for the growth of Basilicata. In the Norman period, inland areas nestling beneath castles, particularly the sub-regional centre Vulture, gain influence. Melfi, and then Venosa, Horace's birthplace, was the most famous centre of Roman Lucania. Territorial isolation continued under the Kingdom of the Two Sicilies, when the region attracted the attentions of state government only when natural catastrophes occurred or the bandits struck. Basilicata suffered a series of major earthquakes and the nature of the terrain magnifies their destructive power (Val d'Agri earthquake in 1857, 10000 victims; landslide at Pisticci in 1688, 400 victims, the destruction in recent times of the towns of Campomaggiore and Craco). The traditional features of agricultural countryside become established and include: a low population; rural dwellings in small, isolated hilltop villages (the Basilicata of the miniature crib scenes) off the beaten track. The large amount of available land, that is divided in microfarms and large estates, became even less stable with the massive deforestation of the 1800s. There is a prevalence of open field seed crops, giving way to wooded pasture land on higher land. This higher ground is connected to the lowlands by a dense network of tratturi for the seasonal migration of herds of sheep. Specialised cultivation takes place on a limited area. The vines on the eastern slopes of the Vulture volcanic complex merit mentioning. The picture is completed by the limited flatland of the Piana di Metaponto and the valleys of the main rivers, that cannot be used intensively, due to the presence of marshland, frequent flooding and malarial plains that have existed for centuries (see fig. 6).





Figs. 5 & 6
Two typical traditional agricultural spaces in the Apennine mountains and the hills of Matera (source Italian land utilisation map of the C.N.R, sheet no. 17, Rome, 1960)

Seed crops (dry)
Seed crops and wood (dry)
Vineyard
Olive grove
Pasture and untended but partially and occasionally seed crops

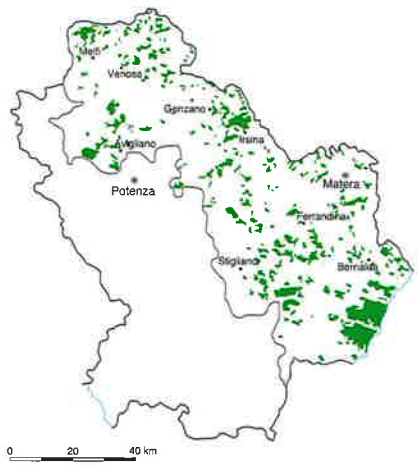


Fig. 7
Areas involved in agrarian reform (source R. Bergeron, 1994)

Fig. 8
Montecotugno dam on the Sinni near Senise (photo R.G. Maury)

Fig. 9
Vegetable crops on the irrigated Metaponto plain (photo R.G. Maury)

Fig. 10
Agricultural sub-areas (elaboration D. Palumbo)

Limestone mountain and high inland hill
Inland hill area of the "bradanica" secondary trough
Vulture volcanic hill region
Irrigated area on the Metaponto plain and in valley bottoms
Dam – basin

Fig. 11
Vineyard on the slopes of the volcanic formation of the Vulture (photo R.G. Maury)

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Sub-areas, produce and sp

A. RIGGI

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Fig. 12
Seed crops on clay soil and deforested land of the Avanfossa Bradanica
(photo R.G. Maury)

When Italy was unified, the gravity of the situation in rural Mezzogiorno emerged. Firstly in the parliamentary enquiry in to the living conditions of peasants (Jacini, Zanardelli, Giolitti), and the speeches of Rossi Doria and elsewhere in the unforgettable pages of Cristo si è fermato ad Eboli by Carlo Levi. The ensuing debate, in Italy and abroad, led in 1952 to the first Matera law (no. 619) and to the transfer of roughly the 15000 people (mainly farmhands), living, some still today, in the Sassi cave dwellings dug into the rock at the edge of the Matera trough. Between the 1950s and the 1980s there were major transformations of agricultural countryside, mostly the result of interventions by the Cassa per il Mezzogiorno, including reclamation, agrarian reform (see fig. 7) and improved water supply. A series of dams was built by the Ente Irrigazione (San Giuliano, Pertusillo, Gannano, Rendina, Saetta, Montecotugno, etc.) (see figs. 8 & 10), that proceeded to construct an irrigation network that serves the entire Metaponto, and large areas in the Agri, Basento, Bradano and Ofanto valleys (see fig. 10). Other typical features of agricultural countryside can be seen in areas where damage to the water table is extensive and in the mountain band, where hydraulic projects and reforestation are taking place. Rural areas are constantly subject to population flows. Calculations show that today, 650000 Lucanians live outside the region, that is higher than the current resident population. The constant deterioration of the inland belt causes a decline in the sectorial and territorial operations of traditional agricultural spaces in the least favourable environments. Agricultural countryside shows signs of the neglect in part-time agriculture, often practised by elderly farmers.

Fig. 14
Example of erosion caused by water run-off at S. Maria d'Anglona, Matera
(photo R.G. Maury)

Sub-areas, produce and specialised cultivation.

A. RIGGIO

The breakdown of regional agricultural space must take account of various geographical factors such as: environmental limitations; the influence of varying pedological and altitudinal conditions; population flows; the recent evolution of agricultural countryside caused by the territorial distribution of state interventions; structural and economic features and the variation in territorial functioning in individual contexts (see figs. 1, 2, 3, 4 & 10).
The irrigated area of the Piana del Metaponto and the areas in valley bottoms combine to form the first agricultural region. A collection of lowland areas with favourable natural conditions and the positive effects of state intervention, both sectorial (reclamation, agrarian reform, capital lending, irrigation systems, regional experimental centres) and territorial (roads, services, greater economic growth). The land is used prevalently for fruit and vegetable growing (tomatoes, strawberries and citrus fruit) (see fig. 9). Livestock farming takes place in the Valle dell'Agri. These agricultural systems are dominated by high density medium-large farms. The highest levels of production are on the Piana di Metaponto, that is fighting the incursion of tourism and urbanisation.
The volcanic hill land of the Vulture. This is one of the most fertile areas in Basilicata and devotes activity to production of the DOC wine Aglianico. There is considerable bottling activity in the towns of Rionero in Vulture, Barile, Venosa and Acerenza (see fig. 11). The olive, which is the other largely cultivated species, and is frequently grown in association with vines is helped by the Consorzio Oleicolo del Vulture. This is a densely inhabited and built-up zone with other countryside resources, cultural and environmental heritage, mineral and thermal water. In this northern

Fig. 13
Brienza and low mountain agricultural landscape
(photo R.G. Maury)

sector of the region rapid change is taking place due to the construction of the Sata-Fiat factory, that employs 7000 and other industries.
The inland hill area of the Avanfossa Bradanica. This is an agricultural area, where, after massive deforestation, activity concentrates almost entirely on traditional wheat growing, revitalised by CAP funds (see fig. 12). The area excludes the totally infertile run off troughs (see fig. 14). A few medium size farms follow other activities such as cattle farming for slaughter and pork farming. In the territory of Ferrandina, olives are cultivated and produced for table consumption.
The limestone mountain and the high inland hills. The altitude and the isolation due to the rugged morphology and the eternal shortage of roads, greatly limit agricultural potential and territorial functioning of this sub-region. The area is formed by the Lucan Apennine and the stark Mount Pollino (the sub-area includes the Valle del Noce and the Golfo di Policastro with its mountain overlooking the sea at Maratea). The productive systems concentrate on cereal cultivation and livestock farming. A good part of rural space risks depopulation. Other important countryside features include precious forest resources and collectively owned

Fig. 15
Potenza: scattered dwellings and new university campus under construction (to the fore at the left) in the agricultural outskirts of Macchia Romana
(photo R.G. Maury)

land used for civic purposes (see fig. 13). The Lucan Dolomites are a separate environment (Regional park) of wild beauty with rounded limestone outcrops.

Unsolved problems and the new role for rural space

A. RIGGIO, R. G. MAURY

Widespread natural hazards, due to a variety of frequently overlapping factors, constitute one of the fundamental features of regional territory. There is risk of earthquakes in 65% of-communes. Hydro geological problems affect 116 communes out of the 131 where there is a risk of landslides and floods. One particular phenomenon of accelerated erosion of agricultural land is the formation of run off fissures that involves the territory of the Avanfossa Bradanica (a good part of the province of Matera) (see fig. 12). In these circumstances, the worst hit land becomes completely sterile, while the run of water threatens many cities (Pisticci, Montescaglioso, Ferrandina, Grassano, Montalbano). Further problem is that of rural depopulation. This phenomenon is worst felt in inland areas. From 1961 to 1991 in the 38 communes with a population of under 1500, the number of residents continued to fall ceaselessly.

The last decade has seen rural space undergo the transformations due to recent developments in housing and non agricultural activities. Cultivation gives way to other functions such as housing (Potenza, Matera, Melfi, Ionian coast) (see fig. 15); drilling (oil well in the Val d'Agri) (see fig. 17); industry (Vulture Melfese, Tito); tertiary sector (Telespazio at Matera, Enea at Rotondella, C.N.R at Tito, university campus at Potenza); tourism (Metapontino, Maratea). This type of erosion of agricultural space is typical of areas of higher economic growth. Alongside these tendencies, there are developments that are not connected with urbanisation. One should not overlook agricultural experimentation (see fig. 9); the utilisation of structural funds (LEADER programmes) for the development of agritourism (Pantano di Pignola, Metapontino); environmental protection, with the promotion of already existing parks (Pollino, Dolomiti Gallipoli Cognato, Murge materane) and the creation of new ones; the promotion of cultural and environmental resources, that, in Basilicata, are particularly closely linked to the rural world (archaeological sites, abandoned settlements – see fig. 18 – rock dwellings, castles, monasteries, rural houses, celebrations and country and religious traditions, including those of the Albanian ethnic minority). In addition we must consider the reappraisal of wooded pasture land and of traditional pork, sheep and goat farming. This sector, formerly characterised by seasonal migration to higher pasture, is currently benefiting from experimentation by the Istituto Sperimentale per la Zootecnia di Bella on the preservation of production systems by the reintroduction of local species and promotion and marketing of locally produced and consumed cheeses. Other innovations are still at early stages: recreational activities on artificial lakes; the proposal for the creation of a trough park and a park of rural culture; the restoration of fortified farm houses, hamlets and other types of rural dwelling (see fig. 16); tratturi excursion tracks.

Fig. 17
Oil well on agricultural land in the Val d'Agri (photo R.G. Maury)

Fig. 16
Sheep in a farmyard in the mid Bradano valley (photo R.G. Maury)

Fig. 18
Craco, a community that was abandoned in 1965, after repeated landslides (photo R. G. Maury)

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Regional

M.G.

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Key

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- medium-small high cultivation density
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- medium-big weak cultivation density
- tabularia
- specularity
- pulverization
- provincial boundaries
- limits of altimetric bands

Fig. 2 Altimetric bands in regional territory

- mountain
- hill
- lowland

Graphs of provincial and sub-provincial agricultural systems

- CAA quotas
- Farm quotas
- Farm area quotas

X= farm size classes
Y= percentage values

Fig. 3

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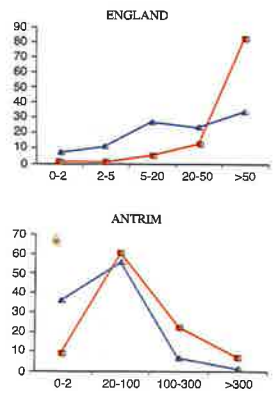


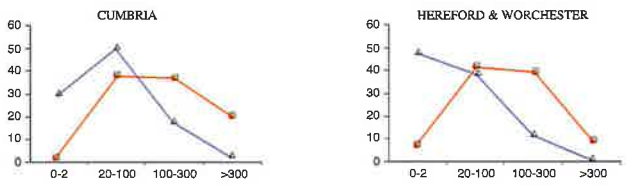


Fig. 11
Regional agricultural systems of England and Wales (da P. Falcioni, 1998)

Farm quotas

Farm area quotas

German agricultural surveys deserve specific attention. The data gathered on the dimensions of farms should be read in terms of underlying social and historical factors and not paying attention to the criteria on which the survey is based. The regional authorities differ depending on their belonging to longstanding Länder in the original German Federal Republic or to the new Länder from the recently annexed German Democratic Republic. The former reflect a farm structure typical of the West and of its property markets, while the latter reflect the collective management of agricultural space. The surveys of some Mediterranean states show an equally paradoxical focus on the most productive farms, even where the most widespread model of agricultural business is based on small and microfarms. Greece and Turkey too (see fig. 13) exclude permanent pasture land and woods from the surveys carried out by national statistical offices. The similarities end here however, and the farm area surveyed in the two countries is calculated by different means. Greece has established a minimum size for farms to be included in the survey (*stremma* of 0.1 hectares), while in Turkey every productive unit is included regardless of surface area.

Fig. 12 a, b
Regional agricultural systems of England and Wales (da P. Falcioni, 1998)

Farm quotas

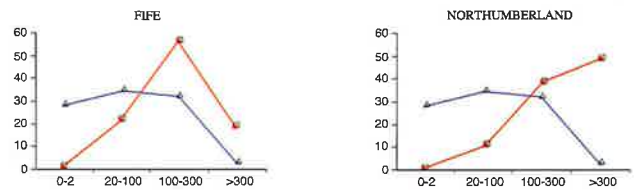
Farm area quotas

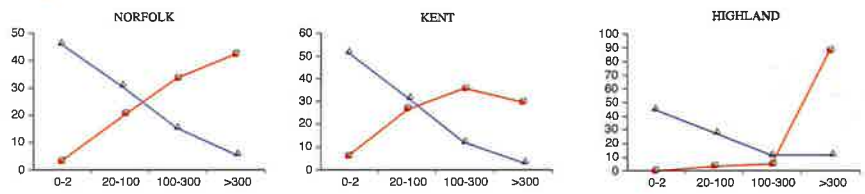
Fig. 13
Narrow strips of agricultural land with rows of vines threatened by erosion and the expansion of tourism in Cappadocia (photo R. Maury)

In every EU member state, the collection of data in terms of scale of output appears to predominate over that of territorial dimension. This is despite the orientation of structural policy, which over the last two decades, has called for the definition and selection of rural areas to receive incentives and investment.

European agricultural systems

Specific individual interests and concerns have moved each member state to adopt its own criteria for agricultural surveys.





Even though the variety of criteria adopted means that the structural characteristics must be interpreted with a degree of elasticity, the data give us an image of the varying socio-economic notions of "land resources", along with the importance of the primary sector in every EU member state. Despite the incoherencies, elaboration of the data on structural elements illustrate certain individual elements of the agriculture in different states. Compared to that in other states in the European Union, agriculture in the United Kingdom is an emblematic case of primary sector growth that has traditionally respected the dictates of economic production. By the 1970s this growth was already so advanced as to require transition to the post productive phase. Starting in 1973, in the year when the UK joined the EU, critical analysis of the traditional model was undertaken and by the beginning of the 1990s gave rise to the Mac Sharry proposal for incentives for set-aside that was accepted by Community policy. From that moment on, British agriculture has distinguished

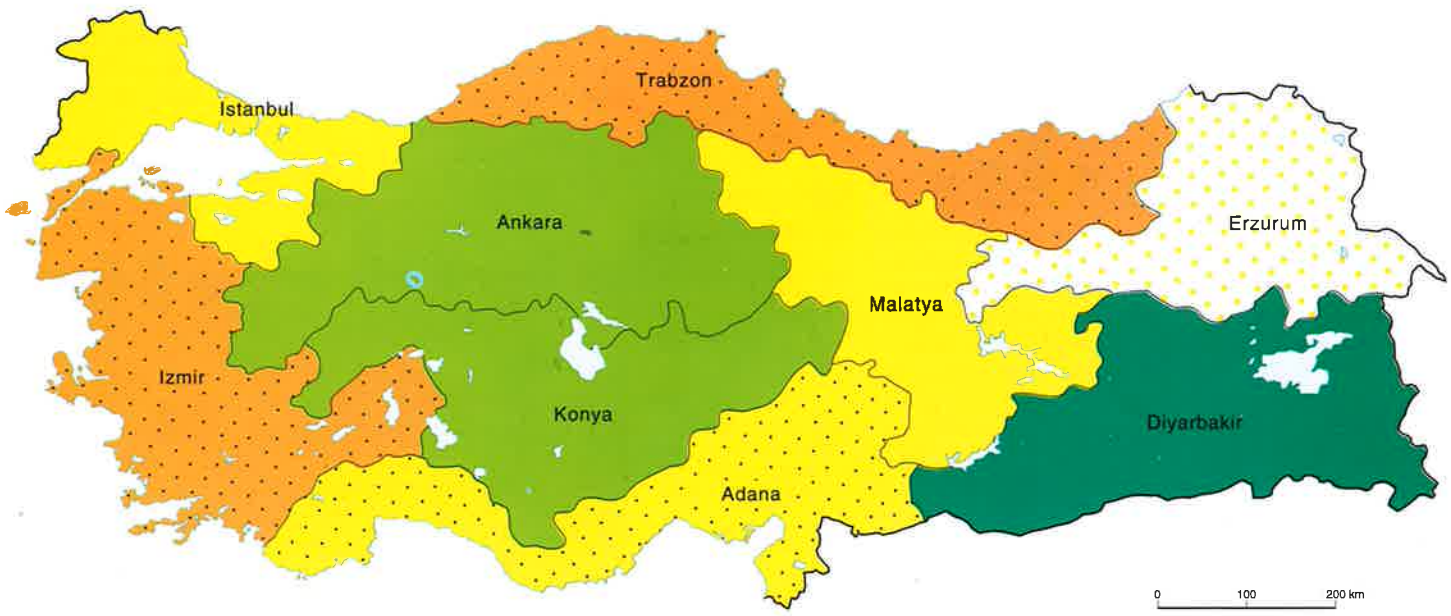
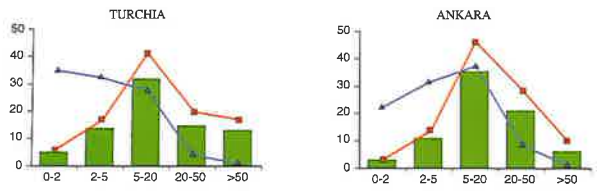


Fig. 14
Agricultural systems of Turkey (source D. Palumbo, A. Riggio, 1998)

- medium-small high cultivation density
- medium high cultivation density
- medium weak cultivation density
- medium-big high cultivation density
- big high cultivation density
- pulverization



a

b

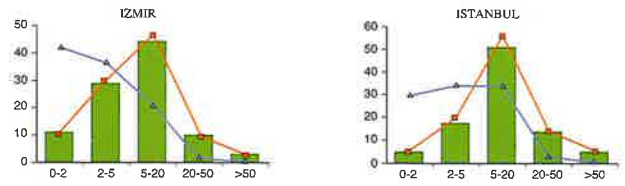
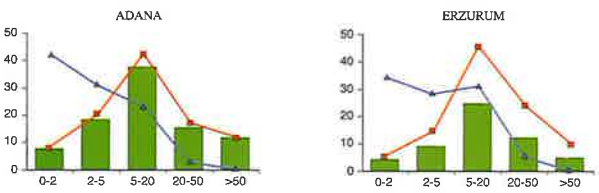


Fig. 15 a & b
Regional agricultural systems of Turkey (da D. Palumbo, A. Riggio, 1998)

between two categories of rural space, namely high intensity production countryside and unproductive marginal areas. The latter were only included in surveys from 1970, once support for marginal areas was emerging as a concrete possibility. Today, UK agriculture, with its mere 244,205 farms – data for 1993 – on 17,301,000 hectares of worked land (Falcioni, 1998), is at one of

Fig. 16
On the colder side of the Ponto coastline overlooking the Black Sea, tea and tobacco growing compete with woods for agricultural land (photo R. Maury)

the extremes of European agriculture. Farm structure is dominated by large estates throughout agricultural space in England and Wales. In this single model the only distinction possible is the percentage of largest farms of over 300 hectares (see fig.7). Considering the above, the graph of the agricultural system in Wales can be selected as representative of the "North Atlantic



a

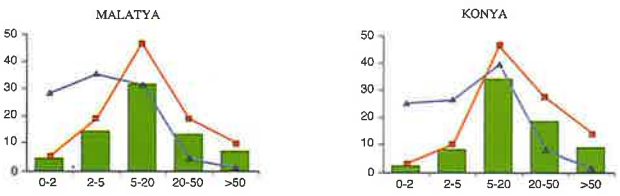
Figg. 18 a, b & c
Regional agricultural systems of Turkey (da D. Palumbo, A. Riggio, 1998)

CAA quotas
Farm quotas
Farm area quotas

b

c

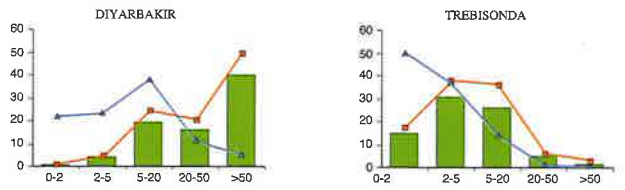
model". Compared to other regions, the structural characteristics of Welsh agriculture are an emblematic expression of the numerical prevalence and widespread distribution of the largest size of farms (see figs. 10 a, b & c: 11, 12 a & b).



The existence of minor holdings in UK agriculture (81,000 on barely 1% of total farm surface area) does not reduce the massive prevalence of the larger farms, except on horticultural land in the vicinity of towns, but is indicative of intensified crop practices in eastern and southern regions. The high crop density of the larger farms decreases on two thirds of national agricultural space (to weak or inadequate density) and this is indicative of the natural obstacles to agriculture on the one hand, and of farmers wanting to adhere to the set-aside programme on the other.
The opposite extreme the "North Atlantic model" found in the United Kingdom is represented in Europe by the Turkish model of agriculture. The country sought entry to the Union significantly later than the other member states and is characterised by traditional exploitation of its agricultural land (see figs. 16 & 17) and by the lack of harmony with the orientations of CAP. On its largely differentiated farm surface area of 23,451,099 hectares, amounting to barely 30% of national territory, there are no less than 4,068,432 active farms (data from 1991 agricultural survey) (Palumbo, Riggio, 1998). This number is by far the highest of all European countries. The graph of the national farm system is a faithful but synthetic representation of the basic elements of Turkish farming activity, a good 50% of which is organised in the macroregions excluding the arid south east Anatolia (Diyarbakir) (see. fig. 19) by medium sized farms (Ankara, Istambul, Adana, Malatya, etc.) or medium to small farms (Izmir, Trebisonda, etc.) with high density culti-

Fig. 17
Livestock market on the Urfa plain, south-eastern Turkey (photo A. Riggio)

vation on the majority of land (see figs. 15 a & b; 18 a, b & c). The map of regional agricultural systems confirms that the traditional organisation of agricultural space in the hands of



small scale farms (medium and medium small) retains its place as the national model. The concentration of larger farms namely the traditional large cereal producing estates, is limited

Fig. 19
In Anatolia major irrigation schemes have rapidly transformed agricultural into today's broad fields used for open field vegetable cultivation as here on the Plain of Harran, in south-eastern Turkey (photo R. Maury)

to three regions i.e. the south-east, the centre-north and the centre-south (see fig. 14). These structural characteristics are not the only parameters where the Turkish primary sector varies from that of the rest of Europe. Over the last few

decades, the trend in evolution
the opposite of that in other me

In Turkey there is no evidence of t
found in western European count
farms and abandoned or part-tim
widespread tendency throughout
medium sized farms falling in nu
increase in the number of larger f
direction with an increase in the
French agriculture is closer to th
exploitation than to that fo
Throughout national territory,
and the medium large business