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**The Consolidation of
Farms in Six Countries
of Western Europe**



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LAND FRAGMENTATION AND DISPERSION IN ITALY

Origins of land fragmentation. The variety which characterizes landed property in Italy is a reflection of innumerable influences, preponderantly juridical and environmental, which have been brought to bear on it down the years.

So long as the greater part of Italy remained divided into small states, each with its own legislation and economy, conditions in the different regions were conducive to the formation of private landed property. By the beginning of the nineteenth century, agriculture had been freed from its feudal chains in the north and in part of central Italy, and also in a few regions in the south; the spirit of the Communes, long dominant, had infused into the citizens a new sense of independence, and the urge towards landownership felt by a vast number of wealthy merchants had already borne fruit.

In the south, however, and particularly in the Islands, large feudal properties still prevailed. In fact, in 1786 four-fifths of the inhabitants of the agricultural south still owed allegiance to feudal lords, only one-fifth being subject to the jurisdiction of the state.¹ It is true that a movement towards free ownership of the land began around the year 1000, and found what can be termed its conclusion, more than eight centuries later, in a law passed on 5 December 1861 by the new Italian state, which abolished the last remnants of feudalism and granted the franchise of emphyteutic rights. Yet it is certain that progress was not uniform in all regions; it was hindered by the differences in agricultural environments due to climate, morphology, and the extent to which the land had been reclaimed and improved.

Earlier events, and the new land laws regulating inheritance and conveyance, could not fail to leave their mark upon the land system, as can be seen from a recent survey of the distribution of landed property in Italy carried out by the Istituto Nazionale di Economia Agraria.² But whilst such statistics on property areas (and taxable

¹ G. Medici, *General Report on the Distribution of Land Property in Italy*, p. 15. (Edizioni Italiane, Rome, 1948.)

² Istituto Nazionale di Economia Agraria, *La Distribuzione della Proprietà Fondiaria in Italia*, 13 volumes and General Report by G. Medici, Rome, 1948.

It is revealed that privately owned lands cover an area slightly exceeding 21,500,000

income) show how the land is subdivided and where parcellization is most acute, they do not show the degree of fragmentation.¹ Generally speaking where parcellization exists, there exist also fragmentation and dispersion, though it is by no means rare to come across medium and large properties which have been fragmented.

It can be said that in Italy today the rural population is involved in three types of land fragmentation which differ in character and in origin.

The first, which is perhaps the worst from a socio-economic point of view, is found in southern Italy and the Islands (partly in Sardinia). Sprung from causes chiefly historical and social, it is found mainly in small, or medium-sized, properties which are characterized by the precarious living which goes with uncertain productivity.

The second type is confined practically to the valleys and foothills of the Alps and the Apennines. It is essentially technical in nature and is the outcome of a pressing need to find suitable ground for staple crops at different altitudes.

The third type is found to a greater or lesser extent in all other regions, and has originated without any particular stimulus.

Studies of the problem. When Italy became united, the problem of the fragmentation of agricultural land found no immediate place in the Code of 1865. This was because of the urgent need to provide for vast regions afflicted by flood and malaria, and also because of the absence of statistics and the scarcity of funds.

Not many decades passed, however, before the attention of eminent scholars was drawn to the problem by its increasing gravity. Among them were Stefano Jacini who, in a noted inquiry, vividly described the lives of the southern poor, compelled to eke out a mere subsistence on minute properties almost incredibly subdivided—a veritable proletariat of proprietors; Luzzati who, in commenting on a Bill presented in 1897 for providing for tax remissions on small fragmented properties, set out with extreme clarity the economic and social ills that

hectares (those held by incorporated bodies, about 6,200,000 hectares). There is already considerable subdivision, inasmuch as small properties cover an area of about 15,000,000 hectares, medium properties about 4,000,000 hectares, and large properties about 2,500,000 hectares.

¹ Terms accepted by the Italian School of Agricultural Economics:

Subdivision—the split-up of an area into separate properties.

Parcellization—when the land is broken up into smaller and smaller plots, often too small to form autonomous units.

Fragmentation—when the land is in scattered plots separated by land in the possession of others.

Dispersion—the same as fragmentation, but with greater distance between the scattered plots.

derive from fragmentation; Ghino Valenti who made explicit mention of the position in his critical essays on landownership; and Marengi and Bordiga. An inquiry directed by Faina (1910-11) drew attention to the excessive fragmentation so often found in small properties, particularly in the south.

Special commissions were set up on two occasions to study the problem, one in 1917, another in 1920. They had for their scope the preservation, improvement, and formation where possible, of small agricultural and mountain holdings. Several members of the first commission realized how necessary it was to find a remedy for the problem, but it was during the work of the second commission that its importance emerged most clearly. To Tassinari must go the credit for having called the attention of the government to it in unequivocal terms, in his remarkable study of land consolidation in Teutonic countries and his clever analysis of what it could be hoped to do in Italy.¹ Some years later he carried out another inquiry through the Itinerant Agricultural Advisory Services (*Cattedre Ambulanti di Agricoltura*) which, though necessarily incomplete, was exceedingly interesting. In recent years some independent analytical studies have been contributed by Rossi-Doria, a well-known authority on agricultural and social problems of southern Italy.²

In that part of the country peculiar pathological conditions of farming exist, which affect both its economic and physical aspects, and render rehabilitation as a whole extremely difficult. Generally, such conditions attach to small and medium peasant holdings,³ the fragmentation and dispersion of which are elements that are often alien to the characteristics of the property. In other words, the unsatisfactory feature of such holdings is due to the fact that they are formed and re-formed—frequently within periods of less than a year—by putting together odd strips of land of modest fertility, separated by varying distances, and only in part owned by the peasants, and characterized by little or no investment of capital.

¹ G. Tassinari, *Fragmentazione e ricomposizione dei fondi rurali*. (Fragmentation and Consolidation of Farm Lands.) Istituto Superiore Forestale di Firenze no. 8. Firenze, 1922.

² M. Rossi-Doria, *Sul problema della ricomposizione dei fondi frammentati in 'Bonifica e Colonizzazione'*, Ottobre 1942 (the problem of consolidation of fragmented lands in 'Land Reclamation and Settlement', October 1942); *Centro permanente del problema del Mezzogiorno* (the heart of the problem of the South—paper discussed at Congress of Southern Studies 1944, Bari).

³ *Small farm*—one that absorbs the labour of one family of peasants; *Medium farm*—one that exceeds this slightly; it can be worked by a family of peasants with some additional help from other workers; *Large farm*—one that exceeds the limits of the medium.

There exists then, besides the problem of consolidating the land, the no less important one of giving balance to the holding. And generally, in southern Italy, the latter problem comes to the fore. The reasons for the double problem are various, among them being especially the product-sharing leases, so prevalent in the south, the fact that frequently the workers live in densely populated centres, and that there is no livestock economy (meat, milk, wool, &c.) connected with the holding that supplies the forage.

In these regions fragmentation of property and of the farm enterprise, accompanied as it is by dispersion, represents, as Rossi-Doria justly remarks, 'an essential basis for the particular technical organization of these enterprises, which in order to find balance require pieces of land of different quality, situated in different places, for the production of different crops, and such, therefore, that labour needs are felt at different times'. The persistent dwelling *en masse* of the rural workers, in hamlets or villages often remote from the land they work, is explained by the fact that as the major part of their holdings are fragmented and scattered, the hamlets or villages represent centres of activity for the peasants, more convenient than any of the plots that make up their enterprises. In the majority of cases, therefore, consolidation can be successfully attempted only if the usual operations for the interchange of land take their place within wider programmes of land reclamation, improvement, and agricultural reorganization.

Legislation. The first laws passed in Italy in favour of the consolidation of agricultural land (1897 and 1907) had reference to one region only, Sardinia. They provided for the exemption from registration tax, for a period of ten years from publication of the law, of all interchanges of lands and sales by private treaty having as their object the consolidation into one block of fragments of land up to 10 hectares each, or up to 20 hectares in any case where a farmhouse or buildings had been constructed on the first 10 hectares. A further law, passed on 23 April 1911, dealt exclusively for the first time with the subject of the consolidation of agricultural land. It exempted from registration tax all interchange of farm lands aimed at consolidating fragmented property of at least one of the two contracting parties; the land value involved was not to exceed Lire 5,000.¹

The recent Act of 15 February 1933 on 'integrated' land reclamation (i.e. hydraulic works and irrigation, crop transformation,

¹ A request has recently reached the government for exemption from transfer tax on land exchanges involving up to Lire 250,000 each.

reforestation, &c.) lays down the rules governing land consolidation and constitutes what may be called the happy ending of that surge of ideas and discussions that marked the years preceding it. Thus the problem of land fragmentation and dispersion has been given a place in Italian legislation and has come to form part of the general problem of land reclamation.

The law on integrated reclamation distinguishes between land reclamation and land improvement. Works of the latter type can be carried out on one or more holdings independently of a general land-reclamation scheme, and have for their purpose the improvement of existing methods of utilization. Reclamation works, on the other hand, are those carried out in a legally delimited area known as a 'circumscription', in accordance with a general plan of works and with co-ordinated activities aimed at securing notable hygienic, demographic, economic, and social advantages. Such works come traditionally within the competence of the state, and among them land consolidation takes its place. In fact, agricultural reorganization is not to be limited to the mere reconstitution of properties formerly fragmented and scattered, which benefit only single properties or groups of properties, and which may be classed as land improvement. The interdependent nature of the different features of land tenure imply that reorganization must more frequently be undertaken in conjunction with other changes in the technical-economic features which are inherent in real-estate improvements, such as soil fertilization, accessibility, buildings, plantations, and juridical-economic features such as new types of ownership, and farms and housing schemes for farmworkers. Thus, when it happens that the consolidation of holdings forms an inseparable part of a vast complex of co-ordinated activity designed to establish a new order in a given area (circumscription), or the major part thereof, it is classed as land reclamation and constitutes a public work that is carried out by the state.

The law also enforces the carrying out of *all* works (without regard for their technical nature) necessary for attaining of the desired ends, so that the juridical basis that forms the pivot of the law of 13 February 1933 tends towards compulsory co-operation where owners of lands within the *circumscriptions* are concerned.

The sections of the law dealing with land consolidation refer to general rules which regulate the formation of 'concessionary consortia' (the basic executive agencies), the methods of procedures, and the confirmation and carrying out of schemes, &c.

The rules are applied, in effect, to territories that are uniform and homogeneous in character, where a large number of landowners hold two or more non-continuous pieces of land forming units convenient for consolidation and where such operations may be expected to further the aim and purpose of the reclamation. The rules establish, moreover, that any eventual gain or loss of productive area shall be distributed among the proprietors proportionately to the value of the land they hold; that establishment of the new order shall involve minimum cash adjustments, which shall not in any case exceed 10 per cent. of the total value of land owned; and that easements, whether extinct or to be created, shall be taken into account in valuing the separate pieces of land. Finally, the areas excluded from consolidation operations (orchards, building lots, &c.) are indicated.

Legislation goes yet further. Under the new Civil Code of 1942 (Sections 850-6) measures of land consolidation may be carried out also in territories not included in *circumscriptions*, if such territories can derive benefit therefrom, the law of 1863 being thus extended to the entire national territory.

Provision is made for the setting up, at the request of the administrative authorities or others interested, of a *consortium* (formed by the landowners, and controlled by regulations similar to those governing the *circumscriptions*) empowered to arrange a reconstitution of holdings to improve the utilization of the territory in cases where 'several contiguous pieces of land of a size inferior to a cultivable unit¹ belong to different proprietors'.

It is not always, however, that measures of rectification are necessary, as preventive measures are often sufficient to check the fragmentation and dispersion of lands. They are designed to prohibit the splitting up of the minimum cultivable units. This important principle, contained in Section 34 of the Act of 1933, has since passed into the new Civil Code, and its validity thus extended to the whole national territory.

Summed up, it can be said that the consolidation of agricultural land encounters varying difficulties according to the type of fragmentation and dispersion encountered. The difficulties are minor in regions where the fragmentation of properties, prevalently medium or large, with stable capitalist² or capitalist-peasant enterprises, is not

¹ By '*minimum cultivable unit*' is meant an area of land sufficient to absorb the labour of a farm family, or, in the case of a large estate, an area sufficient to allow of proper cultivation according to the rules of good husbandry.

² *Capitalist* enterprise—run by non-peasants; *capitalist-peasant*—run by peasants with hired help; *owner-operated* or *peasant*—worked by peasants without help.

excessive; they become major in regions where properties are mostly small and medium, and are more fragmented, and where the fragments are scattered. The operators of these properties—the small or medium, family or small-tenant-operated, capitalist or capitalist-peasant holdings, often feel acutely the effects of this fragmentation and dispersion.

When it is a question of regions where the properties are fragmented and scattered as well as being generally parcelled, and where the holdings are small or medium in size and equally fragmented and scattered, mere consolidation of the parcels appears to be inadequate, for even if it were carried out, it would still leave, in many cases, the fragmentation of the economic unit, which is so difficult to eliminate.

Examples of land consolidation. By way of illustration there follow brief descriptions of four operations carried out in very dissimilar environments: in Sardinia (Musadera); in the Lower Friuli district (Bacino del Planais); in Istria (Valle del Quietto); and in Tuscany (Sesto Fiorentino).

In Sardinia, prior to the decree providing for reclamation of the Musadera territory, steps were taken to consolidate some ex-feudal lands in the Province of Cagliari, belonging in part to inhabitants of the commune.¹ They were prevalently pasture lands, ploughable and of low productivity.

The method followed was that of interchange of plots, based on the appraisal of each in accordance with the new cadastral classification, with adequate final cash adjustments. There were 202 properties and they were reconstituted in such a way that no one property had an area of less than 2 hectares; seventy-four of them had areas of more than 10 hectares.

The advantages were immediate. About 200 hectares, mostly level land, were placed under cultivation, the remainder being left for grazing for which it was better suited. On the holdings exceeding 30 hectares, an equal number of farm families were settled permanently without an excessive investment of capital (for farmhouse and buildings, water-supply, &c.).

The two experimental schemes that were put in operation in the Lower Friuli and Istria districts by virtue of the 1933 Act dealt with territories which were very much fragmented and dispersed. In both

¹ G. Medici—I. Sirotti, *Aspetti della proprietà fondiaria ed un esperimento di commasazione in Sardegna*, Rome. Federazione Italiana Consorzi Agrari. 1932. (Aspects of land ownership, and an experiment in consolidation in Sardinia.)

cases the object was to form new farms with regular boundaries, and to consolidate so far as possible the largest fragmented and scattered properties into compact units such as would allow of good layout having regard particularly to drainage needs and to public and private works of reclamation (drying operations, irrigation, &c.).

The estimates of the value of the different plots—the most delicate part of agricultural reorganization—were based on direct recordings and calculations of the areas of most of the negotiable parcels, since the cadastral maps, particularly of the lands reclaimed from swamp, were not sufficiently reliable. The parcels were appraised synthetically and their values related in each case to actual market prices of land in the district, as these would play an important role in the final cash adjustments. The expenses incurred in the preparation and carrying out of the final schemes were shared by the landowners in proportion to the advantages gained.

In the Istrian scheme, the land parcels were classified on a pre-reclamation basis, and their values estimated duly allowing for the benefits accruing from the reclamation works. A numerical system of rating was adopted:

| | | | | | | | | | |
|-------|------|-------------------------------|---|---|---|---|---|---|----|
| Class | I. | Arable, good | . | . | . | . | . | . | 35 |
| „ | II. | „ poor | . | . | . | . | . | . | 30 |
| „ | III. | Meadow, good or medium | . | . | . | . | . | . | 25 |
| „ | IV. | „ poor | . | . | . | . | . | . | 20 |
| „ | V. | „ broken, or with swamp grass | . | . | . | . | . | . | 15 |
| „ | VI. | Marshland | . | . | . | . | . | . | 10 |
| „ | VII. | „ (salt water) | . | . | . | . | . | . | 8 |

The advantages of the new order, once it was established, were numerous and important; the number of fragments was everywhere reduced. The criteria which inspired these reorganizations can be best described perhaps as intermediate, in the sense that operations were directed not only towards the formation of farms of local type (of from 12 to 15 hectares) but also towards making each holding as valuable as possible, by cutting out the smallest and poorest plots with the consent of their owners. Formidable obstacles of a psychological-social nature, which would arise through excessive elimination of small proprietors, were thus avoided. It may be added that these measures in Istria were carried out whilst extensive reclamation works were in full swing and land values therefore subject to change.

Success was due in great part to the faith and confidence instilled into all concerned, but also to the rapidity with which the preparation

and carrying out of the schemes were effected, so that the inevitable inconveniences due to transition were reduced to a minimum. Furthermore, completion of the scheme was timed to coincide with the beginning of the agricultural year.

The operations carried out at Sesto Fiorentino, just outside Florence, are the most recent. They were the result of private initiative and were applied to an intensively farmed territory, where stable capitalist, peasant, and family enterprises, most of them autonomous, existed side by side. Subdivision, dispersion, and fragmentation were all present, though rarely on so serious a scale as is common in other parts of Italy.

In this case reorganization followed two directions; on the one hand the scattered pieces of land were thrown together, and on the other an 'internal consolidation' was carried out so as to unite in one compact block all the scattered pieces of land forming parts of the same farm. At the same time, a series of important land and water works were put into execution.

From investigations made, it has been shown that the simple *per unit* cost of consolidation was modest, amounting to about Lire 25,000 (present day value) per hectare.¹ The further cost incurred in establishing the new farming systems on the holdings brought this figure up to a little more than Lire 60,000.

The *per unit* profit from the consolidation, measured in terms of annual income from the land, amounted to about Lire 10,000 per hectare, that is, 30 per cent. more than the revenue obtainable from holdings still having a fragmentation of the type in question.

Also, in this case there were considerable indirect results. Whilst previously there was hardly any work done by tractors, after reorganization their use rose to 380 hours annually, equalling 47 or 48 days; the three grain drills of former times became nine and their use rose from 60 hours to 480 hours annually; the reapers are now five, instead of one, and they are used, on an average, 800 hours annually. Water for irrigation purposes has been made available, and livestock rearing tends to a much richer production.

Final considerations. It is clear from what has been said above that legislation covering land consolidation, though well advanced, has

¹ Ugo Sorbi, *La commassazione fondiaria nell'Azienda Guiccardini e nella zona limitrofa del Comune di Sesto Fiorentino (Ricerche intorno al costo e all'utile unitario di commassazione)*. (Land consolidation on the Guiccardini holding and adjacent zone of the Commune of Sesto Fiorentino, per unit cost and profit.) Issued by Accademia dei Georgofili, Florence, 1949.

yet to be brought to completion in that it should make more provision, so far as it can, for different types of fragmentation. Above all, too, it should have an inner psychological content that can respond to those delicate, invisible, and profoundly operative mental needs of the different people concerned in these operations. There should also be sections providing for substantial fiscal assistance.

Excluding zones where land fragmentation and dispersion are not harmful, and where they may even present some advantages, the greatest obstacles to consolidation remain always those which are well known: attachment to the soil, over-valuation of the strips of land possessed, mistrust of change, suspicion of third parties, and so on. These can be of different weight, however, according to whether the holdings operated on fragmented land are firmly established, and whether there is continuity of management and security, or whether everything is uncertain, as it is in a great part of southern Italy and the Islands.

The problem of land consolidation in Italy is assuming, though slowly, a well recognized importance, as it must, if the country is to work successfully towards a solution that is by no means easy.