The Agricultural Revolution (1943-79)

1. Italian agriculture in the wake of the war

Italian agriculture emerged from the war in poor shape, its productive potential having been reduced to around 60 per cent of the prewar level.[1] Around 77,000 hectares of cultivated land planted with 135 million grapevines, olives and fruit trees had been destroyed or damaged, along with 67,000 hectares of woods and chestnut groves, an immense number of rural buildings, stables, manure and compost pits, silos and warehouses, 82,000 kilometres of canals and more than 800,000 agricultural machines and instruments. The livestock population had also been decimated and stood at 75 per cent of its prewar total after the loss of 600,000 head of cattle, 389,000 pigs, 142,000 horses and more than 1 million sheep and goats. Agriculture had also been hard hit by shortages of fertilizer, pesticides and labour,[2] and the war had reduced farming to its exigencies, forcing more extensive cultivation of some crops to the detriment of others. In 1945 wheat was still the priority crop and farmers were not only encouraged to grow it but also obliged to bring it to the stockpiling agency.[3] Nevertheless the wheat crop contracted from an annual average of 7,250,000 metric tons between 1933 and 1938 to 6,150,000 tons in the 1945-46 crop year and then sagged to 4,700,000 tons in 1946-47, partly on account of poor weather. Production rebounded to almost 6,150,000 tons after the mandatory stockpiling regime was replaced by fixed quotas to be brought to the government silos, but the average yield per hectare was only 1.3 tons, compared with 1.48 before the war. Although reconstruction had commenced even as the battlefront advanced northwards, in 1947 agriculture was still in hard straits and its difficulties were only exacerbated in September of that year by the government's tightening of credit, which made the shortage of working capital more acute. The liquidity squeeze caused purchases of tractors and farm machinery to plunge by 25-30 per cent and reduced the use of existing equipment, owing to the cost of fuel,[4] and of both occasional labour and fertilizers.[5] However, it should be borne in mind that the supply of phosphates

[1] P. Germani, "L'agricoltura italiana nel dopoguerra", in *L'economia italiana nel decennio 1947-1956. Review*, special tenth anniversary issue, 1957, p. 34. In 1957 Germani was chairman of the Chamber of Deputies' Committee on Agriculture, Forestry and Food.

[2] *Ibid.*

[3] G. Orlando, "The economic situation of agriculture in 1948", *Review*, III, 1 (January 1949), pp. 32-40.

[4] *Ibid.*, pp. 34-36. Orlando, later a university professor of agrarian economics, was with the National Institute of Agrarian Economics at the time.

[5] *Ibid.*, pp. 35-36.

and nitrates was itself limited as production was still well below the level recorded in the five years from 1935 to 1939.[6]

With the arrival of American aid farmers began to turn to more profitable crops. Between 1945 and 1948 production of fruit and vegetables and industrial crops increased, as did livestock breeding.[7] In 1948 the Italian government also began to lend a helping hand. It liberalized the sale of phosphates and nitrates in February, granted favourable conditions to farmers for the use of fuel in April, abolished the 1 per cent surtax on fertilizers, approved measures to give farmers easier access to credit, and in September concluded agreements with the US government for the export of $56 million of fruit, vegetables, hemp, seeds, tanning extracts and other farm products to Allied-occupied Germany in return for imports of manufactured goods.[8] The amount of farmland in use increased as a result.[9]

Italian farming was given strong impetus by the inauguration of the Marshall Plan, whose goals included the intensification of agricultural production. The introduction of new crops alongside cereals would increase both the nation's food supply, which still appeared to be deficient,[10] and its income.[11]

In an article appearing in the *Review* one year into the Marshall Plan, Harry McClelland, head of the agriculture division of the ERP mission in Italy, reiterated the aim of food self-sufficiency for Italy by the time the Marshall Plan came to an end in 1952.[12] The goal was arduous. To begin with, nearly half of the population earned its living from the land, and of the 28 million hectares of so-called productive land in Italy, 37 per cent was located in mountains, 42 per cent in uplands and only 21 per cent in lowlands. In addition, the agricultural lowlands still required extensive productivity-enhancing irrigation and reclamation works and other technical improvements. Just 13 per cent of the nearly 10 million hectares earmarked for reclamation had been definitively reclaimed, while only 27 per cent of the associated public works had been completed and 35 per cent had been begun. Finally, a fair amount of reclaimed land had reverted to swamp because of the wartime destruction of pumping stations, canals, roads and other infrastructure, even though between 1944 and

[6] *Ibid.*, pp. 36-37. [7] *Ibid.*, pp. 34-35.
[8] *Ibid.*, pp. 38-39.
[9] Between 1947-48 and 1948-49 total farmland in use increased from 4,664,000 to 4,726,000 hectares. *Ibid.*, p. 38.
[10] The rigid policy applied during the thirties in the drive to become self-sufficient had reduced Italy's food imports from 18 per cent in 1926-29 to 5 per cent in 1935-38, thanks in part to the crisis of 1929 and the subsequent rise in prices, although Italy remained largely dependent for some items, such as fats and meat. Between 1944 and 1947, however, the food situation was disastrous across the board. See P. Vicinelli, "Italian food problems", *Review*, III, 2 (March 1949), pp. 120-21.
[11] Orlando, "The economic situation of agriculture in 1948", p. 35.
[12] H. McClelland, "The program for agricultural recovery in Italy", *Review*, III, 3 (May 1949), pp. 203-208.

1946 the government, with help from AUSA, Interim Aid and other US assistance programmes, had seen to repairing the damage.[13]

The poor quality of land management struck McClelland, who noted: "I have seen farmers endeavouring to wrest a livelihood from rocky terraced hillsides, but I have also seen kilometer after kilometer of land where not one farmer could be seen at work in the fields".[14] It was imperative for Italy to organize its resources more rationally and put them to better use. Against this background, the Italian parliament had just taken an important step by allocating to agriculture 26 per cent of the ERP funds for 1948-49, equal to 70 billion lire. Forty billion lire of this amount was earmarked for the reclamation of 2.5 million hectares of land and the irrigation of a further 500,000 hectares, projects that would provide work for 150,000 people and boost agricultural production by 30 per cent. The programme was not limited to the South, for its compass included reclamation along the Po, the Arno and other rivers in the Centre and North. But as the most backward area the South had priority and had been allocated just over half of the total funds, primarily for improvement projects that had remained on the drawing board and for the eradication of malaria.[15] In the Capitanata district near Foggia, no less than 100,000 hectares were already in course of improvement, and McClelland reported: "I have seen every dam, every road, every ditch and every canal which is to be constructed under the program. We have gone over every hectare to be developed".[16] The American government was monitoring the rehabilitation and modernization of Italian agriculture with the utmost attention and sought to support this effort in various ways. For example, 2,000 tons of hybrid wheat were being distributed below cost, promising to raise local output by 50 per cent, and other high-yield hybrids were on the way. Italian experts were scheduled to visit the United States to learn the new techniques that had been developed in farming, cattle breeding, farm credit, etc.

2. The mechanization of farming

Scant mechanization was one aspect of Italian agriculture's relative backwardness. In 1945 Italian farmers owned a total of 52,000 tractors (60 per cent of them foreign-made), 60,000 fixed engines and a hundred or so combines, most of them imported in the interwar years. The issue was addressed repeatedly but to no avail, and a conference on farm mechanization held in Reggio Emilia in 1949 showed that the problem was far from being solved. Still, that year

[13] D. Perini, "Land reclamation in Italy during the last 50 years", *Review*, III, 6 (November 1949), pp. 512-13.
[14] McClelland, "The program for agricultural recovery in Italy", p. 205.
[15] *Ibid.*, pp. 207-208.
[16] *Ibid.*, p. 206.

marked a turning point.[17] Almost twice as many tractors were sold in the first half of 1949 as in the previous six months (1,084, compared with 645) and sales exhibited a distinct crescendo, rising from 113 units in January and again in February to 480 in June; in fact, Italian farmers purchased more tractors in the first half of 1949 than in the whole of 1948.

Most of the tractors were Italian-built and almost two thirds of these were made by FIAT and Landini. The success of domestic models was due in part to the reputation Italian farm equipment had won in the space of a few years, with exports, mainly to France and South America, topping imports by a good margin.

A decisive contribution to the diffusion of tractors came from an agreement between FIAT and the Federation of Agrarian Consortia, or Federconsorzi, which also signed accords with fertilizer, pesticide and fungicide producers. Through these agreements, which entailed price discounts and other concessions, the Federconsorzi sought via the Farmers' Association and farm cooperatives to force the pace of agricultural modernization. This was far from easy and the problems were thorniest of all when it came to mechanization, which was widely opposed in some farm districts for its supposed repercussions on employment.

In the Po valley opposition was so strong that temporary restrictions were placed on the use of harvesting and threshing machines. Nor were these fears allayed by the example of Apulia, where farm machinery was fostering more sophisticated production and helping to create jobs.[18] Given the resistance to mechanization, Italy did not seem likely to follow the lead of the United States and achieve widespread use of the more sophisticated machines designed for harvesting maize, fruit, potatoes and beets. Italian farm-equipment makers therefore had little incentive to produce them.[19]

The most important point, however, is that northern and central Italy, especially the regions of Veneto, Lombardy, Emilia, Tuscany and Latium, accounted for the largest share both of the 47,786 tractors to be found in Italy at the end of 1947 and of the total of 2,070 purchased in 1947-48. The figures on purchases confirmed the pattern of southern underdevelopment. In the Mezzogiorno as a whole there was only one tractor for every 1,000 hectares of arable land. In every other region of Italy except Liguria and Trentino the ratio was lower than one per 500 hectares, and in some, such as Veneto, Lombardy and Piedmont, it was just over one per 100.[20] Equipping southern agriculture with tractors was thus among the Marshall Plan's objectives for Italy. Increasing the number of farm tractors in the South to at least 10,000 was considered feasible in view of the comparable results achieved in Britain and particularly in France,

[17] P. Vicinelli, "Features of farm mechanisation in Italy", *Review*, III, 5 (September 1949), p. 411.
[18] *Ibid.*, pp. 411-12.
[19] *Ibid.*, p. 416.
[20] *Ibid.*, p. 413.

which imported 44,000 tractors between 1945 and 1949 thanks to various assistance programmes.[21]

3. The reclamation of the Tavoliere di Puglia

An important and in some respects exemplary chapter of the modernization of Italian agriculture was the reclamation under way in the Tavoliere di Puglia. Until the mid-1800s this vast district comprising 360,000 hectares of flatlands, the largest plain in Italy after the Po valley, and 100,000 hectares of Appennine foothills, had been divided between crops and pastures interspersed with swamps covering 25,000 hectares. Rivers often flooded the plain surrounding Foggia, damaging pastures and destroying crops.[22] Over the centuries land-hungry farmers and shepherds had often been at loggerheads, but population growth and the consequent secular rise in food prices made the farmers victorious in the end. Attempts at reclamation in the early 1800s and 1900s produced unsatisfactory results. A real start was made only after the passing of Law 215 of 13 February 1933, with the formation of the General Consortium for Land Reclamation and Improvement in Capitanata, but mounting political and military tensions, the outbreak of the war and its train of destruction brought progress to a standstill. Reclamation and improvement resumed after the war and the project advanced towards completion through the combined efforts of the General Consortium and of the new Agency for the Agrarian Reform of Apulia, Lucania and Molise.[23]

The reclamation of the Tavoliere di Puglia and the district's conversion to intensive, specialized farming promised to bring great benefits to Italian agriculture in general as well as to the local population.[24]

4. The agrarian reform

The agrarian reform's legislative underpinnings consisted of: Law 230 of 12 May 1950, regarding the settlement of the Sila plateau in Calabria and the adjacent Ionian seaboard, and Law 841 of 12 October 1950, or "extract law", establishing rules for expropriation, land reclamation and improvement and the assignment of properties to the peasantry. Aimed at breaking up large estates or extensive farming units, found mainly but not only in the South, these provisions set up reform agencies charged with superintending the scaling down of landholdings, land improvement and assignment. With a view to encouraging the participation

[21] *Ibid.*, p. 414.
[22] A. Merendi, "Great Italian land reclamation works: The Apulian Tavoliere", *Review*, VIII, 5 (September 1954), p.438.
[23] *Ibid.*, pp. 444-46.
[24] A. Merendi, "The Italian mountains", *Review*, IX, 2 (March 1955), pp. 150-51.

of private capital, owners who directly carried out the improvements set out in the reform agency's plans on one third of their land subject to expropriation were liable to reduced confiscation. Law 191 of 25 July 1952 also deserves to be mentioned here, although it essentially concerned the mountain-dwelling population, as it was part of the more general project for the reform of Italian agriculture and promotion of small peasant ownership.[25]

The reform involved a total of 8,500,000 hectares. The expropriations amounted to 800,000 hectares in all and were most extensive in Apulia, Lucania and Molise (189,400 hectares), followed by the Maremma in Tuscany and Latium (177,500), Sicily (140,000), the Sila (74,800), Sardinia (47,400) and the Po delta (44,200).[26] The expropriated lands were assigned to peasants with right of ownership reserved until payment of the assignment price; the latter consisted of the cost of expropriation plus that of improvement and had to be paid within thirty years. The size of the farmsteads varied according to the nature of the terrain but each was supposed to be sufficient to support a peasant family. By 30 June 1956 546,000 hectares had been parcelled out to more than 102,000 assignees; 130,000 assignees were expected to take the place of some 3,000 expropriated landowners by the end of the reform.[27]

The above figures are only part of the story. Another 1,800,000 hectares came into the hands of owner-operators, 20,000 more were purchased by the Fund for Peasant Proprietorship and also assigned to owner-operators, and 620,000 represented new small landholdings formed beginning in 1948. The circle of land ownership was thus appreciably enlarged,[28] but the operation was very costly and did not produce the hoped-for results. The peasantry tended in any case to flee the land, even land which they owned.

5. The flight from the land

Italian agriculture was certainly in the midst of a great transformation. Although the area planted in wheat and other cereals was 6 per cent smaller than in the prewar years, mechanization and increased use of fertilizers, fungicides and pesticides boosted crop yields per hectare from an average of 1.48 metric tons in 1936-39 to 1.96 tons in 1955.[29] From 1951 onwards, the wheat crop exceeded the abundant levels of the prewar years. Meanwhile, the area given

[25] The highlands constituted a major problem of Italian agriculture. In 1955 they had a total population of around 10 million and a population density of 157 inhabitants per square kilometre. The standard of living was generally low. In the opinion of the law's drafters, the development of small peasant property would raise living standards and keep the peasants on the land. *Ibid.*

[26] Germani, "L'agricoltura italiana nel dopoguerra", pp. 37-38.

[27] *Ibid.*, p. 39.

[28] *Ibid.*, p. 46.

[29] *Ibid.*, p. 53.

over to fruit and vegetables, grapes, olives, industrial crops such as sugar beet and tobacco, and livestock increased.[30] In short, Italian agriculture was becoming tailored to the needs of the industrial countries; still, the increase in agricultural income remained disappointingly low.[31]

As the modernization of medium and large-scale farming operations proceeded it became increasingly clear that agricultural workers would not enjoy an improvement in living standards anything like that seen in the cities. In growing numbers, they left the farms. This rural exodus actually came after an initial postwar wave of migration from the cities. In fact, a substantial proportion of those who left Italy immediately after the war were factory workers and artisans. Subsequently, with the progress of industrial reconstruction, this stream dried up and the exodus from the countryside commenced.

In early 1956 Giuseppe Medici stressed that agriculture still accounted for a very substantial share of national income even though it was no longer the foremost economic sector.[32] It was therefore essential to continue to pay close attention to agriculture and keep up the drive for its modernization. The fall in population pressure was not to be feared, Medici observed. On the contrary, it was to be encouraged as a prerequisite for modern farming. The real problem was to ensure higher living standards and better prospects for those who remained. Many further steps had to be taken to this end. And while Italian agriculture had made clear progress on the mechanization front (the number of tractors tripling between 1948 and 1956), it now had to respond to the combined incentives of technology and economics, be heedful of the market's exigencies, lower production costs and move from precapitalist and pastoral conditions to a rational capitalistic footing, a passage that not only did not exclude but, indeed, demanded a major effort in the livestock sector.[33]

Six years later, by the time an article by Mario Bandini appeared, the picture was very much altered. In recent times, Bandini remarked, the transformation in agriculture had proceeded at a dizzying pace.[34] The changes extended beyond the models of agricultural production to involve labour relations, farm size and farming methods. It was, in Bandini's view, the most sweeping renewal ever in Italian agriculture. The earlier phases of great transformation – that at the end of the 1700s, which Maffeo Pantaleoni had called the "unfreezing" of land ownership, and that of the late 1800s, with large-scale crop replacement spurred

[30] *Ibid.*, pp. 53-60.
[31] *Ibid.*, p. 60.
[32] G. Medici, "Some aspects of Italian agriculture", *Review*, X, 2 (March 1956), pp. 105 *et seq.* Medici, a professor of agrarian economics at the University of Rome, was Minister for Agriculture.
[33] *Ibid.*, pp. 106 *et seq.*
[34] M. Bandini, "Present situation of Italian agriculture", *Review*, *XVI*, 5 (September 1962), p. 375. Bandini was chairman of the High Council for Agriculture.

by the competition of North American farming – had been neither so rapid nor so concentrated.

Tackling the modernization of agriculture later than Belgium, the Netherlands, France, Germany and others, Italy, like its predecessors, was seeing an exodus of the rural population in response to the growth of industry and services. Over the preceding 25 years, and at an accelerating rate in the past ten,[35] the proportion of workers in agriculture had fallen from 49 to 27 per cent.[36] Young people, especially those in rural districts close to developing industrial centres, had been the first to head out. They included milkers, mechanics and other skilled workers as well as peasants. In fact, skilled workers had uprooted first and had even left such prosperous and fertile areas as the Lombard lowlands. In central Italy it was the crisis of sharecropping that fuelled the rural exodus. Subsequently, fuelled the migratory movement reached more remote areas and the unskilled strata of society. Some emigrants from the Mezzogiorno or Veneto crossed the oceans, but a fair number of others headed for the Genoa-Turin-Milan industrial triangle. In addition, Calabrian peasants settled in Liguria, Sicilians in central Italy, and Sardinian shepherds in the Apennines[37], and there was a movement of population into the reclaimed and improved areas of the South, such as the Catania and Metaponto plains and the former marshlands along the Adriatic and Tyrrhenian coasts.[38]

The South, and most notably its countryside, had been drained of labour on a scale unparalleled except in the years from the turn of the century to the Great War. The consequences were made plain by the 1961 census, which showed that the South had lost about a million inhabitants owing to emigration, despite a natural population increase of around 2,5 million.[39]

The expulsion of labour from agriculture continued elsewhere as well. The contraction of the labour market in the Centre and North forced retrenchment of some crops even in highly specialized areas, such as the vineyards of Piedmont and Tuscany. Many hillside vineyards were abandoned as farmers concentrated on tracts where machinery could be used. In the rice heartland between Novara and Vercelli, Bandini reported, "a few years ago" 160,000 women, both locals and outsiders, were employed for around 50 days a year in weeding. In 1962

[35] *Ibid.*, p. 377.

[36] A broader picture of Italian population movements in these years should also consider S. Somogyi, "Variations in the Italian population in the decade 1951-1961", *Review, XVI*, 4 (July 1962). Somogyi calculated that a total of 1,163,089 Italians had emigrated abroad in the ten years he examined. This total did not include those who had left the country for good but had not reported their departure to the population registry.

[37] Bandini, "Present situation of Italian agriculture", p. 378.

[38] *Ibid.*

[39] Somogyi, "Variations in the Italian population", p. 293.

the number was down to 40,000 and the area planted in rice proportionally smaller. A labour shortage was also responsible for the area planted in beet declining from 305,000 hectares in 1959 to 210,000 in 1962. A similar decrease was recorded in traditional tobacco-growing areas, such as Umbria.[40]

Throughout Italy one could find areas where agriculture was expanding, most of them close to large cities and well-served by transport. In the interior of the Mezzogiorno, along the Tuscan-Emilian Apennines and elsewhere, however, the rural population was dwindling at an increasing rate.

Although breaking up the great estates had generally been a good thing, the agrarian reform's goal of basing agriculture on small peasant farms, often cobbled together from fragments of large estates, had been altogether unfeasible. Experience showed that only medium-sized farms like those in the Po valley could succeed, all the more so if well run and sufficiently mechanized and supported by credit. The only chance for small peasants to survive lay in their banding together in cooperatives,[41] as was happening in drained or irrigated lands along the Tyrrhenian coast, in the Tavoliere di Puglia, the Oristano and Nurra plains in Sardinia, the coastal valleys of Campania, and other areas. In the meantime, mechanization was advancing. Between 1956 and 1962 the number of farm tractors doubled to 300,000, and Italy's entry into the Common Market helped to foster the growing conviction that Italian farmers had to cease regarding themselves primarily as smallholders and adopt an entrepreneurial outlook, equipping themselves with market-oriented structures and modern business services.[42]

6. Urbanization in the North and the South

Large-scale migration from the South played a decisive role in the industrial revolution unfolding in the North. According to Giuseppe Di Nardi, between 1951 and 1962 the local market supplied only 18 per cent of the industrial workforce in the Centre and North;[43] without the contribution of the South, northern industry would have been hard pressed to achieve such progress. The phenomenon of urbanization was not limited to the industrializing North. Both in the Centre and North, except in Friuli-Venezia Giulia, and in the South, provincial capitals recorded population growth of at least 11 per cent. Average increases of 30 per cent and more occurred in the provincial capitals of Piedmont, Latium, Basilicata and Sardinia, and of between 16 and 22 per cent in those of

[40] Bandini, "Present situation of Italian agriculture", pp. 380-81.
[41] *Ibid.*, p. 383.
[42] *Ibid.*, p. 387.
[43] G. Di Nardi, "Regional development in Italy", *Review*, XVIII, 6 (November 1964), p. 427. Di Nardi was a professor of economics at the University of Rome.

Lombardy, Trentino, Emilia-Romagna, Abruzzo and Molise, Campania, Apulia, Calabria and Sicily.[44]

This trend intensified in the subsequent years. The population of cities with more than 100,000 inhabitants grew at an average annual rate of 6.7 per cent, more than three times the national rate of 2.2 per cent. Rome grew by around 19 per cent, Parma by 10.5 per cent, Rimini by 8.2 per cent, Turin and Prato by 7.8 per cent, Milan by 4.4 per cent, Florence by 4 per cent, Bari by 3.3 per cent. Four provincial capitals had a population of over 1 million: Rome was approaching 2.5 million while Milan had exceeded 1.5 million, Naples 1.2 million and Turin 1.1 million.

Only 28 per cent of this urban population growth was attributable to the excess of births over deaths; 72 per cent was the product of migratory movements[45] – from the Apennines to the cities, from South to North, or, for the better job prospects offered by the larger population centres, from the countryside and provincial towns to the larger cities.

In short, the ratio between city and countryside changed radically. Between 1951 and 1963 this extraordinary transformation profoundly altered the composition of GDP; the contribution of agriculture to total output fell from 23.8 to 13.1 per cent in the Centre and North and from 43.3 to 31.9 per cent in the South.

The corresponding growth in industry and services was more marked in the Centre and North, where industry now accounted for more than 54 per cent of GDP and services for more than 32 per cent, compared with just under 33 per cent and just over 36 per cent respectively in the South.[46] Nevertheless, for the first time in history agriculture was no longer the dominant activity in the Mezzogiorno. Between 1952 and 1963 farm employment fell from 53 to 37.4 per cent of total employment in the South; over the same period, industry's share rose from 23.4 to 33.6 per cent and that of services from 23.6 to 29 per cent.[47] This progress is more impressive if we bear in mind that the unemployment rate in the South fell and the proportion of first-job seekers declined from 21 to 14 per cent.[48] Per capita income and consumption grew as a result; given its modest starting point, the rise in consumption, particularly of food and durable goods such as electrical home appliances and motor vehicles, was more pronounced in the South. In any event, the great progress Italy achieved was the outcome of movements in opposite directions – of labour from South to North and of capital from North to South. The key to the transformation of both parts of the

[44] Somogyi, "Variations in the Italian population", p. 298.
[45] G. Tagliacarne, "Population, employment and migration between the 1961 census and today", *Review*, XVIII, 4 (July 1964), pp. 251 *et seq.*
[46] Di Nardi, "Regional development in Italy", p. 430.
[47] *Ibid.*, p. 432.
[48] *Ibid.*, p. 434.

country lay in this free circulation of two of the essential factors of production. In Di Nardi's opinion, closing the economic and social gap between the two Italies would be possible only over the long run and with the inevitable cyclical ups and downs, but this was no excuse for cutting back on regional development investment.[49]

7. The situation in agriculture in the late sixties

The expulsion of labour from farming and the mechanization of agriculture were hastened by an appreciable rise in both wages and social insurance contributions,[50] reflecting the tendency to equalize the wages and standard of living of agricultural workers with those in the rest of the economy. Contributory factors were the growing impossibility of retaining traditional contractual relationships, such as sharecropping, and the inherent difficulty and costliness of mechanizing the cultivation of mixed orchard and field crops or highlands. Altitude was in fact becoming a key determinant of land values; the higher costs of hillside farming meant that what had once been good farmland now risked being abandoned or turned to pasture.[51]

Meanwhile, the relative importance of agriculture continued to diminish. The share of agricultural and forestry in GDP fell from 19.7 per cent in 1951-52 to 17.2 per cent in 1958-59 and plummeted to 13.4 per cent in 1965-66 – in spite of a substantial increase in aggregate output (except for forestry products) and in wheat, olive and vegetable production (much more in the South[52] than in the North)[53] - and the agricultural trade balance continued to show a deficit. In 1966 the only items in surplus were beverages, fruits and vegetables. Large deficits were recorded for wheat, corn, rye, barley, oats, fats, eggs and milk, among other products, but no less than 313 billion lire of the overall deficit of about 440 billion was attributable to livestock and carcasses.[54] This huge shortfall was recorded despite the progress of Italy's livestock sector.[55] Further advances could be achieved with adequate investment in stables and the like, but only in certain districts. In sum, self-sufficiency was beyond Italy's reach. It was best for Italy to concentrate on "those forms of agricultural activity for which the prerequisites of growth, depending on the characteristics of the soil and climate, exist". This meant doing more to modernize production methods, farm structures and

[49] *Ibid.*, pp. 431 *et seq.*
[50] P,. Vicinelli, "Grain growing and animal husbandry in Italy", *Review,* XVI, 5 (September 1962), p. 400.
[51] *Ibid.*
[52] A. Bonomi, "Situation and prospects of Italian agriculture", *Review,* XXII, 3 (May 1968), p. 178. Bonomi was Director General of the Italian General Confederation of Agriculture.
[53] *Ibid.*, p. 175.
[54] *Ibid.*, p. 179.
[55] *Ibid.*, p. 178.

marketing organization[56] Actually, some very substantial steps had been taken in this direction. After a brief lull, farm mechanization proceeded at an ever-accelerating pace and averaged 10 per cent a year in the sixties. The number of tractors rose from 377,107 in 1964 to 509,234 in 1967, 23.3 per cent of them foreign-built. Machines in agriculture rose to 1,384,440 in number and 27,128,931 HP in capacity; tractors accounted for 18,891,554 HP, or 70 per cent of the total.

Further evidence of the efforts to modernize agriculture was the conspicuous amount of capital invested in the sector. Alongside self-financing, significant resources were provided by credit institutions. According to Bank of Italy data, loans to farmers amounted to 1,058 billion lire at the end of 1966, 13 times the volume disbursed in 1951; more to the point, 545 billion of the loans granted were for property improvements.[57] Another noteworthy development was the approval of Law 590 of 26 May 1965 promising farmers 40-year loans at 1 per cent for the formation of farms big enough to ensure efficient cultivation.[58] This was tantamount to a public admission that the attempt to set up small peasant farms with the agrarian reform had been a mistake. The law was designed to create farms between 3 and 10 times larger than those established with the aid provided by the earlier legislation, and thus represented an initial, albeit limited, step towards reallotment of the land; the creation of "medium-sized farms" was necessary if up-to-date technology was to be introduced and costs lowered.[59] However, this was no easy task in view of the scale of farm fragmentation.[60] Similar in general intent was the plan the government adopted for the five years from 1964 to 1969 with a view to raising the income of agricultural workers from 47 to 55 per cent of that of the other economic sectors and assisting the formation of associations, organized by sector and area of production and open to all interested farmers on both an individual and a group basis.[61] But even though the General Confederation of Agriculture, National Confederation of Owner-Operators and Federation of Agrarian Consortia joined forces in the Confederation of Italian Cooperatives in July 1964 for an analogous motive, by 1967 only the fruit and vegetable sector had formed an association regulated by statutory provision.[62] At the end of 1967 Italy had only 7,887 cooperatives, of

[56] *Ibid.*, p. 178.
[57] *Ibid.*, p. 177.
[58] *Ibid.*, p. 181.
[59] *Ibid.*
[60] Farms of less than 1 hectare numbered 1,400,742, or 32.6 per cent of the total units, and had a combined area of 709,686 hectares, or 2.7 per cent of the total area. Those of between 1.01 and 3 hectares numbered 1,296,327 (30.2 per cent) and had a combined area of 2,460,049 hectares (9.3 per cent). Those of between 3.01 and 5 hectares numbered 567,007 (13.2 per cent), with a combined area of 2,240,840 hectares (8.4 per cent). In summary, farms smaller than 5 hectares numbered 3,264,096 (76 per cent) and totaled 5,410,575 hectares (20.4 per cent). By contrast, farms of 25 hectares and more numbered 225,978(9 per cent) and totalled 13,176,758 hectares (49.5 per cent). *Ibid.*, p. 182.
[61] *Ibid.*, p. 183.
[62] *Ibid.*, p. 184.

which 1,232 were in the mainland South, 1,461 in Sicily and Sardinia, and the bulk in Emilia-Romagna (some 2,000), Lombardy (681) and Veneto (719).[63]

Farm employment continued to shrink in the meantime. In 1959 there had been 6,847,000 workers in agriculture (66 per cent male); in 1967 the total was 4,556,000 (70 per cent male). Farm employment had thus fallen by 2,291,000, or 33 per cent, in the space of eight years and was expected to decline to 15 per cent of the labour force.[64] The trend was nationwide, but economic and demographic indicators continued to highlight the existence of backward conditions in the Mezzogiorno. In 1967 agriculture absorbed no less than 44 per cent of the labour force in Abruzzo and Molise and 42 per cent in Puglia, Basilicata and Calabria. The situation appeared somewhat better in Sicily and Sardinia (where the corresponding figure was 32 per cent) and Campania (29 per cent). But considering that agriculture's share in total employment was 8 per cent in Lombardy, 15 per cent in Latium and 17 per cent in Piedmont, Liguria and Valle d'Aosta, the gulf between the average of 18 per cent in the North and Centre, roughly on a par with France, and 36 per cent in the South reflected the macroscopic difference in the state of agriculture in the two parts of Italy.[65]

In April 1970 the number of workers in agriculture was down to 3,755,000, a decrease of 478,000 from a year earlier,[66] mainly offset by expanded employment in services. This lowered agriculture's share in total employment to 19.5 per cent, a level that was still high[67] especially considering the difference between incomes in agriculture and the rest of the economy.

8. The Mansholt Plan and the net product of Italian agriculture

In 1970 the European Economic Community examined a revised version of the Mansholt Plan, designed to make European agriculture more productive and efficient through the abandonment of land unable to compete with more advanced farming. For Italy, as Corrado Barberis observed,[68] implementation of the plan would have meant the abandonment of around 1,100,000 farms totalling more than 4 million hectares. Abandonment was voluntary and obtaining consent involved a variety of incentives, an unwieldy arrangement virtually guaranteeing that it would take decades to carry out the plan.[69] In the meantime the transformation of Italian

[63] *Ibid.*
[64] *Ibid.*, p. 186.
[65] *Ibid.*, pp. 187-88.
[66] E. Badioli, "Agricultural credit in the framework of Italian farming. Development of new forms of association", *Review*, XXV, 1 (January 1971), p. 17. Badioli at the time was chairman of the Central Institute for Rural and Artisans' Banks.
[67] *Ibid.*, p. 18.
[68] C. Barberis, "Men, farms and product in Italian agriculture", *Review*, XXV, 5 (September 1971), pp. 403 *et seq.* Barberis was president of the National Institute of Agrarian Sociology and professor of sociology at the University of Rome.
[69] *Ibid.*, pp. 404-407.

agriculture was proceeding. Both grain and fruit and vegetable production were increasing, although the former's share in gross marketable product was shrinking and the latter's expanding.[70] Both sectors had to reckon with falling prices, however.

In addition, a radical change had been taking place in the finance of farms since the fifties. Overheads and improvement expenses were steadily rising in relation to gross output, forcing the land to provide an increasing quantity of products. If one factors in the deterioration in relative prices for agriculture and the rise in labour costs owing to the exodus of farmworkers, it is plain why net product was stagnating despite the rise in the productivity of agricultural labour relative to that of industrial labour.[71] As to the deterioration in the agricultural trade balance, it was, as we have seen, due mainly to the massive increase in imports of livestock feed and meat. Annual per capita consumption of meat rose from 16 to 35 kilogrammes in the space of 15 years as a result of the improvement in living standards and the migration from the countryside. Italy overtook Britain to become the world's leading importer of fresh meat and livestock. Although Italian agriculture had modernized its crops and production techniques, its costs were high. This forced the government to transfer resources to the benefit not of production as such but of the producers, whose ranks included the poorest among the peasantry, in part the legacy of the 1950 agrarian reform. The transfers involved were by no means insubstantial. In 1969 the state granted benefits amounting to around 1,000 billion lire, or roughly one quarter of the sector's total net product.[72]

In fact, Italian agriculture still counted thousands of small farms whose net product was structurally modest compared with their gross output. Hence the argument that more had to be done to spread the cooperative movement.[73] At the end of 1968, Italy's cooperatives – 4,256 registered and 11,491 in all[74] – covered only some of the sectors in which they could have played an effective role. They were active primarily in agricultural processing, e.g. wine cellars, oil presses and storage facilities, but were underdeveloped in services.[75] Few cooperatives had been formed to enable small farmers to use high performance tractors or harvesters for a wider range of crops, to give them access to expert advice on market trends, seals of quality and purchases of appropriate, non-obsolescent equipment[76] – in a word, to supply extremely useful services that would raise farm productivity and lower crop costs, particularly in view of the possible application of the Mansholt Plan.

[70] *Ibid.*, p. 408.
[71] See G. De Meo, "Produttività e distribuzione del reddito in Italia nel periodo 1961-65", *Annali di statistica*, series VIII, vol. 15, Rome, 1965.
[72] Barberis, "Men, farms and product", pp. 411-12.
[73] Badioli, "Agricultural credit", pp. 18-20.
[74] *Ibid.*, p. 21.
[75] *Ibid.*, pp. 19-21.
[76] *Ibid.*, p. 24.

9. The modernization of agricultural assistance structures and services

The slow pace of farm modernization in Italy became a matter of European concern with EEC Directives 159, 160 and 161, which stressed the importance of modernizing structures and vocational training for agricultural development. The European Economic Community approved the directives in 1972, but it was not until mid-1975 that the Italian parliament incorporated them into national law.

The EEC regarded the delay in enacting the directives in Italy as one of the chief causes of the failure of the Common Agricultural Policy, of the widening gap between agricultural and industrial incomes and of the growing disparities in agricultural incomes from region to region and across agricultural sectors.[77] Addressing the subject in the *Review,* Renzo Franzo, president of the Association of Farm Machinery Users, stressed that that the role of mechanization in the modernization of agriculture had been kept firmly in mind in the postwar recovery plans, and that the figures proved this. In 1952 Italy counted just 97,913 agricultural machines, including 80,907 tractors, 14,120 war surplus vehicles and 2,886 jeeps.[78] In 1975 it had 798,824 tractors, plus 27,267 threshers, 375,264 mechanical reapers, 210,487 rotary hoes, 65,343 motorized agricultural vehicles, 79,005 machines of various kind and 298,555 farm machines.[79] Equally important, this stock of machines was distributed evenly among all the regions,[80] in contrast with 1952, when it had been concentrated primarily in the Po valley. Government subsidies had made this progress possible. A ministerial decree of 1963 had entrusted Franzo's organization with assigning farm machinery users subsidies for fuel purchases. These subsidies were not inconsiderable: in 1974 1,505,367 metric tons of fuel had been purchased at a cost of 125 billion lire to the users; the subsidies amounted to 130 billion lire, a gift to agriculture that speaks for itself.[81]

Mechanization had been spurred not only by the peasantry's flight from the land, but also by the need to lighten the burden of toil on account of "young people's allergy to heavy work". However, the rising cost of agricultural machinery and its manifold utilization were making mechanization less and less compatible with farmers' individualism, obliging them to expand the size of their farms or join together in cooperatives. Farm machinery did not fit with small peasant plots, particularly those born with the agrarian reform of 1950.

[77] R. Franzo, 'Mechanisation: A key factor in the modernisation of Italian agriculture", *Review,* XXIX, 5 (September *1975),* p. 405.

[78] Overall, *72* per cent of these machines were to be found in the countryside along the Po *(13.4* per cent in Piedmont and Val d'Aosta, *18.8* per cent in Lombardy. *18.5* per cent in Veneto and *21.3* per cent in EmiliaRomagna). The remaining *28* per cent were distributed throughout the rest of Italy and totalled *26,998* machines *Ibid.*, p. 407.

[79] *Ibid.*

[80] *Ibid.*

[81] *Ibid.*, p. 410.

Further mechanization, with the adoption of more advanced techniques, would thus have to be preceded by a reduction in the number of farms and by technical assistance tailoring mechanization to each specific activity. In the other countries of the European Community there was no lack of services supplying technical, economic, financial, marketing, administrative and accounting assistance for efficient farm management, whereas Italy was sadly deficient in these. According to Franzo, this shortcoming could be remedied by the new regional governments that had become operative in 1972 alongside those of the older, special-statute regions.[82]

10. Crisis and recovery in the livestock sector

The failure of domestic supply to cover domestic demand for meat has already been mentioned. Although meat supply and demand had been more or less in balance in 1951 and the same had been true of dairy products, by 1973 the steadily widening gap between production and consumption had become quite substantial; only the poultry sector had kept up with the growth in demand. The deficit in trade in meat, amounting to 1,600 billion lire in 1973, was reflected in prices, particularly at the retail level,[83] and constituted a problem of general economic policy.

A variety of factors helped to create and aggravate the problem. Limiting his analysis to beef, veal, mutton and lamb, Carlo Venino, president of the Italian Livestock Breeders Association, noted that the rapid rise in meat consumption, at least up to 1973, had mainly involved beef, veal and chicken, whereas the demand for pork had grown rather slowly until 1970, except for prepared pork. According to Venino, poverty had barred a large part of the population from eating beef, veal and chicken until the postwar years. By contrast, the increase in pork consumption had been a long-run development involving the consumption of fresh pork at slaughtering time and of sausages during the year, an ongoing tradition that underpinned the success of major meat processing and marketing companies.

During the fifties and sixties meat consumption grew even more rapidly than incomes and was insensitive to the rising curve of prices. Annual per capita consumption of meat jumped from 7 kilogrammes in 1951 to more than 26 in 1973. Understandably, satisfying such a sharp increase was beyond the powers of the Italian livestock industry. The situation was different in the poultry sector. Although annual per capita consumption increased from 2.5 kilogrammes in 1951 to 17.3 in 1973, technological advances, the rise in the number of poultry farms and higher productivity enabled the poultry industry to keep up with

[82] *Ibid.*, pp. 411-413.
[83] C. Venino, "Italian livestock farming with reference to the EEC and the rest of the world", *Review*, XXX, 3 (May 1976), pp. 209-10.

demand. In the dairy sector, the demand for milk products grew by 2 per cent a year between 1951 and 1973. So moderate a rate of growth had done little to encourage dairy farmers to expand their herds. Nonetheless, the sector had faced three severe crises (in 1962, 1968 and 1973) even in the absence of any sizable rise in milk production.[84]

Another obstacle to the expansion of stock raising was consumers' preference for veal over beef, which resulted in the slaughter of 1 million calves each year. Finally, prejudices regarding the consumption of fresh pork had held back pig farmers. When these prejudices began to abate, domestic production was unable to keep pace with demand. Pork imports in 1973 amounted to some 200,000 metric tons, further aggravating a sectorial trade deficit already bloated by beef and veal. The national cow herd shrank from 5.8 million head in 1961 to 3.8 million in 1973, with a consequent contraction in the production of calves. The number of non-milk cows, replaced by machines in farm work and destined only for breeding, declined from 1.6 to 0.8 million, while that of milk cows decreased from 3.5 to 3 million owing mainly to lack of preparation.[85]

In the face of growing demand and stimulated by the policies of livestock-exporting countries, Italian stock breeders began to import animals for fattening, thus dealing a blow to domestic production. In the wake of the 1973 oil crisis the livestock-exporting countries found it more profitable to export fully-grown animals. The resulting fall in imports led to wholesale, accelerated slaughtering of the domestic herd and the loss of many breeding animals.

It is important to note that the growth in imports came at a time of expanding world livestock production. Between 1971 and 1974 rising beef and veal prices triggered a large increase in the world population of beef cattle. According to the FAO, the increase amounted to around 25 million head, of which 15 million were in the United States and 7 million in western Europe. In Latin America the herd outstripped the supply of fodder and many animals were slaughtered, driving down prices. The deflationary measures adopted following the first oil shock reinforced this price trend. Although Italy did not implement such measures until 1974, many countries did so even before the end of 1973 and this increased the competitiveness of their meat exports. The demand for meat fell in 1973 in countries that devalued their currencies; in Italy it rose.

With the devaluation of the dollar, the adoption in 1974 of floating exchange rates and, above all, the use of cash settlement, imports became even more competitive at a time when the outbreak of inflation in Italy was causing livestock-raising costs to spiral. Together with the other, longer-term factors adversely affecting the sector, the surge in costs caused "a dramatic crisis" in

[84] *Ibid.*, pp. 210-12.
[85] *Ibid.*, pp. 211-213.

domestic production: in 1973 and 1974 the national herd contracted by 600,000 head.[86]

As to dairy farming, prices rose constantly between 1971 and 1974, after the Community set a limit on milk production in order to head off a butter surplus. This prompted many EEC countries to expand their milk production, which rose by 5 million tons between 1972 and 1974. At the same time, the 1973 oil crisis undercut consumption. The contraction in demand for top-quality Parmesan cheese, which brought about the elimination of 50,000 milk cows in Emilia-Romagna alone in 1974, had knock-on effects throughout the dairy industry. The resulting drop in the dairy herd caused the trade deficit on milk products to grow from 300 billion lire in 1973 to 400 billion in 1974. Disinvestment also hit pig farming, when the drop of pork prices to 400 lire a kilo in the summer of 1974 made farmers give up hope of ever turning a profit. Nor did the depression spare the poultry industry.[87]

The crisis in the livestock sector was thus both general and very severe. Collapse would have been inevitable if the European Economic Community had not intervened in 1974 and 1975 and if the Italian government had not followed suit, albeit on a much smaller scale.[88] The EEC's first move was to suspend imports of cattle and other livestock from non-EEC countries, a step that caused relative prices in those countries to plunge by as much as 40 per cent in 1974. Second, with a view to lifting the market, the governments of the EEC states agreed to buy up 10 per cent of their countries' production; this led to the purchase of almost 500,000 metric tons of meat in 1974, most of it later sold to the Soviet Union. In particular, Italy benefited from the fall of around 37 per cent in the lira's value against the Community unit of account, which discouraged imports and helped livestock breeders to survive. To promote the raising of cows and prevent premature slaughtering, the Community established subsidies for those who bred and raised cows for a period of at least 12 months and extended value-added tax to transactions in livestock.[89]

In the dairy industry, the crisis abated thanks to government purchases of around 20,000 tons of Parmesan cheese and the passage of Law 306 of 8 July 1975, which granted various benefits to dairymen's associations. The period of acute distress was over by the end of 1975 in pig farming as well. The retrenchment of 1974 and the first half of 1975 reduced supply in Italy and throughout Europe. With demand now exceeding supply, prices rose and pig farmers began to expand their operations again. Similarly, production stabilized in the poultry industry in 1975.[90] As a whole, the crisis of 1973 altered the

[86] *Ibid.*, pp. 214-16.
[87] *Ibid.*, pp. 214-17.
[88] *Ibid.*, p. 218.
[89] *Ibid.*, pp. 218-19.
[90] *Ibid.*, pp. 219-20.

pattern of meat consumption to the benefit of pork but confirmed the rigidity of milk consumption. This inflexibility represented a further constraint on the production of cows and thus of meat as well. It is useful to recall that Law 306/1975 also approved a "special project for the intensive production of meat in the South" under the Southern Italy Development Fund.[91]

[91] *Ibid.*, pp. 222-23.