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THE AGRICULTURAL ECONOMY AND TRADE OF SPAIN



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ABSTRACT

Problems and accomplishments of the Spanish agricultural economy in the 1960's are discussed as well as aspects of agricultural policy that influence changes in the agricultural sector. The structure of agricultural production is described. Plans and prospects for attaining goals and solutions to problems are also discussed.

Key words: Spain, Agriculture, Production, Grains, Livestock, Inputs, Irrigation, Trade, Policy, Outlook.

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SUMMARY

The agricultural growth rate in Spain has not kept pace with rapid advances in industry and other sectors of the economy. Agriculture's share of the gross national product declined from one-fourth in 1960 to one-sixth in 1971.

Because farmers have not increased or adjusted output enough to meet rising demand, the cost of living has risen and agricultural imports have increased sharply. Agricultural exports have not risen as rapidly as imports since 1961, resulting in large trade deficits in agricultural products which have adversely affected the balance of payments.

Conditions responsible for agriculture's poor showing are fragmented farms, low capitalization, absentee ownership, poor land utilization, insufficient irrigation, and still inefficient farming techniques. Soil resources in many parts of Spain have been depleted by erosion, irregular precipitation, deforestation, and centuries of outdated cultivation practices. Nearly 40 percent of cultivated area is still devoted to surplus crops of olives and wine, and only 12 percent is irrigated--and not permanently. Efficiency in livestock production has been adversely affected by lack of improved breeds, low-yielding animals, diseases, poor feeding practices, insufficient mechanization, and lack of management.

Despite these handicaps and failure to meet or adjust to rising food demands, Spanish agriculture has advanced in the past decade. More and better inputs, notably machinery and fertilizers, are being used on farms. Irrigation and land consolidation have made significant inroads. Meat production has more than doubled since 1960, and crops such as grains and sugarbeets have increased sharply.

Improvements in agriculture are the result of several factors. Industrial growth has provided an outlet for surplus rural labor. Rising incomes have created a demand and opportunity for greater agricultural production. The Government has set higher support prices and subsidies and granted other incentives to farmers to increase production. Relaxation of controls in both domestic and import markets has permitted expansion of trade. The Government is also sponsoring agricultural production through regional development plans and market improvements.

In addition, Spain's Third Year Plan (1972-75) projects an increase in irrigated area--a key to the country's agricultural progress--of 400,000 hectares. Other reform plans call for achievements in three other areas essential to agricultural success--farm structure, shifts in land utilization, and livestock improvement. The latter area is expected to make significant progress with the support of a \$25-million loan from the International Bank of Reconstruction and Development.

The United States is a significant trading partner of Spain. In 1967-69, U.S. agricultural imports accounted for about one-fourth of Spain's agricultural imports. The United States has also become an important market for Spanish farm products--especially olives, olive oil, wine, and spices--taking \$70 million annually in 1967-69.

THE AGRICULTURAL ECONOMY AND TRADE OF SPAIN

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INTRODUCTION

The remarkable growth of the Spanish economy during the 1960's has been accompanied by fundamental changes in its structure. The share of agriculture in the gross national production (GNP) has been declining, and there has been a large exodus of rural population to meet needs of increasing industrialization. Although Spanish agriculture has advanced significantly in the past decade, farmers have not increased or adjusted output enough to cope with the quick-changing pattern of consumer wants. Many production gains have taken place in already surplus commodities, while output has remained insufficient in others such as beef, dairy products, and animal feed.

The slow adaptation of agriculture to domestic requirements has contributed to higher prices of foodstuffs and large imports of agricultural products. Because agricultural exports have not increased as rapidly as imports, agricultural trade is no longer making positive contribution to the balance of payments. Adaptation of Spain's agricultural production to increasing demand is essential. Progress in making this adjustment depends largely on the success that Spain is able to achieve in four areas of development: Farm structure, shifts in land utilization, livestock improvement, and irrigation.

This report discusses the growth of agricultural economy and trade of Spain in the 1960's (compared with the general economy), perennial problems impeding progress in the four areas of development, and prospects for solving these problems.

GENERAL ECONOMY

In 1970, GNP of Spain, with a population of 35 million, amounted to \$24.6 billion, and the per capita income totaled \$840. The basic unit of currency is the peseta (\$1.00 = 70 pesetas). Predominantly agricultural in the past, the economy of Spain is rapidly becoming industrialized.

The Spanish Civil War (1936-39) and World War II seriously retarded economic development in Spain. It was not until 1955, when Spain became a full member of the United Nations, that a long period of "isolation" came to an end.

In 1959, with the help of substantial overseas credits, the Government began to extensively overhaul the economy. By the end of 1963, economic expansion was well underway, and the following year Spain adopted the first Development Plan (1964-67). This measure was followed by the Second Development Plan (1968-71). Both Plans set economic growth targets and provided investment capital to stimulate the economy. As a result of these measures, as well as large tourist revenues, the economy experienced a decade of strong and rapid expansion.

GNP in real terms rose by an average of more than 7 percent a year during the 1960's. National income per capita more than doubled in the period. Despite trade deficits, Spain's gold and foreign exchange reserves rose to a record \$1.8 billion at the end of 1970.

Rapid economic growth, however, has created some problems. Since the early 1960's, inflationary pressures have prevailed, and prices and wages have risen rapidly. Large imports have been necessary, not only to sustain economic development, but also to complement domestic food production and curb price increases. While exports have steadily increased, imports have increased more rapidly, causing annual trade deficits of over \$2 billion in recent years. The Government devalued the currency in late 1967 following the devaluation of the British pound, and has had to adopt a number of austerity measures to curb rising inflation. Although these measures slowed the rate of rapid economic growth in 1969-71, inflation has persisted.

The economy is expected to return to a pattern of vigorous expansion in 1972 under the stimulus of large public investments, rising personal incomes, and record foreign exchange reserves (\$2.9 billion in September 1971). A further expected stimulus to the economy is the preferential trade agreement that Spain signed with the European Community (EC) in 1970. The Government has drafted the Third Development Plan (1972-75), which sets a target rate of economic growth at 7 percent, compared with the 5.5 percent goal of the Second Plan.

PHYSICAL ENVIRONMENT

Spain, which ranks second to France in area in Western Europe, has a total area of 196,000 square miles, including the Balearic and Canary Islands. The country is about one-fourth greater than the State of California and one-third less than that of Texas. Spain is divided into 50 administrative provinces, 47 of which are peninsular and three, islands. The country is also divided into 14 geographical or provincial administrative divisions (see map).

Spain is bordered on the north by the Bay of Biscay and France, on the east by the Mediterranean Sea, and on the south by the Strait of Gibraltar. Portugal occupies a narrow wedge in the western side of the Iberian Peninsula. The coastline, on both the Atlantic and Mediterranean, totals some 1,500 miles.

About 90 percent of the total area of Spain is classified as agricultural land, with 20.3 million hectares (1 hectare = 2.471 acres) in cultivated area and 26.1 in uncultivated productive land, including 12 million hectares in forest. Three-fourths of the cultivated area--or about 15.5 million hectares--is reported in field crops, and one-fourth in orchards and vineyards. The total

irrigated area is about 2.4 million hectares, representing 12 percent of the cultivated area.

The mountainous terrain of Spain contributes to its poor agricultural resources. The dominating feature of central Spain is the 2,000 feet high, semi-arid plateau, called "Meseta." In some areas, the soil has been seriously damaged by erosion caused by the terrain, irregular precipitation, deforestation, and poor cultivation practices.

The climate over most of Spain is not conducive to agriculture. The climate of the central plateau is extreme; winters are cold and windy while summers are hot and dry. Summers become hotter and drier toward the south and east. Only in the north, along the Atlantic slope, is the climate relatively moderate and moist. Along the Mediterranean coast the climate is subtropical.

The irregularity and scarcity of rainfall over most of the country constitute a major obstacle to agricultural production. With the exception of the humid zone of the north and the Pyrenees mountain ranges, rainfall averages only 18 inches a year. Little rain falls on much of the central plateau and southern Spain and is badly distributed throughout the year. Rainfall in many areas is markedly seasonal, being virtually confined to September-March. Water in these areas is scarce during the hot summer months. Because of inadequate rainfall, about 5 million hectares of cropland lie fallow every year.

Except in the northern provinces, pastures for livestock are scarce and of limited duration. In the mountain ranges, the harshness of winter delays grazing until late spring, while limited rainfall in the summer in other parts of Spain restricts grazing to spring. Soils in the many parts of the grazing lands are poor or of medium fertility.

AGRICULTURE IN THE ECONOMY

Agriculture continues to be a major sector in the Spanish economy, although its relative importance has been declining--its share in GNP decreased from 27 to 16 percent in 1960-70. Such economic sectors as industry, services, and transportation have experienced much higher growth rates than agriculture. Real growth in the industrial sector since 1960 has averaged more than 10 percent per year, while the average growth rate in agriculture was about 3.5 percent. Between 1960 and 1970, the industrial share in GNP increased from 24 to 37 percent, with its rate of increase in GNP being double that of the agricultural output.

Both the absolute number of people engaged in agriculture and share of agricultural labor in the total labor force have declined rapidly in recent years. While the total labor force in Spain rose from 11.5 million in 1960 to nearly 13 million in 1970, the agricultural labor force (including forestry and fishing) decreased in this same period from 4.6 to 3.3 million. Thus, the share of agricultural labor in the total labor force dropped in 1960-70 from 40 to about 25 percent. Higher wages in other economic sectors caused large migration of rural labor to cities. Emigration also contributed to the exodus of rural labor during the 1960's. More than 200,000 people a year are estimated to have left rural areas in the sixties.

Despite the declining share of agricultural trade in total trade, trade in farm products continues to have a major role in total trade. Between 1961 and 1969, agricultural exports increased by 55 percent, but in the same period exports of nonagricultural products rose more than three-fold. As a result, the share of agricultural exports in total exports decreased from 54 to 31 percent in 1961-69. During this period, the value of all imports nearly tripled, while agricultural imports rose by slightly more than 150 percent. Consequently, the relative share of agricultural imports in total imports dropped from 30 percent in 1961 to 20 percent in 1969.

The food processing industry contributes significantly to the GNP and exports; in 1968, it contributed \$1.27 billion to the gross value of industrial products--equivalent to 5 percent of the GNP. In the same year, exports of processed food products amounted to \$10 million, representing 10 percent of all Spain's exports.

Farmers' purchases from other sectors are also very important. The Second Plan shows annual, short-term purchases--such as seeds, fertilizers, fuel, feed, and insecticides--at more than \$1 billion in 1967. In the same year, farmers' operational expenses on mechanization amounted to \$75 million. To these amounts should be added farmers' annual purchases of agricultural machinery, estimated at about \$140 million.

AGRICULTURAL PRODUCTION

Spain's agricultural production has experienced more rapid growth since 1960, averaging an increase of about 3.5 percent per year. Much of this increase can be attributed to the livestock sector, particularly to large increases in poultry, meat, eggs, and pork.

Prior to the 1960's, agricultural production was restricted by such factors as low capital investments, poor farm structure, lack of effective demand, and inadequate agricultural policy. Output rose by an average of about 2 percent a year.

Agriculture has acquired new strength and dynamism because of important economic and agricultural policy changes during the past decade. In 1959, Spain adopted the Stabilization Plan which stimulated economic growth. This growth has been accompanied by a sharp increase in demand for food, particularly livestock products. Because of a large exodus of rural labor and resultant higher wages, farmers have introduced labor-saving production methods. Also, the Government has been promoting agricultural development. Since 1960, Spain has abolished many internal controls on marketing and permitted large imports of animal feed to aid livestock development. Other significant Government policy changes are discussed in the section on agricultural policy.

Agricultural production in Spain varies widely among regions. Forty percent of the wheat crop is grown in the Province of Castille, while one-third of the corn crop comes from the Province of Galicia. Half the olive trees are located in the Province of Andalusia, accounting for about a third of its farmed area. Fruit orchards grow mainly on the Mediterranean coast of Levante; about

two-thirds of cotton is produced in Andalusia. Sugarbeets are largely grown in the Ebro and Duero valleys, while sugarcane is grown in Malaga. Half of the pigs and dairy cattle and one-fifth of the hogs are raised in northwestern Spain--mainly in the Province of Galicia. Half of the sheep are raised in the central plateau, and the bulk of poultry is produced in the Provinces of Catalonia and Old Castille.

Crops

Crops account for nearly 60 percent of the value of agricultural production. Because of inadequate rainfall, most production consists of dryland crops such as wheat, barley, olives, wine, and pulses. However, a large proportion of fruits and vegetables, sugarbeets, cotton, and rice is produced in the major river valleys of Ebro, Duero, and Guadalquivir.

Crop production increased only slightly between 1950 and the early 1960's. More recently, due to more and better inputs and agricultural policy changes as well as generally favorable weather (until 1970), crop production has significantly improved. Since 1964, it has increased an average of 3 percent annually--led by grains, citrus, and other fruits and vegetables. Grains comprise about one-sixth of the gross agricultural products (GAP) in Spain and about half the area in field crops. Wheat, barley, and corn are the major grains produced.

Grain production increased slowly between 1950 and 1964 (see table 1 at end of report), averaging 7.7 million tons ^{1/} in 1950-54 and 8.4 million by 1964--an increase of slightly less than one-tenth. During 1965-69, grain production rose more rapidly, totaling a record of nearly 12 million tons in 1969 (about 40 percent greater than the average in 1960-64). In 1970, however, unfavorable weather caused grain production to decline to slightly more than 10 million tons.

Recent grain production increases are attributable mainly to higher yields rather than to an expansion in area. Grain area of 7.4 million hectares in 1969 was slightly higher than the average in 1960-64, but below the 1950-54 average. Grain yields during 1965-69 were about one-fourth above those in 1960-64. Both area and yields declined slightly, however, in 1970.

More favorable weather, the use of more and better inputs, and increased irrigation are responsible for the sharp increase in grain yields in 1965-69. In 1969, total irrigated grain area approached 750,000 hectares, 100 percent one-third above the average in 1960-64. However, total irrigated grain area still represents only about one-tenth of total grain area.

Wheat.--Spain's most important grain crop is wheat. Until 1969, well over half the grain area was sown to wheat. In recent years, this average has represented more than half of the irrigated grain area.

Wheat area deviated little from 4 million hectares between 1950 and the 1960's as a result of Government policies of self-sufficiency. In recent years, however, wheat area has significantly trended downward, decreasing to less than 3.7 million hectares since 1969 as Government policy shifted to elimination of surplus production. Weather conditions greatly influence wheat yields.

^{1/} Unless otherwise noted, tons refer to metric tons (1 metric ton = 2,204.6 pounds).

causing it to fluctuate widely. Wheat production rose to a record 5.7 million tons in 1967, but has steadily declined since then, dropping to 4 million tons in 1970. However, production rose to over 5 million tons in 1971.

Erratic weather conditions in Spain also account for the wide variance in wheat yields. On the average, wheat yields made scant progress up to 1965--averaging 9.9 quintals per hectare (1 quintal = 100 kilograms or 220.5 pounds). During 1965-68, wheat yields trended upward, rising to 13.4 quintals per hectare in 1968. They declined, however, in the following 2 years because of unfavorable weather, but set a new high of 14 quintals in 1971.

Wheat was in large surplus during the latter part of the 1960's. Although large quantities of wheat were subsidized for feed or exports, stocks rose rapidly to a record high of 2 million tons in later 1968. However, the drop in area sown to wheat, along with lower yields in both 1969 and 1970, adjusted wheat production close to the level of domestic requirements.

The wheat surplus problem, however, could reappear. The 1971 wheat area was 3.6 million hectares, slightly above the goal in the Second Plan, but wheat production totaled 5.1 million tons. This output is more than one-third above the goal established in the Plan for 1971, and substantially above the present requirements. If Spain is to avoid surplus wheat, a large decrease in wheat area is apparently needed.

Feed Grains.--Feed grain production steadily increased until 1970, when unfavorable weather reduced production significantly (see table 1). Between 1950-54 and 1960-64, feed grain production rose slowly from an average of 3.0 to 3.5 million tons. This increase took place despite a 4-percent decline in feed grain area. In 1966, feed grain production began to rise rapidly and totaled 6.3 million tons by 1969--an increase of 80 percent compared with the average in 1960-64. More recent data show total feed grain production at 7.2 million tons in 1971.

Recent increases in feed grain production have been the result of both more area sown and higher yields. Feed grain area, at 3.3 million hectares in 1970, was one-third above the average in 1960-64 and represented close to half the total grain area, compared with about one-third in 1960-64. The averages in feed grain yields rose about one-fifth between 1960-64 and 1965-69. Favorable weather aided feed grain yields, but higher yields are also attributable to a 50-percent increase in irrigated land in the 1960's.

Despite these sharp increases in feed grain production, Spain still has to rely on imports to meet domestic requirements. Imports of feed grains rose from an average of 1.1 million tons in 1960-64 to a record high of 3.4 million tons in 1966, declining to an average 2.3 million tons during 1967-69 and 2.2 million in 1970.

Barley.--Barley is the second most important grain produced in Spain. Both area and production of barley decreased between 1950-54 and 1960-64 because of Government policy of stressing wheat production. In recent years, with the reversal of this policy, barley production has increased rapidly. In 1969, it

accounted for a third of total grain production and occupied more than one-fourth of the area sown to grains (table 1).

Barley production set a record of nearly 4 million tons in 1969, more than twice the average in 1960-64, while barley area expanded by about $\frac{1}{2}$ million to over 2 million hectares. In 1971, barley production rose to a new record high of 4.4 million tons. Average barley yields during 1965-69 were more than one-fourth higher than the 1960-64 average. Barley output is now being stimulated by relatively high support prices and increasing domestic demand for feed grains. Today, barley utilization is approaching 4 million tons, compared with an average of 2.2 million in 1960-64.

Spain has been a traditional importer of barley. Barley imports averaged close to 400,000 tons in 1960-64 and 600,000 tons in 1965-66. Barley imports have become negligible since 1967 because of increased domestic production. Spain will probably continue to be self-sufficient in barley, except in years of very poor weather, with much smaller increases in production being absorbed by increasing consumption.

Corn.--Until recently, corn has not been an important crop in Spain. The area planted to corn until 1968 was lower than that in oats, and it was less than one-third of the barley area. In 1967, corn accounted for only 11 percent of total grain production and took only 7 percent of the total grain area.

However, both corn area and production have been increasing rapidly. Between 1950-54 and 1960-64, corn production nearly doubled while the planted area increased by a third. Corn production set a record 1.9 million tons in 1970 and 2.0 million in 1971, nearly three-fourths above the average in 1960-64, while corn area increased by about one-fourth (600,000 hectares in 1971). As a result, corn has become an important crop, representing nearly one-fifth of total grain production and one-third of feed grain production in 1970.

Corn yields have also increased sharply. During 1967-70, corn yields averaged 30 quintals per hectare, or one-fourth above the average in 1960-64. Much of the increase is due to the use of improved seeds and more use of irrigation. About 60 percent of Spain's corn area is now irrigated, or about twice the amount of the 1960's. Hybrid seed corn now covers more than half the corn area, compared with less than one-tenth at the beginning of the sixties.

Spain's rapid increase in corn production has been accompanied by significant increases in utilization. Corn utilization in 1970 exceeded 3 million tons, compared with a 2-million ton average in 1960-64.

Spain has been a large importer of corn since the late 1950's but has self-provided one-third to one-half of requirements. Corn imports in the 1960-64 period averaged 2.4 million tons, compared with 720,000 tons in 1950-54. Corn imports rose to a record 3.3 million tons in 1967, but have decreased to about 2.2 million tons since then. Since 1967, corn utilization has increased slightly owing to a rise in demand for medium and coarse milo and sorghum and to surplus wheat for feed.

Although the Government hopes to sustain the rapid increase in corn production through higher support prices and subsidies, Spain is not expected to become self-sufficient in corn in the near future. Most of the increase in corn production will probably have to come from greater use of irrigated land and hybrid seed. In the past decade, both corn area and production on dry land have actually declined--a trend expected to continue. Except in the Province of Galicia and in other northern provinces, limited precipitation over most of Spain makes irrigation necessary for efficient corn production. The use of irrigated land for corn, however, competes with such other crops as fruit and vegetables and sugarbeets--considered more profitable by farmers. Meanwhile, corn utilization is expected to continue to increase rapidly, particularly if Spain tries to attain greater self-sufficiency in livestock products.

Other Grains.--Other grains grown in Spain are oats, sorghum, and millet--used entirely for feed--and rye which is used primarily as a bread grain. Because of higher yields, oats production has trended upward, but both rye area and production have been declining in recent years. Except for sorghum, production of these grains has met domestic requirements.

Spain produces about 375,000 tons of rice a year. Rice is grown on irrigated land in the Provinces of Valencia, Catalonia, and Andalusia. The area planted to rice in recent years has not deviated much from 60,000 hectares, despite the Government's policy of reducing rice production. The Government set this policy to lessen the heavy financial burden (in the form of export subsidies) caused by one-fourth of the rice crop exceeding domestic requirements. Substantial quantities of rice are also believed to be used for animal feeding.

Other crops.^{2/}--Spain is a large producer of pulses. About 800,000 hectares a year are planted with pulses, including about 400,000 hectares in feed pulses. Production of edible pulses has been trending downward and now totals about 350,000 tons a year. Despite the declining trend in per capita consumption of edible pulses, Spain continues to be a net importer of pulses. Since 1967, about 25,000-50,000 tons of pulses have been imported a year, while smaller quantities--between 11,000 and 17,000 tons--were exported.

Production of sugarbeets has been expanding rapidly. In 1970, the area in sugarbeets totaled 215,000 hectares, nearly 50 percent more than the average in 1960-64. Sugarbeet production set a record of 5.4 million tons, more than one-half above the average in 1960-64. Refined sugar production now approaches 850,000 tons, but is still short of domestic requirements.

Before 1950, cotton was a minor crop, providing only a very small part of domestic requirements. Because of high-support prices and other Government assistance, cotton production increased rapidly up to the mid-1960's. However, much of the production was short staple or low-quality cotton, causing serious surplus problems. Revision of Government regulations and price supports in the past 2-3 years has made cotton cultivation less profitable, resulting in a rapid decline of both cotton area and production. Spain is and probably will continue to be a large importer of cotton.

^{2/} See table 1 for breakdown of figures for other crops.

Fruit and vegetable production is very important to Spanish agriculture, accounting for more than one-third of the value of agricultural production.

Spain's citrus fruit production now ranks second only to the United States--totaling slightly more than 2 million tons, about one-fourth greater than the 1960-64 average. Some increase in area and better cultivation practices are responsible for the higher citrus production in recent years. In 1970, Spain's citrus area totaled 175,000 hectares, all irrigated, of which 50 percent was in full production and 27 percent semiproductive. Orange trees take up 85 percent of all citrus area. Spain is also a significant producer of apple, pear, and peaches, and produces about 200,000 tons of walnuts and almonds a year.

Foreign demands consume more than half of Spain's citrus production. Foreign competition with Spanish citrus, however, is becoming more intense because other Mediterranean countries have increased their production of these fruits.

Vegetables are grown in large quantities--the main ones being tomatoes, cabbage, peppers, onions, and string beans. Two distinct types of vegetables are produced in Spain: Those grown in irrigated field areas--mainly for export--and those grown in "truck gardens" near the cities for domestic consumption.

Spain is a significant producer of potatoes (close to 5 million tons in 1970), with production rising almost continuously the last 20 years. Although the cultivated area has also increased slightly, it remained almost unchanged during the 1960's at roughly 400,000 hectares. Spain has been more than self-sufficient in potatoes, feeding large quantities domestically, and exporting great amounts of early potatoes to European markets.

Spain is the world's leading producer and exporter of olive oil and by far the leading producer and exporter of table olives. Olive oil is the traditional vegetable oil of the Spanish people, but consumption of seed oils is growing steadily, threatening the number one position of olive oil. Although Spain exports about one-fourth of the olive oil crop, carryover stocks have occasionally been a serious concern to producers. Rising costs of production and lower priced seed oils are adversely affecting the olive oil market.

Spain is among the leading producers and exporters of wine. The country produces about 20-30 million hectoliters of wine a year, depending on the weather, and exports about one-fifth of its production. Vineyard area has been declining, but yields have increased because of improved cultivation practices and better disease control. Spanish total consumption of wine has been stable since demand, resulting from population increases, is being offset by a decline in per capita consumption. Beer and soft drinks, however, are critical rivals in the wine market.

Tobacco is cultivated in several regions of Spain, but the Province of Caceres in the Extremadura region accounts for about half of total production. Because its tobacco production has fluctuated, generally decreasing in recent years, Spain has had to import about half of its requirements. Tobacco cultivation has been hindered by recurring effects of both good and bad weather. Hence, Spain's self-sufficiency in tobacco is not steady, fluctuating with rising labor costs. The National Tobacco Growing Agency regulates demand and production of tobacco.

Livestock

Livestock, the most dynamic sector of Spanish agriculture, is growing in importance. Since 1965, livestock production has increased an average of 8 percent per year. This increase is primarily attributable to rapid growth in poultry and pork production. In 1969, production of animal products accounted for about 40 percent of the value of agricultural output, compared with 33 percent a decade earlier.

Red meat production has almost doubled since 1960, totaling 910,000 tons in 1970 (table 2). Pork comprised 52 percent of this total, followed by beef and veal (30 percent), and mutton, lamb, and goat meat (16 percent).

Beef and veal production, which has been increasing at an average annual rate of more than 5 percent since 1960, reached 275,000 tons in 1970. Both increases in slaughterings and heavier weight animals accounted for this increase. In 1970, the number of cattle slaughtered totaled 1.0 million head, about one-third higher than in 1960. The average carcass weight was up about one-fifth in the same period. Reasons for increased slaughter weights are better feeding and the Government policy of paying higher subsidies to producers for cattle marketed at heavier weights.

Despite large increases in cattle slaughterings, cattle numbers have moved upward, totaling 4.4 million head in 1970--one-fifth more than in 1960 (table 3). Although there has been a movement toward more specialized breeds, most Spanish cattle are still dual purpose (milk and meat). Herds consist of a variety of breeds that are being improved by imported breeding cattle and artificial insemination. About half of Spain's cattle are located in the northern provinces (Galicia, Asturias, and Basques) where climate conditions are favorable for cattle raising. The small farm size in the region, however, limits farm modernization. Production techniques are generally inadequate and labor intense. Grassland farming is not possible under the present land-holding structure.

Spain has become a large importer of beef and veal in recent years, and probably will continue this trend in the near future. Production increases in beef and veal will continue to be offset by rising consumption. Although current production of beef and veal exceeds the Plan's goal for 1971, Spain's imports of beef and veal in 1971 are estimated at 75,000 tons--about equal to one-fourth of requirements.

Pork production rose from 271,000 tons in 1960 to 475,000 tons in 1970, an average annual increase of nearly 8 percent. Most of the increase in production occurred in the last 5 years. The increase in pork production is attributable to the greater number of hog slaughterings, which totaled 7 million head in 1970--more than twice the 1960 level.

Despite the sharp rise in hogs slaughtered, hog numbers have been increasing in recent years--except in 1964 and 1965. In these two years, they suffered a sharp decline due to African swine fever. Hog numbers totaled 6.4 million head in 1970 (table 2). The Government expansion program and fewer outbreaks of African swine fever are responsible for the increase in hog numbers and pork production in recent years.

Spain has been both an importer and exporter of pork. Although consumption of pork is expected to rise considerably above current levels at 2.7 kg per person, expansion in pork production is expected to accommodate such increases in requirements. Pork production will continue to expand as the raising continues to shift from small, family farms to commercial farms.

Mutton, lamb, and goat meat totaled 143,000 tons in 1970, about 8 percent above 1960 totals. This rise is due mainly to increased requirements, which in part explains the sharp decline in sheep numbers in the 1960's (table 2). The relative importance of mutton, lamb, and goat meat declined to 10 percent of total red meat in 1970, compared with 22 percent in 1960. Spain has been self-sufficient in mutton and lamb, although occasionally some animals are imported for slaughter and breeding--a practice expected to continue. Commercial sheep raising is expected to increase meat production to meet greater requirements resulting from population expansion.

Poultry meat production has increased nearly 23 times since 1960, reaching 300,000 tons in 1970. The percentage of poultry meat in total meat production rose from 3 in 1960 to 25 in 1970. Poultry consumption has also risen sharply and now totals about 9 kilograms per person. Rapid developments in the poultry industry have made it possible for production to keep pace with demand. Spain has several large-scale, commercial poultry production units in operation.

Egg production has also been increasing rapidly, although at a slower pace than that of poultry meat. Production of eggs approached 300,000 tons in 1970, nearly twice the 1959 level.

Spain's dairy situation basically parallels that of beef and pork. Significant increases in milk production have failed to meet domestic requirements, necessitating the import of large quantities of dairy products. Production of cow's milk, excluding milk fed, rose from 2.1 million tons in 1960 to 3.7 million in 1969, but declined slightly in 1970 because of unfavorable weather. The sharp expansion in cow's milk production was the result of significant increases in dairy cattle, as indicated in table 3, and higher yields resulting from better feeding and health care. Despite the decline in relative importance of sheep and goat milk, production in 1969 still exceeded 400,000 tons. Both sheep and goat milk continue to be widely used in the production of cheeses which are highly regarded by Spanish consumers.

INPUTS

Labor

Labor, always a significant input in any segment of the economy, has greatly influenced agricultural production in Spain. Until recently, Spain traditionally had surplus labor, especially in the agricultural sector. Today, this situation is rapidly changing with the migration of agricultural workers to cities and other European countries where expanded industrialization has created better-paying jobs. Family workers have accounted for the bulk of this migration, as indicated in the following breakdown of gainfully employed farm labor in 1960 and 1969 by employment status:

	1960 (Census)	1969
	- - - <u>1,000 persons</u> - - -	
Employers	241	211
Self-employed and family workers	2,390	1,445
Hired workers	1,078	1,644

Mechanization and Improved Farming Technology

Despite the drop in rural labor, farm labor productivity has risen significantly in recent years owing to increased mechanization and other improvements in farming technology. Previously, mechanization was confined only to prosperous and large farms. The exodus of rural labor, however, has forced many small farms to mechanize or cease production. To encourage further mechanization, the Government has been granting subsidies, tax remissions, and favorable credit rates for the purchase of machinery.

Tillage, sowing, and fertilizer operations are being increasingly mechanized. Cultivators, rollers, and spreaders are also in common use. At present, there is about one tractor for every 10 farms. In 1969, there were upwards of 250,000 wheel and crawler tractors on farms, a three-fold increase over 1960. The number of self-propelled grain harvesters is increasing by about 4,500 a year. In 1969, they totaled 30,000, or six times more than that in 1960. The number of mechanically drawn plows has been increasing by about 20,000 a year.

Fertilizers and Pesticides

Fertilizer utilization also experienced a sharp upward trend--partly the result of Government programs providing low-cost fertilizers for certain crops. Between 1960 and 1969, Spain's total use of fertilizers doubled to 1.3 million tons of plant nutrient--broken down (in thousand tons) as follows: nitrogen--591; phosphate--491; and potash--202. Since 1960, the use of nitrogen has increased 70 percent, while the use of phosphate and potash has risen 10 and 72 percent, respectively. The average fertilizer use is 60 kilograms of plant nutrients per hectare of cultivated area, compared with 75 kilograms in Italy and 200 in France.

The use of pesticides has also greatly increased. Plant and pest control in 1969 extended over 3 million hectares, compared with less than 1 million hectares in 1960. The Government pays subsidies and makes advances for the purchase of pesticides and pesticide equipment. The Ministry of Agriculture frequently sponsors collective treatment against pests.

Irrigation

Irrigation has a key role in Spanish agriculture. An IBERDROLA study³ estimates that between 40 and 45 percent of the gross value of crop production in Spain is obtained on irrigated land. Irrigation services encourage cultivation of greater, good quality, high value crops (such as fruit and vegetables) for export. Irrigated areas produce all the citrus and rice; most of the corn, kidney beans, sugarcane, and sugarbeets; and about half the potatoes and cotton. In some years, as much as one-fifth of the wheat is produced on irrigated land. In addition to producing higher yields, irrigation permits the cultivation of more than one crop a year in some areas of Spain. Irrigation also mitigates fluctuations in agricultural production.

During the past decade, nearly 600,000 hectares were brought under new irrigation, and about 400,000 hectares experienced improvements in irrigation. The total irrigated area rose to 2.4 million hectares by the end of 1977. Of this, about 1.8 million hectares are now in field crops, an increase of about 30 percent above the 1960 level.

FARM STRUCTURE

Farm structure in Spain has hindered progress in agricultural productivity. The distribution of the land is very unequal, with farms ranging in size from "latifundios" (large landholdings) to "minifundios" (small landholdings). Two-thirds of the 3 million farms in the last (1962) census were less than 1 hectare in size. This proportion covered a total area of 2.9 million hectares, or 7 percent of total agricultural area. At the other extreme, 1 percent of the total number of farms had 49 percent of all the land in farms.

The problem of fragmentation, especially with small farms, exacerbates the situation. It often hinders mechanization, diminishes productivity through time lost in moving from one plot to another, entails the loss of land (for enclosures), and hampers improvement plans. Table 1 shows that fragmentation is particularly acute in central and northwest Spain. Compared with a national average of 1.1 hectares per plot and 14 plots per farm, the 1962 census showed an average plot in Galicia and Leon to be less than 1 hectare; in Old Castile and Leon, farms averaged more than 30 plots. Fragmentation is less serious in Andalusia where the average number of plots per farm does not exceed four. The area of the plots averages less than 4 hectares in eastern Andalusia and about 10 in western Andalusia.

According to the 1962 census, the principal farming systems were distributed over the total agricultural area as follows: owner occupancy, 68 percent; tenancy, 12 percent; share farming, 7 percent; and other, 13 percent. The system of share farming is especially widespread in the provinces of the Mediterranean coast and in Extremadura, mainly among the middle-sized farms.

³/ International Bank for Reconstruction and Development and the Food and Agriculture Organization of the United Nations. See Selected References.

The Government has been promoting land settlement and consolidation for many years. The National Colonization Institute, established in 1939, has the primary responsibility for land settlement. At the end of 1965, about 50,000 families were settled on land acquired by the Institute.

Spain's land consolidation program began in 1953 with creation of the Land Consolidation Service. About 2.5 million hectares were consolidated by the end of the 1960's.

A new farm organization has also begun operations in Spain. It arranges for joint farming of land belonging to a number of farmers. These so-called production groups have spread rapidly and now number 1,500--about 50,000 members. Joint farming has permitted greater mechanization and more efficient management.

AGRICULTURAL POLICY

Spain's agricultural policy in the past had two main objectives: Attain maximum production of basic food crops such as grains, and increase self-sufficiency in industrial crops such as cotton, sugarbeets, and tobacco. The Government developed a system of price supports and subsidy payments to encourage production of certain crops and to protect farmers against large price changes caused by fluctuations in the Spanish agricultural production. Special attention was focused on wheat and industrial crops by the implementation of price and marketing measures.

More recently, in both the First Development Plan (1964-67) and the Second Development Plan (1968-71), other objectives have been stressed. The First Plan endeavored to prevent sharp increases in prices of agricultural products and to improve the market distribution. The Second Plan identified the need to adjust agricultural production to existing markets so as to minimize surplus and deficits in agricultural products. Priority has been given to the development of stock farming. Also, whereas the previous income objective was an "adequate" income for every farming family, the aim today is "parity" income with nonfarm families.

The Government has gradually shifted price supports and subsidy payments to induce farmers to change production patterns. The current goal of price supports is to gear agricultural production to existing domestic and foreign markets. This goal is based on the premise that these adjustments plus higher farm productivity can best succeed in permanently raising farmer incomes.

As a result of large imports of livestock products and animal feed in recent years, agricultural policy now seems directed toward grains and livestock raising. In addition, the Government has been trying to cope with overall market improvements and increases in agricultural productivity.

Grain Policy

The Government's grain policy has been influential in the structure of grain production. The National Wheat Service was created in 1937 to regulate

production, distribution, purchase, and prices of wheat. The Service has been buying the entire national wheat crop at prices fixed prior to the start of the farm season. Until 1963, farmers had to allocate part of their cultivated land to wheat production. Other methods of promoting wheat cultivation included direct subsidies, favorable credit rates, and technical assistance to wheat growers. Although the Service also fixes minimum guarantee prices for other grains, these tended to be very low in comparison with wheat. As a result of this policy, wheat acreage has remained relatively stable while the area for other grains has decreased slightly.

Since 1965, the Government has initiated a policy of bringing wheat production down to normal domestic requirements to avoid surplus and increasing production of feed grains to reduce mounting import costs. Each year the Government has raised support prices of feed grains while maintaining stable support prices for wheat. Also, the Government has decreased or eliminated certain subsidies paid for wheat production while introducing generous subsidies for the production of feed grains. The result has been a sharp upward trend in feed grain production and a downward trend in wheat production since 1965.

Livestock Policy

Most of the policy measures dealing with livestock raising began about 1964. The strong upsurge in demand for livestock products since 1960 has caused the Government to introduce several measures for livestock expansion. Since 1964, the Government has maintained a system of price supports for livestock products. These prices have been raised several times. In 1964, the Government also adopted a "concerted action" program, in which the leading livestock raisers were grouped together and provided with low interest credit to increase livestock numbers and productivity. The Supply and Transport Board (Comisaria de Transportes y Abastecimientos--CAT) administers subsidies and regulates the foreign import market on animal and animal products. Other Government programs to upgrade livestock include imports of selected breeding animals, breeding and animal health services, and low interest loans and other financial assistance to livestock raisers.

Other Agricultural Policy

Agricultural policy in Spain has also given special emphasis to the improvement of the marketing system. The production and marketing of such commodities as wheat, sugarbeets, cotton, and tobacco are closely regulated, whereas other products such as feed grains, rice, olive oil, pork, and beef are subject only to minimum price supports. In some cases, direct action is taken by Government agencies such as the National Wheat Service; in others, intervention takes place through growers' associations (rice and olive oil) or State controlled companies (cotton and tobacco).

In recent years, the Government has been sponsoring marketing cooperatives--such as Cooperativa Espanola de Productos del Campo (CEPC)--which promote livestock production and better marketing practices of their products. In 1967, the Government established the Fund for the Organization and Regulation of Food Products and Prices (Fondo de Ordenación y Regulación de Productos y Precios

Agrarios--FORPPA) to coordinate production and marketing of farm products. As noted earlier, CAT supervises trade in farm products. In 1970, MERCORSA (Empresa Nacional de Mercados de Origen de Productos Agrarios, S.A.) was set up to improve marketing in the major agricultural areas.

Agricultural policy has also been sponsoring better farming techniques and more agricultural education facilities to increase productivity. The Extension Service, established in 1956, has been rapidly expanding the number of offices (or centers) as well as the services available to farmers. In 1970, an estimated 685 agencies were serving 1.6 million farmers. These centers have had an important role in improving the efficiency of farming operations by providing technical assistance and other services to farmers.

The Government has also adopted several other programs to improve agricultural productivity--one of the most important is irrigation development. Plans to improve the economic situation in depressed agricultural areas generally include expansion of irrigation facilities. By far the largest development plans are those for the Provinces of Padajoz and Jaen in southern Spain. In addition to irrigation, these plans include land-resettlement programs, reforestation, road construction, and the establishment of factories to provide nonfarm employment. The Government also has been encouraging land consolidation and the formation of joint cultivation groups. To make the large estates viable units, laws have been passed recently providing for improvement of large farms which have been cultivated inadequately by former tenants.

FOOD CONSUMPTION

Consumption of agricultural products, notably foodstuffs, accounts for a large share of consumer expenditures but appears to be trending downward. The food bill today accounts for slightly less than 40 percent of total consumer spending--a sharp decline from the 54 percent level in the late 1950's. For comparison, using 1969 as a base, Spanish outlays for food at 40 percent still exceed the level in the United States (17 percent) and in the EC countries (26 percent).

The rising general food level in Spain is leveling off at about 3,000 daily calories, and is now comparable with that of other European countries. This rise has been accompanied by different trends in the consumption of individual products. While consumption of wheat, potatoes, and pulses has dropped, that of sugar, meat, eggs, and milk has risen rapidly. During the 1960's, meat consumption almost doubled, especially poultry, beef, and--to a lesser extent--pork. For a number of commodities such as vegetables and citrus, consumption has not changed much. Beer consumption has risen sharply, while consumption of wine is on the decline (see table 5).

AGRICULTURAL TRADE

Spain is a significant and growing importer and exporter of agricultural products. Imports of agricultural products amounted to a record \$85 million in 1969--a 150-percent increase over the 1961 level. They represent one-fifth of the country's total merchandise imports. Spain's farm exports in 1969

totalled \$583 million, slightly below the record in 1967 but more than 30 percent greater than in 1961. Farm exports represented slightly less than one third of all Spain's exports in 1969 (table 6).

Spain's agricultural trade has significantly changed since 1961. The country's trade balance (customs basis) in agricultural products shifted from about \$50 million surplus in 1961 to an average deficit of about \$100 million during 1962-68, and rose to a record deficit of \$273 million in 1969.

The composition of Spanish imports has also changed considerably. Wheat, cotton, and vegetable oils were very important import products in the early 1960's, but have decreased sharply in recent years owing to increases in domestic production. The present major imports are feed grains (mainly corn), oilseeds (primarily soybeans), meat and meat preparations, and tropical products such as coffee and tea. Agricultural imports of tobacco, cotton, agricultural fertilizers and oils, and feed concentrates continue to be important. Since 1967, Spain has also become a large importer of hides and skins (table 6).

Spain's agricultural exports have undergone smaller changes. Fruit (mainly citrus) and vegetables (including processed products) continue to account for most of Spanish agricultural exports, while wine and olive oil remain the other two major agricultural exports. In the late 1960's, however, wheat and rice became significant exports, totaling about \$53 million a year during 1967-69.

Spain's agricultural trade has been greatly influenced by developments in the domestic production of grains and livestock products. Poor wheat crops in 1960 and 1961 necessitated large imports of wheat. Large wheat crops in recent years have resulted in exportable stocks, although the wheat price in Spain is very much higher than the world price. Because of fairly good rice crops in recent years, Spain has succeeded in exporting large quantities of rice--about 100,000 tons a year in both 1967 and 1968, almost double the 1961 volume.

Significant gains in Spain's livestock sector have resulted in a sharp increase in demand for feed grains and other animal feed--greater than domestic production could provide. As a result, Spain's imports of feed grains rose to a record \$222 million in 1966, a nearly five-fold increase over 1961. Owing to a sharp increase in feed grain production since 1967, Spain's imports of feed grains decreased rapidly to about \$143 million in both 1968 and 1969.

Spain has also been relying on imports of oilseeds, mainly soybeans, and protein cakes and meals to meet livestock demand for mixed feeds. Actual mixed feed output is estimated at 4.5 million tons. Ten years ago production was less than 1 million tons. As a result, imports of oilseeds rose from \$3 million in 1961 to \$131 million in 1969. Although domestic crushing of oilseeds has greatly increased the supplies of protein cakes and meals, imports of animal feed (mainly feed concentrates) also increased rapidly--\$9 million in 1961 to \$45 million in 1969.

The expansion of livestock production has not met much shorter increases in demand. Spain has been importing \$78 to \$90 million worth of meat (primarily beef) and \$20 to \$25 million in dairy products in recent years.

About three-fourths of Spain's agricultural exports now go to Western Europe, compared with less than half in the early 1960's. The EC countries are the main markets for Spanish farm products, accounting for \$246 million of Spanish farm exports in 1969, or 42 percent of total farm exports.

The United States is also an important and growing market for Spanish farm products--especially olives, olive oil, wine, and spices--taking about \$70 million annually in the last 2 years. In addition to being Spain's leading customer for table olives and among the leading customers for olive oil, the United States is also becoming a growing market for Spanish wine--about \$4 million in 1969.

In recent years, the United States has been supplying about one-fourth of Spain's agricultural imports. Feed grains, primarily corn, and soybeans account for more than three-fourths of Spain's agricultural imports from the United States. Other important items are tallow, tobacco, and hides and skins.

The EC countries are important suppliers of agricultural products to Spain, providing more than \$100 million a year since 1968. The Latin American countries are also significant suppliers, accounting for about one-third of Spain's farm imports in recent years.

Foreign trade policy remains basically protective of Spanish agriculture, although there are periodic suspensions and reductions in tariffs on short-supply products to dampen inflation or to increase livestock production. In addition to customs and tariffs, the Government places a variable levy, similar to that used in EC countries, on imports of commodities subject to market regulations. The levies are based on minimum import prices established annually to protect domestic support prices. Spain has also established annual import quotas for a number of items.

The Government has no uniform policy for agricultural exports. Subsidies are occasionally authorized to dispose of surplus commodities, and sometimes exports of agricultural products in short supply are restricted.

Spain is a member of several organizations which influence its trade policy. These include the United Nations (1955), the Organization for Economic Cooperation and Development (OECD) (1963), the General Agreement on Trade and Tariffs (1963) and the International Monetary Fund and World Bank (1959). Spain signed a preferential trade agreement with EC in 1970.

OUTLOOK

The prospects for a successful adjustment of Spanish agricultural production to meet rising demand are difficult to evaluate. Spain has demonstrated that rapid advances in agricultural production can be made. Between 1967-69 and 1969, feed grain production rose by more than three-fourths. Since 1969, wool production has doubled and milk production has increased about 75 percent. Some success has also been achieved in shifting production patterns, as evidenced by the reduction of wheat area and increase in barley and corn area. Similarly, production of low-quality cotton has been decreasing, while sugarbeet production continues to rise rapidly.

The rate of growth in total demand for agricultural products is that is expected to decrease somewhat, since Spain's food consumption level (in caloric terms)--which was growing at an average rate of 5 1/2 percent since 1960--seems to be leveling off at a rate comparable with other developed countries. The significant shift in the pattern of food consumption, primarily toward greater consumption of livestock products, is expected to continue. This shift has caused rapid changes in Spain's self-sufficiency in various agricultural products. From being nearly self-sufficient in feed grains in 1960, Spain's production as a share of consumption declined to about half in the mid-1960's, but rose to about three-fourths in the late 1960's. From complete self-sufficiency in meat and dairy products in the mid-1950's, Spain has become a sizable importer of meat and dairy products in recent years.

Despite significant growth in the consumption of animal products in Spain, further expansion of livestock production is needed. Per capita consumption of meat and dairy products is still low, particularly when compared with general consumption levels of neighboring countries. For example, Spanish per capita consumption of beef and milk, at 10 and 68 kilograms, respectively, is less than half of that in France. To the extent that domestic demand for meat and milk is met by increased production, demand for products such as animal feedstuffs and breeding cattle--all the ingredients associated with the development and supply of the livestock industry--will continue to rise.

Spain has considerable potential for making further increases in feed grain production and raising the productivity of livestock. With substantial shifts in land from wheat to barley, more use of fallow land, and more irrigated corn area, production of feed grain should rise greatly. It is doubtful, however, that the increase in feed grain output will equal the rise in feed grain requirements, particularly for corn, in the immediate years ahead.

The present policy of improving breeding stock and selectively raising support prices for livestock products should continue to stimulate production of beef and milk. The increase in production, however, will probably be insufficient to meet domestic requirements.

Deficits and surpluses in certain farm products will probably continue to exist, but these imbalances will likely be smaller. Deficits in corn will continue to decrease as Spain substitutes domestic production for imports. Continued reduction of wheat area, particularly the irrigated portion, will bring wheat production closer to domestic requirements. Lower support prices will reduce surplus production of low-quality cotton and rice. Rising production costs will probably discourage surplus production of wine and olive oil.

Spain is expected to continue importing large quantities of oilseeds--mainly soybeans. Although the rate of increase in demand for soybean meal appears to have slackened, the increase will probably continue as Spain strives for greater self-sufficiency in livestock products. Soybeans account for about three-fourths of the oilseeds crushed in Spain. The import deficit in oilseed production will continue to be large, and it is unlikely that current efforts to foster this sector will make Spain self-sufficient in oilseeds, particularly soybeans.

Spain will probably maintain its large imports of coffee and spices, hides and skins, and tobacco. Spain needs great quantities of hides and skins for its large exports of leather products--\$79 million in 1969. Self-sufficiency in tobacco is not likely since Spain imports about half its tobacco requirements. Recurring attacks of blue mold, along with rising costs of production, are rendering tobacco cultivation less profitable to the Spanish farmers.

Irrigation is a key factor in Spain's agricultural progress. Preliminary data for the Third Plan (1972-75) project an increase in irrigated area of 400,000 hectares. Past experience, however, suggests that newly irrigated areas will fall below this target. The allocation of this irrigated land is also significant--emphasis will probably be placed on fruit and vegetables and on products associated with livestock development.

Other important factors affecting agricultural progress are farm structure, continued modernization of farm production, and livestock improvements. The Spanish Government has recently announced reform plans to make Spanish farms viable units. Considerable progress is expected in further mechanization and modernization of the farm sector with the Government's authorization of large credits and grants. The concerted action program (discussed earlier) should be helpful in raising livestock production. Livestock improvements are being supported by a \$5-million loan from the International Bank of Reconstruction and Development.

Table 1. -- Area and production of selected crops, Spain, average 1950-54 and 1960-64, annual 1965-7.

Commodity	Average		1965	1966	1967	1968	1970
	1950-54	1960-64					
----- 1,000 hectares -----							
Grains:							
Wheat	4,257	4,148	4,254	4,210	4,200	4,200	4,200
Barley	1,487	1,484	1,483	1,484	1,480	1,480	1,480
Oats	1,377	1,434	1,376	1,376	1,370	1,370	1,370
Rye	524	524	524	524	524	524	524
Millet	55	55	55	55	55	55	55
Total grains	8,690	8,686	8,692	8,687	8,640	8,640	8,640
Other crops:							
Wine grapes	1,300	1,300	1,300	1,300	1,300	1,300	1,300
Olives	1,300	1,300	1,300	1,300	1,300	1,300	1,300
Other	1,300	1,300	1,300	1,300	1,300	1,300	1,300
Total other crops	3,900	3,900	3,900	3,900	3,900	3,900	3,900
Total	12,590	12,586	12,592	12,587	12,540	12,540	12,540
Production:							
Wheat	1,300	1,300	1,300	1,300	1,300	1,300	1,300
Barley	1,300	1,300	1,300	1,300	1,300	1,300	1,300
Oats	1,300	1,300	1,300	1,300	1,300	1,300	1,300
Rye	1,300	1,300	1,300	1,300	1,300	1,300	1,300
Millet	1,300	1,300	1,300	1,300	1,300	1,300	1,300
Total grains	5,500	5,500	5,500	5,500	5,500	5,500	5,500
Wine grapes	1,300	1,300	1,300	1,300	1,300	1,300	1,300
Olives	1,300	1,300	1,300	1,300	1,300	1,300	1,300
Other	1,300	1,300	1,300	1,300	1,300	1,300	1,300
Total other crops	3,900	3,900	3,900	3,900	3,900	3,900	3,900
Total	9,400	9,400	9,400	9,400	9,400	9,400	9,400

Table 1.--- Area and production of selected crops, Spain, averages 1950-54 and 1960-64, and annual 1965-70---Continued

Commodity	Average					
	1950-54	1960-64	1965	1966	1967	1968
----- 1,000 metric tons -----						
Grains:						
Wheat.....	3,907	4,120	4,745	4,876	5,050	4,631
Rye.....	482	393	349	353	336	348
Barley.....	1,004	1,893	1,921	2,000	2,576	3,124
Oats.....	515	465	372	442	492	409
Corn.....	509	1,275	1,202	1,250	1,406	1,562
Mixed.....	41	29	46	53	63	104
Total feed grains..	2,940	3,456	3,400	3,535	4,320	5,247
Rice.....	300	397	150	375	300	308
Total grains.....	7,717	10,366	10,863	11,259	12,626	16,240
Pulses:						
Kidney beans.....	125	133	110	120	121	110
Chickpeas.....	147	132	62	127	131	95
Lentiles.....	30	31	22	30	41	33
Dry peas.....	19	21	11	21	24	12
Broad beans.....	101	134	114	127	130	115
Feed pulses.....	301	353	175	420	256	260
Other crops:						
Potatoes.....	3,715	4,604	4,475	4,423	4,490	4,900
Sugarbeets.....	2,431	3,532	3,670	4,055	4,262	5,350
Cotton.....	14	92	40	30	05	50
Tobacco.....	26	31	32	21	31	24
Olive oil.....	345	378	324	437	259	390
Citrus.....	1,189	1,799	2,029	2,468	2,147	2,371
Wine ^{3/}	17,879	23,307	26,453	30,749	23,310	25,000

^{3/} Production in hectoliters (1 hectoliter = 100 liters).

Source: Ministry of Agriculture, Spain, Agricultural Yearbooks (Anuario Estadístico de la Producción Agrícola). Foreign Agricultural Service (FAS) dispatches were used for more recent data.

Table 2.--Production of principal livestock products, Spain, 1960-70

Year	Beef, veal	Pork ^{1/}	Mutton, lamb, goatmeat ^{2/}	Total red meat ^{3/}	Poultry, meat ^{4/}	Cow's milk	Eggs
	----- 1,000 metric tons -----						
1960.....	151	244	98	510	13	1,950	151
1961.....	160	271	122	568	13	2,075	171
1962.....	178	252	115	562	82	2,221	211
1963.....	163	258	114	555	110	2,237	238
1964.....	173	321	115	630	128	2,304	324
1965.....	225	326	129	701	141	2,380	298
1966.....	177	276	134	609	147	2,418	300
1967.....	198	376	133	724	213	2,726	310
1968.....	215	417	133	788	257	3,011	319
1969.....	241	419	131	812	256	3,370	321
1970.....	254	437	128	835	297	3,650	343
1970.....	275	475	143	910	310	3,502	298

^{1/} Includes fatback and small amounts of farm slaughter.

^{2/} Excludes farm slaughter, estimated at about 10,000 a year.

^{3/} Includes horsemeat.

^{4/} Ready-to-cook basis.

Source: Ministry of Agriculture, Spain, Anuarios Estadísticos de la Producción Ganadera, 1962-65. FAS dispatches for recent data.

Table 3.--Livestock numbers, Spain, 1959-70

Year	Cattle			Hogs	Sheep
	Total cattle, calves	All cows	Dairy cattle <u>2/</u>		
	----- 1,000 head -----				
1959.....	3,395	1,050	n.a.	5,400	20,736
1960.....	3,640	1,350	1,465	6,032	22,622
1961.....	3,760	1,220	1,460	6,028	22,622
1962.....	3,683	1,909	1,495	6,118	20,099
1963.....	3,071	1,980	1,502	6,055	19,896
1964.....	3,723	2,040	1,531	5,011	17,168
1965.....	3,712	2,010	1,500	4,931	17,073
1966.....	3,721	2,120	1,553	5,770	16,071
1967.....	3,914	2,193	1,702	6,824	16,648
1968.....	4,021	2,200	1,789	6,873	16,726
1969 <u>3/</u>	4,135	2,321	1,751	6,127	18,962
1970 <u>3/</u>	4,350	2,350	1,803	6,400	18,800

1/ Data as of September.

2/ Includes dual-purpose cows.

3/ Data as of March 31.

n.a. = Not available.

Source: Confederacion Espanola de Cajas de Ahorro, La Demanda de Productos Agropecuarios. Madrid, 1969, Anexos, pp.323-350. FAS "shuttle cards" for recent data.

Table 4.--Size of farms in Spain, by regions, 1961/

Region	Average size of farm	Plots per farm	Average size of plots
	-- Hectares --	-- Number --	-- Hectares --
Western Andalusia...	29.81	3.13	1.13
Eastern Andalusia...	14.53	3.74	3.79
Old Castille.....	22.27	34.29	.65
New Castille.....	27.43	17.33	1.58
Aragon.....	27.24	11.54	2.36
Levante.....	8.42	3.47	4.43
Leon.....	17.48	30.72	.57
Catalonia-Balearic Islands.....	12.96	3.9	1.16
Estremadura.....	24.02	3.75	6.41
Rioja-Navarra.....	15.06	13.96	1.13
Galicia.....	5.60	22.7	.25
Basques provinces..	10.02	11.35	1.21
Canary Islands.....	6.73	14.55	1.19
Asturias-Santander..	7.74	9.43	.82
Average.....	15.63	13.09	1.19

1/ Based on 1962 census.

Source: Ministry of Agriculture, Spain, Censo Agrario de España, 1962. Madrid, 1963. Organization for Economic Cooperation and Development, Low Incomes in Agriculture, Paris, 1964.

Table 5.--Per capita consumption of selected food products, Spain, average 1960-64, annual 1965/66 to 1968/69

Commodity	1960-64 average	1965/66	1966/67	1967/68	1968/69
	----- Kilograms per person -----				
Grains.....	110.7	99.8	105.0	93.4	87.4
Wheat.....	99.1	87.0	92.5	88.1	82.3
Rice.....	7.0	6.0	6.2	5.3	5.1
Potatoes.....	115.9	104.8	109.5	101.5	102.0
Pulses.....	8.1	7.3	7.3	7.5	6.4
Sugar.....	19.4	21.3	22.8	26.6	27.8
Wine.....	66.5	59.2	64.0	59.9	59.5
Beer.....	14.4	23.2	25.9	30.8	32.7
Citrus.....	20.8	20.4	27.2	24.6	16.0
Vegetables.....	131.5	130.9	134.7	130.4	128.0
Fats and oils.....	21.0	22.9	23.6	19.8	21.0
Meat 1/.....	22.9	28.1	31.8	34.3	35.5
Beef and veal.....	8.9	3.6	8.5	8.8	11.2
Pork.....	4.6	5.0	6.4	6.5	6.5
Mutton and lamb.....	3.7	3.8	3.8	3.7	3.6
Poultry.....	3.4	4.8	6.8	8.2	8.8
Cow's milk.....	55.2	53.2	5.8	61.4	68.0
Eggs.....	8.7	10.2	10.5	10.3	10.3

1/ Includes horsemeat, rabbit, and edible orials.

Source: Organization for Economic Cooperation and Development, Food and Consumption Statistics, 1960-68. Paris, 1970.

Table 6.--Spain's agricultural trade, selected commodities, 1961, and 1961-69 1/2

Commodity	1961	1965	1966	1967	1968	1969
	Million U.S. dollars					
Agricultural imports:						
Live animals.....	1.6	9.2	6.9	9.1	12.8	12.8
Meat and meat preparations.....	6.6	75.7	90.5	74.2	80.5	78.7
Dairy products and eggs.....	3.6	29.0	20.4	21.7	24.3	21.2
Cereal and cereal preparations.....	107.0	157.1	230.0	217.6	148.1	147.1
(wheat grains).....	35.6	145.1	221.5	212.7	142.7	142.7
Fruit and vegetables.....	8.5	44.7	38.2	34.8	22.8	32.1
Coffee, tea, cocoa, spices, etc.....	14.5	45.4	50.3	40.1	51.1	59.0
Animal feed.....	9.2	31.7	40.3	26.4	25.6	46.0
Tobacco, unmanufactured.....	23.7	28.4	26.3	24.4	37.2	41.3
Hides and skins.....	8.5	24.0	31.9	29.4	29.2	60.4
Oilseeds.....	5.3	52.3	93.9	103.7	110.2	130.0
(Soybeans).....	---	39.0	79.2	90.7	103.3	111.4
Natural fibers.....	72.6	48.2	85.5	55.8	68.5	70.0
Agricultural fats and oils 1/2.....	45.5	68.5	30.5	23.3	21.3	20.4
Other.....	21.4	35.2	44.5	40.5	57.5	62.0
Total agricultural imports.....	323.5	650.6	791.6	724.2	691.0	691.0
Total imports.....	1,092.0	3,303.5	3,572.4	3,470.1	3,502.3	4,301.7
Agricultural exports:						
Cereal and cereal preparations.....	10.7	116.3	100.0	69.8	50.7	69.0
(dress, or flour).....	1.1	0.2	---	47.4	13.4	49.6
(hire).....	9.6	12.1	2.0	15.9	10.0	7.0
Fruits and vegetables.....	311.9	329.5	327.0	358.1	350.1	325.0
Wine.....	29.2	60.0	37.0	15.0	54.3	90.0
Oils and fats.....	63.3	47.9	406.0	211.1	30.8	60.0
Wool.....	7.0	42.3	111.0	111.0	100.0	90.0
Total agricultural exports.....	423.8	638.0	806.0	603.4	566.3	604.6
Total exports.....	693.3	2,000.5	1,253.0	1,371.0	1,509.7	1,681.1

1/2 The use of 1/2 (live), 1/2 (meat), 1/2 (dairy), 1/2 (fruit and vegetables), and 1/2 (oil and fat) since 1961 (live and meat only) are 1/2 (meat), 1/2 (oil and fat).

Source: Spanish Government and Commodity Board, Agricultural Trade, series 1 and 2.

Table 7.--Spain's agricultural imports from the United States, selected commodities, 1961 and 1965-69

Commodity	1961	1965	1966	1967	1968	1969
	- - - - - Million U.S. dollars - - - - -					
Grain and preparations.....	84.6	94.2	127.5	71.2	40.3	44.0
Feed grain (corn).....	59.7	91.6	123.5	71.2	40.0	43.9
Animal feed.....	5.1	10.0	12.1	1.8	4.6	9.7
Tobacco, unmanufactured.....	4.7	5.4	4.5	7.5	6.6	7.0
Hides and skins.....	.2	2.9	3.5	3.3	3.4	3.9
Oilseeds.....	.4	35.7	77.0	92.9	103.4	108.0
Soybeans.....	---	37.0	75.4	91.9	101.4	106.5
Natural fibers.....	100.5	4.9	2.7	.8	1.0	1.2
Agricultural fats and oils...	42.9	40.3	14.4	10.3	8.0	9.0
Other.....	.4	6.0	8.7	7.0	5.3	7.5
Total agricultural imports.....						
From the United States.....	152.8	205.0	250.4	194.8	173.2	191.2
Total agricultural imports.....	328.3	631.1	791.6	734.0	691.0	854.8

Source: U.S. Department of Agriculture, The Agricultural Situation in Western Europe, Economic Research Service; various issues. Organization for Economic Cooperation and Development. Foreign Trade, various issues.

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