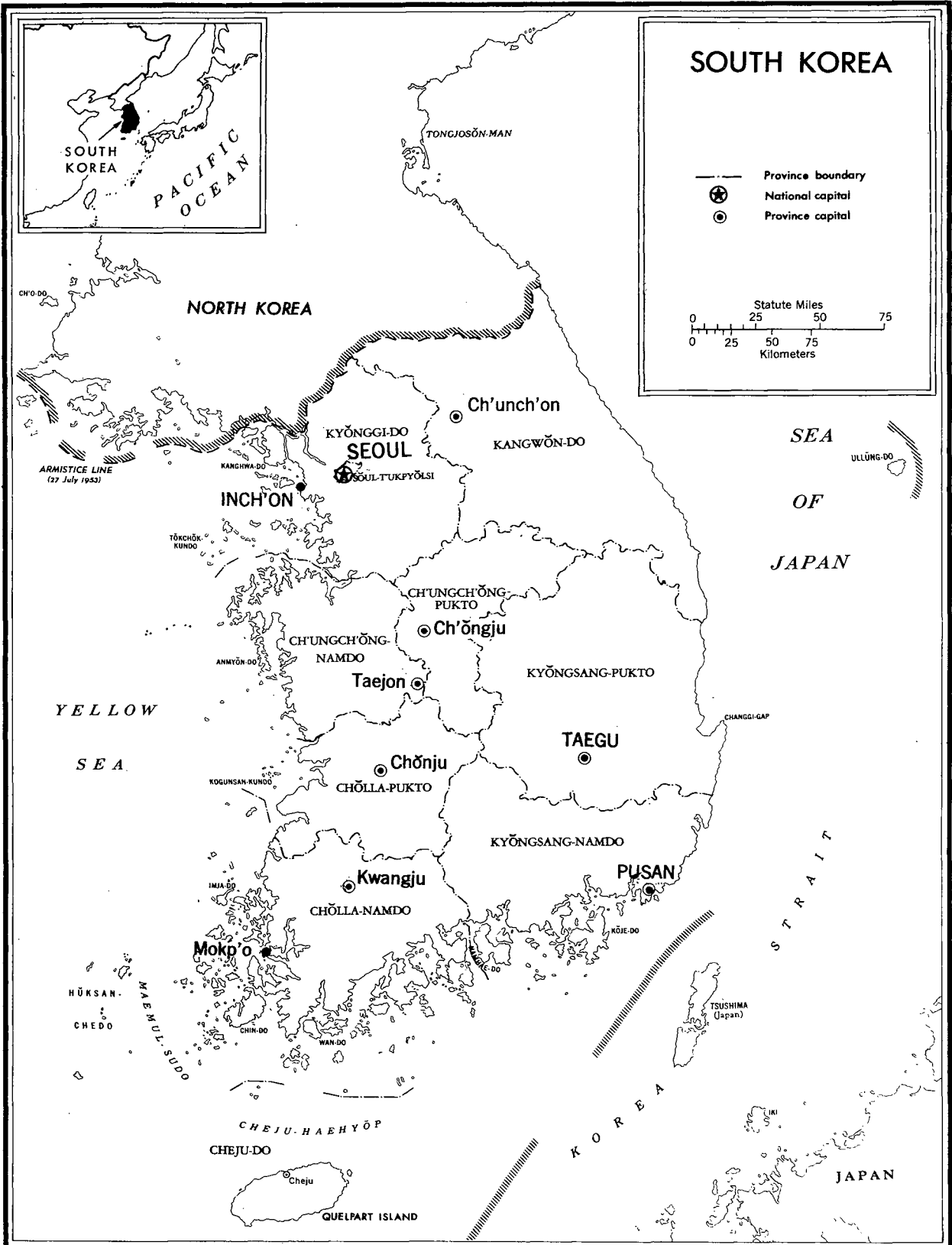


South Korea's Agricultural Economy

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SOUTH KOREA'S AGRICULTURAL ECONOMY

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INTRODUCTION AND SUMMARY

South Korea has a predominantly agrarian economy. Agriculture supports over 60 percent of the total population, accounts for about 40 percent of the gross national product, and supplies approximately 15 percent of the country's foreign trade earnings.

In recent years, South Korea's economy has been characterized by a moderately declining rate of growth. In 1957, the growth of the gross national product (GNP) over the preceding year was 9.7 percent, but in 1958 it was only 6.3 percent. In 1959 the growth rate was 4.1 percent.

Agriculture, by far the leading contributor to GNP, is the major factor in the economy's declining growth rate. Agricultural output increased only 1.4 percent in 1959 over the preceding year, and in 1958, by 5.5 percent and in 1957, by 9 percent.

Agricultural production patterns and practices in Korea are the result of the country's topography and the pressure of population on the land. Topography has confined farmland to one-fifth of the country's total area and pressure of population on land resources has led to the development of small farm holdings. Small-scale cultivation in Korea is not only the immediate cause of lower income but also restrains expenditures for improvement of agricultural production. Thus, South Korean farms are characterized by intensive labor inputs in order to maximize total output.

Food consumption levels are low. Average consumption in terms of calories per capita is estimated at slightly less than the 2,100 average in the Far East. Korea has been able to maintain this level in recent years because of food imports under the U.S. aid program. More than \$400 million worth of U.S. agricultural products have been shipped to the Republic of Korea in the past 5 years.

Thus, food self-sufficiency requires a considerably higher production level than at present. Moreover, without taking into consideration the increased per capita demand for food as income grows, an additional 2 percent annual increase in production will be required to meet population growth.

Agricultural production in Korea has been increasing more rapidly than the population since the Korean conflict, though per capita production is still substantially below the prewar level. The country's agricultural production index in 1959 was estimated at 126 (1952-54 = 100), while the population index was 113. Production in 1960 was slightly less than in the bumper year 1959. Korea reduced its food imports in 1959 and exported small amounts of rice in both 1959 and 1960.

Farm programs which should stimulate production have been announced by the Ministry of Agriculture and Forestry. These programs are (1) long-term loans to stamp out usury; (2) a 5-year plan to increase food production through land reclamation and improvement and increased yields; and (3) establishment of a semigovernmental agency financed through the Development Loan Fund to carry out a greatly expanded irrigation and land development program.

With implementation of these programs, with continued development and application of farm technology, and with economic assistance from the United States, South Korea's agricultural economy should continue to develop at a moderate rate. But the country will remain a net importer of agricultural commodities for several years.

GENERAL CHARACTERISTICS

Korea was politically and culturally oriented toward China until the late 19th century. In 1894-95 Japan, by force, eliminated Chinese influence; through the Russo-Japanese war of 1904-5 Japan secured complete dominance in Korea. After formal annexation in 1910, Korea was governed as an integral part of the Japanese Empire until the surrender of Japan in 1945. In September 1945, the United States Army was charged with the responsibility for military government in South Korea. This responsibility was not assumed unilaterally, but rather resulted from United States adherence to Allied policy for Korea as established through wartime and postwar Allied agreements. On August 15, 1948 the Republic of Korea was established in formal ceremonies held at Seoul, the national capital.

Location and Population

The republic of Korea occupies the southern half of the Korean Peninsula. A line of demarcation established under the Korean Armistice Agreement of July 23, 1953, marks the northern boundary. The Sea of Japan is off the east coast and the Yellow Sea extends along the west coast. South of the peninsula is the Korean Strait and 53 miles in a southwesterly direction is the country's largest island, Cheju (Quelpart Island). South Korea is about 250 miles long and covers 38,000 square miles, about as much as the State of Virginia. It has a total population of 24 million (1960).

Topography

South Korea is a mountainous country, a limiting factor for agricultural development. There are no extensive lowlands, but there are areas of relatively fertile land bordering the principal rivers and along the coast in the west and south. These are the most favorable sectors for agriculture.

Highlands, intricately dissected by small, narrow, winding valleys, comprise about two-thirds of the total area. Within the mountains, slopes are generally steep. Foothills tend to be more rolling and undulating. In contrast to the fairly regular east coast, the south and west coasts are very irregular. Numerous islands, reefs, rocks, and shoals dot this area.

Cheju Island is composed entirely of volcanic rock; plains gently slope from the central volcanic cone.

Climate

South Korea has a continental climate--marked by cold, dry winters and hot, humid summers. Temperatures average 78° F. throughout the country in August, the warmest month. In January, however, mean temperatures range from 23° F. at Seoul to 35° F. at Pusan. Cold, dry monsoon winds in winter pass over the comparatively warm water of the Yellow Sea causing more moderate temperatures on the coasts and in the extreme south of Korea. On Cheju Island, the climate is milder and more humid than it is on the mainland. The length of the growing season increases from 178 days at Seoul to 226 days at Pusan.

The summer monsoon carries warm, moist air to South Korea from the south-east. Annual rainfall averages from 40 to 55 inches, but is heavier along the southern coast--about 60 inches. In the western part, where most of the agriculture is concentrated, rainfall averages about 45 inches. June to September is the period of heaviest rainfall.

Usually the amount and distribution of rainfall are adequate for satisfactory crop growth; however, variations cause distress to farmers. Rice production is sometimes affected by early droughts, which delay transplanting, and by late droughts, which interfere with crop growth. At the other extreme, heavy rains frequently fall damaging crops and irrigation works. Late heavy rains also make rice more susceptible to blast.

Soils

Soils over most of South Korea are unsuited for cultivation because they are too steep, shallow, and stony. The most productive and most intensively cultivated soils are the fine-grained alluvial deposits that cover much of the heavily populated plains along the coasts and the broader inland valleys. They are suitable for flooding and are commonly used during the warm months for the growing of rice. Many of the rice paddies are drained during the remainder of the year and planted to winter grains.

The coarser alluvial soils are productive and easy to work. They tend to be well drained, and thus are devoted mainly to dryland crops, such as millet, wheat, barley, potatoes, and soybeans. Nearly all areas of Podzolic soils, which occur intermittently along the coast, are used intensively for agriculture--particularly for rice production.

Farm Population and Income

Some 60 percent of South Korea's total population is classified as agricultural. Land settlement has been mainly along the country's major rivers and in the coastal plains. It is estimated that the population is growing at an annual rate of 2 percent.

With slightly more than 2 acres for the average farm and an average of over 6 persons per farm household, income per farm dweller is low--about \$50 a year, approximately half the annual income of the nonagricultural person.

AGRICULTURAL PATTERNS AND PRACTICES

Land Use

About one-fifth of South Korea's total land area of approximately 24 million acres is under cultivation. This area has remained relatively stable over a long period, mainly because of the country's unfavorable topography. Also, on some steep mountain slopes "firefield farming," or shifting cultivation, is practiced. The total area farmed in this way is not large at any one time, but new lands are cleared and burned every 3 to 5 years. This practice destroys large areas of good forests and greatly accelerates erosion and floods in the upper watersheds. Forests cover about 70 percent of the total land area. The remaining 10 percent includes areas devoted to farm building sites, urban residential and commercial development, roads, and waste. Pastureland in South Korea is insignificant.

Cultivated areas are mainly on the coastal plains and in the broader valley bottoms. There are also strips of cultivated land extending along the main rivers in the mountains, and some steep slopes are terraced to meet the demand for more cultivable land.

Rice paddy fields, occupying most of the lowlands as well as some of the terraces on higher land, account for 60 percent of the arable land. Upland fields, or dry farming areas, make up the remaining 40 percent. They are generally situated on higher land and usually on less fertile soil.

Table 1.--Land utilization: Total area, type of use, and percent distribution, 1958

Use	Area	Percentage of total
	<u>1,000 acres</u>	<u>Percent</u>
Cultivated area:		
Paddy fields.....	2,965	12.2
Dry fields.....	2,008	8.2
Total.....	4,973	20.4
Forest area:		
Private.....	13,077	53.7
National.....	3,394	14.0
Total.....	16,471	67.7
All other.....	2,897	11.9
Total land area.....	24,341	100.0

Ministry of Agriculture and Forestry, Republic of Korea.

Farm Size

Pressure of population on land resources has led to the development of small farm holdings. With 5 million acres of arable land and over 2 million farm households, the average farm size is 2.2 acres. Arable land per farm person is less than 0.4 acre and for the entire population is only 0.2 acre. Nearly three-fourths of all of South Korea's farms are less than 2.5 acres. Only 6.5 percent of the rural households and 19 percent of the cultivated land are in farms over 5 acres in size. Cultivated area per farm is largest in the northern provinces and lowest in the southern. Small farms, large farm families, and low soil fertility are the principal reasons for the poverty of South Korea's rural population.

Table 2.--Farm size: Number of farms, area by size of farmland under cultivation, and percentage distribution, 1958

Area by size	Number of farms		Cultivated Land	
	Number	Percentage of total	Area	Percentage of total
	Thousands	Percent	1,000 acres	Percent
Less than 0.7 acre...	421	19.0	263	5.3
0.7 to 1.2 acres.....	515	23.2	559	11.3
1.2 to 2.5 acres.....	674	30.4	1,378	27.7
2.5 to 4.9 acres.....	463	20.9	1,816	36.5
4.9 to 7.4 acres.....	138	6.2	871	17.5
7.4 acres and over...	7	.3	59	1.2
Other.....	--	--	27	.5
Total.....	2,218	100.0	4,973	100.0

Ministry of Agriculture and Forestry, Republic of Korea.

Land Tenure

Since the passage of the Land Reform Law in June 1949, most Korean farmers have become owners of the land they till. The law provided for government purchase of specified categories of land, including land belonging to nonfarmer landlords. Land belonging to farmers in excess of 3 chongbo (1 chongbo equals 2.45 acres) or not being farmed by the owner was also included. The law provided that such lands were to be sold only to actual farmers, with priority being given to those who had been farming the same land as tenants. The maximum area to be sold to any one farmer was 3 chongbo.

New owners were to pay in kind for the land they received. Each farmer was to pay in five annual installments a total of 150 percent of the average annual crop raised on the land. Payments started with the 1950 summer grain harvest and were originally scheduled to be completed in 1955. Total collections were expected to reach 1,963,000 metric tons of grains, unmilled rice equivalent. However, because of the Korean hostilities and other difficulties, payments extended into 1958.

Landowners were given bonds in payment for the land purchased from them by the government and resold to the tillers of the land. The face value of the land bonds was stated in terms of the value of the unmilled rice, and the bonds were to be paid off by the government over the 5-year period 1950-54, in equal annual installments. The amount of the annual cash payment was determined by official rice prices fixed yearly by the government and approved by the National Assembly. (The official price is usually somewhat below the free market price.) Thus the amount of cash due each bondholder varied in accordance with the established rice price of the applicable year; the bonds carried no interest and no adjustment was made for price inflation at the time of payment.

The government's annual obligation to the former landowners represented the cash value (in terms of official prices) of approximately 214,000 metric tons of unmilled rice. In actual practice, however, the former landowners received only the cash equivalent of grains which the government actually collected from the new owners.

The program was administered by a system of Agricultural Land Commissions composed of a majority of private citizens and a few government officials. Under the land reform program, over 1 million acres of land were redistributed. About three-fourths of this area consisted of paddy land and the remainder of upland fields. This was 23 percent of the total cultivated area at that time. About 1.5 million families, nearly two-thirds of all farm households, bought some land under the redistribution program.

Production Practices

In South Korea there is a minimum expenditure of capital in the form of animal power and improved agricultural equipment--emphasis has traditionally been on hand labor. More recently, production practices have included a considerable use of fertilizers, extensive double cropping, expanded irrigation, seed improvement, and a wider use of pesticides.

Farm machinery.--In Korea, with its characteristic smallholdings, farm tools play an important part in agricultural production. Equipment is simple. It consists of hoes, spades (either solid or forked), small wooden plows and harrows, hand sickles for harvesting, flails or hatchels, and small wooden cylinders with wire teeth for threshing. The equipment is light and easily moved from one rice field to another.

There are several reasons for the use of such implements in preference to modern farm equipment. Not only is the average farmholding small, but it is commonly subdivided into scattered plots. A tractor could scarcely turn around in the ordinary Korean rice field and maneuvering of equipment would damage the crop. Mechanization has also been retarded because of economic reasons. The cost of modern equipment is prohibitive for farmers at such a low economic level--especially since manpower is abundant and underemployed.

Table 3.--Farm machinery: Number of agricultural implements and machines owned by farm households, 1956-58

Type	1956	1957	1958
	Thousands	Thousands	Thousands
Plow.....	265	267	233
Weeder.....	123	131	154
Sprayer.....	17	23	25
Thresher.....	521	519	551
Huller.....	12	13	15
Rice polisher.....	28	27	30
Barley cleaning.....	16	17	19
Flour mill.....	11	11	13
Pump.....	7	7	7
Straw rope.....	30	31	32
Straw bag.....	340	329	329
Straw mat.....	10	10	9
Winding.....	-75	74	77

Ministry of Agriculture and Forestry, Republic of Korea.

Fertilization.--Limited agricultural land, low soil fertility, and an increasing demand for food have created a need for liberal application of fertilizers in South Korea. Farmers have long been adept in fertilizing their fields with farmyard manure, night soil, green manure, and fuel ashes. More recently, commercial chemical fertilizers, especially those with a high nitrogenous content, have become important.

Before liberation in 1945, undivided Korea was able to meet its fertilizer needs with its own manufacturing facilities. Nearly all of the fertilizer plants, however, were north of the 38th parallel. After division of the country at the end of World War II, South Korea was faced with importing all its fertilizer.

Completion and operation of three fertilizer plants, now being built or considered, would provide about one-third of Korea's annual fertilizer requirements. The Chunju fertilizer plant, built under the U. S. aid program, started production early in 1960. It has an annual capacity of 85,000 metric tons of urea.

Five Federal Republic of Germany firms are constructing a urea fertilizer plant, valued at the equivalent of \$23.5 million, at Naju in Chollanamdo. It is expected that the plant will have an annual capacity of 85,000 metric tons and will be turned over to the government in 1961. The Korean Reconstruction Board has agreed to build a third fertilizer plant as part of the government's program to become self-sufficient in fertilizer production. The details of the proposed new plant are still indefinite.

Supplies of chemical fertilizers available to South Korean farmers have more than doubled since 1951, reaching about 800,000 tons in recent years. Ammonium sulfate accounts for about two-thirds of the total. Urea is gaining in importance as a nitrogenous fertilizer, and triple superphosphate is becoming the main fertilizer material for phosphorous. The United States Operations Mission, in conjunction with the Korean Agricultural Extension Service, is carrying on an active campaign to popularize the use of urea through demonstrations to illustrate its benefits and to teach its proper application.

All chemical fertilizers are procured and distributed by the Korean Government except for relatively small quantities imported by private traders. The Office of Supply imports the fertilizers, and transfers them to the Agricultural Bank, which in turn distributes to farmers on the basis of acreages of various kinds of crops.

Farmers can buy the fertilizer for cash, or on credit from the bank. The official price fixed by the government with the approval of the National Assembly is a pool price for each main fertilizer based on the import cost converted into hwan at the official exchange rate, plus customs duty and other charges. In the case of fertilizers commercially imported, which are subject to higher duty and to what is in effect a higher exchange rate, the price to farmers is two or three times that of government-distributed fertilizers. Nevertheless, the demand from farmers runs ahead of the supply.

Table 4.--Chemical fertilizers: Amount supplied to farmers, 1956-58

Kind	1956	1957	1958
	1,000	1,000	1,000
	<u>m. t.</u>	<u>m. t.</u>	<u>m. t.</u>
Ammonium sulfate.....	559	458	452
Ammonium nitrate.....	86	61	34
Calcium nitrate.....	--	32	16
Urea.....	27	37	108
Superphosphate.....	72	27	67
Triple superphosphate.....	77	110	112
Potassium chloride.....	13	10	7
Other.....	16	29	61
Total.....	850	764	857

Ministry of Agriculture and Forestry, Republic of Korea.

Double cropping.--South Korean farmers practice double cropping in an attempt to gain a maximum return from a unit of land. This method of producing two or more harvests from a given unit of land within a single year is indicative of the intensity of land utilization. The ratio of planted area to total cultivated area is about 1.5 to 1. This ratio is highest in the south and west and lowest in the north.

Both paddy and dry fields can be double cropped, depending on climatic and soil conditions. For irrigated rice fields, the summer crop is rice and the winter crop may be barley, wheat, leguminous green manure crops, or such vegetables as cabbage, radishes, or spinach. On dry fields, grains, beans, potatoes, and commercial crops are grown in the summer. Most of these areas are planted again with fall-sown grains--barley, naked barley, wheat, and rye. Slightly over half of the upland fields in South Korea are double cropped and roughly one-third of the paddy land is in two crops.

Irrigation.--In Korea, irrigation serves as insurance against seasonal or temporary shortages of rainfall and plays an important role in rice production. Irrigation projects are developed and operated by associations of farmers formed under the Irrigation Association Law of 1917 and operated as corporations. The associations usually pay 50 percent of the construction cost, but in some cases pay less; their portion is secured by a loan from the Agricultural Bank through the Korean Irrigation Association Union (KIAU). The rest is paid by the government under a grant to the association appropriated by the National Assembly in the annual budget from general revenues and from foreign aid funds.

By 1959 there were 690 associations established to serve about 800,000 acres. Some of the associations cover 50,000 acres, but most serve less than 125 acres. Associations which have already completed construction number 481 and serve more than 550,000 acres. The projects now underway in 156 districts will add 230,000 acres to the total irrigated area when completed. Most of these projects are scheduled for completion in 1961. About half of the rice paddies are fed by rain water. Completion of present projects will bring the proportion of paddy land under irrigation to about 55 percent.

Seed improvement.--South Korea has two national seed-breeding stations, one located at Suwon and the other at Iri. In addition, at least one station in each Province produces foundation seed of the major farm crops. In the past, rice and upland grains have received the most attention in the seed improvement program, but now work is underway on the improvement of seed of other upland crops, grasses, legumes, and vegetables.

In 1958 the government invested 286 million hwan in the production of improved paddy and barley seeds, supplying over one-third of the total cultivated acreage.

Use of pesticides.--Production of DDT and other chemicals has increased significantly in recent years, while pyrethrum has lost its market and become uneconomical. Benzene hexachloride (BHC) makes up about one-third of South Korea's pesticide consumption. BHC is used to control the stem borer, the most serious pest of the rice crop. During 1958, over 7,000 tons of agricultural pesticides were distributed to aid in prevention of damage from plant disease and insects.

Distribution of pesticides in South Korea is made by the Horticultural Association, as well as by the extension staff. Fruit and vegetable growers

along with rice producers are the major users of pesticides. A more vigorous program to control insect and disease damage to both growing and stored crops could contribute substantially to an increase in the net food supplies available from South Korea's own resources.

AGRICULTURAL INSTITUTIONS

Agricultural Cooperatives

Programs for farmland reform and agricultural cooperatives were introduced as the two major programs of the new agricultural administration in the beginning of the establishment of the Republic of Korea. Land reform was enforced through the consent of the National Assembly, but the cooperative program failed to pass the legislature. It was not until 1957 that an Agricultural Cooperative Association Act was promulgated. Its purpose was "to obtain a balanced national economy by increasing agricultural productivity and improving the economic and social status of farm people through the promotion of independent cooperative organizations by farmers."

The cooperatives were authorized to provide assistance to members in production, purchasing, and marketing; to make available community facilities for storage and equipment; to establish mutual insurance services; to assist in credit; and to engage in a number of other related activities.

In 1958, village cooperatives joined together into a National Agricultural Cooperative Federation. By 1959, there were 8,400 cooperatives functioning and several hundred more in the process of organization. Most of the cooperatives serve individual villages. Much of the agricultural supplies provided by the United States aid program are channeled through the farmer-owned organizations.

Agricultural Credit and Taxation

Credit.--Lack of agricultural credit has been partly responsible for the slow economic progress in South Korea. It was not until 1957 that National Assembly created the Agricultural Bank to help alleviate the need for this type of credit.

The purposes of the agricultural Bank are "the development of the agricultural cooperative associations, the rehabilitation of the rural economy, and the improvement of the economic status of farmers by establishing an agricultural credit system." The Bank was organized as a private bank with a capital account of 30 billion hwan, 14 billion hwan to be subscribed by individual farmers and cooperatives and 16 billion hwan to come from counterpart funds.

If farmers and cooperatives are unable to finance their quotas, then the government is to make up the deficit. The Bank's charter permits loans to be made for almost any purpose in the interest of the development of the

rural economy. The Bank can issue debentures up to 10 times the paid-up capital. Reimbursement of debentures is fully guaranteed by the government.

The Bank is operated by a Board of Directors consisting of the Minister of Finance, the Minister of Agriculture and Forestry, the Governor of the Bank of Korea, the Governor of the Agricultural Bank, and three representatives selected by the National Council for Farmer Cooperatives.

Also in 1957, to provide credit at lower rates and give the farmers added incentives to increase production by insuring a firm market for their crops, the government instituted a rice lien program. Under this program, funds are loaned to farmers at low interest rates on pledge of part of their rice crop.

Taxation.--One of the largest single sources of tax revenue in South Korea is the land income tax. More than 95 percent of the receipts from this tax represent collections in kind, primarily rice and barley. The tax, as promulgated in 1951, applies to all classes of land, urban as well as rural, and is levied semiannually. The rate on urban land is 12 percent of the rental value. Rural land producing staple crops ordinarily is assessed on the basis of its average harvest, except in years of poor harvest when actual harvest is used. An additional exception provides that no tax is paid when natural calamities or abnormal weather conditions cause a farmer's harvest to fall below 30 percent of its rated average harvest. As an inducement to maximize production, there is no tax on any portion of a harvest that exceeds the rated average.

Land producing staple crops is taxed on the basis of a progressive standard rate schedule, graduated from 15 percent to 28 percent of the farm's output. Substantially higher tax rates usually apply on lands which produce fruits and ginseng (a herb root for traditional medicine). Where net income is the base, the rates are high. Farmers paying annual installments on land purchased under the Land Reform Law, however, are taxed at reduced rates, since the burden of the annual installment alone amounts to 30 percent of the harvest. Payments under this tax are paid in kind, except when the net income is used as the tax base. The farmer is permitted to make payment all in rice if he chooses, regardless of the crop he has produced.

Since the tobacco industry in Korea is a government enterprise, no taxes are levied on production and consumption of tobacco products. Instead, all profits are turned over to the government treasury as government revenues. These profits amount to slightly more than 1 percent of the total national revenues each year.

Marketing and Transportation

Marketing.--Grains are the principal commodities moving into commercial channels in South Korea, although 60 percent of the rice and even higher proportions of other grains are consumed on the farms. About half of the cotton, 70 percent of the chickens, and 80 percent of the vegetables are

retained for farm use. On the other hand, nearly all of the fruit, silk, and tobacco are sent to market, but these items are relatively small in volume and value compared with grains.

Since 1939, government control has been used to ensure reasonably equitable distribution of limited supplies and to prevent undue price increases. Under the present program, the Ministry of Agriculture and Forestry manages the supply, distribution, and prices of principal food grains.

Agricultural cooperatives have been authorized to provide assistance to members in production, purchasing, and marketing. The Agricultural Bank is closely related to the cooperatives since credit to individual farmers or for other rural development purposes is channeled through the cooperatives. However, the cooperatives have not yet become fully effective in the marketing processes partly because of shortage of credit.

Since a large share of the grain output is consumed by the farm people, emphasis is on the development of warehouse facilities in the rural areas. Farmers have traditionally stored their crops on their own premises, where they are subject to extensive damage from rodents and insects. Under the rehabilitation program, more than 600 warehouses have been built in rural areas. As soon as the agricultural cooperatives are financially capable of assuming the responsibility, it is expected that they will take over operation of these warehouses.

Transportation.--There is a substantial movement of farm products to South Korea's urban centers and a return flow of fertilizers and other farm supplies and goods. Thus, transportation facilities have an important bearing on agricultural production and development in South Korea.

Railroads are the most important mode of transportation. The larger cities are connected by two-land highways, but hard-surfaced roads are rarely found between cities and towns. South Korea has a large number of small sea-going vessels relieving pressure on the domestic rail and highway systems. Inland waterways are of limited importance. Rivers serve primarily as sources of irrigation and hydro-electric power; however, they do provide for some local movement of agricultural products.

Education, Research, and Extension

Education.--It is estimated that 80 percent of the people over 12 years of age have the equivalent of at least 3 years of primary school education. However, illiteracy remains a serious problem especially in the rural areas.

In 1959 there were 3.5 million children between the ages of 6 and 12 attending primary schools, or about 95 percent of all such children in Korea. Attendance in secondary schools, high schools, normal schools, universities and colleges has increased some 50 percent since 1953. In 1959, these schools had a total enrollment of about 800,000 students.

In 1957, there were 136 agricultural high schools in South Korea. Suwon Agricultural College, the oldest agricultural college, dates from the years before the Japanese occupation. It has had a long and notable career and is responsible for much of the agricultural leadership now in South Korea. There have been 7 other agricultural colleges established since the liberation in 1945.

Substantial aid has been received from the United States through educational exchange and technical assistance. The ICA (International Cooperation Administration) technical assistance program, locally administered by USOM (United States Operations Mission), has brought about 300 Korean teachers and vocational and agricultural technicians a year to the United States.

Research and extension.--In 1957 the National Assembly passed a new Agricultural Extension Law which created the Institute of Agriculture at Suwon. This act consolidated all agricultural research and extension activities under one administrative unit. The Institute is administered by a director and is composed of a Research Bureau and an Extension Bureau.

There are Provincial Institutes of Agriculture in all nine Provinces, with an average of four extension workers in each gun (county). About half of the guns have home demonstration workers and plans are to supply enough additional agents to locate one in each gun.

The Korean 4-H Club movement has also expanded rapidly since its founding in 1946. By 1958, there were 7,324 local 4-H Clubs.

AGRICULTURAL POLICIES

Five-Year Plan

South Korea's second 5-year plan (1958-62) calls for raising the yield per acre of rice and millets and for both raising the yield per acre and expanding acreage of summer grains, potatoes, and most industrial crops. To improve yield per acre, reliance is placed on greater use of fertilizers and better type of seeds, extension of irrigation, and closer control of pests and diseases. The government hopes that yields of food grains can be increased steadily enabling Korea to become self-sufficient in food grains within the next decade.

To increase acreage, the government launched a 5-year land expansion plan in February 1960. Under the new program the government will subsidize 30 percent of the costs required for the reclamation of wasteland and will make grants for newly reclaimed cattle grazing areas. The program is expected to increase Korean grain production by some 80,000 tons annually, and will feed an additional 24,000 head of cattle. However, the more promising solution to Korea's agricultural production problem is not in increasing acreage, but rather in improving yields per acre.

Food Program

The Grain Act of 1950 authorizes the Korean Government to regulate the supply, distribution, and price of principal food grains through collection and control of part of the food produced and imported. For this purpose the Ministry of Agriculture and Forestry establishes two food programs each year: (1) The Overall Program and (2) the Republic of Korea's Government Controlled Food Program.

The Overall Food Program calculates the total food availability and requirement of staple food grains for the entire population. The Government Controlled Food Program was designed to supply grains at government-fixed prices for industrial purposes and to special categories of non-self-suppliers, such as the Korean Armed Forces, government employees, and prisoners.

The methods of procurement are no longer based on an official farm price but rely on the collection of a statutory proportion of the crop, such as payment of land tax or land purchase price. All imported grains including those received as a form of external aid are under government control. The Office of Supply imports the grain and transfers it to the Food Bureau for storage and distribution.

Average food consumption in terms of energy value for South Korea is almost 2,100 calories per person per day. This is about the average for the Far East. However, grains and starchy foods make up 85 percent of the diet, the highest percentage of any country in the Far East. Also among countries of the Far East, South Korea ranks lowest in the share of fats in the diet--only about 1 percent. These are indications that there is much room for improvement in the Korean diet.

Price Policies

The main objective of South Korea's price policies for rice and other food grains has been to stabilize prices in order to keep down the cost of living and check inflation. The government intervenes in one way or another in the marketing and price fixing of cotton, hemp, castorbeans, cocoons, and few minor crops, with a view to diversifying farming and increasing production. This is aimed at giving additional income to farmers and saving imports or increasing exports. Ginseng, like tobacco, is under government monopoly for revenue purposes.

The government also buys straw bags and ropes from farmers at official prices in order to secure an adequate supply of these items required to pack government-held farm products and fertilizers; and also to enable farmers to add to their incomes, particularly in the winter.

AGRICULTURAL PRODUCTION

South Korea's agriculture is aimed primarily at producing food. Grains are the principal food crops, accounting for almost three-fourths of the total planted area. In 1958, over 98 percent of the 2.2 million farm households were classified as grain farms. Vegetables and fruit farms accounted for 1 percent, leaving 1 percent for all other types of farms, including livestock.

Table 5.--Type of farms: Number of farm households, classified by management of farmland, 1958

Type	Number of farms	Percentage of total
	<u>Thousands</u>	<u>Percent</u>
Paddy field.....	1,826	82.3
Upland field.....	352	15.9
Fruit.....	7	.3
Vegetable.....	13	.6
Other crops.....	2	.1
Fire-field.....	5	.2
Livestock.....	6	.2
Sericulture.....	2	.1
Other.....	5	.3
Total	2,218	100.0

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Major Crops

Rice is Korea's most important crop--almost half of the grain land is planted to rice and it accounts for over two-thirds of total grain production. Other important crops include "summer grains" and "other grains." Summer grains consist of barley, wheat, and rye; other grains include millets, sorghums, corn, buckwheat, and oats. Soybeans, red beans, green beans, and kidney beans are the most important pulses produced in Korea. White potatoes and sweetpotatoes are important food crops because of their high yield per acre. Potatoes are usually produced in sufficient quantities, as are fruits and vegetables.

Commercial crops are of lesser importance, but of significance to the economy. Cotton, tobacco, and cocoon (mulberry leaves) are the only commercial crops of considerable acreage. Area and production of cotton have been considerably reduced in recent years, but cotton still remains the leading commercial crop by area. Tobacco is significant because of its high value of yield per acre. Other commercial crops include hemp, sesame, ramie, and castorbeans.

Rice--Koreans prefer rice to all other cereal crops. It serves as the staple food and represents about half of the caloric value of the food supply. Production is concentrated in the Provinces bordering the Yellow Sea on the western side of South Korea and in the southeastern part of the country.

South Korea's 1958 rice crop set a post-World War II record and was one of the largest in the country's history. Rice output of 3.3 million tons was 12 percent above the 1935-39 average. Partly because of typhoon damage, the 1959 crop fell short of the 1958 crop and the goal of the current 5-year plan.

Table 6.--Major crops: Cultivated area by commodity groups, 1957-59

Crop	1957	1958	1959
	<u>1,000 acres</u>	<u>1,000 acres</u>	<u>1,000 acres</u>
Grains:			
Rice.....	2,730	2,740	2,725
Common barley.....	1,265	1,144	1,149
Naked barley.....	747	770	779
Wheat.....	355	314	309
Rye.....	91	86	86
Millet.....	369	381	379
Sorghum.....	29	29	29
Corn.....	61	56	54
Buckwheat.....	<u>66</u>	<u>76</u>	<u>71</u>
Total.....	5,713	5,596	5,581
Pulses:			
Soybeans.....	686	664	669
Red beans.....	64	69	66
Green beans.....	16	19	18
Other.....	<u>21</u>	<u>22</u>	<u>22</u>
Total.....	787	774	775
Potatoes:			
White.....	142	120	117
Sweet.....	<u>115</u>	<u>120</u>	<u>130</u>
Total.....	257	240	247
Fruit:			
Apples.....	22	27	29
Pears.....	11	11	11
Persimmons.....	7	6	6
Grapes.....	1	1	1
Peaches.....	7	7	7
Other.....	<u>2</u>	<u>3</u>	<u>3</u>
Total.....	50	55	57
Vegetables:			
Radishes.....	88	81	81
Chinese cabbages..	88	76	76
Cabbages.....	2	3	3
Green onions.....	7	7	5
Other.....	<u>102</u>	<u>109</u>	<u>106</u>
Total.....	287	276	271
Tobacco.....	53	52	51
Cotton.....	191	140	149
Hemp.....	25	23	23
Mulberry.....	89	90	89

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Table 7.--Major crops: Production by commodity groups, 1957-59

Crop	1957	1958	1959
	<u>1,000 m. t.</u>	<u>1,000 m. t.</u>	<u>1,000 m. t.</u>
Grains:			
Paddy.....	3,084	3,252	3,215
Barley.....	730	915	1,036
Wheat.....	118	120	163
Millet and sorghum.	87	122	97
Corn.....	14	14	14
Other grains.....	<u>31</u>	<u>37</u>	<u>41</u>
Total.....	4,064	4,460	4,566
Pulses:			
Soybeans.....	153	153	138
Red beans.....	13	13	12
Green beans.....	4	3	3
Other.....	<u>4</u>	<u>5</u>	<u>6</u>
Total.....	174	174	159
Potatoes:			
White.....	349	317	289
Sweet.....	<u>352</u>	<u>397</u>	<u>401</u>
Total.....	701	714	690
Fruit:			
Apples.....	61	75	104
Pears.....	29	30	26
Persimmons.....	13	16	13
Grapes.....	3	3	3
Peaches.....	16	15	15
Other.....	<u>5</u>	<u>13</u>	<u>6</u>
Total.....	127	152	167
Vegetables:			
Radishes.....	482	392	359
Chinese cabbages...	435	356	309
Cabbages.....	18	16	36
Green onions.....	25	26	19
Other.....	<u>267</u>	<u>322</u>	<u>287</u>
Total.....	1,227	1,112	1,010
Tobacco.....	26	28	29
Cotton.....	9	8	8
Hemp.....	7	7	7
Raw cocoon.....	6	6	5

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The 5-year (1958-62) rice production program of South Korea envisages a 23-percent increase in rice output over the 1957 level, to 3.8 million tons (paddy) in 1962. This is to be accomplished mainly by raising yields per acre through the extension of irrigation, increased use of fertilizers, better farming practices, and pest and disease control. Rice yields per acre have been steadily increasing, except for a severe setback in 1956, when growing conditions were very poor.

In Korea, as in other oriental countries, two principal types of rice are produced--common and glutinous. The first comprises varieties with hard kernels which remain separate when cooked. Glutinous rice kernels do not remain separate when cooked, but become a sticky mass; this rice is used largely for pastries and confections. Slightly more than 97 percent of the 1959 rice crop was common rice, and less than 3 percent was the glutinous type.

Many rice varieties are being tested in South Korea for high yields, early maturity, and resistance to blast disease. Ripening by the middle or end of September is of prime importance. In general, rice in Korea is sown in seedbeds about May 1 and transplanted June 10-15. It is harvested between September 15 and October 30, or even later.

Barley.--Next to rice, barley is Korea's most important grain crop. About one-fourth of the total cultivated area is devoted to barley. It is particularly important in the diet of the poorer people.

Two principal varieties are grown--common and naked. The grain of naked barley has no hull and the kernels separate in threshing as do wheat kernels. Naked barley has a higher food value than common barley, but returns lower yields per acre. It occupies nearly 40 percent of the total barley area.

In the northern part of South Korea, some barley is planted in the spring, but the common practice throughout the country is to plant in the fall--mostly from mid-October to late October, following a summer crop. Although barley competes with wheat and other winter crops, it does not compete with rice for the use of land. Barley is grown in paddy fields, where land can be drained and prepared for planting in the fall, as well as on upland areas.

Millet and grain sorghum.--Millet is an important spring-planted crop grown on upland areas. Some farmers are unable to produce sufficient rice for their own use and grow millet as a main summer-grown food crop. Other farmers sell part of their rice crop to meet cash requirements and buy millet for their own consumption.

Millet and sorghum occupy one-fifth of the upland area, or 7 percent of the total grain area. The area planted to millet and grain sorghum has declined about 30 percent since the late 1930's. Yields per acre have also declined and are about half those obtained in Japan. Annual output in Korea is less than half the prewar average.

Wheat.--Although wheat is not as important in South Korea as barley, it competes with barley for use of cropland in winter and spring. However, its longer growing period sometimes delays harvest until the rainy season. The winter wheat crop is planted in October and harvested about the middle of June.

Production of wheat flour in South Korea has increased steadily--most of it being produced in commercial mills from imported wheat. Numerous small cottage-industry type mills produce flour from locally grown wheat for home consumption. Most wheat flour milled in Korea is used in making noodles.

Potatoes and vegetables.--South Korea produces and consumes about 1.5 million tons of potatoes and vegetables annually. Since potatoes yield more food per acre than most other crops, the government has encouraged production of both white potatoes and sweetpotatoes.

Most of the white potatoes are grown in the eastern and northeastern part of South Korea. Sweetpotatoes are well adapted to soil and climatic conditions of the southern Provinces. They fit in well as a summer crop in rotation with barley and other upland winter crops. Planting is generally done from late May through early June and harvest comes in mid-October.

Many of the vegetables produced are used in making kimchi (pickled vegetables). The principal vegetable crops are radishes, cabbage, onions, carrots, garlic, cucumbers, pumpkins, melons, eggplant, tomatoes, peppers, skirret, and spinach. A large part of Korea's vegetable crop is produced in the northwest.

Pulses.--Soybeans are the most important pulse produced in South Korea; however, yields per acre are low. South Korean soybean yields are about half those obtained in Japan and lowest among the principal soybean producing countries of the world. Soybeans are planted in late May and harvested in mid-October. In areas having a relatively small proportion of upland, they are frequently planted on dikes between paddy fields. Soybeans are crushed for oil or used in making such protein foods as soy sauce, soy paste, and bean curd. Pulses of lesser importance include red beans, green beans, kidney beans, peas, peanuts, and other beans.

Fruits.--Although several types of fruit are grown in each Province, fruit growing is of minor importance in South Korea. Apples, grown principally in the east, are the most important fruit crop. About half the pears produced are grown in the two southern Provinces. Persimmons are concentrated in the southeast, grapes in the northwest, and peaches in the west coast Provinces. Except for a few orange trees on Cheju Island, citrus fruits are not grown in South Korea.

Korean fruits, especially apples and pears, are considered to be of high quality. Most fruits are consumed when fresh. The country produces no fruit for cider or canning, but small quantities are dried for winter use. Fruits compete very little with higher yielding staple food crops for use of land.

They are usually grown on uplands, and often on less productive hilly or mountainous land. Also, much of the fruit does not grow in conventional orchards or groves, but on individual trees in farmyards and along roads and field boundaries.

Cotton.--Acreage of cotton in South Korea has declined since 1945; there has been a pressing need for greater food production from the limited amount of tillable land. Since cotton yield per acre has also declined, total production has declined considerably. It is not likely to recover and reach levels sufficient to meet the needs of the growing textile industry. Korean textile millers consider imported U.S. cotton to be markedly less expensive and better suited for spinning and weaving than the domestic cotton.

Locally grown cotton, generally unsuited for use in manufacturing textiles, is used almost exclusively as padding for quilts, mattresses, and clothing and for spinning for home use. Large textile mills depend almost entirely on imports for their supplies of raw cotton.

Tobacco.--Although tobacco occupies less than 1 percent of the total cultivated area, it is an important commercial crop. Two types of leaf tobacco--flue-cured and sun-cured--are raised in South Korea. Flue-cured tobacco has been gaining in importance as a result of government efforts to encourage production of better quality tobacco.

South Korea's tobacco industry, a government enterprise, is managed through the Office of Monopoly. Production of leaf tobacco is confined to licensed growers who are required to deliver their tobacco crop to the government at prices fixed by the Monopoly.

Livestock and Poultry

Livestock production is of minor importance in the Korean agricultural economy. Only 0.2 percent of all farm households are classified as livestock producers. Farm animals are valued more for draft power than for food.

Scarcity of arable land limits the production of forage crops and there is little grain available for livestock feed. Roughages consist largely of forage recovered from nonarable land, straw, sweetpotato vines, and other crop byproducts or waste. Concentrates consist of byproducts of grain-milling operations, as well as some low-quality grains.

Cattle are the most important class of livestock in South Korea. Most of the cattle are native brown or red workstock. There are few beef cattle and only a small number of dairy cattle in the country. Work cattle are kept on about one-third of the farms.

Hogs are raised throughout South Korea, but they are most important in the southwest. Although hogs consume some feed concentrates, they do not compete with humans for edible foodstuffs. They are fed grain milling byproducts and waste materials from the homes and farms. Even though pork is produced from cheap feed, it is an expensive food and rarely included in the

farmer's diet. Hogs are primarily a supplementary source of income for South Korean farmers. Hog bristles are recovered from slaughter and constitute an important export item.

Increased numbers of hogs and poultry are probably a result of increased human consumption of wheat and barley food products. Supplies of byproduct feedstuffs have grown along with increased consumption, providing more concentrates for hogs and poultry. Despite increased livestock and poultry numbers, per capita meat production remains very low.

Table 8.--Livestock and poultry: Number on farms, 1956-59

Species	1956	1957	1958	1959
	Thousands	Thousands	Thousands	Thousands
Livestock:				
Draft cattle....	917	967	1,001	1,020
Dairy cattle....	(1/)	1	1	1
Hogs.....	1,161	1,233	1,324	1,439
Horses.....	17	18	18	19
Goats.....	51	68	83	109
Sheep.....	1	1	1	1
Total.....	2,147	2,288	2,428	2,589
Poultry:				
Chickens.....	9,031	9,352	9,894	12,041
Ducks.....	364	232	166	210
Geese.....	15	20	22	n.a.
Turkeys.....	1	1	1	2
Total.....	9,411	9,605	10,083	n.a.

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1/ Less than 500.

Sericulture

Sericulture is South Korea's leading subsidiary industry, and the raising of cocoons constitutes the principal cash crop for many farmers. Cocoon production depends on the supply of silkworm eggs and grafted mulberry seedlings. Silkworm eggs are produced almost entirely under strict supervision in government-operated stations, one in each Province. The eggs are placed on sheets or in paper bags and distributed to farmers in May and August through government distribution channels.

Grafted mulberry seedlings are generally planted in the spring in areas where food crops cannot be grown--in footpaths and on narrow ridges separating rice fields. It takes 3 years for original field plantings of graft seedlings before any appreciable harvest of twigs and 5 years before the stump comes into full production. The mulberry stump may then be maintained for 30 to 35 years.

About 60 percent of Korea's annual raw silk production is processed by commercial filatures. Raw silk is a major item among Korea's agricultural exports.

INTERNATIONAL TRADE

South Korea has a chronic trade deficit--both in agricultural and non-agricultural commodities. This imbalance has largely been offset by U. S. economic assistance. As less U. S. aid is made available, Korea is placing more emphasis on production of both export and import products.

Balance of Payments

South Korean exports in 1959 rose to \$19 million from \$16 million in 1958, while imports declined to \$283 million from \$378 million the preceding year. This resulted in a reduced trade deficit of \$264 million in 1959 compared to \$362 million the previous year.

Despite large trade deficits, Korea had a positive balance of payments in both 1958 and 1959. The deficits have been covered by supply programs of the International Cooperation Administration, Public Law 480, U.S. voluntary agencies, and the United Nations Korean Reconstruction Agency. These aid programs have resulted in a small excess of receipts over payments in recent years. Abundant agricultural production in 1958 and 1959, by reducing the need for food imports, was also a contributing factor to the favorable balance of payments position. International reserves have been about \$135 million to \$150 million during the past 3 years.

Trade Regulations

The Bank of Korea is authorized to license, more or less automatically, essential import items and export commodities available in adequate supply. Less essential import items and exportable goods in relatively short supply require licenses from the Ministry of Commerce and Industry. All commodities are subject to the price-check requirements established by the Ministry of Commerce and Industry. The flow of trade is controlled through trade programs announced semiannually.

Most importable items included in the trade program are paid for with foreign exchange deposited in the import accounts at the Bank of Korea and with government-owned and U. S. aid dollars made available for imports. A small number of items, listed as specific import items in the trade program, consisting of the less essential and usually more profitable items, is financed only with export proceeds.

Custom duties are levied upon imports on an ad valorem basis. The value of the imported goods for the assessment of duties since 1957 is the landed value (c.i.f.) of the commodities. A commodity or sales tax varying from 10 to 100 percent, depending on the essentiality of the commodity, is levied on all items sold for consumption within the Republic of Korea.

Agricultural Exports

Agricultural exports in 1959 amounted to \$3 million, or 16 percent of Korea's total exports. This was about twice the value of agricultural goods shipped in 1958. Most of the increase came in larger shipments of foodstuffs--5,000 tons of rice was exported to the Ryukyu Islands. This was the first rice exported from Korea since 1950.

In recent years, silk and bristles have been the most important agricultural export items. Ginseng, apples, and animal bones are other important farm exports. A major part of the agricultural exports go to the United States, consisting almost entirely of raw silk and bristles. Other important customers are Japan and Hong Kong.

Table 9.--Agricultural trade: Exports of farm products, by value, 1955-59

Commodity	1955	1956	1957	1958	1959
	1,000	1,000	1,000	1,000	1,000
	dollars	dollars	dollars	dollars	dollars
Hides, skins, and fur skins..	388	147	114	127	137
Rice, milled.....	--	--	--	--	775
Fruit, fresh.....	12	61	202	102	65
Red beans.....	291	--	--	--	--
Fats, oils, and oilseeds.....	--	1	10	--	224
Raw silk.....	1,275	1,560	927	548	744
Animal bones.....	98	116	145	140	66
Bristles.....	667	756	199	373	630
Ginseng.....	249	640	851	206	72
Other.....	576	741	269	195	403
Total agricultural.....	3,556	4,022	2,717	1,655	3,116
Total all exports.....	17,966	24,595	22,202	16,451	19,162
Agricultural share of total..	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
	19.8	16.4	12.2	10.1	16.3

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Agricultural Imports

Agricultural imports in 1959 were valued at \$78 million, or 28 percent of Korea's total imports. This was two-thirds the value of farm imports in 1958 and about half that of 1957. Most of the reduction came from decreased imports of foodstuffs, particularly cereals--a result of bumper grain crops in Korea during 1958 and 1959.

Most of Korea's imports in recent years have come from the United States. These shipments have consisted largely of grain, raw cotton, and manufactured goods. Japan, despite a temporary trade ban in 1959, and West Germany are the next most important suppliers.

Table 10.--Agricultural trade: Imports of farm products, by value, 1955-59

Commodity group	1955	1956	1957	1958	1959
	1,000	1,000	1,000	1,000	1,000
	dollars	dollars	dollars	dollars	dollars
Livestock and animal products..	3,476	2,059	14,366	2,909	1,571
Meat and meat prep.	646	245	10,815	124	5
Milk, evap. or condensed....	72	125	204	346	524
Milk, dried.....	1,483	564	2,099	1,363	571
Hides and skins.....	442	893	650	631	434
Cereals and preparations.....	6,413	31,156	84,127	51,015	16,140
Wheat.....	4,188	12,367	27,328	26,362	14,494
Rice.....	14	30	34,722	527	1
Barley.....	258	17,808	18,763	18,464	--
Corn.....	3	5	231	404	703
Grain sorghum.....	--	--	2	1,672	570
Wheat flour.....	1,659	455	1,948	1,776	1
Fruits, nuts and vegetables....	341	116	442	335	296
Fruit, fresh.....	1	49	268	209	277
Sugar and preparations.....	7,295	11,329	8,444	10,132	7,597
Raw sugar.....	1,949	1,627	5,124	6,833	5,273
Molasses.....	1,439	2,320	2,938	3,187	2,096
Tobacco.....	12	4,850	2,125	1	--
Fats, oils, and oilseeds.....	2,982	2,631	2,536	3,858	2,656
Soybeans.....	247	136	84	3	--
Beef tallow.....	1,492	1,974	1,598	2,026	1,995
Lard.....	--	9	222	1,072	--
Natural rubber.....	1,630	4,932	3,871	4,463	6,653
Natural fibers.....	20,313	27,051	34,986	41,340	40,608
Cotton.....	20,145	25,007	26,887	31,686	30,768
Wool.....	76	1,581	7,426	9,149	8,926
Other agricultural.....	1,468	1,236	1,970	2,109	2,240
Total agricultural.....	43,930	85,360	152,867	116,162	77,761
Total all imports.....	341,415	386,063	442,174	378,165	282,743
Agricultural share of total....	Percent	Percent	Percent	Percent	Percent
	12.9	22.1	34.6	30.7	27.5

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Trade With the United States

The United States is South Korea's most important agricultural trading partner, taking about one-third of the exports and providing over three-fourths of the imports. More than \$400 million worth of U. S. agricultural commodities have been shipped to Korea since 1955. These goods have been effective in covering the annual food and fiber deficits and in minimizing inflationary trends.

U. S. Public Law 480 has played a major role in keeping U.S.-Korean agricultural trade on a high level. Almost \$145 million worth of agricultural products were programmed under Title I of P.L. 480 from 1955 through 1959. Actual shipments during this period amounted to 1.4 million metric tons of farm commodities. Primary exports under P.L. 480 have been wheat, barley, rice, cotton, and tobacco. Other shipments included grain sorghums, corn, pork products, lard, cheese, and dried whole milk.

In view of a decline in U. S. economic assistance to Korea, a further drop in that country's imports is indicated. The reduction in U. S. assistance may be offset to some extent by U. S. Development Loan Fund loans and by increases in Korea's own foreign exchange earnings. In any event, Korea should continue as a sizable outlet for surplus U. S. wheat, cotton, feed grains, beef tallow, and dairy products.

Table 11.--Agricultural trade: Imports of selected agricultural commodities, by quantity, 1955-59

Commodity	1955	1956	1957	1958	1959
	Metric tons	Metric tons	Metric tons	Metric tons	Metric tons
Milk, evaporated or condensed.	167	--	467	733	1,426
Milk, dried.....	6,731	1,869	6,547	3,372	662
Wheat.....	42,300	186,563	352,049	365,701	193,601
Wheat flour.....	14,313	5,344	19,940	13,794	5
Rice, milled.....	767	2,514	198,222	4,761	--
Barley.....	3,478	257,622	258,820	342,656	--
Corn.....	7	16	103	6,211	11,016
Grain sorghum.....	--	--	1	30,524	11,843
Soybeans.....	--	--	--	671	1,137
Lard.....	--	27	507	2,429	--
Beef Tallow.....	5,698	9,442	6,814	7,633	7,994
Cotton, raw.....	27,677	40,157	42,135	48,056	52,966

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Table 12.--Agricultural trade: U. S. exports of agricultural commodities to South Korea, by value, 1955-59

Commodity	1955	1956	1957	1958	1959
	1,000	1,000	1,000	1,000	1,000
	dollars	dollars	dollars	dollars	dollars
Livestock and animal products.	5,323	7,805	9,497	879	3,289
Cereals and preparations.....	5,674	27,721	63,124	50,972	16,318
Fruits, nuts and vegetables...	113	96	578	658	383
Sugar and preparations.....	18	2,335	520	275	431
Tobacco, unmanufactured.....	--	4,653	2,117	--	--
Fats, oils and oilseeds.....	1,891	2,641	10,391	10,356	2,931
Cotton, raw.....	24,693	26,478	22,227	32,456	26,383
Other agricultural.....	5,012	7,876	14,738	15,239	9,953
Total agricultural.....	42,724	79,605	123,192	110,835	59,688
Total all exports.....	126,189	157,344	276,787	215,933	136,646
Agricultural share of total...	Percent	Percent	Percent	Percent	Percent
	33.9	48.7	44.5	51.3	43.7

Foreign Agricultural Trade of the United States.

Table 13.--Agricultural trade: U. S. imports of agricultural commodities from South Korea, by value, 1955-59

Commodity	1955	1956	1957	1958	1959
	1,000	1,000	1,000	1,000	1,000
	dollars	dollars	dollars	dollars	dollars
Bristles.....	709	847	298	252	700
Silk, raw.....	997	1,950	925	561	776
Other agricultural.....	11	14	--	7	4
Total agricultural.....	1,717	2,811	1,223	820	1,480
Total all imports.....	5,143	8,830	4,354	2,391	3,999
Agricultural share of total:	Percent	Percent	Percent	Percent	Percent
	33.4	31.8	28.1	34.3	37.0

Foreign Agricultural Trade of the United States.

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