SECRET

• **N**º 86

Economic Intelligence Report

# AGRICULTURAL PLANS OF THE EUROPEAN SATELLITES THROUGH 1965



CIA/RR ER 61-43 October 1961

# CENTRAL INTELLIGENCE AGENCY Office of Research and Reports

SECRET

## SECRET

## Economic Intelligence Report

# AGRICULTURAL PLANS OF THE EUROPEAN SATELLITES THROUGH 1965

CIA/RR ER 61-43

#### WARNING

This material contains information affecting the National Defense of the United States within the meaning of the espionage laws, Title 18, USC, Secs. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.

# CENTRAL INTELLIGENCE AGENCY Office of Research and Reports

## SECRET

S-E-C-R-E-T

## FOREWORD

This report estimates the prospects for fulfillment of the agricultural plans of the European Satellites for 1965. An examination is made of past trends in production and consumption of food as an aid to projecting the manner in which production and consumption of food in the Satellites may develop for major groups of agricultural commodities during the next 5 years. Because of the limited plan data available and the many variables that determine agricultural production, all projections include a large element of judgment. One important assumption is made in evaluating the future level of production -- that average weather will prevail during 1961-65.

The European Satellites covered in this report are Czechoslovakia, East Germany, Hungary, Poland, and Rumania. Each has announced planned goals for agricultural production ending in 1965.\* Both the amount and the quality of information available on the agricultural plans, however, varies widely among the Satellites. Because of the collectivization campaigns waged during 1959-60 in Hungary and East Germany, subsequent to the announcement of their 1965 plans, statistical revisions probably can be expected in the original goals set for 1965. Data on 1965 plans for Albania and Bulgaria were too incomplete to be included.

\* Plan periods are as follows: Czechoslovakia, Hungary, and Poland, 1961-65; East Germany, 1959-65; and Rumania, 1960-65.

- iii -

### S-E-C-R-E-T

## S-E-C-R-E-T

## CONTENTS

		Page
Sum	mary and Conclusions	1
I.	Agricultural Production, 1956-60	5
	<ul> <li>A. General</li></ul>	5 5 6
II.	Agricultural Production Plans for 1965	9
	A. Production of Crops	11 13
III.	Planned Means of Achieving Production Goals	15
	<ul> <li>A. Investments</li></ul>	15 18 19 20 21
	<ol> <li>Fertilizers, Pesticides, and Herbicides</li> <li>Improvement of Seed</li></ol>	21 22
	F. Agricultural Labor	23
IV.	Institutional Factors Affecting Production	23
	A. Socialization	23 25
۷.	Prospects for Fulfillment of Agricultural Production Goals	25
	A. General       General         B. Czechoslovakia       General         C. East Germany       General         D. Hungary       General         F. Poland       General         F. Rumania       General	25 26 27 29 29 31
۷L.	Availability of Food	32

S-E-C-R-E-T

## S-E-C-R-E-T

## Appendix

## Tables

1.	Indexes of Gross Agricultural Production for Selected European Satellites, Prewar, 1955-60, and 1960	
	Plan	6
2.	Production of Major Crops in Selected European Satel- lites, Prewar, 1955-59, 1960, and 1965 Plan	7
3.	Numbers of Livestock and Production of Livestock Products in Selected European Satellites, Prewar, Selected Postwar Years, and 1965 Plan	8
4.	Planned Increases in the Value of Gross Agricultural Production and Annual Rates of Growth in Selected European Satellites, 1956-60 and 1961-65	10
5.	Yields of Selected Major Agricultural Commodities in Selected European Satellites, Prewar, 1955-59, 1960, and 1965 Plan	12
6.	Numbers of Livestock per 100 Hectares of Agricultural Land in Selected European Satellites, 1955, 1960, and 1965 Plan	14
7.	Gross Fixed Investments in Agriculture in Selected European Satellites, 1961-65 Plan Compared with 1956-60 Actual	16
8.	Share of Agriculture in the Total Gross Fixed Invest- ments in Selected European Satellites, 1956-60 and 1961-65 Plan	17
9.	Planned Structure of Investment Outlays for Agricul- ture in Selected European Satellites, 1961-65	17

#### - vi -

## S-E-C-R-E-T

S-E-C-R-E-T

## Page

10.	Inventory of Tractors in Selected European Satellites, 1950, 1955, 1960, and 1965 Plan	18
11.	Availability of Mineral Fertilizer to Agriculture in Selected European Satellites, 1955, 1960, and 1965 Plan	21
12.	Consumption of Mineral Fertilizer per Hectare of Arable Land in Selected European Satellites, 1954/55, 1959/60, and 1965 Plan	22
13.	Annual Per Capita Availability of Selected Foods in the European Satellites, 1965 Plan	33

## Chart

Selected European Satellites: Percentage of Total Agri-	
cultural Land in State and Collective Farms, 1956-61	
following page	24

- vii -S-E-C-R-E-T

## S-E-C-R-E-T

## AGRICULTURAL PLANS OF THE EUROPEAN SATELLITES THROUGH 1965\*

## Summary and Conclusions

The agricultural sector of the economies of the European Satellites continues to give the Communist planners considerable trouble. Whereas long-term planned increases in gross industrial output have been fulfilled or exceeded, no Satellite has ever fulfilled a 5-year or a 6year plan for agricultural output. The average value of gross agricultural production for the European Satellites during 1955-59 was only 8 percent above the pre-World War II average compared with an average increase of 27 percent for Western Europe.

The plans of the European Satellites for 1965 call for an average annual rate of increase in gross agricultural production of about 3.5 to 4.5 percent, except in Rumania, where a more ambitious annual rate of growth of 9.2 to 10.3 percent is planned. Although these rates of growth are about the same as those planned for 1956-60, the actual rate achieved during that period was less than 2 percent, except in Poland (3.2 percent). The Communist regimes, however, have planned substantial increases in agricultural investments for 1961-65 in comparison with 1956-60, ranging from about 60 percent in Czechoslovakia and Rumania to 93 percent in East Germany. The largest share of the investment is to be used for agricultural machinery and farm buildings. Except for Poland, collectivization has been essentially completed. The organization of large production units, in Communist theory, will permit more efficient utilization of the new machinery and the widespread application of technological improvements. No increase in farm labor is planned in any Satellite during the next 5 years.

To achieve the planned increases in inputs, industry during 1961-65 is to provide greater support to agriculture. Mineral fertilizers and agricultural machinery available to agriculture are to increase sharply along with production of pesticides and other chemicals. Extensive land improvement is planned throughout the Satellites, including an expansion of the irrigated areas in Czechoslovakia, Hungary, and Rumania.

A common goal of the various agricultural plans is to increase production of livestock products at a rate faster than or about equal to

\* The estimates and conclusions in this report represent the best judgment of this Office as of 15 September 1961.

#### S-E-C-R-E-T

#### S-E-C-R-E-T

that of production of crops. The planned targets for production of livestock are to be achieved by increases both in productivity per animal and in numbers of animals. More feeds as well as feeds of better quality, improved breeding stock, and more barns are planned to improve the productivity of livestock. To help alleviate the perennial problem of fodder shortages in the Satellites, the large production increase planned for silage corn and legumes is to be achieved both by an extension in sown area and by increased yields per hectare. For other feed crops, bread grains, and root crops the increases in production are based largely on increases in yield per hectare, as there are only limited possibilities for extending the total cultivated area.

Many factors seem to favor a somewhat higher rate of growth in agricultural production in the future. These factors are increased investment, coming partly from the increased capacity of industry to supply means of production; increased productivity as a result of past investments in land improvement and farm education, which are beginning to have an effect; increased opportunity to apply improved technology; and fewer disruptions from collectivization drives. Nevertheless, many institutional, managerial, and other problems that remain to be solved will continue to depress the growth of agricultural production. Among the problems are the determination of the optimum size for collective farms, the status of private plots, the payment of wages in money or in kind, the most effective type of collective, and the role of the machine tractor stations (MTS's). Furthermore, the Communists still have to overcome the deep-rooted preference of most peasants for private farming and to train men accustomed to smallscale farming to operate large collective farms.

It is estimated that the planned rates of increase in agricultural production will not be achieved. The rate of growth, however, probably will be larger than during the past 5 years -- except possibly in Poland -- and should exceed the rate of increase in population. Poland may have difficulty in maintaining an average annual rate of 3.2 percent. Relative to the other Satellites, Rumania and Hungary may show the largest increase in agricultural production by 1965 compared with 1960. Agriculture in these countries is less developed and stands to gain substantially from increases in physical inputs and technology. Furthermore, the level of production for Rumania and Hungary in 1960 was no higher than in 1955, whereas the level reached in 1960 represents a postwar high for the other Satellites.

Contrary to plans the indications are that production of crops in the Satellites will increase at an average annual rate higher than that for production of livestock. Most Satellites can reap greater short-run benefits from increased inputs of fertilizers and improved

- 2 -

#### S-E-C-R-E-T

varieties of seed, especially on grain and root crops, than from measures aimed at improving production of livestock. The probable lag in production of fodder crops in the northern Satellites will continue to restrict the growth of production of livestock. Also, measures to decrease the number of livestock on private plots in favor of collective ownership may have unfavorable repercussions on increases in livestock numbers. Some increase in the productivity of livestock can be expected, but considerably less than planned, especially in Rumania, Hungary, and Czechoslovakia.

The main objective of agricultural policy in the Satellites is to increase agricultural output as rapidly as possible in order to insure an increase in the quality and variety of the average diet. The Satellite plans for 1965, except for Rumania, aim at achieving the current levels of per capita consumption of high-quality foods such as meat, milk, and sugar in the more developed Western European countries. Rumania has planned the most ambitious increases for per capita consumption of quality foods, but consumption even if achieved would still be below Western European levels.

Although the various plans for 1965 do not state self-sufficiency as the ultimate aim, it is apparent that a larger share of the needs for domestic food is planned to be covered from indigenous production. The plans for food consumption, therefore, are largely dependent on achievement of goals for agricultural production. Improvement in the diet is expected, but because the production goals for some food crops and for livestock products are overly ambitious, the improvement in the variety and quality of the diet probably will fall short of planned goals. This shortfall could be most serious for Hungary, Rumania, and Poland, where the industrial worker's demand for livestock products already exceeds supply, where additions to the industrial labor force may be the largest during the next 5 years, and where the pressure to increase agricultural exports exists. Furthermore, food has a heavy weight in the budget of the average Satellite family, and per capita consumption as well as the demand for nearly all staple foods has increased. Planned increases (25 to 40 percent in 5 or 6 years) in the income of workers is expected to create an additional demand for more high-quality foods, especially animal products, fruits, and vegetables. Because the supply of these foods will not be able to satisfy this increased demand, complaints of shortages and high retail prices for these foods are expected to continue throughout all the Satellites. By 1965, East Germany and Czechoslovakia will still be large importers of meat, fats and oils, and grain. These two Satellites, as well as Poland (for grain), may have to depend more on non-Bloc sources for such commodities than previously.

## - 3 -

## S-E-C-R-E-T

## I. Agricultural Production, 1956-60

## A. General

During 1956-60 the agricultural policy of the European Satellites was characterized by increased state investments in agriculture, by increased availability of production inputs, by higher farm prices, and by pressures to socialize agriculture (except in Poland). All these measures were officially stated to be aimed at increasing agricultural production, which, by 1955, was seriously lagging behind industrial rates of growth and was showing tendencies to stagnate. Furthermore, in 1955, gross agricultural production was still below prewar levels in the more highly industrialized Satellites of Czechoslovakia, East Germany, and Poland, as shown in Table 1.\*

Planned increases in gross agricultural production from 1955 to 1960 ranged from 17 to 66 percent. No Satellite country, however, achieved the planned level of gross production in 1960. The only Satellite that registered a favorable increase in agricultural production was Poland (17 percent), whereas production in Hungary and Rumania was no better than in 1955.

The low level of investment in agriculture combined with the institutional and organizational upheavals during the past 5 years had an adverse effect on the development of agricultural production, except in Poland, which supported private farming. The collectivization of agriculture proceeded faster in most of the Satellites during 1956-60 than in the previous 5 years, but Poland registered a decline.

## B. Production of Crops

Industrial and fodder crops continued to be expanded at the expense of grain crops, especially wheat and rye. The increased yields of grain crops were planned to overcompensate for any loss in sown area. However, as shown in Table 2,\*\* the average production of grain and potatoes for 1955-59 was below prewar levels in all Satellite countries except Rumania. On the other hand, the increase in area devoted to industrial crops (oilseed and sugar beets) resulted in a substantial increase in production, although yields per hectare were below prewar levels.

The low yields per hectare for grain and potatoes created a shortage of these crops for use as fodder. Whereas fodder crops

\* Table 1 follows on p. 6. \*\* Table 2 follows on p. 7.

- 5 -

#### S-E-C-R-E-T

#### S-E-C-R-E-T

#### Table 1

## Indexes of Gross Agricultural Production for Selected European Satellites <u>a</u>/ Prewar, 1955-60, and 1960 Plan

1955 = 100

Year	Czechoslovakia	East Germany	Hungary	Poland	Rumania
1934-38 <u>b</u> /	105	105	79	106	84
1956-60 р/	104	107	96	115	95
1955 1956 1957 1958 1959 1960 <u>c</u> / 1960 Plan <u>d</u> /	100 102 102 104 103 109 127	100 99 106 112 107 109 117	100 90 95 90 1.04 99 1.27 <u>e</u> /	100 111 115 116 115 117 125	100 82 102 88 103 100 166

a. The index series was constructed by using European regional weights developed by the Food and Agricultural Organization (FAO) of the UN and by the Organization for European Economic Cooperation (OEEC) and based on 1952-56 price relationship to the production figures. To make indexes conform to Communist reporting of gross agricultural production, feed and seed have not been deducted.

- b. Average.
- c. Preliminary estimates.
- d. Long-term plan.

e. The 1960 plan was based on the increase above the average production in 1950-54.

showed little or no increase in production, numbers of meat animals (cattle and hogs) were increasing during 1955-59, as shown in Table 3.\* To support the larger numbers of livestock, East Germany, Czechoslovakia, and Poland were required to import quantities of grain larger than planned.

## C. Production of Livestock

Production of livestock during the past 5 years increased more rapidly in the northern Satellites (East Germany, Czechoslovakia, and

\* Table 3 follows on p. 8.

- 6 -

#### S-E-C-R-E-T

## Table 2

## Production of Major Crops in Selected European Satellites <u>a</u>/ Prewar, 1955-59, 1960, and 1965 Plan

	Thousand Metric Tons				1965 Plan	
Commodity and Country	1934-38 Average	1955-59 Average	1960 Preliminary	1965 Plan	as a Percent of 1955-59 Average	
Grain						
Czechoslovakia East Germany Hungary Poland Rumania	5,636 6,464 6,521 13,279 7,982	5,211 5,296 6,377 13,155 8,003	5,174 5,500 6,757 13,010 8,550	7,040 7,625 <u>b</u> / N.A. 15,560 15,000 <u>c</u> /	135 144 N.A. 118 187	
Total	39,882	38,042	<u>38,991</u>	N.A.	N.A.	
Potatoes						
Czechoslovakia East Germany Hungary Poland Rumania	9,635 13,567 2,166 38,000 1,318	7,844 12,140 2,439 33,791 2,242	5,254 13,000 2,750 35,960 2,300	9,360 18,800 <u>b</u> / N.A. 41,850 4,750 <u>d</u> /	119 152 N.A. 124 212	
Total	64,686	<u>58,456</u>	<u>59,264</u>	74,760	128	
Sugar beets						
Czechoslovakia East Germany Hungary Poland Rumania	4,664 5,412 886 5,962 392	5,881 5,620 2,163 7,154 2,148	8,404 6,800 3,100 10,017 3,400	7,970 8,600 <u>b</u> / 3,500 11,400 5,000	136 153 162 159 233	
Total	17,316	22,966	<u>31,721</u>	36,470	159	
Oilseeds						
Czechoslovakia East Germany Hungary Poland Rumania	7 41 53 72 48	50 171 129 108 314	55 198 77 100 522	N.A. N.A. 120 157 750	N.A. N.A. 93 145 239	
Total	221	772	<u>952</u>	N.A.	N.A.	

a. Barn harvest unless otherwise indicated.

b. Biological harvest.

c. Midpoint of the planned range of 14 million to 16 million.

d. Midpoint of the planned range of 4.5 million to 5.0 million.

- 7 -

## S-E-C-R-E-T

#### S-E-C-R-E-T

## Table 3

## Numbers of Livestock and Production of Livestock Products in Selected European Satellites Prewar, Selected Postwar Years, and 1965 Plan

Commodity and Country	1934-38 Average	1955	1959	1960 Preliminary	1965 	1960 as a Percent of 1955	1965 Plan as a Percent of 1960
Cattle			Thousand Head	a/			
Czechoslovakia East Germany Hungary Poland Rumania	4,296 3,577 1,905 9,924 <u>b</u> / 3,653	4,107 3,760 2,128 7,912 4,630	4,303 4,465 2,004 8,353 4,394	4,387 4,675 1,971 8,695 4,450	4,800 5,030 2,270 10,500 5,800	107 124 93 110 96	109 108 115 121 130
Cows							
Czechoslovakia East Germany Hungary Foland Rumania	2,384 1,945 <u>b</u> / 915 6,294 <u>b</u> / 1,787 <u>b</u> /	2,084 2,100 859 5,455 1,914	2,072 2,158 962 6,025 2,137	2,047 2,175 949 5,885 2,156	2,300 2,603 c/ 1,110 6,600 2,900	98 104 111 108 113	112 120 117 112 135
Hogs							
Czechoslovakia East Germany Hungary Poland Rumania	3,144 5,744 3,620 9,684 <u>b</u> / 2,761	5,285 9,029 5,818 10,888 4,370	5,687 8,283 6,225 11,209 4,008	5,962 8,316 5,356 12,615 4,300	5,510 8,733 6,990 15,500 7,500	113 92 92 116 98	92 105 131 123 174
Meat <u>d</u> /		The	ousand Metric	Tons			
Czechoslovakia East Germany <u>g</u> / Hungary <u>g</u> / Poland Rumania	629 <u>e</u> / 615 280 1,534 <u>b</u> / 763	768 667 311 1,703 886	903 685 315 2,098 903	929 719 290 2,150 962	1,280 <u>f</u> / N.A. 2,855 1,750 <u>h</u> /	121 108 93 126 109	138 N.A. N.A. 133 182
Milk <u>i</u> /							
Czechoslovakia East Germany <u>j</u> / Hungary Poland Rumania	4,500 4,952 1,700 11,100 <u>b</u> / 1,496	3,521 4,962 1,525 9,903 1,830	3,771 5,826 2,085 12,302 2,203	3,832 5,700 2,050 12,263 2,453	5,531 7,658 2,780 15,707 5,200 <u>k</u> /	109 115 134 124 134	144 134 136 128 212
Butter 1/							
Czechoslovakia East Germany Hungary Poland Rumania	14.3 105 9.4 N.A. N.A.	43.2 144 11.4 61.3 6.9	55.4 161 16.5 93.3 11.0	61.8 175 16.3 94.6 12.0	' 81.2 241 N.A. 154.0 30.0	143 122 143 154 174	131 138 N.A. 163 250
Eggs Million							
Czechoslovakia East Germany Hungary Foland Rumania	1,900 1,300 N.A. 3,200 1,354	1,734 2,043 1,200 4,160 1,546	2,135 3,127 1,850 5,127 2,160	2,230 N.A. 1,870 5,525 2,250	3,000 N.A. 2,320 7,000 4,750	129 N.A. 156 133 146	135 N.A. 124 127 211

Census dates: 1 January for Rumania, June for Poland, March for Hungary, and December for East Germany and Czechoslovakia. 8. 1938. ъ.

c.

Based on planned numbers per 100 hectares of agricultural land. Live weight basis, except where otherwise indicated. Including hogs, cattle, sheep, and horses. 1936. đ.

e.

f. Including horse meat, sheep, and poultry, which are not included for other years.

Trimmed carcass weight. g. h.

Midpoint of the planned range of 1.7 million to 1.8 million. Cow milk. **i**.

3.5 percent butter fat content.

Including sheep and buffalo milk. Commercial butter. k.

1.

- 8 -

#### S-E-C-R-E-T

Poland) than in the southern Satellites (Hungary and Rumania). Livestock numbers trended upward during the early part of the period 1956-60 and then leveled off in the northern Satellites. Hungary and Rumania, however, experienced a decline in numbers of hogs and cattle during the period, so that numbers of hogs and cattle in 1960 were less than those in 1955 (see Table 3\*). However, numbers of both hogs and cattle in 1960 were above prewar levels in all the Satellites except for cattle in Poland. Livestock numbers everywhere fluctuated with variations in monetary incentives and fodder supplies and with the phases of collectivization, but more so in Hungary and Rumania.

Somewhat larger increases occurred in output of livestock products than in livestock numbers. During the last 5 years, gains were registered by each Satellite in production of milk and in yields per cow -- apparently, efforts to improve feeding practices and breeds of cattle were beginning to pay off. The largest gains were made by Rumania, Hungary, and Poland -- countries in which milk yields had been low. By 1960, Czechoslovakia was the only Satellite that had not exceeded prewar levels in the numbers of cows or the total production of milk. With the exception of Hungary, production of meat trended upward during 1956-60 but showed signs of weakening by 1960 in several Satellites. Poland achieved the largest increase in production of meat during the past 5 years and also relative to prewar levels. Production of commercial butter and eggs increased throughout the Satellites, and production of each in 1960 greatly exceeded both the level in 1955 and the prewar level.

Although production of livestock products increased in most of the Satellites during the past 5 years, the increases were below expectations of the economic planners in the various countries. Also, the increase in production of meat was not sufficient to meet the demands of an expanding urban population with rising incomes. By the end of 1960, therefore, most Satellites were reporting difficulties in meeting the demand for meat and animal fats -- higher prices and/or some form of rationing were being used to curtail demand.

### II. Agricultural Production Plans for 1965

In all Satellite countries the over-all value of gross agricultural production planned for 1965 calls for an acceleration of past rates of growth of output, though to a lesser extent in Poland than in the other countries. As shown in Table 4,\*\* Rumania again, as in the last long-term plan, has planned the most ambitious rate of growth, annually averaging 9.2 to 10.3 percent. Planned increases in over-all

#### S-E-C-R-E-T

<sup>\*</sup> P. 8, above.

<sup>\*\*</sup> Table 4 follows on p. 10.

## S-E-C-R-E-T

## Table 4

Planned Increases in the Value of Gross Agricultural Production and Annual Rates of Growth in Selected European Satellites 1956-60 and 1961-65

Country	Total Growth	Average Annual	Rate of Growth <u>a</u> /
	1961-65 Plan	1956-60 <u>b</u> /	1961-65
	(Percent)	Actual	Plan
Czechoslovakia	22.8	1.7	4.2
East Germany	24.5 c/	1.7	4.5
Hungary	19 d/	-0.2	3.5
Poland	22	3.2	4.1
Rumania	55 to 63 <u>e</u> /	0	9.2 to 10.3

a. Average annual rates of growth are computed at the compound rate for the stated period, including the terminal years.

b. Derived from Table 1, p. 6, above.

c. Based on the average annual rate of increase planned, 4.5 percent for 1959-65.

d. Computed from the announced increase of 30 to 32 percent in the volume of gross agricultural production above the 1954-58 average.
e. The Six Year Plan (1960-65) indicates an increase of 70 to 80 percent in agricultural production.

production are to come largely from more intensive farming operations -shifting of acreage from lower to higher valued crops and from increased productivity of land, labor, and animals. The Satellites have no large areas of uncultivated farm land that can be brought into production to effect a sharp upward trend in production such as occurred in the USSR during the past 7 years. A larger rate of growth has been planned for the livestock sector than for the crop sector in all the Satellites excepting Czechoslovakia and Hungary.\*

The production goals for agricultural commodities in 1965 are largely based on attaining or preserving self-sufficiency in supplies of basic foods, while at the same time raising consumption levels of quality foods; insuring a better supply of raw materials to industry;

- 10 -

## S-E-C-R-E-T

<sup>\*</sup> Because of the unfavorable situation currently prevailing in the livestock sector as a result of collectivization drives in 1959 and 1960, a downward revision in the 1965 plan for production of livestock may be forthcoming.

and in some countries expanding exports. Furthermore, the planned levels of productivity in agriculture (other than labor) appear to have been highly influenced in Czechoslovakia and East Germany by current levels of productivity in the more developed countries in Western Europe, such as West Germany, while the agriculturally less developed Satellites hope to achieve a level of productivity comparable to current levels in East Germany and Czechoslovakia.

## A. Production of Crops

The pattern of output is to continue the past trend of raising the relative importance of industrial and fodder crops to food crops. Large increases in yields are to account for the major share of planned increases in production of crops by 1965. A lesser influence will be that of expanding acreage because the possibilities for expanding the sown area are very limited in each Satellite. Some shifting within the present area sown to grains from oats and miscellaneous grains to corn for silage and legumes is planned in the northern Satellites. Hungary is the only Satellite that has planned a sizable reduction in the bread grain area -- one-fifth below that of the 1954-58 average. The area devoted to corn, however, is to increase in the same proportion. In contrast, Rumania plans a small increase in the area sown to bread grains and a drop in the harvested area of corn for grain. Increases in the area devoted to oilseeds, sugar beets, and vegetables are planned in most Satellites.

The planned yields per hectare in 1965 for major crops in five Satellites are shown in Table 5.\* Among these Satellites the planned increase for 1965 in comparison with the average in 1955-59 for each crop is very ambitious for Rumania and more modest for Poland and Hungary. Generally the largest increases in yield are expected for potatoes and industrial crops. In the northern Satellites the average yields of these crops in 1955-59 were still below the prewar average. Except for oilseeds, the planned yields for 1965 not only exceed prewar levels but represent an all-time high. In absolute terms, East German agriculture in 1965 would still have the highest level of production per unit of land among the Satellites. However, the spread in yields between the least productive Satellite, Rumania, and the most productive, East Germany, is planned to decrease.

Although plan data are incomplete, statements by officials indicate that all the Satellites are expecting substantial increases in production of corn silage and hay. For example, East Germany has planned an increase of 94 percent in comparison with the average yield in 1958-60 for green silage, and Poland has planned an increase of

\* Table 5 follows on p. 12.

- 11 -

#### S-E-C-R-E-T

#### S-E-C-R-E-T

## Table 5

## Yields of Selected Major Agricultural Commodities in Selected European Satellites Prewar, 1955-59, 1960, and 1965 Plan

	· · · · · · · · · · · · · · · · · · ·			Quintals	s per Hectare <u>a</u> /
Country and Commodity	. 1934-38 Average	1955-59 Average	1960 Preliminary	1965 Plan	1965 as a Percent of 1955-59 Average
Czechoslovakia					
Wheat Rye Barley Corn Potatoes Sugar beets Rape Milk <u>b</u> /	17.1 16.0 17.0 21.4 134.8 285.8 14.7 2,004 <u>c</u> /	20.7 19.4 20.3 25.6 127.5 259.0 13.5 1,718	20.0 19.0 22.0 29.0 92.3 347.0 14.0 1,785	27.0 25.0 26.5 36.0 180.0 327.4 N.A. 2,350	130 129 131 141 141 126 N.A. 137
East Germany			•		
Grain Potatoes Sugar beets Oilseeds Milk <u>b</u> /	20.5 173.0 291.0 19.1 2,532 <u>e</u> /	21.4 152.7 257.4 13.3 2,535	23.3 168.6 289.4 14.4 2,646 /	30.5 <u>d</u> / 245.0 385.0 18.5 2,942	142 160 150 139 116
Hungary					
Bread grains Barley Corn Sunflower seed Potatoes Sugar beets Milk <u>b</u> /	13.0 f/ 13.6 f/ 18.7 f/ 9.5 f/ 68.7 f/ 205.2 f/ 1,586 e/	14.0 17.9 22.4 11.4 104.8 208.5 1,903	15.6 19.3 24.0 11.1 109.1 233.1 2,105	18.8 N.A. 29.2 13.0 130.4 243.0 2,700	134 N.A. 130 114 124 117 142
Poland					
Grains Potatoes Sugar beets Oilseeds Milk <u>b</u> /	13.7 138.0 265.0 10.8 1,760 <u>e</u> /	14.7 123.0 196.0 9.9 1,865	14.6 125.0 250.0 10.5 2,023	17.6 155.0 260.0 12.5 2,311	120 126 133 126 124
Rumania					
Wheat Corn Potatoes Sugar beets Sunflower seed Milk <u>b</u> /	10.3 10.4 87.3 150.8 8.6 812 <u>e</u> /	10.9 11.5 84.6 142.3 9.0 905	12.9 11.2 82.1 170.0 10.4 1,102	18.0 26.5 g/ 150.0 250.0 15.0 1,534	165 230 177 176 167 170

a. Barn harvest unless otherwise indicated. (One hectare equals 2.471 acres; 1 metric quintal [equivalent to a metric centner] equals 100 kilograms, or 220.46 pounds avoirdupois.)

b. Liters per cow.

c. 1937. d. Biological yield, which should be reduced by at least 10 percent to be comparable, or a barn yield

of 27.4 quintals and a percentage increase of 128. Thus the percentage increase is overstated. e. 1938.

f. 1931-40 average.

g. Midpoint of the planned range, 25 to 28 quintals per hectare.

- 12 -

### S-E-C-R-E-T

57 percent in production of forage crops above the levels in 1960. Of the food crops, production of vegetables in 1965 compared with that in 1958 is to be expanded the fastest in the southern Satellites, as indicated by the following percentages: Czechoslovakia, 35; East Germany, 11; Hungary, 51; Poland, 33; and Rumania, 106. Rumania once again stands out as setting the most optimistic goal of the five Satellites.

## B. Production of Livestock

Although the plans for 1965 call for an expansion of livestock herds, the larger share of the planned increase in livestock products is to be derived from increased productivity per animal. Rumania and Hungary, which are less developed agriculturally, have planned for larger percentage increases in both livestock numbers and livestock products than have East Germany, Poland, and Czechoslovakia. As shown in Table 6,\* in both Rumania and Hungary the number of livestock per 100 hectares of agricultural land was lower in 1960 than in 1955, so that the planning of larger increases than in the northern Satellites during the next 5 years is to be expected.

Czechoslovakia is the only Satellite that has planned a reduced number of hogs by 1965. All Satellites, however, expect a reduction in the number of horses because of the planned increase in mechanical draft power. The reduction in horses will release feed for other types of livestock. Data on livestock numbers and production of livestock for selected years, including the 1965 plan, are given in Table 3.\*\* Rumania once again is the most ambitious planner both in terms of the number of livestock and in productivity per animal. Even though the productivity of livestock in Rumania is among the lowest in the Satellites, past trends hardly justify the expectation of a doubling of production of milk and an increased production of meat of more than 80 percent within 5 years.

The large increases planned in production of livestock products -- meat, milk, and eggs -- in all the Satellites are to provide for an improvement in the quality of the average diet and for an increase in exports by Poland, Rumania, and Hungary. East Germany and Czechoslovakia are striving to attain self-sufficiency in production of meat by 1965.

To a certain extent the Satellite governments have less control over production of livestock than over production of crops. Whereas, except for Poland, 80 to 95 percent of the land has been socialized,

\* Table 6 follows on p. 14.
\*\* P. 8, above.

- 13 -

#### S-E-C-R-E-T

## Table 6

## Numbers of Livestock per 100 Hectares of Agricultural Land in Selected European Satellites <u>a</u>/ 1955, 1960, and 1965 Plan

	· · · · · · · · · · · · · · · · · · ·			
Country and Livestock	1955_	1960	1965 Plan	
Czechoslovakia				
Cattle Hogs	56.3 72.4	59•3 80•6	64.9 74.5	
East Germany	- -			
Cattle Hogs	58.4 125.9	72.9 129.7	78.0 135.4	
Hungary			<i>,</i>	
Cattle Hogs	29.4 80.3	27.5 74.5	31.5 b/ 97.1 b/	
Poland				
Cattle Hogs	38.8 53.4	42.6 61.8	51.5 76.0	
Rumania				
Cattle Hogs	47.9 51.2	45.2 43.7	58.0 75.0	

a. One hectare equals 2.471 acres.

b. Computed from the planned increase in the numbers of livestock given as a percent of 1958.

most of the livestock are still privately owned. During the coming years, emphasis will be placed on increasing the share of collectively owned livestock in the total. Governments probably will be careful not to force the private owner out of the livestock business too fast, because of the adverse effects such a move could have on production of meat and milk. Czechoslovakia is the only Satellite that has openly advocated elimination of the private plot of collective members as a means of raising production of livestock on the collective farms, but no deadline has been set for implementation.

## - 14 -

#### S-E-C-R-E-T

#### S-E-C-R-E-T

#### III. Planned Means of Achieving Production Goals

One important reason for the low rate of increase in agricultural production in the Satellites has been the very limited and slow application of modern technology in farming. During the past 15 years, most Western European countries have registered significant gains in the productivity of labor and land by the use of improved farming techniques. The most important of these factors have been mechanization, fertilization, plant breeding, control of plant diseases and pests, and management of grasslands. The current Satellite plans put greater stress than in any previous period on the wider application of new technology (except for mechanization) as a means of effecting an acceleration in the growth of agricultural production.

Except for Poland, all of the Satellites have about completed collectivization. With increased central control over farming operations, the governments should be able to introduce improved technology much faster than previously. In addition to supplying the physical inputs, however, the regimes must supply the trained agriculturalists to teach new techniques to the farmers. The problem of keeping enough trained agriculturalists in the countryside has been chronic for all of the Satellite regimes. Improved housing, cultural centers, and higher pay for trained personnel are expected to attract them to the villages and collectives in the future.

The Polish government has introduced several laws to insure that the increased technical means made available to agriculture are effectively used. These laws are aimed at forcing the private farmers to use new seed stock periodically, to use pesticides, and to use improved breeds of livestock. A peasant's failure to comply with the law can mean payment of a fine and/or confiscation of his property. The extent to which the laws will be enforced is not predictable, but they do provide the government with a limited control mechanism that other Satellites now have through extensive collectivization.

## A. Investments

The Satellite regimes have planned a substantial increase in agricultural investments for 1961-65 compared with 1956-60, ranging from 58 percent in Czechoslovakia to 93 percent in East Germany, as shown in Table 7.\* Also, an increase in the share of the total investments allocated to agriculture is planned in East Germany, Poland, and Hungary compared with the previous 5-year period (see Table 8\*\*).

\* Table 7 follows on p. 16.

\*\* Table 8 follows on p. 17.

- 15 -

#### S-E-C-R-E-T

#### S-E-C-R-E-T

#### Table 7

## Gross Fixed Investments in Agriculture in Selected European Satellites 1961-65 Plan Compared with 1956-60 Actual

	Bill Constant C		
Country	1956-60 Actual	1961 <b>-</b> 65 Plan	1961-65 as a Percent of 1956-60
Czechoslovakia (crowns) East Germany (DME <u>a</u> /) Hungary (forints) Poland (zlotys) Rumania (lei)	27.1 5.5 b/ 21.2 b/ 49.5 12.1	42.8 10.6 38.0 <u>c</u> / 90.9 19.6	158 193 179 184 162 <u>d</u> /

a. Deutsche Mark East (East German marks).

b. Estimate.

c. Midpoint of the range of 37.0 billion to 39.0 billion.

d. The Six Year Plan (1960-65) called for a doubling of agricultural investment above that of the period 1954-59.

The recent collectivization drives in East Germany and Hungary, in 1959 and 1960, will result in the requirement for large expenditures of state funds for mechanization and farm buildings. In addition, the collectives will be expected to increase their expenditures for capital improvements above previous years. The major share of the planned Polish investments are to come from private capital. Although there has been a gradual increase since 1956 in private investments in Poland, the projection of this trend until 1965 seems unrealistic because of governmental pressures to tighten controls over private farming. In Rumania the share of agriculture (13 percent) in the total state investments appears small relative to the importance of agriculture in the economy and especially in relation to the ambitious goals set for agricultural production in 1965.

In addition to the direct investments in agriculture, state investments will increase to those industries supporting agriculture, such as the chemical and agricultural machinery industries. The Polish government claims that the total of direct and indirect investments planned for agriculture accounts for 20 percent of all investments. In Hungary the share could well exceed 20 percent if indirect investments are included.

- 16 -

## S-E-C-R-E-T

## S-E-C-R-E-T

## Table 8

## Share of Agriculture in the Total Gross Fixed Investments in Selected European Satellites 1956-60 and 1961-65 Plan

		Percent
Country	1956-60	1961-65 Plan
Czechoslovakia East Germany Hungary Poland Rumania	16.2 9.0 16.1 11.3 14.3	15.4 9.5 19.0 14.6 13

The end use of the investments allocated to agriculture is not given officially for every Satellite, nor, when the end use is given, is it clear that statistics are comparable between Satellites. However, as shown in Table 9 and based on physical inputs to be supplied to agriculture during the next 5 years, mechanization, farm buildings, and land improvements represent the order of priority. Although investments for agricultural machinery will continue to receive a large share of investment funds, the percentage share for farm buildings and land improvement has increased at the expense of machinery.

## Table 9

## Planned Structure of Investment Outlays for Agriculture in Selected European Satellites 1961-65

	<u></u>		Percent
Country	Agricultural	Farm	Land
	Machinery	Buildings	Improvement
Czechoslovakia	38.0	50.0	12.0
East Germany <u>a</u> /	45.0	16.4	N.A.
Poland	39	36	18

a. 1959-65. Not including investment from state budget that accounts for about 40 percent of the total investment for agriculture.

## - 17 -

#### S-E-C-R-E-T

S-E-C-R-E-T

#### B. Mechanization

The Communist regimes have pushed the mechanization of agriculture since their takeover of eastern Europe. On the basis of increased inventories of tractors, the regimes have been relatively successful, as shown in Table 10. The Satellites most successful in mechanization, East Germany and Czechoslovakia, also were the ones most in need of mechanizing agricultural operations because of a declining and aging agricultural labor force.

## Table 10

Inventory of Tractors in Selected European Satellites 1950, 1955, 1960, and 1965 Plan

				Units
Country	1950	1955	1960	1965 Plan
Czechoslovakia a/ East Germany a/ Hungary Poland Rumania	25,979 b/ 17,134 c/ 12,708 28,411 13,713	40,804 48,308 23,645 48,342 23,033	94,300 72,170 40,000 62,450 44,194	154,000 131,535 <u>a</u> / 62,500 135,000 100,000

a. Units of 15 horsepower.

ъ. 1951.

c. Excluding privately owned tractors.

d. Computed by the addition of planned deliveries to agriculture, 1959-65. Obviously, depreciation will decrease the actual inventory, but because the intention of this table is to show only general magnitude, no estimate of or deduction for depreciation has been made.

During the next 5 years, planned additions to the inventories of tractors and other agricultural machinery will exceed any previous 5-year period. More emphasis is to be given to the supply of harvesting machinery (combines and root harvesters). Because past deliveries of the latter type of machinery have fallen far short of planned goals, harvesting losses on those state farms and collectives with a shortage of labor have increased.

To support the 1965 plan for agricultural machinery, increased investments and priority have been allocated to the agricultural machinery industry in the respective Satellites. In addition, specialization of production as agreed on through the Council for Mutual Economic

- 18 -

#### S-E-C-R-E-T

Assistance (CEMA) is expected to improve the quality of machinery and production of spare parts.

There is no evidence to indicate that earlier mechanization in the Satellites has had a favorable effect on raising productivity per unit of land. It has, of course, raised labor productivity in East Germany and Czechoslovakia, and the further mechanization planned during the next 5 years for these countries probably will result in further net gains. However, in a farm labor surplus country such as Rumania, and to a somewhat lesser extent in Poland and Hungary, the planned increases in mechanization will require large expenditures of capital that could better be directed into inputs with a higher rate of return, such as fertilizers, pesticides, and breeding stock. The major advantage of mechanization to these latter countries will be to replace animal draft power with tractors and thereby release feed for other livestock. The number of horses may not decline as fast as expected, however, because of their importance in peasant transportation and small plot farming.

#### C. Land Improvement

More attention in the current plans is to be given to land reclamation and irrigation than previously. Whether plans can be fulfilled is questionable, but at least larger sums of money have been allocated, and collective farms may provide the mechanism for obtaining the necessary work cadres. Poland, lacking a large socialist sector, will continue to have difficulty in coordinating plans for land improvement on a local level and in gaining the cooperation of the private peasant labor force.

Poland and Rumania have planned the largest program for land improvement and probably the most ambitious. Poland and Rumania, however, also are the two Satellites that stand to gain the most from land improvement. Poland has large areas in need of drainage and flood control, while Rumania, which experiences marginal rainfall, plans to irrigate some 800,000 hectares by 1965.

The area affected by land improvement work during the current long-term plans for each of the Satellites is as follows:

	Thousand Hectares*		
Country and Time Period	Drainage and Flood Control	Irrigation	<u>Total</u>
Czechoslovakia (1961-65) East Germany (1960-65) Hungary (1959-65) Foland (1961-65) Rumania (1960-65)	200 N.A. 345 2,362 1,000	174 N.A. 135 8 800	374 420 480 2,370 1,800

\* One hectare equals 2.471 acres.

- 19 -

Although land improvement plans may not be fulfilled 100 percent, even partial fulfillment will contribute to raising agricultural production over the long run. Poland admits that most of the land improvement work to be done during 1961-65 will not bear results until after 1965.

## D. Farm Buildings

All the Satellites plan a step-up in the construction of farm buildings during 1961-65. The previously low priority that agriculture has had for construction materials, inadequate capital funds, and lack of peasant incentive has restricted new construction on both collective and private farms. Of the Satellites, Czechoslovakia has made the greatest effort in meeting the need for new buildings. With the increase in the number of collective farms during the past 2 years, especially in Hungary, East Germany, and Rumania, a pressing need exists for more livestock barns, machine sheds, silos, and other farm buildings on the collectives.

If the plans of the Satellites to increase the numbers and productivity of livestock on collective farms are to be successful, a top priority must be placed on construction of livestock barns. The lack of proper housing for livestock on collectives is one reason why some Satellites have moved very slowly in their campaign to restrict private ownership of livestock. The large share of agricultural investment allocated for farm buildings (largely livestock shelters) in Czechoslovakia (see Table 9\*) probably is related to the regime's stated intention to reduce livestock holdings of collective members on their personal plots.

There are two major reasons why the 1965 plan for farm buildings probably will not be fulfilled in most Satellites. First, construction of farm buildings will be in direct competition with the high-priority residential housing programs for limited supplies of construction materials. Second, a large share of the investment for farm buildings must come from the collective's indivisible fund, which is insufficient in the majority of collectives to satisfy other investment requirements. In Poland the private peasant faced with the threat of eventual collectivization is unlikely to spend funds for other than residential housing and the repair of standing farm buildings.

\* P. 17, above.

- 20 -

#### S-E-C-R-E-T

## E. Agricultural Chemicals and Seed Improvement

## 1. Fertilizers, Pesticides, and Herbicides

An important means of increasing crop yields, especially grain, potatoes, and pastures, is by the use of more and better mineral fertilizer. The planned percentage increases by 1965 in the availability of mineral fertilizer are largest for the less developed Satellites, such as Hungary and Rumania (see Table 11). However, the planned consumption per hectare for most Satellites in 1956 still falls far short of the level in East Germany and the developed countries of Western Europe. In 1965, Rumania will still have the smallest input of fertilizer per hectare of arable land of the five Satellites (see Table 12\*). The largest increases of mineral fertilizer are expected in the use of nitrogenous and phosphatic types. In addition to expanding the use of mineral fertilizer, better care and increased utilization of manure are called for on collective farms.

## Table 11

## Availability of Mineral Fertilizer to Agriculture in Selected European Satellites 1955, 1960, and 1965 Plan

<u></u>			· · · · · · · · · · · · · · · · · · ·	Ind (1955	lex = 100)
Country	1955	1960	1965 Plan	1960	1965
	Thou	sand Metric	Tons <u>a</u> /		
Czechoslovakia East Germany Hungary Poland Rumania	325.7 768.0 54.4 543.9 10.7	522.0 962.0 171.7 744.6 62.0	961.2 <u>b/</u> 1,378.0 <u>c/</u> 336.4 1,243.0 500.0	160 125 316 137 579	295 179 618 229 4,673

a. In terms of nutrient content.

b. Based on the planned agricultural land of 7.2 million hectares and on the consumption of 133.5 kilograms per hectare in 1965. (One hectare equals 2.471 acres; 1 kilogram equals 2.205 pounds avoirdupois.)
c. 1965 Plan computed from kilograms per hectare of agricultural land.

\* Table 12 follows on p. 22.

- 21 -

S-E-C-R-E-T

#### Table 12

## Consumption of Mineral Fertilizer per Hectare of Arable Land in Selected European Satellites a/ 1954/55, 1959/60, and 1965 Plan

		Kilograms	per Hectare <u>b</u> /
Country	1954/55	1959/60	1965 Plan
Czechoslovakia East Germany Hungary Poland Rumania <u>c</u> /	44.6 113.2 10.1 35.3 1.1	69.4 148.2 31.8 48.6 6.3	133.5 212.0 62.3 80.0 50.0

a. Net weight. Agricultural land for Czechoslovakia and East Germany; arable land for Hungary, Poland, and Rumania.

b. One hectare equals 2.471 acres; 1 kilogram equals 2.205 pounds avoirdupois.

c. Computed from Table 11, p. 21, above.

Production and use of pesticides and herbicides in most of the Satellites was largely neglected until about 1955, and the available supply was limited to the collective and state farms. Next to fertilizers in importance for short-run results, more intensive use of pesticides could give a boost to production of crops in most Satellites. For example, in 1959 less than 10 percent of the sown area was supplied with insecticides in Poland, but the 1965 plan calls for 70 percent of the sown area to be supplied. Gomulka, at the Sixth Plenum in 1960, stated that conservative estimates placed the annual loss to crops caused by insects, diseases, and weeds at 9 to 30 percent. Even though Satellite production of crop-protection chemicals may be stepped up during the next 2 years, the problems of educating the farmers in the proper application and of supplying the necessary equipment may depress the effectiveness of more intensive application.

## 2. Improvement of Seed

Satellite plans for 1965 call for increased production and use of improved and new varieties of seed stock. State farms designated as the main suppliers of selected seed stock and private seed producers have not been able to produce sufficient quantities, because of the pressure to deliver grain, potatoes, and the like for consumption. Agriculturalists in the northern Satellites attribute the low yields of potatoes partly to the deterioration of planting stock. Also, the major corn-producing Satellites -- Hungary and Rumania -did not start using hybrids until about 1956. In Rumania, by 1960

#### - 22 -

#### S-E-C-R-E-T

only about 25 percent of the corn area was planted to hybrid seed. By the end of 1965 the entire corn area is to be planted with hybrid seed. Through the agricultural committee of CEMA, specialization in production of selected seed and improved varieties for export to other Bloc countries is planned. Also, the exchange of information between the agricultural research institutions may be of considerable benefit to improving the use of better varieties of seed for certain crops. If mechanization of field operations is to be successful, plants must be grown that are adaptable to machine cultivation and harvesting.

## F. Agricultural Labor

All of the plans, except for Poland's, presuppose a decline in the agricultural labor force by 1965. In Poland the agricultural labor force is expected to remain rather stable until 1975, although transfers among rural districts are envisioned. Czechoslovak and East German complaints of shortages of agricultural labor have been registered for several years. The shortage of labor has been further aggravated by the rising average age of the agricultural worker in both countries. Efforts to encourage the farm youth to stay in the countryside have failed substantially, and it is doubtful if the migration can be arrested during the next 5 years.

The planned declines in agricultural employment are based on the expected manpower savings to be derived from collectivization and/or increased mechanization. One of the major problems of countries such as East Germany and Hungary, however, will be to keep the decline in the agricultural labor force within planned limits. Unless these countries can restrict the movement of skilled workers out of agriculture, the production goals for 1965 will be even more difficult to attain.

## IV. Institutional Factors Affecting Production

### A. Socialization

During the past 2 years (1959-60), collectivization drives were waged in all the Satellites except Poland. Thus state and collective farms\* at the beginning of 1961 covered about 95 percent of the agricultural land in East Germany and about 83 to 87 percent in Czechoslovakia, Hungary, and Rumania (see the chart\*\*). By contrast, Poland had only about 13 percent of its agricultural land in the socialist sector.

\* Except in Rumania the Satellite regimes use the word cooperative. \*\* Following p. 24.

- 23 -

#### S-E-C-R-E-T

#### S-E-C-R-E-T

The Polish regime has maintained that complete agricultural socialization is the final goal, but policy since late in 1956 has been aimed at promoting more efficient farming in the private as well as the socialist sector. Gomulka, while giving lip service to collective farming, has gone slow so as not to endanger the more important short-term goal of raising agricultural output. Instead, agricultural circles -- independent cooperative associations of peasants -- have been promoted and now constitute the main institutional element in Polish agricultural policy. The agricultural circles are to be used in the Second Five Year Plan (1961-65) as the principal means of channeling investment resources into agriculture and for enlightening the peasants about the advantages of cooperative ventures in the hope that collectivization eventually will be voluntarily accepted.

One effect of recent drives to complete the socialist transformation of farming enterprises in the other Satellites, especially in East Germany, Hungary, and Rumania, has been to increase sharply the number of large farms. Before collectivization the average size of a private farm was less than 10 hectares, but at the end of 1960 the average collective farm ranged from 280 hectares in East Germany to 800 hectares in Rumania. This shift in size of farming enterprises creates an immediate need for different types of farm machinery, managerial personnel, farm buildings, and other facilities. None of the Satellites was prepared to fill these needs immediately. Therefore, the governments now face the problem of spreading limited investment funds and production inputs over a much larger agricultural area and among a greater number of collective farms than previously. In contrast to the period of collectivization, when the socialist sector was given priority for the limited supplies of production inputs, the regimes now must decide within the socialist sector which farms have the greatest need and/or ability to utilize efficiently the available means of production.

Although socialization of farming enterprises is nearly complete, two phases of collectivization remain to be completed during the next 5 years -- the amalgamation of collectives and the transformation of the lower forms of collectives to the higher or more advanced type. The disruptive effect of these two phases to agricultural production may be less severe than the initial collectivization drives, but the transition probably will not be smooth, especially if it includes elimination of private plots as indicated in Czechoslovakia.

The success or failure of the plans for agricultural production in 1965, except in Poland, will depend for the first time almost entirely on socialist farming. Government officials can no longer use the private peasant and the small farm as reasons for failures in agriculture.

- 24 -

#### S-E-C-R-E-T



35322 8.61

## S-E-C-R-E-T

#### B. Other Institutional Factors

The trend toward less central control or direction over local planning of agricultural production, greater flexibility in procurement systems, and a declining role of the machine tractor station (MTS) is expected to continue during the next 5 years. Czechoslovakia is the only Satellite thus far to abolish the MTS as previously done in the USSR. Most of the other countries are permitting collectives to purchase agricultural machinery, but none plans an expansion of the MTS network. It is currently of little political influence in the countryside, and as the supply of farm machinery becomes more plentiful in other Satellites, the MTS probably will be gradually relegated to the role of a repair tractor station as in the USSR and Czechoslovakia.

In the future, more agricultural specialists and politically reliable personnel will be attached to collectives and village Peoples Councils. The local Peoples Councils are receiving more responsibility for agricultural planning and procurement of agricultural products. Decentralizing agricultural planning should have a favorable effect on production unless local officials become overzealous in setting and trying to achieve unrealistic output targets. In Poland, where the large private farming sector predominates, the role of the Peoples Councils is becoming extremely important in directing implementation of national agricultural policy. It seems obvious that the village Peoples Councils will be called on to insure that the agricultural circles and private farmers are fully utilizing the means of production made available by the government. The implementation of recent laws dealing with productivity of farms, mentioned earlier, will be largely the responsibility of the Peoples Councils. According to the Polish Minister of Agriculture, M. Jagielski, "90 percent of the means earmarked for agriculture during 1961-65 are managed by Peoples Councils." The implementation of their increased powers by the Peoples Councils must be conducted in a very slow and careful fashion, or the adverse effect on peasant attitudes will be reflected in lower production.

## V. Prospects for Fulfillment of Agricultural Production Goals

## A. General

The ambitious plans for agricultural production in 1965 in the Satellites probably will not be achieved, but the growth of output should exceed that of the period 1956-60, except possibly in Poland. Hungary and Rumania, because of the relatively low level of agricultural production in 1960, may show the largest percentage increase in total agricultural production by 1965. Contrary to official 1965 plans, it is estimated that most Satellites probably will

- 25 -

#### S-E-C-R-E-T

increase output in the crop sector somewhat faster than in the livestock sector.

The annual increases in agricultural production during 1961-65 should be larger near the end of the period. Benefits from increased capacities of the fertilizer and agricultural machinery industries, land improvement schemes, improved farming practices, and the like are not expected to mature in most Satellites until 1963-65. The fact that collectivization has been virtually completed, except in Poland, eliminates an element of uncertainty that has depressed individual efforts and prevented government agricultural policies from being based solely on economic needs. Nevertheless, institutional and other problems remain to be solved. The final organization of the collective farms has not been completed. Neither have the wage systems, the role of private plots, and the distribution of labor been determined. (Because of the wide differences existing between Satellites in their stages of agricultural development, their degrees of socialization, and their levels of planned inputs, an evaluation of the prospects for agricultural production for each Satellite in 1965 is discussed separately below.)

## B. Czechoslovakia

Increases in the means of production, especially fertilizers. and improvements in agricultural technology and farm price policy should contribute to an increase in agricultural production in Czechoslovakia during the Third Five Year Plan (1961-65). It is unlikely, however, that the increase will be large enough to fulfill the goal for agricultural production in either 4 or 5 years.\* As in other Bloc countries, past agricultural production goals in Czechoslovakia, both annual and quinquennial, have been unfulfilled. As shown in Table 1,\*\* even with an announced increase of 7 percent in 1960, production fell far short of the Second Five Year Plan (1956-60). The low rate of growth between 1955 and 1960 resulted in spite of increased applications of fertilizer and other agricultural inputs. The relatively poor performance has been due in part to the constant organizational changes in agriculture caused by forced collectivization, which should be less of an adverse factor in the future. Future amalgamations of collectives, however, will have some disruptive effect on the efficiency of operations of collective farms and on the incentives of the members.

The value of gross agricultural production by 1965 probably will increase about 15 percent above that in 1960 compared with an

\* The Czechoslovak government has exhorted the farmers to fulfill the Third Five Year Plan in 4 years. \*\* P. 6, above.

- 26 -

estimated increase of 9 percent between 1955 and 1960. The development in production of livestock probably will be less successful than in production of crops. In 1955-59, production of crops trended downward while production of livestock increased according to the following index:

Year	Production of Crops	Production of Livestock
1955 1956 1957 1958 1959	100 99 95 100 95	100 107 110 111 115
1965 Plan	131	149

The past improvement in production of livestock has been facilitated by expanding the domestic fodder base and by importing large quantities of feed grain. However, the position that the government now takes with regard to private plots of collective members could be the chief factor restricting production of livestock during 1961-65. Recently the Czechoslovak regime has been more outspoken on the "evils" of the private plots than any other Bloc country, including the USSR. A major effort to withdraw these holdings from the peasants would have a detrimental effect on production of livestock. Also, planned increases in livestock productivity are too optimistic in the light of past performance and the probable shortfall in plans for production of fodder crops. The Czechoslovak government, constantly complaining about the high per unit cost of agricultural output, will not solve this problem during the next few years.

## C. East Germany

Adequacy of management and the responsiveness of farm labor to full-scale socialized farming probably are the two most important factors that will influence the effectiveness of increased physical inputs and hence the rate of agricultural growth in East Germany during the next 5 years. The economic impact of the full socialization of agriculture -- attained in April of 1960 -- may not be fully noted until 1961 or 1962, but the general decline of initiative and a sluggish readjustment to planned work programs in agriculture usually foreshadows a static or at best a minimum rate of growth. It is estimated that the numerous economic adjustments in management and planning brought on by the work slowdowns and the movement of agricultural labor to the cities will reduce the effectiveness of the planned

## - 27 -

#### S-E-C-R-E-T

## S-E-C-R-E-T

investment programs and lessen the possibility for attaining the planned rate of agricultural growth during 1961-65.

The expansion of mechanized farming operations is a key factor in the future agricultural development of East Germany and is necessary in order to compensate for the loss of farm labor. Officials had stated that 1959 and 1960 would be the most critical years for the development of the agricultural machinery industry, evidence suggesting that the planned expansion of the industrial capacity has undergone a downward adjustment. It is believed, therefore, that the planned goal for 1959-65 to deliver a total of 74,360 tractors and 12,270 combines may not be fulfilled. A cutback in construction of farm buildings also has occurred. These cutbacks, although not a major deterrent to the short-run growth of agriculture, could affect the ability of the collective sector to achieve expected efficiencies in operation.

The more productive uses of funds in agriculture are found in providing increased availability of fertilizers and insecticides and in expanding programs of land reclamation, livestock breeding, and farm education. It is estimated that the planned quantity of fertilizers for 1965 can be produced. The expected increase in the availability of these inputs to the agricultural sector should be influential in raising the yields of selected crops. Inputs other than agricultural chemicals, however, will have only a small effect on productivity in the short period of 5 years.

An evaluation of all factors influencing agricultural production in East Germany suggests that the annual rate of growth through 1965 may exceed the average rate of 1.7 percent in 1956-60 but fall short of the planned rate of 4.5 percent. Also, the estimated growth during the first 2 years of the plan probably will be less than the average.

Within the bounds of probable agricultural growth, it is estimated that the livestock sector will increase more rapidly than that of field crops. The present percentage relationship between the two sectors of agriculture shows that livestock accounts for approximately 55 percent and crops 45 percent of the total gross output. The more rapid rate of growth of the livestock branch is premised on (1) fuller utilization and larger production of domestic feed supplies, (2) more rigid control over breeding, (3) continuation of current price incentives for livestock and livestock products, (4) the continued high import level of feeds and feed concentrates, and (5) no restrictions on the private ownership of livestock by collective members.

## - 28 -

## S-E-C-R-E-T

S-E-C-R-E-T

## D. Hungary

Agricultural production in Hungary during the Second Five Year Plan (1961-65) is expected to increase but not by 19 percent as planned. It is possible, however, that the average annual rate of increase will exceed the 1.8 percent of the last decade. Although present long-term plans for agricultural production are optimistic, especially in view of the drag on production created by the rapid collectivization drives of 1959 and 1960, it is believed that after 1962 the larger investment program and the creation of a more disciplined management on collective farms will permit a somewhat more efficient use of agricultural resources than in the past. Larger farms also will permit a wider application of improved agrotechniques.

Although evidence suggests that the agricultural labor force will continue to decline, it is believed that manpower mobilization plans sponsored by the government during the peak periods of agricultural activity can solve the labor requirements of agriculture. It is possible, moreover, that the farm labor shortage will be lessened during the next 5 years by a rapid increase in mechanization. The general long-term outlook for the agricultural sector in Hungary, therefore, is one of positive growth, particularly if the organizational changes are accepted by the peasant and the government carries out its planned investment program in agriculture. Cost per unit of output will remain high, however, and could increase over the next few years because of inefficient management on the collective farms.

The gains in production probably will be greater for the livestock sector of agriculture than for crops compared with the past 5 years. In 1960 the percentage relationship of the two sectors of agricultural production showed that the livestock sector accounted for only 41 percent of the total gross output. The greater emphasis on production of forage and fodder crops should permit an increase in both the number and the productivity of livestock by 1965. Nevertheless, production of livestock products will not be sufficient to attain planned levels of per capita consumption and/or to increase exports.

## E. Poland

It seems unlikely that Poland will achieve the planned increase of 22 percent in agricultural production during the Second Five Year Plan (1961-65). Polish government officials have even expressed doubts about the feasibility of the plan. In spite of plans to increase nonlabor inputs, the average annual rate of increase of 4.1 percent necessary to achieve the over-all increase in agricultural production appears unrealistic in the light of past performance. It is even doubtful that the estimated average annual rate of growth achieved during 1956-60 of 3.2 percent can be maintained.

- 29 -

#### S-E-C-R-E-T

#### S-E-C-R-E-T

A large share of the planned investment scheduled in support of agriculture will not begin to have an effect on agricultural production until the latter part of the Second Five Year Plan period, if then. This is especially true for land improvement work, mechanization, and increased use of fertilizers, which are dependent on improved or new industrial capacity to provide increased production of these inputs. Furthermore, assuming that planned production levels of fertilizers, pesticides, and machinery are achieved, it is unlikely that the peasant demand for these inputs would approach availability, because of the present structure of farm ownership and the low level of technology in Polish agriculture. State investment plans seem to be aimed at providing a base -- agricultural machinery and chemical industries -- necessary to support large-scale farming after 1965.

In contrast to the First Five Year Plan (1956-60), the current Five Year Plan does not appear to be relying as much on added incentives as a means of rapidly boosting agricultural production. For example, at the beginning of the last Five Year Plan, prices paid for farm produce were raised, compulsory deliveries were reduced, supplies of industrial goods to rural areas were increased, and collectivization was halted. The result was an immediate increase in agricultural production, especially livestock, which continued through 1958. Then, with no new incentives and unfavorable weather for some crops, production tended to level off in the last 2 years of the plan. The government hopes to reactivate the production reserves in agriculture during the current Five Year Plan primarily through improved farm management (technology and education). A large potential exists for increasing agricultural production through better farm management, such as increased use of fertilizers, improved seeds, insecticides, high protein feed mixtures, and the like, but their use requires additional expenditures by the farmer. Although making the additional expenditures may be profitable, convincing the average farmer of this may take many vears. There is no evidence that the Polish government, like Western European governments, plans to subsidize costs of fertilizers, insecticides, and the like as a means of expanding the use of these on a large scale among private farmers. Any increase in yields of crops expected from production inputs probably will be slight, and the expected results from education and new technology will require more than 5 years.

It is difficult to see how production of livestock in Poland can increase at a rate faster than or even as fast as during the last Five Year Plan. Achieving the planned level of production for grain and potatoes, essential for providing the fodder base required to support the planned numbers of cattle and hogs, is unlikely. Therefore, production of livestock, currently at a peak postwar level, unless supported by larger imports of feed concentrates than presently

## - 30 -

#### S-E-C-R-E-T

## S-E-C-R-E-T

planned, will increase during 1961-65 at a much lower rate than during 1956-60. In addition, better feeding practices, more and better housing, better breeds, and disease controls are all essential to achieving the planned increase in livestock productivity. However, the technological improvements for production of livestock, like those for crops, raise production costs and thus require additional financial incentives and mass education of the farmers. It seems improbable that both of the latter requirements can be provided on a scale sufficient to give the results expected in the short period of 5 years.

The Polish government has admitted that the successful fulfillment of the current Five Year Plan for agriculture largely depends on the expansion and influence of the agricultural circles in the countryside. The agricultural circle is the organization through which the government must work to increase mechanization, to expand land reclamation, and to introduce and expand technological advances in agriculture. However, as the government moves to gain control over the Union of Agricultural Circles and to infiltrate the village circles with Party people, the peasant will become more reluctant to join for fear of the next step -- collectivization.

peasant suspicions were aroused when the government introduced the agricultural development fund in 1959. Thus it is very likely that the growth of the agricultural circles will be very slow in the coming years, with a resultant adverse effect on achieving the planned level of state investment and of technology in the private sector of agriculture. This slow development could precipitate a showdown on collectivization between the government and farmers by 1965.

## F. Rumania

Rumania, next to Albania the least agriculturally productive of the European Satellites, possesses resources favorable to the further development of agriculture. In spite of this potential, however, the goal of an increase of 70 to 80 percent in agricultural production in 1965 compared with 1959 appears to be completely unrealistic in the light of planned levels of inputs, the adverse effects of continued collectivization, and the restricting effect that the low average annual level of precipitation will still have on crop yields. Although more than 80 percent of the agricultural land has been socialized and although large expenditures on the means of production will be undertaken to lessen the effects of adverse weather on production of crops, it is not probable that these measures will be sufficient to permit a high average annual rate of growth of 9.2 to 10.3 percent\* compared with

\* Albania is the only Bloc country that has a long-term plan calling for an annual rate of growth (10.4 percent) of agricultural production similar to that in the Rumanian plan.

## - 31 -

#### S-E-C-R-E-T

Declassified in Part - Sanitized Copy Approved for Release 2013/08/28 : CIA-RDP79R01141A002100150001-0

50X1 50X1

#### S-E-C-R-E-T

less than 1 percent during 1956-59. No other country is known to have sustained such an annual rate of growth over a 5-year period. It is believed to be possible that the rate of growth could average as high as 4.2 percent during the Six Year Plan (1960-65) to give a total increase in agricultural production of 28 percent above the levels of 1959. This forecast of agricultural development in Rumania represents the largest annual average rate of output for any of the Satellites considered in this report. Indexes of estimated value of gross agricultural production\* in Rumania for 1965 and of actual production for selected years are as follows:

Year	<u> 1959 = 100</u>
1955 1956 1957 1958 1959	97 80 99 85 100
1965 (estimate)	128

It is estimated that the increase in production of crops probably will exceed that of production of livestock during the plan period. This large increase in production of crops is premised on achieving the planned consumption of fertilizer, the increased use of hybrid corn seed and new varieties of wheat, and the expansion of the area devoted to industrial crops. In spite of an estimated increase in production of fodder, the lack of improved livestock management practices needed to utilize efficiently the increased availability of feed, the depressive effect of transferring livestock from private to collective ownership, and the fact that gains in production of livestock normally lag behind increased availability of fodder by as much as 18 months all support the estimate of a lower rate of growth for production of livestock than for production of crops.

## VI. Availability of Food

All Satellite plans for 1965 call for an improvement in the quality and variety of the diet. This improvement is to be accomplished by increasing the per capita availability of animal products, fruits, and vegetables (see Table 13\*\*) accompanied by a slight decline in the

\* Based on the methodology of the Food and Agricultural Organization (FAO) of the UN and of the Organization for European Economic Cooperation (OEEC) and based on 1952-56 price relationship to the production figures. \*\* Table 13 follows on p. 33.

- 32 -

#### S-E-C-R-E-T

#### S-E-C-R-E-T

## Table 13

## Annual Per Capita Availability of Selected Foods in the European Satellites a/ 1965 Plan

Country and Commodity	1965 Plan (Kilograms Per Capita) b/	Index (1959 = 100)
Czechoslovakia		<u>c</u> /
Meat <u>d</u> / Fats and oils Milk and milk products <u>e</u> / Sugar Vegetables Eggs (number)	65.0 22.5 247.0 39.2 83.0 200.0	116 111 126 108 106 112
East Germany		
Meat <u>f</u> / Milk Butter Eggs (number) Fish	59.2 141.0 13.5 250.0 18.0	105 129 132 139 134
Hungary		
Meat <u>f</u> / Milk and milk products Sugar Eggs (number) Flour	52.0 182.0 31.0 162.0 129.0	114 127 120 129 99
Poland	· · ·	
Meat <u>g</u> / Milk and milk products <u>e</u> / Sugar Vegetables Fruit Eggs (number) Flour	44.9 240.9 35.0 110.0 35.0 166.4 135.0	120 114 125 159 250 116 94
Rumania <u>h</u> /	•	
Meat . Milk Sugar Butter	38.0 53.0 16.0 2.4	224 424 219 200

a. Because the categories meat, milk, and milk and milk products are not defined in plan documents, comparison of data between countries is difficult. For the same reason, official data were used for the base year rather than the estimates of this Office derived from food balances that do not necessarily agree with official data.

b. One kilogram equals 2.205 pounds avoirdupois.

c. 1960 = 100.

ì

d. Including beef, veal, mutton, goat, pork, game, and edible offal.

e. Excluding butter.f. Including beef, veal, mutton, pork, poultry, and edible offal.

g. Including beef, veal, mutton, pork, and edible offal.

h. Consumption based on planned state sales of food. Because state sales are largely to the nonagricultural population, the data do not represent the national per capita levels of consumption, except for sugar.

- 33 -

#### S-E-C-R-E-T

availability of cereals and potatoes. According to the plans for 1965, the differences between Satellites in the average per capita consumption of quality foods will not be as great as at present. Also, Czechoslovakia would replace East Germany as having the highest per capita consumption of high-quality food.

Meeting the demand for meat and other animal products as the income of workers increases has been a growing problem for most Satellites since the early 1950's. Because incomes of workers and peasants are planned to increase during the next 5 years, the demand for quality foods also will increase. Also, if the Satellites should convert the work payments of collective members entirely to cash wages and/or restrict private ownership of livestock, another group of consumers will compete in retail markets for the available supply of livestock products.

Because the increase in production of livestock products probably will be less than planned, planned per capita consumption of meat and milk for 1965 appear to be ambitious for all the Satellites, except possibly for Poland. It is estimated that East Germany and Czechoslovakia will have to increase rather than decrease imports of meat if per capita consumption targets for 1965 are to be realized -- targets nearly equal to the 1958/59 per capita consumption levels in France and the UK.

The trade planned in agricultural products that would directly contribute to improving diets is limited primarily to larger imports of fruits and vegetables by the northern Satellites from the southern Satellites as well as to imports of tropical products. The major Satellite importers of grain -- Poland, East Germany, and Czechoslovakia -- are planning to maintain imports at the levels of 1959-60, a necessary measure to support the planned increase in production of livestock products. Over-all imports of food commodities by both East Germany and Czechoslovakia are planned to decline. Nevertheless, to prevent popular discontent, imports of food may have to be retained at a level higher than that planned.

Planned exports of food products include livestock products by Poland and Hungary, corn by Rumania, and sugar by all the Satellites. Although quantities have not been stated, the value of agricultural exports during the respective planning periods is to increase above the base period. The pressure to earn foreign exchange by exporting agricultural products will hold down increases in per capita consumption of these products.

Although the various plans of the Satellites do not state selfsufficiency as a goal, it is apparent that only a very small percentage

- 34 -

#### S-E-C-R-E-T

#### S-E-C-R-E-T

of the food supplies will be derived from imports. Thus any improvement in the quality of the diet is largely dependent on the achievement of the goals for agricultural production in 1965. Because the goals for commodity production are estimated to be too ambitious, the planned per capita availability of quality foods probably will fall far short of expectations. This shortfall could be more serious in the southern Satellites, where the industrial worker's demand for livestock products already exceeds supply and where additions to the industrial labor force may be the largest during 1961-65.

An improvement can be expected in both the quality and the variety of the average diet in the Satellites by 1965, but the periodic shortages of foods caused by fluctuations in production and faulty distribution will continue. During the early part of the period 1961-65, furthermore, East Germany, Czechoslovakia, and Hungary, because of expected production difficulties, may experience a slight drop in the per capita availability of meat and fats compared with 1959/60 unless imports are increased by the first two countries and unless exports are decreased by Hungary.

## - 35 -S-E-C-R-E-T



## SECRET

SECRET