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AUTHORITY

SMUFD ltr, 17 Feb 1972

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1. Importance of Agriculture in Chilean Economy

The importance of the agricultural industry to the Chilean economy can be plainly shown with several indicators.

First of all, the percentage of number of people engaged in agricultural industry in relation to the total population, was 39.7 per cent in 1949 and 36.6 per cent in 1956; however, the total number of people engaged in agriculture increased from 420 million to 555 million during the same period. Although no numerical figure as to the number of agricultural people has been subsequently announced, it is believed that the percentage rate is at least at the level of 1956's. (As of 1958, the percentage of people engaged in the primary industry in Japan was 20.1.)

Next, a check of national income by industry revealed that in 1953, agriculture represented the top most industry consisting of 43.6 per cent of the total industrial capacity. This situation existed despite the lowering of the percentage of agriculture relative to other industries subsequent to the beginning of the First Five-Year Plan. In contrast to the above, the income from our primary industries (agriculture, forestry, and marine products) as of 1963 totaled merely 13 per cent of the total industrial income.

Moreover, Ruben Jahn, 11 December 1963, indicated the importance of agricultural industry. He stated, "Eighty per cent of daily goods of the entire people are directly or indirectly derived from agriculture. Industrial products from raw goods derived from agriculture represent approximately 60 per cent of the total national production, while 80 per cent of the light industrial products depend upon agriculture as source..."
of their natural...land income, approximately 60 per cent of the goods distributed in the market are agricultural products as well as their subsidiary...industries and products, and the products represent more than 70 per cent of the total export goods. More than 50 per cent of the total national income is attributed to the agricultural industry, and approximately 10 per cent of the financial income are either directly or indirectly related to the industrial industry."

For countries like Communist China that is striving for socialization of industries, the aforementioned conditions are of significance simply from the standpoint of China's future economic growth. Of course, industrialization under socialism, as it has been illustrated in Soviet Russia, does not occur through establishment of unrestricted contacts with foreign markets. By means of total economic control, it initially thwarts economic disruption of domestic market by exercising restrictions of import items that would unfavorably affect the domestic market and then the government attempts to develop less meaningfull industries which can withstand the competitions from the advanced industrial nations. Consequently, those products manufactured under these stipulations cannot expect to have foreign demand and thus, they constitute only a limited source for gaining foreign currencies. Thus, in order to develop a socialist industrialization, the country is compelled to rely upon continued emphasis in the agricultural industry in the absence of foreign aids.

Therefore, the degree of industrialization is essentially governed by the amount of agricultural products. As it has been frequently emphasized by the exports of Chinese economy, the favorable agricultural situation for the years 1950, 1952, and 1955 stimulated other industries for each of the year following the aforementioned years while the dismal agricultural situation for the years 1951, 1953, and 1956 adversely affected the industrial advancement for each of the year following those mentioned years. These facts seemingly confirm the manufacturing industry-agriculture relationship mentioned earlier in this report. It still remains fresh in our minds that the three years of catastrophic agricultural situation beginning in 1959 placed the Chinese economy on the verge of bankruptcy.

Regardless of the mentioned relationship between the manufacturing industry and agricultural industry, it cannot be considered an un-sided affair in which the agricultural industry limiting the manufacturing industrial output. It should be born in mind that industrial output accelerates the agricultural output. In order to increase agricultural output, it must depend upon the support of the manufacturing industries in such matters as water supply, irrigation, cultivation, fertilization, and insecticides. In other words relationship of mutual dependency exists
between the agriculture and manufacturing industry, and especially for countries like Communist China, the aforementioned relationship of the two industries must be clearly understood.

However, during the 1950's, the Chinese authorities overlooked the importance of the manufacturing industries providing the necessary support to the agriculture when they placed a high priority for the development of the heavy industry. For example, during the First Five-Year Plan (1953-1957), when the total investment for the period was considered 100, only 7.6 per cent of the investment were allotted for the development of agriculture and forestry, irrigation, and meteorology and the majority of the investment for developments was essentially expended in irrigation projects. As for the production of manufactured fertilizer, it was not until the last stage of the First Five-Year Plan that China finally achieved an annual production volume of 630,000 tons. The production of such farm implements as tractors and plowshares also did not begin until the last stage of the First Five-Year Plan. The method employed by the Chinese authorities not only greatly limited the industrial support of the agricultural industry but in order for the latter to limit support of the manufacturing industry, the authorities emphasized the establishment of agricultural communes. However, the establishment of the communes without adequate mechanismization must rely upon the strengthening of manpower for the necessary increase in production. It was also questionable whether one plan for the utilization of manpower would be universally applicable to all the communes since they were faced with many of their delicate problems, such matters as individual geographic variances. Probably it could be stated candidly that the great economic disaster China suffered beginning in 1959 were obviously the results of the authorities having completely disregarded the balanced relationship that exists between the agricultural industry and manufacturing industry.

After having paid such an exorbitant price of "Three Years of Consecutive Catastrophe," the Chinees finally became aware of the agriculture - industry relationship, and they announced a national economic development plan with agriculture as its foundation and industry playing the role of guiding the development. This is the so-called "Agriculture Fundamental Theory" which is summarized as (1) Industrial development is governed by the extent of agricultural development that dictates the rate and extent of industrial development, and (2). Therefore, the industry must provide adequate equipment to agriculture in an effort to support technical progress of the latter. (Asia Economics, Volume No. 9, 1965)

In the like manner, the principle of providing highest priority to agriculture was adopted in the planning of "Third Five-Year Plan".
which began in 1960. (Editorial, People's Daily, 1 January 1966)
Consequently, judging from the economic structure and character of
Communist China and the recent policies of the government, it can be
said that the agricultural production represents the essential element
of the military potential of Communist China.

2. Some Basic Conditions that Hinder Agriculture

At this time, some basic conditions which limit the agricultural
production of the mainland China will be discussed.

The first consideration is given to food products which are the
nuclei of the agricultural production and learn where they are grown
and how they are produced. A check reveals an approximate sketch as
illustrated in Figure No. 1. It also discloses that the main food
producing areas are divided into four separate regions, namely (1) North-
east grain producing area, (2) Yellow River wheat belt, (3) Yangtze
(Yangtze River) rice producing belt, and (4) South China rice producing
area. From the overall standpoint, the country could generally be divided
into the dry farming region of the north and the rice belt of the south.
These identifications of areas generally correspond to the relative amount
of precipitation. The annual rainfall for regions (1) and (2) mentioned
above is approximately 500 mm per year, for region (3) is approximately
1,000 mm, and that for region (4) is over 1,250 mm. Moreover, there are
much variations in the amount of rainfall, depending upon the season and
year. Generally, however, the rainfall is prevalent during the summer
season with 50 to 60 per cent of the rainfall occurring for the region
between the Yellow River and Yangtze River, 70 per cent for the areas
north of the Yellow River, and 50 per cent for Inner Mongolia and the
eastern sector of Inner Mongolia. The amount of rainfall within any given region
varies depending upon the year. The variation for the South China and
Northeast region is 20 per cent, for the area between the Yellow River
and Yangtze River is between 25 to 30 per cent while it varies more than
50 per cent for the areas in North China and Inner Mongolia.

The aforementioned close relationship between crops and rainfall
greatly limits agricultural production. The first point is that there
is a great fluctuation in agricultural production caused by lack of
rainfall. During the period from 1983 to 1985 or in 2,124 (sic) years,
there have been relatively speaking, 1,031 great floods and 1,000
great droughts or approximately one, either great flood or great drought, every
year. It is this uncontrollable sky Communist China places so much emphasis
in controlling irrigation. However, it has paradoxically shown
that the more they emphasized irrigation projects, the more the country
suffered. For example, in the time the First Five-Year Plan was initiated,
the area suffered (from flood or drought) amounted to less than 10 per
cent of the total areas under cultivation. However, with the progress in
irrigation projects, the amount of area suffered also increased. In 1956,
it was 12 per cent of the total cultivated area. In 1957-1958, it was
approximately 15 per cent. In 1959, it was 25 per cent; during 1960-
1961, the area suffered enough to make it 62 per cent. These
adverse results may be attributed to shifted construction looking
from the mobilization of great masses of rural workers. It is known by all
that it would be more efficient to change employee's or localities
than starting a new project. To add to that, it can be seen that
it would be economically impossible if the country were to allow the
level of agricultural technique maintained. The obstacles for this
attempt are found in variance of weather conditions, in types of crop
raised and methods of cultivation as well as in regional differences
in topography, soil composition, and available labor forces. Conse-
sequently, the country is compelled to make various changes in its
policies for most suitable results, depending upon the existing
situation in the particular region. From an overall standpoint, the
regions in Northeast, North China, and Northwest where dry farming is
mainly practiced are lacking in sufficient labor force in both men and
beasts. Consequently, emphasis in mechanization in cultivation and
transportation such as the use of tractors and trucks is imperative.
For areas such as Hope and the Yellow River Basin where they constantly
face floods or drought, the emphasis must be on irrigation projects
while in the southern rice growing region with over abundance of rainfall,
the emphasis is placed in the use of drainage equipments. The third point
to be mentioned is that there are variations in the amount of crop depend-
ing upon its kind and location. The Table No. 1 and Table No. 2 were both
extracted from the Far Eastern Economic Review Yearbook. Undoubtedly a
reader will notice that rice crop is approximately 3 to 1 in comparison
to wheat for a given area. From the standpoint of amount of crop relative
to a unit area, wheat is least following in the order of rice, potatoes,
and grain. Because of the aforementioned situation, although the Yellow
River Basin represents 40 per cent of the total cultivated area, it
produces only 20 per cent of the total food production. It was because
of this situation that the policy of expanding the rice growing into the
North was instituted following the "Three Consecutive Years of Catastrophy."
It is believed that a reader can notice some appreciable differences in
reviewing the results indicated in the Tables No. 1 and No. 2.

Although the fourth point is different in perspective from the
previously mentioned points, it is believed appropriate to mention at this
time. It concerns damages resulting from insect and plant diseases. China
suffers innumerable damage from blight and harmful insects every year.
Elimination of damage from these alone would be equivalent to an increase
in acreage of food products and cotton, 10 and 20 per cent, respectively.
Consequently in this particular problem area, the production and utiliza-
tion of agricultural chemicals becomes a matter of significance.
The final point is referenced to uncultivated areas in China. It is said that the acreage is almost equivalent to the size presently under cultivation. The development of these uncultivated areas has been constantly emphasized since the inception of the First Five-Year Plan. However, very little progress in this direction has been accomplished due to the resistance of these uncultivated areas. According to official statistics, the increase in cultivated acreage between the period of 1950 to 1955 amounted to only 7 per cent. It is believed that subsequent rate of increase has been even less than the aforementioned figure, and accordingly it is also believed that not much of any great increase in cultivation of new areas can be expected.

3. Indicator and Actuality of Agricultural Modernization

In order to increase agricultural production, only two avenues are available, viz., expand acreage of cultivation or increase crop production per unit area. If it is difficult to expand the acreage of cultivation, then the country must rely upon improvements of agricultural techniques for the increase in crop production. Mao Tse-tung’s initial time schedule for agricultural technical reform indicated considerable prudence regarding the problem. He estimated that to accomplish a nation-wide technical reform in agriculture would require 20 to 25 years. (New China Monthly Report, November, 1955) However, influenced by the superficial optimism generated by the “Great Leap Forward,” the time schedule was shortened and resulted in establishing an accelerated plan of “Counting from 1959, minor problems concerning agricultural modernization will be accomplished within four years; average problems will be resolved within seven years, and major problems within 10 years.” However, subsequent to the “Three Consecutive Years of Disaster,” in 1962, the authorities changed their period of estimation to the original plan of 20 to 25 years for accomplishing modernization of agricultural techniques starting with 1962. (Editorial, People’s Daily, 9 November 1962)

In China the word “shih-hsin” (four changes) is expressed symbolizing modernization or technical improvement in agriculture. These “Four Changes” are in mechanization of agriculture, electrification, improvement in irrigation, and increase in chemical utilization. The tentative dates of accomplishment as mentioned by Liu Shih-hsin are as indicated in Table No. 3. The holdings (as of 1964) as indicated in Table No. 3 are believed based upon Chou En-lai’s report made in late 1964. In contrast to the total amount required for completion of modernization, the table indicates that the country has only one-seventh of the required number of tractors, one-third of plowage equipment, two-sevenths of necessary fertilizer, and two-thirds of the needed electrification in agriculture. The deficiency in tractors in especially glaring. On the whole, presently the country has only one-third of the necessary materials/items required for the modernization of the agriculture.
Although incomplete, few statistics are furnished to indicate how much progress was made in the "Four Changes" during the year 1965. A report on irrigation projects revealed that for "the work, during the winter of 1964-1965, 1.4 million more manpower was mobilized and accomplished more than 50 per cent in comparison to the previous year, and 1.3 million hectares of additional land were newly irrigated." (Asia News, 5 February 1965) However, based upon previous instances, there are some doubts as to actual benefits these results will produce. Although in regard to drainage facilities, "there have been an increase of 25 per cent over the previous year," (same reference as above), the fact that the amount of holdings concerning drainage equipment was the same as reported in a weekly report published at the end of 1964 could only be interpreted that the number of increase in equipment represented primarily replacement of old equipment. A similar report concerning number of tractors has also been made. (New China News Agency, 29 September 1965) It is not clear whether hand tractors were included in the number of tractors; however, it is noteworthy to observe that the production of tractors during the period of January to August amounted astonishingly to more than 5.5 times the corresponding period during the previous year. Cae: interpretation concerning the phenomenal increase is that rather than clearly reflecting the growth, it also indicates how meager the original number of tractors. According to New China News Agency (25 February 1965) the consumption of electrical power in the rural areas increased by 25 times that of 1957's. Since the electrical consumption in the rural areas for 1957 was estimated at 110 million kw, it was calculated that the consumption for the year 1965 was 3.5 billion kw. Since successive numerical figures are available since 1961, (reference is made to the author's Economic Power of Communist China), the following figures are cited: 1961 = 1 billion kw; 1962 = 1.56 billion kw; 1963 = 2.1 billion kw; 1964 = 3.22 billion kw; and 1965 = 3.5 billion kw. The reader should note that in contrast to the approximate 40 per cent annual increase during the period of 1961-1964, the increase for the year 1965 amounted to less than 10 per cent, reflecting tremendous decrease in rural electrification works for the year. Although it was not included in the Liu-Jih-hsien indicator, the production for agricultural chemicals for 1965 was reportedly approximately 50 per cent more than that for the previous year (Economic Review, 1 January, 1966). Since the production volume for 1964 was approximately 300,000 tons, the 1965 production was estimated at 450,000 tons.

It was reported that "production for the period January-August was 30 per cent more than the corresponding period for the previous year." (Kuang-King Daily, 24 October 1965) The NGOA news dated 1 November reported that "as of present" the amount of production was 1.7 million tons more than the volume produced in 1964. The December 15th announcement of the NGOA stated that the total production as of the end of November was 2.79 million tons more than that of the previous year. Consequently determining
the date of "as of present" previously announced by the Central
matter of significant importance. If the time for the unit of the chemical
it meant that the monthly production for sulfuric acid was 2.5 million
approximately 250,000 tons each and that in the production field
would be an increase of 3.5 million tons. In previous years
the time frame was as of half of October. In early 1965 this
the month of November amounted to 1.25 million tons
be an increase of 3.5 million tons over previous years.

According to Economic Review, No. 1, January 1966 (さえ by
Jang Ch'ang-Chih) the production of chemical fertilizer increased by more
than 60 per cent over the previous year. In the production field in the first
the total production in 1965 amounted to approximately 8.6 million tons. If figured on the second time frame, the total
production would have been over 10 million tons. The latter figure is
believed too excessive when interpreted with figures related to the 1964
production. The amount of chemical fertilizer distributed to the rural areas
during 1964 was approximately 7 million tons. When the amount of fertili-
izer imported was subtracted from the total distribution, the domestic
production was estimated at 5 million tons (previously referenced author's
article). Thus, it is believed that the first interpretation regarding
the production is preferred over the second interpretation. Consequently
it is estimated that the domestic production amounted to 8 million to
9 million tons. By adding the import to the above-mentioned amount, it
seems that approximately 10 million tons of fertilizer were distributed
to the farmers. Regardless of how one views the situation, he cannot deny
the fact that Communist China has greatly accelerated its production of
chemical fertilizer. During 1965, 28 large and 140 small fertilizer
factories were either built or expanded, and reportedly almost all the
provinces and autonomous regions have at least one chemical fertilizer
factory. (ECON, 15 December 1965) The fact that these new invariably
mentions a production increase in phosphate fertilizer indicates that its
production has increased much more rapidly than the production of nitro-
genous fertilizer.

A survey of the aforementioned statistics reveals that there has
been a phenomenal growth in chemical fertilizer production and increase
in electric consumption in the rural areas in the modernization of
agricultural production for the year 1965 and that estimated 40 per cent
of the I'm Jih-hsin indices have been attained. On the other hand it was
adjudged that hardly any progress was made in mechanization such as in
number of tractors and drainage facilities.

4. Recent Agricultural Production Level

Progress in "Four Changes" i.e., mechanization, electrification,
and improvement in irrigation and in increase of chemical products, does not
correspondingly reflect increase of agricultural production for the
same year. The actual production is governed also by such other factors
as weather conditions and the will to work on the part of the laborers.

Information concerning agricultural production for 1955 runtime was
concluded long. The 1955 New Year editorial of the People's Daily noted
that "For 1955, one agricultural production reached the preceding year
for the fourth consecutive year." However, it states that the actual
production for the year was less than that for 1954.

Of the limited number of reports available on the actual produc-
tion of agriculture for the year 1955, comparatively organized informa-
tion was disclosed by Wu Chen, Deputy Director, Department of Agricul-
ture, during his interview by a correspondent of the China News (Peking
January 25 December 1955) and from which the following pertinent informa-
tion was extracted:

In tone similar to that voiced in the New Year's editorial of the
People's Daily, Wu Chen initially stated that the "agricultural produc-
tion in China for 1955 surpassed that of the preceding year for the
third consecutive year since 1952." He stated that "Food production,
cotton, farm products for oil, and other economic products all showed
over-all increase in production. There has been an increase in live
stock (cattle, horses, donkeys, and mules) and in pigs, sheep, and
domestic fowl and an overall increase in agricultural products from
the previous year. Summer crops such as wheat showed a 15 per cent
increase over the preceding year. As for the autumn crops, except for the
certain areas, they, too, showed an overall increase in output
previous year. Cotton production showed somewhat a greater increase
than food production and in both total amount of crop and yield, the
unit surpassed the previous records." The special feature of the
interview was that except for his disclosure of some increase in meat
and cotton production, he failed to mention specific increases in other
productions. Thus our approach to the problem must necessarily assume the
form of generalities.

The problem is did the 1955 production actually surpass that of
the previous year? Some question arises from the fact that in urging
his interview, provided some specifics regarding the increased in summer
production but remained rather vague concerning the autumn production.
A question thus arises that although there was an increase in summer
production, the important autumn production proved relatively lower
the overall production for the year might not have reached that of the
preceding year. Even an HCM article published at the end of 1955 (21
December 1955 edition) reported that "the autumn production suffered
nation-wide because of the flood and drought." Concerning the autumn
production, the article reported that "the rice had a bumper crop and
other main products exceeded both in production per hectare and in total.
amount, surpassing the records of 1964."

In fact, news from the mainland did reach to the sever of 1965 until the National Day (1 November) publicized maximum reports of a magnificent bumper crop, however, about the time when the autumn harvest was usually announced, news arising revealed that the crop was not as large as expected and far in between.

The basis for the assessment that the agricultural production for the year 1965 did not approach that of the previous year is indicated in the fact that the National People's Congress for the year was not convened. In the past the only time the National People's Congress was not held since the Founding of the Communist regime in China was in 1951 when the country was faced with a serious economic disaster. Judging from this fact, the seriousness of the economic plight for 1965 was obvious. It could be said that a National People's Congress Standing Committee conference was held on 20 November 1965 to hear a report concerning the agricultural situation and to decide whether or not to convene a National People's Congress based upon the report furnished. It can also be assumed that due to the unexpectedly adverse report concerning the agricultural situation, the Standing Committee members decided to postpone the National People's Congress.

Also in reference to the interview of Hu mentioned previously, the fact that Hu "emphasized" the adverse weather condition could be interpreted that the agricultural production for 1965 was poor. According to Hu the natural condition for the year 1965 was as follows:

In many northern areas, draught conditions prevailed because of lack of snow and rain from November 1964 to the early part of April 1965. Even during the summer months much dry spell prevailed in the North China region, and this dry spell which extended into the autumn was the most severe one in the last several ten years. In contrast to the above, the weather condition in South China was relatively favorable, but still the spring and autumn temperatures were too low, adversely affecting in the seeding and harvesting of paddy rice. In some areas rice paddies were damaged because of excessive rain, and winds as well as frost and harmful insects.

Noted was almost a total absence in announcements concerning amount of production for various agricultural products. By collating various news of Communist China, the products which could definitely be stated to have increased in 1965 over that of 1964 were wheat, cotton, leaf tobacco, raw materials for sugar and in number of pigs among the live stock. Among the aforementioned products, wheat production amounted to 15 percent over the previous year and cotton by several hundred pounds more than that of 1964 and that the latter was the highest recorded in
history. (Bloomberg Business News, 15 January 1966) It was reported that no
cotton production for the year 1965 was available. The production for the year
1965 (prior balance in cotton) tons of cotton was less than 700,000 bales. The
amount of cotton produced was less than 100,000 bales of the total
food production, the production of the cotton was
only a small contribution to the
food production. The most important produce was rice but there was
no information available on the amount of rice production.

The following announcement appeared in the China Daily News 20 January, to state that "During
1965, China's bumper crop of large-scale crops and the amount of increase in the production during the period occurred to be part of the total increase in the main production." The fact
that it was a bumper harvest over the 1964 production and the
fact that the amount harvest was generally poor in comparison to the
previous year indicated that the rice production for 1965 probably did
not reach the 1964 level.

Concerning soy beans, an important product for oil, the Huan
[Harbin] (20 November 1965) reported as follows: "This year's
soy beans were harvested for the more than 1.8 million acres of the
main soy beans were planted in 1965. Both in the total production and the yield per
acre the amount surpassed those of the previous year." The fact that this announcement pertaining
to increase was made in such a conservative tone, indicated in itself,
that the amount of increase was barely over that of the previous year.

The Huan further announced that leaf tobacco production "increased
noticeably over the preceding year" and that the total production of raw
cotton for tobacco is believed to be more than 30 per cent over the 1964
bumper crop. (Indonesian, 20 November 1965) "The number of pigs is the highest in
the last 10 years." (Economic Review, 1 January 1966)

An estimate of agricultural production for 1965 as indicated on
Table No. 5 was based upon the aforementioned news information and the
previous estimates made by this author for the year 1964. The figures
listed in Table No. 2 were those published in the Eastern Economic Review
whose over-all estimated figures are lower than those of this author.
They may also be used as basic figures.

Finally, the data announced by the United States Department of
Agriculture in November 1965 are listed as reference (World News, 14
December 1965); (c) Although the food production in Communist China made
a sizable gain in 1962 over 1961, it has remained in the vicinity of 180
million tons per year since that time.
Because of drought in North China the production of wheat for 1965 was less than 1964. It is anticipated that potato production will also be less because of decrease in planting acreage and diversion of some farm land for planting of peanuts. (2) The soybean production is anticipated to be only four and one-half less than the 1964 production and the annual average for the period 1953-1957.
2. Northeast Grain Producing Area
3. Gold Kundure Region Outside the Yanze Delta
4. Lao River
5. Yalu River
6. Yellow River
7. Yellow River Basin Winter Wheat Belt
8. Yangtze River
9. Chekiang-Fujian Maritime Rice Producing Region
10. Yangtze River Rice Producing Region
11. Taiwan
12. Kwangtung-Kwangsi Rice Exporting Region (Sic)
13. Hai River
14. Southwest Plateau Rice Cultivation Area
15. Szechwan Basin (Rotational) Cultivation Area
16. Loess Plateau Mixed Cultivation Area
17. Siling - Tibetan Plateau Oats Belt
18. Northwest Dry and Wet Rice Field Area
(1) **Table No. 1 Areas of Cultivation of Various Crops**

<table>
<thead>
<tr>
<th>(2) (units: 1 million hectares)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(3) Average for 1953-57</td>
</tr>
<tr>
<td>(4) Year</td>
</tr>
<tr>
<td>(5) Comparison</td>
</tr>
<tr>
<td>(6) Rice</td>
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<tr>
<td>(7) Wheat</td>
</tr>
<tr>
<td>(8) Grain</td>
</tr>
<tr>
<td>(9) Potatoes</td>
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<tr>
<td>(10) Total food products</td>
</tr>
<tr>
<td>(11) Cotton</td>
</tr>
<tr>
<td>(12) Soya Beans</td>
</tr>
<tr>
<td>(13) Peanuts</td>
</tr>
<tr>
<td>(14) Rape Seed</td>
</tr>
<tr>
<td>(15) Sesame</td>
</tr>
<tr>
<td>(16) Grand total</td>
</tr>
<tr>
<td>(17) Notes: 1. A column based upon the &quot;Great Ten Years&quot; 2. Remaining figures are unofficial estimates</td>
</tr>
<tr>
<td>(18) Reference</td>
</tr>
</tbody>
</table>

(1) Year 20 is an estimate.  
(2) (in the second and fourth columns, the figures of the following columns are not included.  
(3) Average for 1953-57  
(4) Year  
(5) Comparison  
(6) Rice  
(7) Wheat  
(8) Grain  
(9) Potatoes  
(10) Total food products  
(11) Cotton  
(12) Soya Beans  
(13) Peanuts  
(14) Rape Seed  
(15) Sesame  
(16) Grand total  
(17) Notes: 1. A column based upon the "Great Ten Years" 2. Remaining figures are unofficial estimates  
(18) Reference
Table No. 2  Value of Principal Products

(2) (unit: 1,000 tons)

<table>
<thead>
<tr>
<th>(3) Average for 1953-57</th>
<th>(4) 1953</th>
<th>(5) 1954</th>
<th>(6) 1955</th>
<th>(7) 1956</th>
<th>(8) 1957</th>
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<tbody>
<tr>
<td>Rice</td>
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<td>Corn</td>
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<td>Soybean</td>
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<td>Cotton</td>
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<td>Cotton seed</td>
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<tr>
<td>Peanut</td>
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<tr>
<td>Sesame</td>
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</tbody>
</table>

Notes: * 4 of potatoes were calculated as 1 of grain

## Table No. 3: Indicators and Demonstration of Agricultural Modernization

<table>
<thead>
<tr>
<th>Item</th>
<th>Various Indicators and Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Total needs (2)</td>
</tr>
<tr>
<td>2.</td>
<td>Indicator for modernization (1)</td>
</tr>
<tr>
<td>3.</td>
<td>Holdings (Year 1964) (3)</td>
</tr>
<tr>
<td>4.</td>
<td>Machine power</td>
</tr>
<tr>
<td>5.</td>
<td>Per.10,000 hsq 500 hp</td>
</tr>
<tr>
<td>6.</td>
<td>130 million hp</td>
</tr>
<tr>
<td>7.</td>
<td>1 tractor per 1,500 hsq</td>
</tr>
<tr>
<td>8.</td>
<td>500,000 tractors</td>
</tr>
<tr>
<td>9.</td>
<td>123,000 tractors</td>
</tr>
<tr>
<td>10.</td>
<td>Truck</td>
</tr>
<tr>
<td>11.</td>
<td>1 truck per 4,000 hsq</td>
</tr>
<tr>
<td>12.</td>
<td>400,000 trucks</td>
</tr>
<tr>
<td>13.</td>
<td>Irrigation and drainage machinery</td>
</tr>
<tr>
<td>14.</td>
<td>1 hp per 40 ho</td>
</tr>
<tr>
<td>15.</td>
<td>20 million hp</td>
</tr>
<tr>
<td>16.</td>
<td>7.3 million hp</td>
</tr>
<tr>
<td>17.</td>
<td>Chemical fertilizer</td>
</tr>
<tr>
<td>18.</td>
<td>30 lbs per 40 ho</td>
</tr>
<tr>
<td>19.</td>
<td>24 million tons</td>
</tr>
<tr>
<td>20.</td>
<td>Million tons (includes import)</td>
</tr>
</tbody>
</table>

(*10 Japanese ho is 0.245 acre*)

### Notes

2. Calculations based upon: 1.6 billion ho (Chinese) of cultivated land, 1.2 billion ho of cultivated land where tractors can be used, 0.8 billion ho of land for use of irrigation machines.
Table No. 4  Mechanization, Employment of Chemicals, and Electrification

<table>
<thead>
<tr>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unit</td>
<td>1957 Results</td>
<td>1964 Estimate</td>
<td>1965 Estimate</td>
<td>Farm Tractors</td>
</tr>
<tr>
<td>(7)</td>
<td>1957</td>
<td></td>
<td></td>
<td></td>
<td>Standard tractor 15 hp</td>
</tr>
<tr>
<td>(8)</td>
<td>1957</td>
<td></td>
<td></td>
<td></td>
<td>11,000 hp</td>
</tr>
<tr>
<td>(9)</td>
<td>1957</td>
<td></td>
<td></td>
<td></td>
<td>10,000 tons</td>
</tr>
<tr>
<td>(10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Approximate</td>
</tr>
<tr>
<td>(11)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Domestic product</td>
</tr>
<tr>
<td>(12)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Import</td>
</tr>
<tr>
<td>(13)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Agricultural chemicals</td>
</tr>
<tr>
<td>(14)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Consumption of electrical power in rural community</td>
</tr>
<tr>
<td>(15)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10 million l/h</td>
</tr>
</tbody>
</table>

1. tractor
2. tractor
3. tractor
4. tractor
5. tractor
6. tractor
7. tractor
8. tractor
9. tractor
10. tractor
11. tractor
12. tractor
13. tractor
14. tractor
15. tractor
16. tractor
17. tractor
18. tractor
19. tractor
20. tractor
| (1) | 1957 Results |
| (2) | Chou Mo-Jai's Report |
| (3) | 1964 Estimate |
| (4) | 1965 Estimate |
| (5) | Main agricultural products (unit - 10,000 tons) |
| (6) | Food product |
| (7) | Exceed 1957 |
| (8) | Cotton |
| (9) | Same as above |
| (10) | Soya beans |
| (11) | Peanuts |
| (12) | Sesame |
| (13) | Leaf tobacco |
| (14) | Sugar cane |
| (15) | Livestock (unit - 10,000 heads) |
| (16) | Large livestock |
| (17) | Sheep |
| (18) | Pig |

Notes: (1) 1964 estimates were extracted from China's Economic Power published by the Eastern Research Center.
(2) Figures given for 1964 and 1965 are all estimates.