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1. Importance of Agriculture in Japanese Economy

The importance of the agricultural industry to the Japanese 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 35.6 per cent in 1955; however, the total number of people engaged in agriculture increased from 450 million to 655 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 1955's. (As of 1963, the percentage of people engaged in the primary industry in Japan was 23.1.)

Next, a check of national income by industry revealed that in 1959, agriculture represented the top most industry consisting of 42.6 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, Mishima Ikuji, in December 1961, indicated the importance of agricultural industry. It stated, "Ninety 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 resources. Indeed, approximately 60 per cent of the goods distributed in the market are manufactured products as well as their subsidiary, food, foodstuffs, 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 are attributed to the agricultural industry, and approximately 60 per cent of the national income are either directly or indirectly related to the agricultural 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 meaningful industries which can withstand the competitions from the advanced industrial nations. Consequently, these 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 socialistic 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 Chien’s 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 Chien economy on the verge of bankruptcy.

Regardless of the mentioned relationship between the manufacturing industry and agricultural industry, it cannot be considered an one-sided affair in which the agricultural industry limiting the manufacturing industrial output. It should be borne in mind that industrial output accelerates the agricultural output. In order to increase agricultural output, it must depend upon the support of the manufacturing industry, 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, especially for countries like Communist China, the aforementioned relationship of the two industries must be clearly understood.

However, during the 1950s, 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 620,000 tons. The production of such farm implements as tractors and cultivators 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 mechanization 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 among some 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 Chinese 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. (Agricult 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 1956. (Editorial, People's Daily, 1 January 1956)

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 an essential element 

defining the military potential of Communist China.

2. Some Basic Conditions That Hamper 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 1,220 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 Hebei 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 1952 to 1956 or in 2,124 (sic) years, 

there have been relatively speaking, 1,031 great floods and 1,060 great 
droughts or approximately one, either great flood or great drought, every 

year. It is thus understandable why Communist China places so much emphas-

is in controlling irrigation. However, it has paradoxically shown 

that the more they emphasized irrigation projects, the more the country 
suffered. For example, at 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 1955, it was 4 per cent. Again, 1959-1960, the area suffered somewhat to unbelievable 60 per cent. These adverse results can be attributed to slipped construction and delays from the mobilization of means for their solutions. It is obvious that frequently it would be more efficient to change or destroy the Watkins than starting a new project. In this way, the country is forced to the fact that it would be exceedingly beneficial to the country to improve the level of agricultural technique nationwide. The obstacles for this attempt are found in variations of weather conditions, in types of crops raised and methods of cultivation as well as in regional differences in topography, soil composition, and available labor forces. Consequently, the country is compelled to make various changes in its policies for next similar 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 Henan 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 depending upon its kind and location. The Table No. 1 and Table No. 2 were both extracted from the Far Eastern Economic Review Yearbook. Undoubtedly the 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 incalculable damage from blight and harmful insects every year. Elimination of damage from them 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 utilization of agricultural chemicals becomes a matter of significance.
The final point is reference 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 was 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 in 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 LII 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 machinery equipment, two-sevenths of necessary fertilizer, and two-thirds of the needed electrification in agriculture. The deficiency in number of tractors is especially glaring. On the whole, presently the country has only one-third of the necessary materials/items required for the modernization of the agriculture.

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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 man-power 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, similar to previous instances, there are some doubts as to actual benefit 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. One 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 120 million kwh, it was calculated that the consumption for the year 1965 was 3.5 billion kwh. 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 kwh, 1962 - 1.56 billion kwh, 1963 - 2.1 billion kwh, 1964 - 3.22 billion kwh, and 1965 - 3.5 billion kwh. 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." (Kuan-Ying Daily, 24 October 1965) The NPGA 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 NPGA 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 Chinese in the matter of significant... it meant that the monthly production for October and November was approximately 960,000 tons each and that in the fourth quarter, the monthly production for November would be 1.2 million tons and 1.0 million tons and the monthly production for December would be 0.92 million tons each.

According to Economic Survey, 8 January 1965 (source by: Liang Ch'eng-Chih) the production of chemical fertilizer increased by more than 60 per cent over the previous year. In the first time frame, the total production in 1963 amounted to approximately 8.8 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 fertilizer distributed to the rural areas during 1964 was approximately 7 million tons. When the amount of fertilizer imported was subtracted from the total distribution, the domestic production was estimated at 6 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, 26 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. (NORTH, 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 nitrogenous fertilizer.

A survey of the aforementioned statistics reveals that there has been a phenomenal growth in chemical fertilizer production in the rural areas in the modernization of agricultural production for the year 1965 and that estimated 40 per cent of the Hu 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, improvement in irrigation and in increase of chemical products, does not
correspondingly reflect increase of agricultural production for the
same year. The total 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 remains
conspicuously lacking. The 1955 New Year's editorial of the People's Daily stated
that "For 1955, our agricultural production exceeded the preceding year
for the fourth consecutive year." However, it states that the total
production for the year was less than that for 1954.

Of the limited supply of reports available on the actual production
of agriculture for the year 1955, comparatively organized information
was disclosed by Wu Chen, Deputy Director, Department of Agriculture,during his interview by a correspondent of the China News (Caifuqu, January 25 December 1955) and from which the following pertinent information 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 production
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
an 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 an increase of
increase over the preceding year. As for the autumn crops, except for the certain areas, they, too, showed an overall increase over the
previous year. Cotton production showed somewhat a lower increase than food production and in both total amount of crop and yield of
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 giving
his interview, provided some specifics regarding the increase in summer
production but remained rather vague concerning the autumn production.
A question thus arises that although there was an increase in cotton
production, the important autumn production probably fell below the
overall production for the year might not have achieved the same increase
as 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 total.
amount, surpassing the records of 1961.

In fact, news from the mainland and reports to the autumn of 1965 until the National Day (October) published maximum reported bumper crop, however, about the time of the harvest usually announced, news taking related to the crop of 1965 was not.

The basis for the assessment that the agricultural production for the year 1965 did not approach that of the previous year as 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 national 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 unexpected adversity 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, drought conditions prevailed because of lack of snow and rain from November 1964 to the early part of April 1965. Drought 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 from frost and harmful insects.

Note 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 millions more than that of 1964 and that the latter was the highest recorded in
Corresponding soy beans, an important product for oil, the Nanking Economic Review (12 November 1965) reported as follows: "This year's soybean crop yields from the more than 1.2 million hectares of the main soybean growing area of Shangdong Province was relatively high. Both in the total production and in yield per unit, the amount surpassed those of the previous year." The fact that this announcement pertaining to increased soy production, in such a conservative tone, indicated in itself, that the amount of increase was barely over that of the previous year.

The Nanking further estimated that leaf tobacco production "increased noticeably over the preceding year" and that the total production of raw material for sugar was believed to be more than 50 per cent over the 1964 bumper crop." (loc. cit., 12 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 in 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, soybean acreage announced by the United States Department of Agriculture in November 1965 are listed as reference (World News, 14 December 1965): (1) Although the food production in Communist China made a sizeable gain in 1962 over 1961, it has remained in the vicinity of 180 million tons per year since that time.
(2) 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. (3) Soy bean production is anticipated to be only three and three fifths less than the 1964 production and the annual average for the period 1953-1957.
2. Northeast Grain Producing Area
3. Gold Venture Region Outside The Yarn Belt
4. Lao River
5. Yalu River
6. Yellow River
7. Yellow River Basin Winter Wheat Belt
8. Yangtze River
9. Chekiang-Fukien Maritime Rice Producing Region
10. Yangtze River Rice Producing Region
11. Taiwan
12. Kwangtung-Kwangsi Rice Exporting Region (Sic)
13. Loi River
14. Southwest Plateau Rice Cultivation Area
15. Szechuan 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></th>
<th>(2) (in 1 million hectares)</th>
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<td>(17)</td>
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<td>(18)</td>
</tr>
</tbody>
</table>

(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

14
(1) Table No. 2  Value of Principal Products

(2) Note: 1,000 tons

<table>
<thead>
<tr>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
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<tr>
<td>Grain</td>
<td>Total grain</td>
<td>Average for</td>
<td>1953-57</td>
<td></td>
<td></td>
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<tr>
<td>Cotton</td>
<td>Cotton</td>
<td></td>
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<td>Soybeans</td>
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<td>Peanuts</td>
<td></td>
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<td></td>
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<tr>
<td>Cotton seed</td>
<td></td>
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<tr>
<td>Rape seed</td>
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<tr>
<td>Sesame</td>
<td></td>
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</tbody>
</table>

(3) Average for 1953-57

(4) Total grain product

(5) Cotton

(6) Soybeans

(7) Peanuts

(8) Cotton seed

(9) Rape seed

(10) Sesame

(11) Notes: 4 of potatoes were calculated as 1 of grain

(12) Reference

(13) Year

(14) Rice

(15) Millet

(16) Wheat

Table No. 3  Indicators and Demarcation of Agricultural N. Evaluation

<table>
<thead>
<tr>
<th>Item</th>
<th>(2)</th>
<th>Indicator for modernization (1)</th>
<th>(24)</th>
<th>Electrical power for agricultural usage</th>
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<tbody>
<tr>
<td>(3)</td>
<td>Total needs (2)</td>
<td>(25)</td>
<td>1 kw/h per 1 ho²</td>
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<td>(4)</td>
<td>Holdings (Year 1964) (3)</td>
<td>(26)</td>
<td>6 billion kw/h</td>
<td></td>
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<tr>
<td>(5)</td>
<td>Machine power</td>
<td>(27)</td>
<td>3.22 billion kw/h</td>
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</tr>
<tr>
<td>(6)</td>
<td>Per 10,000 ho² 500 hp</td>
<td>(28)</td>
<td>Notes</td>
<td></td>
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<tr>
<td>(7)</td>
<td>130 million hp</td>
<td></td>
<td>(1) Data from the thesis by LIII Jih-Hein</td>
<td></td>
</tr>
<tr>
<td>(8)</td>
<td>Tractor</td>
<td></td>
<td>(People's Daily, 20 June 1963)</td>
<td></td>
</tr>
<tr>
<td>(9)</td>
<td>1 tractor per 1,500 ho²</td>
<td></td>
<td>(2) Calculations based upon:</td>
<td></td>
</tr>
<tr>
<td>(10)</td>
<td>500,000 tractors</td>
<td></td>
<td>1.6 billion ho (Chinese ho) of cultivated land</td>
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<tr>
<td>(11)</td>
<td>123,000 tractors</td>
<td></td>
<td>1.2 billion ho of cultivated land where tractors can be used.</td>
<td></td>
</tr>
<tr>
<td>(12)</td>
<td>Truck</td>
<td></td>
<td>0.8 billion ho of land for use of irrigation machines</td>
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</tr>
<tr>
<td>(13)</td>
<td>1 truck per 4,000 ho²</td>
<td></td>
<td>(3) Extracted from China's Economic Power, published by the Kashi Research Center</td>
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<tr>
<td>(14)</td>
<td>400,000 trucks</td>
<td></td>
<td></td>
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<tr>
<td>(15)</td>
<td>Irrigation and drainage machinery</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>(16)</td>
<td>1 hp per 40 ho²</td>
<td></td>
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<tr>
<td>(17)</td>
<td>20 million hp</td>
<td></td>
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<tr>
<td>(18)</td>
<td>7,3 million hp</td>
<td></td>
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</tr>
<tr>
<td>(19)</td>
<td>Chemical fertilizer</td>
<td></td>
<td></td>
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<tr>
<td>(20)</td>
<td>30 lbs per 40 ho²</td>
<td></td>
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<tr>
<td>(21)</td>
<td>24 million tons</td>
<td></td>
<td></td>
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<tr>
<td>(22)</td>
<td>6.8 million tons (includes import)</td>
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(*1 ho Japanese ho is 0.245 acre)
Table No. 4  Industrialization, Employment of Chemicals, and Electrification

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</tbody>
</table>

(2) Unit
(3) 1957 results
(4) Circuit report
(5) 1954 estimate
(6) 1955 estimate
(7) Farm tractors
(8) Standard tractor 15 hp
(9) 1957
(10) Irrigation/drainage facilities
(11) 10,000 hp
(12) Supply of chemical fertilizer
(13) 10,000 tons
(14) Approximate
(15) Domestic product
(16) Import
(17) Agricultural chemicals
(18) Consumption of electrical power in rural community
(19) 10 million kw/h
Table No. 5 Recent Agricultural Production Level

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<td>16.</td>
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<th>(16)</th>
<th>(17)</th>
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</thead>
<tbody>
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<td>1.</td>
<td>2.</td>
</tr>
</tbody>
</table>

(1) 1964 Reports
(2) Chou En-Lai'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) Sesame
(10) Soya beans
(11) Peanuts
(12) Sugar cane
(13) Leaf tobacco
(14) Livestock (unit - 10,000 heads)
(15) Large livestock
(16) Sheep
(17) Pig

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