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Manchoukuo's geographic value to Japan.

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Thesis
MANCHOUKUO'S GEOGRAPHIC VALUE TO JAPAN
by
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Introduction

This paper is an analysis of Manchoukuo's geographic value to Japan. After a brief treatment of Manchoukuo's physical background, the body of the thesis is divided into four sections dealing with Manchoukuo as an outlet for Japan's surplus population, as a source of foods for Japan, as a source of raw materials for Japan, and as a market for Japanese manufactured goods. Through the use of statistics, both Japanese and Manchoukuoan, and through comparisons with other countries better known to the average individual, I have endeavored to show in just which ways the possession of Manchoukuo is of benefit and in which ways it is of detriment to Japan's economic prosperity. Rather than encumber the discussion with many figures, I have arranged much of the material in the form of charts and graphs. Moreover, wherever it seemed advisable maps have been added.
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Manchoukuo, comprising an area of 482,440 square miles in northeastern China, stretches from the Gulf of Liaotung northward to the Sungari and Amur rivers. Its westernmost boundary reaches the 117th meridian. This suggests an area somewhat greater than twice that of Dutch Borneo and about equal to that of New South Wales and New Zealand combined. According to topography, it may be divided into three regions: the Changpai Mountains of eastern Manchoukuo, the Central Plain, and the Khingan Mountains in the west. The Changpai Mountains represent the stage of maturity, with their relief of several thousand feet, occasional valley, clear streams and tree-clad slopes. Lying between Chosen and Maritime Russia on the east and the Sungari and Liao valleys on the west, they rise in a series of high ranges along the border of China in eastern Kirin and northeastern Liaoning. Toward the plain are rounded hills and open valleys which again increase in height eastward. The rock foundation is metamorphic, overlain by Tertiary coal strata. Although there is no volcanic action now, the highest peak, Paritou Shan, is a volcanic cone containing a crater lake.

Central Manchoukuo is a plain, until recently a grass land, relieved by low hills. Surrounded on three sides by mountains, it lies open on the south in a narrow valley reaching to the sea. The plain never rises to an elevation of over
1000'. This area of 137,637 square miles finds its eastern limit parallel to and not far from the southern branch of the Chinese Eastern Railroad; its southeastern limit near the head of the Gulf of Chihiili; its northeastern extension down Sungari valley to longitude 128°E.; its northern limit near Mergen on the Nonni river; its western limit in the mountains of Jehol; its southwestern limit at Chinchow along the Peiping-Liaoning Railroad; and its southern boundary of eighty-five miles, along the Chinese Eastern Railroad.

Between the Manchoukuoan plain and the Mongolian plateau tower the Khingan Mountains, the Little Khingans to the north, the Great Khingans to the west. This region, bounded on the north and northwest by the Amur and Argun valleys consists of a low narrow gneiss range in the stage of late maturity, therefore with little level land. On the west a series of rounded hills reach a height of 1,000' above the plateau. In the central region the peaks obtain 6,000' and some 8,000' above the plateau, but to the east the mountains fall in height to 3,000' hills cut by deep valleys.

Although in the same latitude as southern Europe, the State of Manchoukuo is marked by a continental climate with its short duration of spring and autumn and comparatively long summer and winter. Due to its position, the State as a whole is relatively dry, particularly in the west. Benefiting somewhat from the influence of the sea, the eastern mountain section receives more rainfall than does the plain. In the
MANCHURIA
AVERAGE NUMBER OF DAYS WITHOUT FROST

AFTER MURAKOSHI GEOG. REV. VOL. 20 1930 PAGES
higher mountains 40" is the average, whereas on the western slopes only 25" fall. Over the entire area the average number of days with rain does not exceed 120. The winters of this eastern section are severe, accompanied by much snow and temperatures as low as -30°F. In the summer, because of the elevation, the temperatures are not high and only the months of June, July, and August are frost free. Northwestward from Darien to Manchouli the mean temperature and annual average precipitation decrease, so that hardier, drought resistant crops must be grown in much of the Central Plain. The Khingan Mountains are subject to an even more severe climate with only a few warm weeks and less than 100 frost free days. The precipitation nowhere exceeds 12". Although there is some snow in winter, because of aridity the amount is meager. The average humidity of the State is 60 to 68% or 10 to 20% less than that of Japan, while the evaporation is twice that of Japan.

In Manchoukuo there are two principal types of soil, black and yellow. The black, rich in chemicals and mineral matter, is found in the north; the yellow, poor in nitrates and organic matter, appears in the south. As a whole, the soil is rich in alkaline material. The small content of organic and nitrogenous matter is due in part to the cultivation of a limited variety of crops such as kaoliang and millet which have strong absorbing powers. The nitrogen is partly supplemented, however, by the soy bean and by rapid
efflorescence caused by cold winters. Since the roots of crops and weeds are used for fuel, the supply of much organic matter is removed. Poor agricultural methods and lack of proper fertilizer allow the soil to lose its richness rapidly. In parts of Manchoukuo farms are never manured; in the most densely populated villages of Kwantung the majority of farmers fertilize their fields once a year; in Heingyocheng, once in two years; in Kaochuling, once in three years. The most popular fertilizer mixture is composed of animal dung, grass, horsebeddings, ashes, leaves, kitchen rubbish, and mud. But the government recently has been taking steps toward the use of adequate fertilizer and toward the establishment of crop rotation.
MANCHOUKUO - AN OUTLET FOR JAPAN'S SURPLUS POPULATION

This is the region which Japan long considered the land of promise, the possession of which would provide at least a partial answer to her major economic problems. Therefore on September 18, 1931 Japanese troops occupied Mukden. Five months later Japan declared the independence of the State of Manchoukuo. Just what did Japan expect to gain through this artificial means? Briefly, she looked toward Manchoukuo as an outlet for the Japanese surplus population, as a source of foods and raw materials for the Japanese at home, and as a market for Japanese manufactured goods.

As a solution to Japan's population problem, however, Manchoukuo has proven herself far inadequate, although the Japanese seem doggedly determined to ignore all signs of failure. In the first place, Manchoukuo is becoming overcrowded with Chinese immigrants alone. To be sure the Khingan Mountains are sparsely populated. What few towns there are in this section lie chiefly along the railroad and rivers. But such a mountainous region offers no means of subsistence to an agricultural people. The lumber industry does draw a few thousand workers during the winter and hunting beckons to the sportsman, but neither of these activities could intrigue many permanent settlers. To the west, the desert provides a scanty livelihood for wandering Mongols. It is the valley of southern and central Manchoukuo, containing the best agricultural land,
which supports the majority of the people. But this region occupies only about one-third of the total area of Manchoukuo. In 1936 the density of population in Manchoukuo had reached 72 per square mile. Figuring that most of the people are concentrated into one-third of the total area, the density of that region must be near 200 persons per square mile. In an agricultural state this, of course, means overcrowding. According to the 1938 Japan-Manchoukuo Year Book, two of the four agricultural divisions of the State still offer room for expansion. These are the region of central Manchoukuo, watered by the Hurka and upper and middle Sungari rivers and the region watered by the lower Sungari, Nonni, and Amur. Both of these localities, rich in soil, offer possibilities for agricultural settlement. But statistics show that only fifty per cent of the Japanese immigrants are agriculturally inclined.1 The other fifty per cent are interested in business and industries in the already densely populated cities of southern Manchoukuo. Moreover the population of Manchoukuo is rapidly increasing without the assistance of Japanese immigrants. In 1907 the total population was estimated to be between 16,000,000 and 22,000,000.2 By June, 1932, it had increased to 29,968,835.3 And in June, 1935, the population estimate reads 32,869,054.4 All except a small fraction of this number are Chinese, and

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3. Ibid.
4. Ibid.
PERCENTAGE OF CHINESE
IN
MANCHOUKUO

1920

<table>
<thead>
<tr>
<th>CHINESE</th>
<th>OTHERS</th>
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<tbody>
<tr>
<td>90%</td>
<td>20%</td>
</tr>
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</table>

1935

<table>
<thead>
<tr>
<th>CHINESE</th>
<th>OTHERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>95%</td>
<td>5%</td>
</tr>
</tbody>
</table>
the proportion of Chinese is steadily increasing. In 1900 the Chinese element equalled only eighty per cent of the population; in 1935 it accounted for ninety-five per cent of the population. The remaining five per cent included not only Japanese but also, Koreans, Russians, other Asiatics, Europeans, and Americans.

It is against this Chinese element that the Japanese must contend. And it is an element probably impossible to eradicate or submerge because of its long history and firm hold in Manchoukuo. Since the stone age the Chinese have comprised part of the Manchoukuoan population. Though the natives of the country, the Manchus, were alien to the Chinese racially and hostile politically, and tried to keep Manchuria free from Chinese permeation, they had no knack for colonization and were too few and barbarous to withstand the inward flow of Chinese culture, even when assisted by the Mongols of the western part of the country. So the Chinese may claim occupancy of the land from the first. In recent years refugees from the floods, famines and banditry of North China have been fleeing by the thousands into Manchoukuo. From 1924-1930 the net gain of population was annually over 1/4 million, reaching in the peak year of 1927 more than 836,000.

Without question Japan needs territory for expansion

because of her custom of producing large families. Her population is yearly increasing by the astounding figure of some 900,000. Since 1920 the rate of this increase has rapidly risen.

<table>
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<tr>
<th>Year</th>
<th>Population of Empire</th>
<th>Rate of Increase</th>
</tr>
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<tbody>
<tr>
<td>1920</td>
<td>76,988,379</td>
<td></td>
</tr>
<tr>
<td>1925</td>
<td>83,456,929</td>
<td>6.7%</td>
</tr>
<tr>
<td>1930</td>
<td>90,396,043</td>
<td>7.9%</td>
</tr>
<tr>
<td>1935</td>
<td>99,456,512</td>
<td>8.1%</td>
</tr>
</tbody>
</table>

In 1934 the density of population in Japan had reached 390 per square mile.

But the increase in Japanese population is not the only cause for disturbance. It has been accompanied of late by a decided advance in the standard of living, as judged by the consumption of wheat, sugar, meat, and fish. So far the output of rice has nearly kept up to the population increase, but because of extended scientific methods of cultivation, not increase in area for planting. The total arable land of Japan is less than the farmed land of Ireland, and not naturally very fertile or open and level. Honshu, with 1/3 as much arable land as Great Britain, is supporting 20,000,000 more people.² Within fifty years, through meticulous care, the Japanese have

2. Lyde, F. W., The Continent of Asia, p. 710.
doubled their output of rice, but agricultural possibilities have been practically exhausted. And 5,000,000 additional bushels of rice annually are needed to feed the extra 900,000 people.  

It was around 1900 that the Japanese first began to invade Manchurian territory. At that time the Japanese government maintained that it would in the next ten years send 1,000,000 emigrants to southern Manchuria. By 1927 there were only 68,000 Japanese in Kwantung out of a total of 740,000 people. Nearly all of these were in Darien and Port Arthur. In the railway zone there were 105,000 Japanese in the population of 309,000. And in the rest of Manchuria not under Japanese rule, there were not more than 68,000 islanders, making only 240,000 Japanese in a total of 27,500,000 people. With the formation of the state of Manchoukuo, Japan began a new drive to populate the territory with Japanese. This took the form of immigrant batches ranging in size from 300 to 500 people. Among the most notable were the "self-guarding" immigrants. These were granted, according to the progress of their colonization over a period of four years, two subsidies, one of which included passage, livestock, agricultural implements, housing, clothing, and living. The other provided for the furtherance of public enterprises. For various reasons such as fighting, 

3. Ibid.
4. Ibid.
banditry, flood, disease, the population in each settlement has either dwindled or has increased by only a small fraction.

In 1935 the total Japanese population of Manchoukuo numbered only 501,251.1 Where does the difficulty lie and what hope is there of its alleviation? In the first place, the Japanese are unaccustomed to mass emigration. For two and one half centuries prior to 1868 Japan was a closed country. No people for so long out of touch with the world can be hurried into so vast a change. The Japanese as a people would rather live crowded together at home than migrate to the edges of the empire unless forced to do so. Studying the world distribution of population, it is evident that the Japanese have strayed far, but in small numbers.

Japanese Overseas Population - 1933²

<table>
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<tr>
<th>Continent</th>
<th>Japanese Population</th>
<th>Per cent of Total Japanese Overseas Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America------</td>
<td>174,230--------------</td>
<td>20</td>
</tr>
<tr>
<td>Asia---------------</td>
<td>339,998--------------</td>
<td>39</td>
</tr>
<tr>
<td>Europe-------------</td>
<td>2,954-----------------</td>
<td>less than .5</td>
</tr>
<tr>
<td>South America-----</td>
<td>201,740--------------</td>
<td>22</td>
</tr>
<tr>
<td>Africa-------------</td>
<td>201-------------------</td>
<td>---</td>
</tr>
<tr>
<td>Oceania------------</td>
<td>153,684--------------</td>
<td>18.5</td>
</tr>
</tbody>
</table>

Total Japanese Overseas Population 872,807 Per cent of total Japanese Population .87

In the second place, the Japanese cannot compete with the

2. Ibid., p. 45.
low standard of living maintained by the Chinese in Manchoukuo. The Chinese peasant usually works for a year or so as a laborer, then takes a small piece of land and for a while lives a meager existence. Probably his home is an unstable mudhouse. The food supply is small and undependable, but having always lived on the margin of subsistence, the Chinese laborer is content with his coarse kaoliang and soy bean. On the other hand, the Japanese farmer demands a more substantial livelihood - a clean, solid structure in which to live; a more palatable food such as rice, fish, and other comparatively expensive fare, for his constitution is more delicate. He requires water, a daily bath, soap, and towels. Not satisfied with the coarse cotton garments of the Chinese, he desires fine cotton or even silk or wool. Then being a more intellectual people, he wants books, magazines, papers, whereas the mass of Chinese farmers is content to remain ignorant.

Of minor importance and yet not to be disregarded are the factors of landscape and climate. The Japanese, used to a varied landscape, dislike the monotony of Manchoukuo; accustomed to delicate color and beauty, they find the dry areas of Manchoukuo dull and ugly. The climate of Manchoukuo is severe in comparison with that of Japan. It means added expense for clothing, housing, and food. Even Hokkaido, an island of Japan Proper, is sparsely settled because of climate as well as distance from the center of the empire. If the Japanese will not populate territory which has belonged to
them through the ages, how can they be expected to migrate to far less promising surroundings.

Even though the Japanese were willing to settle in Manchoukuo, could Japan supply the necessary financial aid? She is badly pinched as it is and none of the subsidized settlement schemes are planned on proportions to take care of more than a small part of the yearly Japanese population gains. The largest schemes plan for only tens of thousands and the more sane deal with thousands and hundreds -- and as yet these are but schemes. Even if tens of thousands could annually settle in Manchoukuo, the problem would not begin to be solved.

Finally, in how far will the Japanese in Manchoukuo be able to hold their national identity against the ever strengthening Chinese population. "In a few decades Chinese culture has permeated less civilized foreign invaders than the Japanese. They have been assimilated with the Chinese people, losing their own fundamental characteristics. Political dissensions have caused as much disunity in China as in Europe. But the interest of a race in China and the will to preserve its unity have dominated. Civil wars have divided China into semi-independent states, but all feel that they are a part of the Chinese nation and people. Though there are conspicuous racial shades between Mohammedan Chinese in the west and Chinese in the north and south, they all have the main

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characteristics in common. Their political ideal is a
government system which admits to each province a freedom
verging into independence without ruining the national unity.
Japanese say Manchoukuo was no more under Nanking government
before than now."¹ Perhaps not, but she is confronted with a
new political creed. Japan meant to cause disruption in the
relation between China and Manchuria, to establish a new
nation, independent, which would renounce affinity to China and
have a subsequent alliance with Japan. But even the Japanese
are beginning to realize that they have underrated the
capabilities of the Chinese. Recently a Japanese economist
stated, "If there were ever a hope for Japanese dominance in
Manchuria, it was the first ten years during which we wished
to colonize to the extent of 1,000,000 immigrants. It is too
late now."²

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¹ Kulgren, China Weekly Review, December 3, 1932, p. 22.
² Orchard, J. E., Japan's Economic Position, p. 43.
MANCHOUKUO - A SOURCE OF FOODS FOR JAPAN

Some authorities feel that although Manchoukuo cannot accommodate many more Japanese, she will be of value to Japan as a source of foods and raw materials. Of the total Manchoukuoan population, 90% is engaged in farming and 80% of the national income of the state is derived from agricultural pursuits. In 1936 31,697,000 hectares, or 34% of the total land area, was pronounced arable. Of this only 44% was then cultivated. It has been estimated that the total value of crops which in 1934 was only 650,000,000 yen could be trebled in normal times when the entire land arable is under cultivation and the methods of agriculture are improved. At this time the methods are primitive and small scale agriculture dominates the field. Before accepting this optimistic outlook, it must be remembered that the population is increasing at an enormous rate and the increased agricultural output will probably be consumed in good part by the home market, rather than supply an excess for export. Furthermore the central and northern agricultural regions, in which there remains most of the uncultivated arable land, have less favorable climatic conditions than do the southeastern and southwestern regions. It is evident that as these poorer lands are utilized, the

3. *Ibid*.
ENVIRONMENTAL RESTRICTIONS TO EXTENSIVE AGRICULTURAL UTILIZATION OF THE LAND OF MANCHURIA

MOUNTAINS
140 FROST FREE DAYS — 15.1" ANNUAL PRECIPITATION — OVER 20% OF AREA IN CROPS —
MILES

ENVIRONMENTAL RESTRICTIONS TO EXTENSIVE AGRICULTURAL UTILIZATION OF THE LAND OF MANCHURIA

MOUNTAINS
140 FROST FREE DAYS
15.7" ANNUAL PRECIPITATION
OVER 20% OF AREA IN CROPS

MILES

AFTER WEASLY - JOURNAL OF GEOG. JAN 1935 P. 22
production per acre will decrease and the cost of production per acre will increase proportionally. And in estimating the extent of increased production possible anywhere in Manchoukuo, several restrictive factors due to the continental climate must be taken into account. 1 - Because of many clear days the evaporation is rapid. 2 - Frequent droughts limit the crop varieties. 3 - The short growing season limits the variety of crop and prevents a second planting. 4 - The methods of cultivation must be according to the dry farming principle, so that the moisture in the soil will be preserved.

But granting that an increased output for export to Japan is possible in the future, of what real value will these crops be to Japan? The soy bean is Manchoukuo's chief cash crop, providing in 1933 for 57% of Manchoukuo's exports. The crop occupies 25% of the cultivated land, largely in the northern plain, and normally Manchoukuo produces 50% of all the beans of commerce. Of the total crops 25% is consumed locally, the rest being exported chiefly to Japan to help fill her needs for food, feed, food oil, paint, enamel, and fertilizer. In 1931 Manchoukuo exported over 4,500,000 tons of beans and bean cake, but in 1934 only 3,600,000 tons. Moreover the export value of beans in 1935 dropped $30,295,000 below that of 1934. The cause for this decrease in export

3. Ibid., p. 548.
is due not only to the increasing competition of oil seeds from other countries, but also to the rapid rise in the manufacture of artificial fertilizer. Since the chief use of the soy bean is due to its fertilizing element, the increased call for the beans as a food is relatively so slight that it cannot act as a balance to check the decrease in their output. Although in 1935 the soy bean and cake equalled more than 50% of Japan's imports from Manchoukuo, together they comprised only 3.6% of Japan's total imports. Here then is Manchoukuo's chief crop finding but a small and decreasing market in Japan.

Wheat, occupying 15% to 20% of the cultivated land, is Manchoukuo's second cash crop. Grown chiefly in the central and northern sections, approximately 60,000,000 bushels of wheat are annually produced. Since the soil in northern Manchoukuo is generally suited for growing wheat, with further occupancy of the land and development of transportation facilities the production can increase. Although in 1935 wheat was valued at only 1.6% of Japan's total imports it stands second to the soy bean as a food import. With the increasing consumption of wheat in Japan, the Manchoukuoan source should prove valuable. But for Japan to depend entirely on Manchoukuoan wheat can be considered as a possibility only for the distant future. Manchoukuo, not even able to take care

of her local market, imports wheat in the form of flour yearly to the extent of 9.6% of her total imports.¹

Leading among the staple foods of the farm class is kaoliang which occupies 19.2% of the cropped land of Manchoukuo.² Not only does kaoliang provide a food but the stalks are used for fuel, building material, and mats. With the influx of Chinese into Manchoukuo the production of kaoliang has increased in the south, and since it is a drought resistant crop, its cultivation may be extended onto the poorer farming lands of the central district. But the export to Japan is small because the islanders prefer rice as a cereal. Although in 1934 kaoliang represented 1.7% of Manchoukuo's total exports, it was directed mainly to China. The crop in that year was valued at only 1/95 of Japan's imports from Manchoukuo. In this case, then, unless the Japanese are able to cultivate a taste for the course food, an increased production in Manchoukuo would be of slight benefit to Japan.

Second only to kaoliang as a staple food is millet - the chief crop of northern Manchoukuo, although it is grown in all parts of the State. It is hardier than kaoliang and can therefore withstand the poorer soil and colder climate. In spite of its popularity in Manchoukuo, Japan dislikes millet

¹ Japan - Manchoukuo Year Book, 1937, p. 849.
² Bergsmark, D. R., Economic Geography of Asia, p. 549.
as a food. Therefore the grain is almost all locally consumed or sent to China. Although representing 4.8% of Manchoukuo's exports, it does not appear on Japan's import list. Indirectly, though, Japan benefits from its cultivation, for some is sold to Chosen, thus enabling Chosen to export rice to Japan. But this fact is of minor importance and would be of slight value in alleviating the Japanese food shortage were the production of millet in Manchoukuo to be increased.

Ranking with millet in importance is maize, produced chiefly on the rough lands of southeastern Manchoukuo where are found the required growing season of at least 150 days and the precipitation of from 25" to 35". In this region the many sunny days are an advantage but the sandy and gravelly soil is quite a handicap, for the best production of maize requires a rich soil. There is no prospect of increasing the cultivated area of maize in the southeast because every acre of arable land is already under the plough. To the north the climate is too severe for the growth of maize. But here again the extent of production of this crop is of slight importance to Japan, since the Japanese care for it no more than they do kaoliang or millet. Manchoukuo exports 4% of her output of the crop, but the destination of the export is, in the main, China not Japan.

As far as climate is concerned rice will grow north to Vladivostok. But it is unimportant in Manchoukuo because the sandy soil is not best suited for its cultivation and because
the Manchoukuoans do not care for it as a food. With the entry of Japanese and Koreans into Manchoukuo, however, the cultivation of paddy rice has to some extent been stimulated, particularly on the slopes of the eastern hills. Because of the small local demand, the production is increasing only slowly. And in this country where the farmer must contend with adverse custom and soil conditions besides the necessity of expensive irrigation, it is doubtful that the rice production will increase to any considerable extent. At this time the export of rice to Japan is negligible. About 52% of Japan's imported rice comes from Siam, 22% from French-Indo China, and 11% from India. These countries endowed with the best conditions for rice cultivation are able to supply Japan with rice of a better quality and at a lower cost than can probably ever be the hope of Manchoukuo.

In northern Manchoukuo more than a decade ago the Russians began to cultivate sugar beets. The South Manchurian Railway experimented successfully and efforts were made to encourage cultivation among the farmers. Although at present there is a setback in the production, it developed at one time to a point where the local output was able to cater to the South Manchurian Sugar Factory. In 1935 sugar was valued at only 47% of all Japan's imports from Manchoukuo. Japan acquires 93% of her imported sugar from Java.  

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1. Lyde, L. W., The Continent of Asia, p. 743.
2. Ibid.
MANCHOUKUO - A SOURCE OF RAW MATERIALS FOR JAPAN

Some Japanese officials believe that although the production of raw cotton in Manchoukuo is now only in the experimental stage, the possibilities of producing substantial amounts are real. But cotton can be grown successfully only between the 40°N. and 30°S. parallels of latitude. Only the southern half of the Liaotung Peninsula is south of the 40°N. parallel. This region and the Llao Ho lowland alone have the necessary 180 frost free days. Cotton requires a good summer rainfall without excess, bright sunshine, and a uniformly warm growing season. Manchoukuo has summer monsoon rainfall, the region around the Gulf of Liaotung receiving from 19.6" to 23.6". Raw cotton is Japan's chief import, representing from 29% to 30% of her import trade. Each year she buys more than 3,000,000 bales, chiefly from India, the United States, and China. Normally 1/3 of this amount is from British India. Since textiles constitute Japan's major industry, she must, to expand, increase her imports of raw cotton. Chosen supplies only 2% to 3% of her raw cotton and conditions in Chosen are far better for production than those in Manchoukuo because of a longer and warmer growing season. The total area of land

2. Ibid., p. 262.
3. Ibid.
in Manchoukuo, about 750,000 acres, believed to be available for cotton cultivation falls short some 2,000,000 acres of the amount which should be sown if Japan is ever to become self-sufficient in this commodity.¹

Manchoukuo's present crop is not only insufficient to meet Japan's demands but is not large enough to supply even her home market. Nearly the entire crop is consumed in the country and in 1934 Manchoukuo imported $12,287,000 of raw cotton.² Though some Manchoukuoan officials maintain that within 20 years the State will raise an abundance of fine quality cotton, the most generous estimates still lack by 80% Japan's need.³

The sheep reared in Manchoukuo belong to the fat variety of long-tailed species. Since the sheep are primarily raised for meat and hides, the quality of the wool is poor. It is non-uniform, inferior in tension and elasticity, and contains much coarse and dead hair. Because it is full of sand and other foreign matter the weight is irregular, thereby preventing deals from being smoothly made. The wool, therefore, is used chiefly for low grade rugs. Japan depends entirely upon imports for wool. In recent years she has purchased 25% to 30% of Australia's total output and as much as 95% of her total import of wool comes from that continent.⁴ Plans have been

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2. Ibid.
4. Hindmarsh, A. E., The Basis of the Japanese Foreign Policy, p. 120.
MINERAL RESERVES OF MANCHOUKUO

AFTER STEWART - JOURNAL OF GEOGRAPHY, FEB. 1932
made to develop the wool industry in Manchoukuo by obtaining supplies of sheep from lower Mongolia and Hsingan Province. Already the Manchoukuoan government maintains two sheep raising farms - one at Wang Yeh-Miao on the Solun Railroad and one at Chalamute. Both of these aim to improve the Mongol breed by crossing it with Merino. Moreover the South Manchurian Railway, with the same purpose in mind, has opened three farms - one at Linhsi, one at Tienchiatien, and one at Kingchulin. Since these attempts have been made, the wool has become suitable, to some extent, for use in clothing manufacture. But a recent freeze killed a good part of the Mongolian livestock, producing a set back from which it will take years to recover. Although Manchoukuo may supply Japan with wool in the future, it will take at least 30 years to supply her sufficiently. 1 In Manchoukuo there are several factors which will tend to retard the development of the sheep industry, 1 - the general ignorance of the natives who are unprepared for crossbreeding; 2 - the absence of any economic inducement because a state sponsored organization eliminates competition and stimulus; 3 - the absence of a steady and unfailing financing of the project by the state or industry which does not go beyond maintaining a few poorly equipped farms far from Mongolian centers of population; 4 - the steady

decline of the standard of living of Mongolian sheep raisers due to natural calamities and general insecurity of living.

Of the total area of Manchoukuo 36% is forested, the main resources being in the eastern Changpai Mountains and the Great and Little Khingans to the north and west. Among the 300 or more species 8 varieties are coniferous and 21 are deciduous. The finest stands of timber clothe the south-eastern mountains which receive the most abundant rainfall of any section of Manchoukuo. In the highest regions grow the soft wood conifers; on the slopes are mixed woods; and in the lowland the broad-leaf hard woods thrive. Korean pine, the chief wood, totals 70% of the timber while the spruce provides for 20%. Most of the work is carried on during the fall and winter. After cutting, the logs are hauled to the stream by horses or oxen and then piled up until the thaw when they are floated down to Kirin and Antung. The most important producing center of this region is the Upper Sungari, 180 miles from Kirin, where 20,000 to 30,000 men are employed. But the destruction has been rapid and now the forest lies 10 to 15 miles from the river. Second in importance is the vicinity of the headwaters of the Yalu where is possible the development of lumber for construction purposes and for pulp. Of the timber cut near the Chinese Eastern Railway, 1/4 is used for

fuel in locomotives and in Harbin houses. Harbin alone consumes 280,000 tons of timber per year. If well controlled this source of wood could be permanent. Timber is also the greatest resource of the Khingan Mountains where there is, particularly in the north, a thick forest of taiga and larch, the latter comprising 75% of the trees. Birch and low growing oak, both of which are abundant, are used for firewood; the larch, which now supplies the demand for railroad construction, may in the future be cut entirely for the paper industry.

Although the forests of Manchoukuo provide quite a wealth of valuable timber, the forestry industry is handicapped not only because of a dense undergrowth which makes lumbering difficult but also because of the rough topography and great distance from the market. Since there are few rivers, the transportation is poor and, furthermore, light winter snow makes hauling difficult. Commercial lumbering, restricted to the most accessible areas, can be economically carried on in the Khingans only where the Chinese Eastern Railway crosses the mountains and in the Changpai only where the Yalu, Tumen, Sungari, and Hun are sufficiently large to float logs. A forest conservation policy is badly needed, for much of the lumbering is wasteful and many of the forests are entirely fired, especially in the south, by the farming Chinese. In

1. Cressey, G. B., China's Geographic Foundation, p. 239.
2. Ibid.
seven years Manchoukuoan exports of timber declined 72%. At present Japan obtains only 1% of her timber imports from Manchoukuo, whereas she buys 82% from North America and 12% from Siberia.

Among the raw materials of which Japan is in need is coal. At present Japan is quantitatively but not qualitatively self-sufficient in this fuel, for she lacks coking coal. Again she looks toward Manchoukuo as the region that can fill her demand. But Manchoukuo herself has only limited reserves and not enough to meet Japan's needs for any considerable period even though she ignores her own needs. The estimated reserves of Manchoukuo are 4,804,000,000 metric tons, chiefly bituminous, whereas those of Japan are 8,051,000,000 metric tons. The chief mining region is in southern Manchoukuo at Fushun, about twenty miles from Mukden. Here the heavy seams, rich in volatile matter and embedded chiefly in shale, are estimated at 1,200,000,000 metric tons. South of Fushun are the Yentai and Penhsihu works. Yentai coal, low in volatile matter, is high in ash. Though Penhsihu does yield coking coal, it is utilized in the iron and steel works at Anshan. In northern Manchoukuo along the Chinese Eastern Railway there

1. Lyde, L. W., The Continent of Asia, p. 744.
4. Ibid., p. 481.
are large reserves of generally inferior bituminous coal, from which there is an annual production of 1,000,000 metric tons, mainly from the Chalanoir, Mulin, and Hokang works. When one considers that the coal production of the world is 1 1/4 billion tons annually, the 11,000,000 tons of Manchoukuoan production seems insignificant. Manchoukuo's total production in 1935 equalled only 1/3 of Japan's consumption for that year.

In the case of iron ore Japan is even more badly off, for she produces less than 10% of the iron she consumes. Most of her pig iron is manufactured from imported ores. In order to fulfill her iron and steel requirements, Japan would have to produce 15 times as much ore as she now does. Chosen makes up a good part of the deficit. Manchoukuo has reserves of approximately 738,000,000 metric tons but this is, in the main, of low grade, not 1/100 containing 60% iron. Moreover, most of the ore, chiefly hematite and limonite, is only 30% to 36% metallic and is from 40% to 45% siliceous, so that the actual iron in reserve does not exceed 295,000,000 metric tons. In the Lake Superior region the United States has millions of tons of this quality iron which she does not even class as ore. A number of countries with larger and better quality reserves find it expedient to import their ore. If

2. Dorfman, B., China Weekly Review, October 7, 1933,
4. Ibid.
the iron content is less than 40%, the ores must be concentrated or beneficiated by various technical processes, so that Manchoukuoan mining is expensive even though some of the mines are open pit and near coal and the South Manchurian Railway. The centers of iron mining in Manchoukuo are at Anshan and Miao-erh-kou, but since the Anshan ore is utilized by the Anshan iron works and the Miao-erh-kuo by the Penhsihu works, little remains for export to Japan. As a matter of fact, if Manchoukuo shipped all her ore to Japan and there were no increase in the annual ore consumption of Japan, her reserves would last only 129 years.

Manchoukuo has no important petroleum reserves. What oil she produces is obtained from oil shale that covers the Fushun coal mine. The estimated reserves of shale are 5,300,000,000 metric tons with an average oil content of 6%. The annual capacity of the Fushun oil plant is but 1,360,000 tons of shale with a production of 69,000 tons of oil. In 1930 only 3,617 tons of oil were produced. Because the shale covers the Fushun coal field to a thickness of 70 to 100 meters, more than 210,000,000 tons must be removed in order to carry on open pit mining. Presuming the oil content to be 4%, more than 5,000,000 tons of crude oil can be obtained from the shale which has to be removed. If the dry distilling

2. Ibid.
3. Ibid.
method is used, it has been estimated that Fushun shale can supply Japan with her total need of 7,000,000 barrels annually for 300 years. The difficulty lies in the cost of production. The Fushun shale is quarried at no cost; the labor is exceptionally cheap; so Manchoukuo starts out by saving about 30% of the working cost of quarrying shale in the United States. Moreover there is available fuel in unlimited quantities at a low price; there is an abundance of water for industrial use; the communication facilities around Fushun are comparatively plentiful. But the cost of dry distilling the shale in itself is immense. And at present it is considered uneconomical by petroleum engineers. Today the annual production of oil in Manchoukuo is supplied to her own navy department. Barring unanticipated technological improvements, Japan can never hope to meet her demands from Manchoukuoan shale, in spite of the high price of oil in the Far East, at other than prohibitive costs.

Among the minor mineral resources of Manchoukuo are gold, limestone, and soapstone, of which only the last is of value to Japan. The estimated reserves of gold are 3,800 tons. The region along the upper reaches of the Amur and certain regions of the Sungari, Nonni, Yalu, and Luko rivers are fairly rich in gold. In these areas there are several large

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2. Ibid., p. 215.
mines such as the Moho, Tapingkou, Kinnaerh and Hsingan. But because of banditry the prospecting business has not technically developed. And as yet the railroad has not extended into the mining area.

The distribution of limestone is extensive; the mining is easy and simple. At Kwantung the production is for cement and glass manufacture, whereas that at Penhsimu and Huoliienchai is for smelting iron ore. Of course limestone is essential as a flux in the iron and steel industry, but Japan herself has sufficient amounts to fill her own needs.

Near Tashichiao and Haicheng soapstone is produced. In 1930 the annual production was 25,726 metric tons; in 1931 it had increased to 44,316 metric tons. Most of this output is shipped to Japan where it supplies nearly her entire demand for spinning, paper making and toilet goods.

MANCHOUKUO - A MARKET FOR JAPANESE MANUFACTURED GOODS

Although Manchoukuo does not seem to offer great possibilities as a source of food and raw materials, perhaps as a market for Japanese manufactured goods she shows more promise. During the past few years the market has been brisk owing to several favorable factors: Japan has been expending and investing heavily in Manchoukuo, the highly depreciated yen giving her great advantage over foreign and domestic competition; the newly erected Manchoukuoan tariffs against imports from China are in her favor; the great impetus in the building industry in Manchoukuo has increased the import of iron and steel; because of military rule there has been an increase in the import of machinery and vehicles. Since the creation of Manchoukuo, these three items have equalled 30% of Manchoukuo's imports from Japan. In 1934 the import of machinery increased 3.7 times over that in 1932. And in 1935, as compared with 1932, Japanese exports to Manchoukuo showed a fivefold increase.

Before 1931 Japanese exports to Manchoukuo were confined principally to textiles and provisions. During the same period imports from China have gradually decreased. In 1935 they represented only 5.3% of Manchoukuo's total import trade.

3. Ibid., p. 545.
4. Ibid.
Imports - Manchoukuo
1936

A. SUGAR
B. WHEAT FLOUR
C. RAW COTTON
D. PAPER
E. ELECTRICAL REQUISITES
F. ARTIFICIAL SILK FLOSS, YARN
G. WOOLEN PIECE GOODS
H. GUNNY BAGS
I. CLOTHING - ALL KINDS
J. CHEMICALS, PHARMACEUTICALS
K. RICE + PADDY
L. FISHERY + SEA PRODUCTS
M. TIMBER + WOOD
In 1934 cotton piece goods, representing 11.5% of Manchoukuo's imports were practically all from Japan,\(^1\) and 3/5 of her wheat flour, which represented 9.6% of her trade, was from Japan.\(^2\) Of her nine leading imports - only one, gunny sacks, was imported chiefly from a country other than Japan. These came mainly from British India. It appears then that Manchoukuo is proving herself of value as a market for Japanese goods. And many accept this fact without examining the conditions more closely.

But in spite of the fact that Manchoukuo in 1935 derived 71.9% of her imports from Japan proper and 3.7% from Chosen with only 5.3% from China and 19.9% from other sources, Japan sent only 17.1% of her total exports to Manchoukuo.\(^3\) Although Manchoukuo offers a market, it is hardly large enough as yet to accommodate Japan to any advantage. One difficulty lies in the fact that Japan's principal exports, namely silk and cotton tissues, suit goods, potteries, refined sugar, paper, aquatic foods, tea, wheat, flour, coal and iron manufactures are luxuries or quasi luxuries, for which the market is narrow, and can find no place in a country like Manchoukuo whose purchasing power is extremely limited. This trade with Manchoukuo is probably due to a temporary expansion of the latter's purchasing power. But when Japan discontinues

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\(^1\) Japan - Manchoukuo Year Book, 1937, p. 849.
\(^2\) Ibid.
\(^3\) Japanese Trade and Industry, p. 545.
expenditures and investments in Manchoukuo and is adjusted to the mounting yen prices of imported merchandise, the basis for this unusual trade will disappear. It is interesting to note that although farmers comprise 90% of the Manchoukuoan population, no tractors have been sold to the State.¹

Furthermore, industry in Manchoukuo is on the increase. Before the founding of the State of Manchoukuo, native industries were unable to advance beyond the stage of small family enterprises due to the competition of manufactures from China Proper; the impossibility of accumulating capital because of heavy taxation, both legal and illegal, by military leaders; and the unrestricted issue of inconvertible notes. The rise of modern industry in Manchoukuo originated in the investment of Japanese capital after the Russo-Japanese war. Although some industrial development was noted during the world war period, it was depressed until the Manchurian Incident. Tranquillization of the state after the Incident stimulated the industrial development, particularly the building industry. Other rising industries which already show signs of being able to compete with Japan at home include the iron and steel, the cotton textile, flour milling and certain others of minor importance.

The two most important industries as far as Japan is concerned are the iron and steel and the cotton milling.

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Manchoukuo exports to Japan not iron ore but pig iron. Although in 1934 pig iron constituted less than 2.5% of her exports, Manchoukuo showed in production an increase of 52,000 M. T. over that of 1933.\(^1\) The ability to produce pig iron gives a basis for an iron and steel industry greater than that of Japan's. The present conditions reflect the presence of adequate coking coal and iron ore; the geographic proximity of the coking coal and iron ore; the geographic proximity of the coking coal and iron ore; the capital available through Japanese sponsorship; markets available in Manchoukuo in the railway and building construction and certain steel products of simple varieties. Now that Manchoukuo has begun to develop industrially it is probable that she will expand her own iron and steel industry rather than export her pig iron to Japan only to reimport it in the form of iron and steel goods. Already there are iron works at Anshan and Penhsihu. The chief drawback to future expansion is the low quality of the iron ore. The Japanese in 1933 made great expenditures at Anshan to build a local industry capable of working the low grade ore. This consisted of two furnaces of 300 T. capacity, one of 500 T. capacity, and ten concentration furnaces of 300 T. capacity. At Penhsihu, they constructed two furnaces of 150 T. capacity. This is merely a beginning, but if the demand proves great enough to warrant the industry based on

\(^1\) Japan - Manchoukuo Year Book, 1937.
low grade ore, the possibilities are extensive. The production of pig iron in Manchoukuo is expensive due to the necessary concentration, crushing and roasting. Before reaching Japan there is the additional cost of rail freight to Darien, handling and loss in transit, transport charges to Japan. Comparatively, the iron works of North Hondo produce pig iron cheaper than does Manchoukuo, but the cost of pig iron in Manchoukuo compares favorably with the production at the Yawata Steel Works at Kyushu, although Manchoukuo has also to compete with the Yangtse Basin, Chosen, and the Malay Peninsula.

Manchoukuo's leading import from Japan is cotton piece goods. But if the State is allowed to develop rationally, it probably will take fewer goods from Japan, for with a cotton industry of her own Manchoukuo will no longer need to ship the raw material to Japan and buy it back in the form of cloth. Already during the last few years Manchoukuo's import of cotton yarn has decreased considerably.

<table>
<thead>
<tr>
<th>Year</th>
<th>Import of Cotton Yarn (MT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1934</td>
<td>12,533,416</td>
</tr>
<tr>
<td>1935</td>
<td>7,937,554</td>
</tr>
<tr>
<td>1936</td>
<td>7,698,579</td>
</tr>
</tbody>
</table>

In 1935 there were in Manchoukuo 405 factories housing 3,900 full width and 5,020 single width power looms besides 1,500

full width and 1,500 single width hand looms. That same year 161,850 bales of cotton yarn were consumed and 5,682,000 full width and 3,820,000 single width rolls of cotton tissue.\textsuperscript{1}

Factories using steam power were introduced into Harbin by the Russian flour mills in 1902. Since then Japan and China have developed the flour mill industry at important trading centers such as Mukden, Harbin, Darien, Changchun, Fushun, Fiehling, and Liaoyang. After the founding of the State, the industry declined in activity due to the overwhelming intrusion of Japanese flour of superior quality and cheap price. Also serious floods in northern Manchoukuo played havoc with the wheat crop. But with the revision of the tariff at the end of 1934 the industry began to recover, and it was further vitalized by the reduction of freight rates on wheat flour commencing February 1, 1936. Quickly the mills resumed operation and at present the capacity of the industry exceeds 44,000\textsuperscript{2} bales a day, producing over 50\% of the annual requirements of 30,000,000 bales.\textsuperscript{3} Imports from Australia have been restricted and total imports of wheat flour into Manchoukuo dropped 1/5 from 1935 to 1936.\textsuperscript{4}

Before 1931 there were in Manchoukuo only 10 machinery plants.\textsuperscript{5} But since the Incident they have increased in number and type of production. Among the most important are the

\textsuperscript{1} Japan - Manchoukuo Year Book, 1938, p. 856.
\textsuperscript{2} Ibid., p. 852.
\textsuperscript{3} Ibid.
\textsuperscript{4} Ibid.
\textsuperscript{5} Ibid., p. 861.
Manchoukuo Manufactory which specializes in castings, tools, and vehicles; the Mukden Arms Manufactory which deals in the production of arms, munitions, gun powder, and the manufacture and repair of machines and tools; the Darien Machinery Works which undertakes the manufacture of iron bridges, pipes, bean oil manufacturing machines, rollers for road construction, electric cars, and automobile bodies. For 1937 aircraft and motor car factories were projected. In 1935 there was a total of 128 factories and in 1934 the production reached in value $6,729,010 \text{ M.¥.}$ Rather than bespeaking encouragement to Japan, the slight increase in the import of iron and steel manufactured goods during the last few years indicates merely that the Manchoukuoan output is not yet great enough to supply her rapidly increasing market. As can be gathered from the table below the rate of increase in the imported goods has dropped materially.

![Machinery Imports Table]

Two industries which have sprung up since 1931 are those of paint and cement manufacture. Before the Incident Japan figured prominently in supplying Manchoukuo with cement. But

2. Ibid.
with the rapid building of railroads, roads, and buildings, the demand so increased that Manchoukuo began her own manufacture of cement. By the end of 1935 she was able to supply her own needs entirely. The import of cement dropped from 7,901,000 in 1934 to 3,437,000 in 1935. An importer of paint before 1931, Manchoukuo, with 3 factories, now supplies 70% of her total requirements. ¹

In Manchoukuo there are 2 large paper manufacturing companies, the Yaly and the Manchuria. The former has a capacity of 12,000 tons of pulp and 8,500 tons of paper; the latter's capacity is only 900 tons. ² Although 80% of Manchoukuo's demand is filled from abroad still, Japan supplying 1/3 of the amount necessary in 1933, the industry is slowly progressing. ³ The production showed an increase of 4,166,000 in 1936 over the total production of 12,959,000 in 1935. ⁴

Becoming of increasing importance is the wild silk industry. Since 1934 the export value of silk goods has doubled and that of silk yarn has decreased. The annual crop of cocoons has been estimated at 6 to 10 billion pieces. ⁵ The industry is carried out both on a small scale by farmers and on a large scale in modern factories in the silk district.

¹. Japan - Manchoukuo Year Book, 1938, p. 848.
². Ibid., p. 846.
³. Ibid.
⁴. Ibid.
⁵. Ibid., p. 859.
In 1935 an export silk conditioning house opened in Antung with branches in Haicheng and Kaiping.

<table>
<thead>
<tr>
<th>Year</th>
<th>Export of Silk Goods (MT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1934</td>
<td>178,320</td>
</tr>
<tr>
<td>1936</td>
<td>329,118</td>
</tr>
</tbody>
</table>

One of the oldest industries in Manchoukuo is that of the bean oil and cake. By 1895 there were 30 mills. With the use of hydro-pressure machines the industry has rapidly expanded. At first bean cake was a by-product, but the sharp increase in its demand as a fertilizer brought it to the foreground. Although the industry is still important, the depression and the innovation of artificial fertilizer on a large scale have impeded its progress to the point of precipitating a decline. At this time there are more than 3,000 bean oil mills in Manchoukuo. Of these 350 contain excellent equipment.

There are many other industries in Manchoukuo such as the soap, pottery, porcelain, and sugar, all of which are conducted along a much smaller scale. But all of these are in a position which will enable them to expand if the State is not hindered by Japanese aggression.

2. Ibid., p. 859.
3. Ibid.
VALUE OF EXPORTS AND IMPORTS OF MANCHOUKUO
BY COUNTRIES

VALUE MY 1,000,000

IMPORTS

EXPORTS

1936

1932

JAPAN
CHINA
U.S.S.R.
GBRITAIN
GERMANY
U.S.A.
OTHERS

10 30 50 100 200 300

10 30 50 100 200 300

300 250 150 50 10 30 50

300 250 150 50 10 30 50

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CONCLUSION

From this study it appears that Japan is due for a disappointment, if she has not already awakened to the truth of her situation in regard to Manchoukuo. It is quite evident that as an outlet for Japan's surplus population Manchoukuo is a failure, in the first place, because she lacks sufficient room offering a means of subsistence to the Japanese, and in the second place, because the Japanese refuse to populate the new territory. As a source of food for Japan, Manchoukuo has little to offer. Of her leading crops producing a surplus for export, the soy bean alone is pleasing to Japan. And the crops which Japan most desires, namely, wheat and sugar, Manchoukuo does not produce in sufficient quantities to supply her local market, let alone furnish an appreciable amount for Japan. Rice, Japan's principal food, is scarcely grown in Manchoukuo now and provides scant hope for future expansion because of the lack of local demand and the expense of cultivation. As a source of raw materials for Japan, Manchoukuo is even less valuable. She will never be able to supply more than 20% of Japan's cotton, for the climate is too severe for its cultivation. Manchoukuo, already using most of her production of iron ore and coal, will have even less to export as her manufacturing industries expand. In the case of petroleum, the price of production is prohibitive and bids fair to remain so indefinitely. There is some hope in the
distant future for wool and timber, but Japan can not count on assistance here during the next half century. For the present Manchoukuo best provides, not a solution, but a partial answer to Japan's economic difficulties by supplying that country with a market for certain manufactured goods. But the fact remains that Manchoukuo's own industries are fast expanding. If she is allowed to develop normally, she will evolve an economy not complementary to that of Japan, but in conflict with it. It seems, then, that Japan is rapidly defeating her own purpose, and that Manchoukuo rather than proving of value to her is only helping to pave the way toward her economic collapse.
COMPREHENSIVE DIGEST

The State of Manchoukuo, comprising an area of 482,440 square miles and including the five provinces of Hsingan, Jehol, Fengtien, Kirin and Heilungkiang, is located in north-eastern China. Topographically the State may be divided into three regions, namely, the Changpai Mountains of eastern Manchoukuo, the Central Plain, and the Khingan Mountains of the north and west. Of these regions the Central Plain, consisting of about 1/3 the total area of Manchoukuo, is the most habitable.

Continental in climate, Manchoukuo experiences severe winters. Nowhere does the growing season exceed 180 days. And because of the predominance of mountain over lowland, Manchoukuoan summers are cooler than the average continental summer. As a whole, the State is markedly dry. From the eastern mountains, which receive as much as 40" of rainfall a year, northwestward the precipitation decreases rapidly. In central and northern Manchoukuo the annual rainfall is less than 20", while to the west the land is desert, unable to support any human beings except wandering Mongols.

Although Manchoukuo was fortunate in having a fairly fertile soil, rich in soluble salts, her use of primitive farming methods, and particularly her ignorance of the benefits of fertilization and crop rotation, is rapidly leaving the soil depleted.
In September, 1931, Japanese troops occupied Mukden, and less than a year later Japan proclaimed the new State of Manchoukuo. Through this artificial means Japan expected to obtain an outlet for her surplus population, a source of foods and raw materials for her people, and a market for Japanese manufactured goods. In considering Manchoukuo as a home for the excess Japanese, Japan failed to perceive that the state is already overrun with Chinese immigrants and that practically the only areas sparsely populated are those of the mountains of the north and west which offer slight means for subsistence. She also failed to give consideration in her plans to the Japanese nature and the difference in the standards of living between the Chinese and Japanese. Being a home-loving people, the Japanese have refused to populate Manchoukuo, so different in climate, scenery, methods of agriculture and type of food. Moreover, with their higher standard of living, the Japanese are unable to compete with the swarms of Chinese who can and will subsist on the meagerest of fare in the most unprepossessing habitations. Besides this, the Japanese Government has been financially unable to assist her immigrants to any but the most insignificant extent.

Some, however, feel that although Manchoukuo may not be able to accommodate many Japanese immigrants, she can supply Japan with a source of foods and raw materials. Only 44% of Manchoukuo's arable land is under the plough, but the best
agricultural land is cultivated to the limit. As these poorer regions to the north are planted, the production per acre will steadily decrease. Manchoukuo's most important crops are the soy bean, wheat, kaoliang, millet, and maize. Of these, the soy bean alone is exported to Japan in considerable quantities, and due to the rise in the use of artificial fertilizer, bean cake exports are dropping. But as a food, the soy bean exports to Japan are increasing. As yet Manchoukuo does not grow enough wheat to supply her local market, let alone Japan; the acreage of the crop, however, can be extended to the north. Not caring for kaoliang, millet, or maize as a food, the Japanese have little use for these important Manchoukuoan crops. The two food crops besides wheat of which Japan is in dire need are rice and sugar, but neither of these is grown extensively in Manchoukuo. While there may be a future for the sugar beet in the State, Manchoukuo is poorly adapted to the cultivation of rice because of aridity and unfavorable soil conditions.

The raw materials of which Japan is in the greatest need are cotton, wool, timber, iron ore, coal and petroleum. Manchoukuo is climatically unsuited to the cultivation of cotton, since only a small area of the Liaotung Peninsula receives the requisite 180 frost-free days. At the present time, Manchoukuoan wool is scant and of poor quality, but with proper breeding the flocks may so improve that in 30 years or so Japan will be able to fill in part her needs
through this source. Manchoukuo has a wealth of timber, but through lack of proper conservation the forests are being depleted. Poor transportation facilities and scarcity of capital are at present retarding the development of this resource. The coal reserves of Manchoukuo are extensive, but what coking coal there is finds a rapidly increasing local market. The iron ore of the State is poor in quality, although quite widely distributed. Because of her rising industry, Manchoukuo requires at home nearly her total output of iron ore. As for petroleum, Manchoukuo has none. She does, however, have a large supply of oil shale which can be inexpensively quarried, although because of the costly methods of oil extraction, the economic use of this resource is restricted.

Practically the only assistance Japan can receive from Manchoukuo is through the latter's purchase of Japanese manufactured goods. During recent years she has increased her imports along this line considerably. But probably this has been due only to a temporary expansion of her purchasing power resulting from an inflow of Japanese capital. When the boom collapses, a normal trade will again result. Furthermore, Manchoukuo is developing her own manufacturing industries. Their progress is already being felt through the decline in Manchoukuo's pig iron and coal exports, and in the increase of her machinery imports. Therefore, it appears that Japan, through her relations with Manchoukuo, is
defeating her own purpose - that instead of providing an
economic complement to Japan, Manchoukuo is proving herself
to be a conflicting economic power of increasing strength.
BIBLIOGRAPHY


Bain, H. F., Ores and Industries of the Far East, New York, council on foreign relations, 1927.


Buxton, L. H. D., China, the Land and the People, Clarendon Oxford, 1929.


China Year Book, 1933, Shanghai.


Foreign Commerce Year Book, Washington, 1936.


Huntington, E., West of the Pacific, C. Scribner's Sons, N. Y., 1925.

Japan - Manchoukuo Year Book, Tokyo, 1936.

Japan - Manchoukuo Year Book, Tokyo, 1937.

Japan - Manchoukuo Year Book, Tokyo, 1938.


Manchoukuo - Handbook of Information, Hsinking, August, 1933.

Manchuria Year Book, 1932-1933, Tokyo, 1932.


