

# AGRICULTURAL DEPRESSION AND JAPANESE VILLAGES

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## I. THE FIRST WORLD WAR AND THE VILLAGE ECONOMY

The First World War brought unprecedented prosperity to the Japanese economy as a whole and the village economy did not fail to share in its gains. For the first couple of years following the outbreak of the War, the disturbances on the world market caused by the hostilities affected Japan in the form of a depression, and the agricultural sector of economy suffered from relative over-production and the temporary fall of farm product prices. The boom which began in 1916, however, brought to Japanese agriculture a "Golden Age"—unknown in the memory of contemporary farmers—which lasted till the spring of 1920, when it ended amidst the whirlpool of the post-war depression. The agricultural depression which, with slight ups and downs, kept torturing the Japanese peasantry from 1920 until about 1935 was conditioned by the framework of the agricultural sector which had been rebuilt in the course of the "Golden Age." Hence comes the need to review—even though briefly—the changes brought to Japanese agriculture during the First World War period and to the framework into which they were fitted.<sup>1</sup>

The first and the best ladder aiding the climb of Japanese agriculture to the zenith of its prosperity during the said period was the sharp rise of farm-product prices. The price trends can be seen in Figure 1. Farm-product prices began to sky-rocket in 1915 and, at their 1919 peak, were more than 3 times higher than the 1915 low. The price of rice, among other farm products, made a noteworthy jump, increasing as much as 3.5 times<sup>2</sup> and the cocoon prices showed an

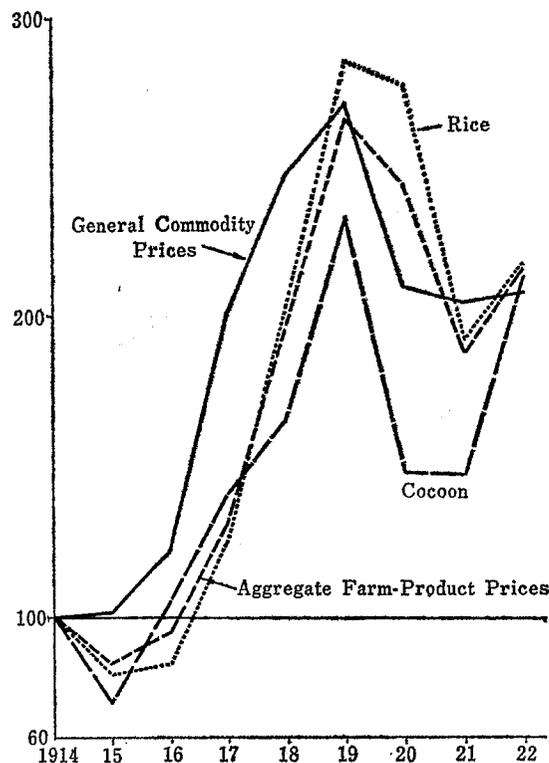
<sup>1</sup> For further details, see Ōuchi Tsutomu, *Nōgyō shi* 農業史 (History of Agriculture), Tokyo, Tōyōkeizai-shimpōsha, 1960, Chap. IV.

<sup>2</sup> The rice price in Figure 1 is based on the Tokyo Market Quotations. The extremely high price in the closing years of the war (1918-1919) is partly due to the speculative cornering by rice merchants, which was also responsible for the outbreak of the Rice Riot (Aug. 3 to beginning of Sept., 1918). The rice price given on the Figure, therefore, does not reflect the producer price trends and seem to be very much exaggerated.

increase rate almost the same as that of rice prices.

In view of the over-all inflationary trends in the country, especially at the beginning of the War when farm-product price increases were lagging behind those of other commodities, it is neither fair nor correct to treat this sharp increase in farm-product prices as representing a net

**Figure 1.** GENERAL COMMODITY PRICES AND FARM-PRODUCT PRICES (1914=100)



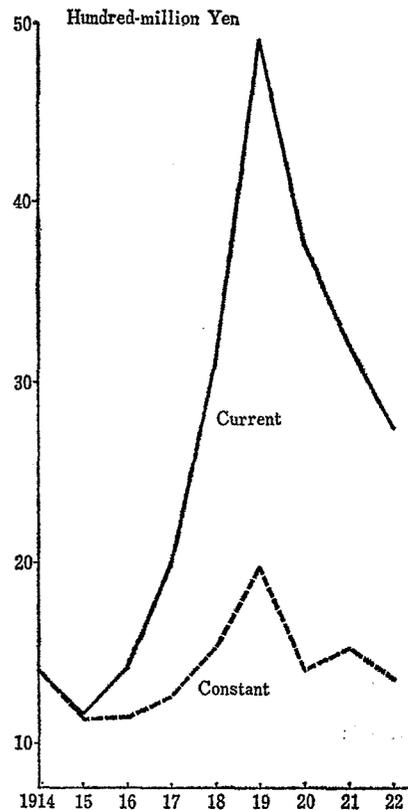
- Sources: (1) As for the General Commodity Prices and Aggregate Farm-Product Prices; Yamada Yūzō 山田雄三, *Nihon kokumin shotoku suikei shiryō* 日本國民所得推計資料 (Data for the Estimation of Japanese National Income), Revised and Enlarged Edition, Tokyo, Tōyōkeizai-shimpōsha, 1957, pp. 184-189.
- (2) As for Rice Prices (Tokyo Market Quotation); Kayō Nobufumi 加用信文 ed., *Nihon nōgyō kiso tōkei* 日本農業基礎統計 (Basic Agricultural Statistics of Japan), Tokyo, Agriculture, Forestry and Fisheries Productivity Conference, 1958, p. 514.
- (3) As for Cocoon Prices (national average spring cocoon); Ministry of Agriculture and Forestry, *Hompō nōgyō yōran* 本邦農業要覽 (General Statistics of Japanese Agriculture), 1933 edition, Tokyo, pp. 128-129.

increase in farm household income. However, it must be admitted that, as the expenditures of a farm household consist to a significant degree of fixed costs such as interest on debts and liabilities such as taxes and other public charges, and as these fixed costs normally become less burdensome at the time of a general price increase, the changes in prices noted here must be effective considerably on improving the financial condition of rural households. However, there are only limited materials available for examining the degree of improvement in farm household economies.

The changes in income of households within agricultural-forestry sector can be projected using the figures in the "Kokumin shotoku tōkei" 國民所得統計 (National Income Statistics) in Figure 2. This Figure shows that the nominal increase in farm income was nearly five times, and the real increase nearly two times, by the year 1919 as compared to the year 1915. When we take into consideration the fact that a minor decline took place in the agricultural-forestry population during the same period, we may safely conclude that farm households had an indisputable increase in their incomes.

It is not so easy to confirm this finding with individual family-budget studies because the "Nōka keizai chōsa" 農家經濟調查 (Farm Household Economy Survey)<sup>3</sup> was yet to be implemented as a routine programme and the survey taken by Saitō Mankichi 齋藤萬吉<sup>4</sup> pro-

Figure 2. AGRICULTURE-FORESTRY INCOME IN CURRENT AND CONSTANT VALUES



Note: Deflator is "General Commodity Price Index" of Figure 1.

Source: Calculated from Yamada Yūzō, *Nihon kokumin shotoku suikei shiryō*, pp. 184-189.

<sup>3</sup> The Farm Households Economy Survey was carried on regularly since 1921 by the Ministry of Agriculture and Forestry.

<sup>4</sup> Saitō Mankichi, a technical expert employed by the Ministry of Agriculture and

**Table 1.** SUMMARY OF FARM HOUSEHOLD ECONOMIES (I)  
(in yen)

	Owner-Farmers		Tenants	
	1912	1920	1912	1920
Scale of Management (Size of Land under Operation) in <i>tan</i>	20.0	20.2	14.0	13.0
Number of Family Members (heads)	7	6	6	6
<b>INCOME</b>				
Rice	594	1,163	450	1,041
Other Cereals	183	165	123	136
Cocoon & others	73	182	57	130
Forestry income	14	16	—	—
Wages	—	—	35	61
Miscellaneous income	74	127	40	48
Total:	938	1,654	705	1,415
<b>OPERATING EXPENSES</b>				
Manures & Fertilizers	71	186	56	163
Land Rent	—	—	253	522
Wages	34	66	—	—
Other Operating Expenses	—	55	—	50
Interest Payable for Debts	12	33	7	20
Total:	117	340	316	755
<b>GROSS INCOME:</b>	821	1,314	389	660
<b>HOUSEHOLD EXPENSES</b>				
Food & Drink	391	680	256	427
Clothing	54	161	24	54
Fuel & Light Expenses	27	48	17	28
Housing Expenses	44	64	10	16
Educational Expenses	24	30	—	—
Sundry Expenses & Incidentals	82	233	43	108
Taxes & Assessments	90	163	8	22
Total:	712	1,379	358	655
<b>NET SURPLUS</b>	109	Δ 66	31	5

Source: Calculated from Nōrinshō nōgyō sōgō kenkyūsho 農林省農業總合研究所 (National Research Institute of Agriculture, Ministry of Agriculture and Forestry), *Fukkokuban nōka keizai chōsa hōkoku* 覆刻版農家經濟調查報告 (Reprinted Edition of the Report of the Farm Households Economy Survey), Tokyo, 1952, pp. 36-37.

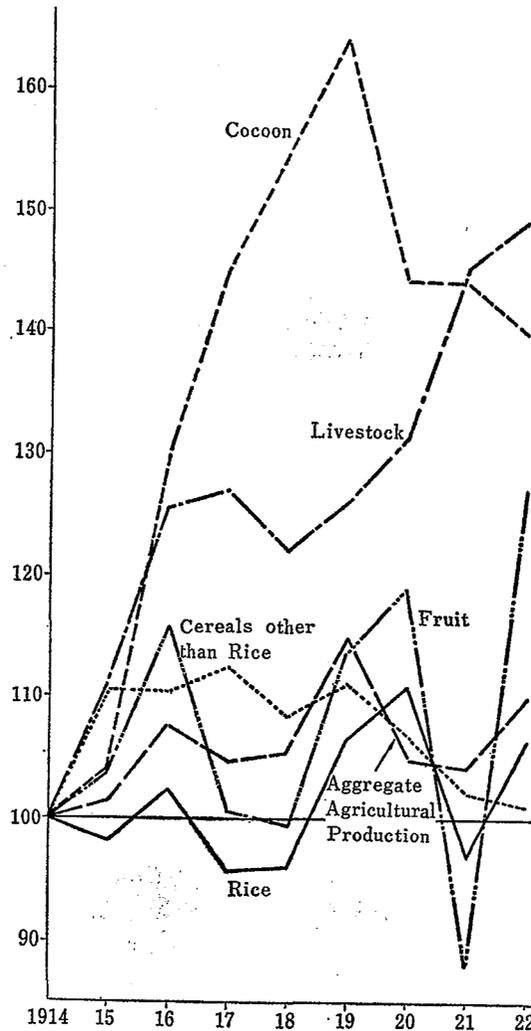
Commerce, carried out family budget surveys among more than 100 owner-farmers (inclusive of landlords) and tenants operating in scores of regions spreading all over Japan, six times: in 1890, 1899, 1908, 1911, 1912, and 1920.

vides us with data only for 1912 and 1920. Results of the Saitō's survey, however, will still give us an indication of the status of individual household economies, if the data is presented as in Table 1. However, the results as seen in Table 1 are subject to a certain degree of confusion due to the categorization of the data: the figures given as "sundry expenses and incidentals" as well as "taxes and assessments," (both categorized under "Household Expenses,") include a number of items which ought to be listed under "Operating Expenses," and "interest payable on debts"; while expenses for livelihood purposes should properly be put under "Household Expenses" rather than under "Operating Expenses." It can also be argued that as the influence of the post-war Depression was already being felt in and around 1920, the figures pertaining to this specific year might not be suitable references for clarifying a situation which developed during the First World War. In spite of all these shortcomings, at least the following findings remain true and sound:

- (1) During the specified period of time, the scale of farm-management remained almost constant, and yet farm-income increased by 1.65 times in the case of owner-farmers and 2 times in the case of tenants. This was primarily due to increased income from rice production and cocoon raising and, in the case of tenants, to bigger wage incomes. It would be fair to say that the increases from rice production and cocoon raising definitely derived from the rise in their respective selling prices and, to a lesser degree, from an increase in production.
- (2) The increase in operating expenses, on the other hand, was 2.9 times for owner-farmers and 2.4 times for tenants, well exceeding the rates of increase in income. The cost of fertilizer played the major role in the higher expenditures: for owner-farmers, the bill was 2.6 times greater and for tenants, 2.9 times. The increased cost of fertilizer is supposed to have resulted partly from price increases and doubtlessly from increased use as well.
- (3) Although gross income grew by 1.6 times in the case of owner-farmers and 1.7 times in the case of tenants, their net surpluses suffered a remarkable decrease and owner-farmers went into the red in 1920. Even though the temporary effects of the Depression might be held responsible for such an adversity, the expansion of household expenses by 1.9 times in the case of owner-farmers and 1.8 times in the case of tenants still deserves our attention. As there was little concomitant change in the average number of family members in farming households, the increase in household expenditures may be interpreted as representing a nominal increase in individual consumption.

It is difficult on the basis of the poor commodity price index available, to say how much net improvement actually occurred by this increase in individual consumption. It can, however, be noted that, while the Engel co-efficient decreased by one point from 55 to 54 in the case of owner-farmers and by seven points from 72 to 65 in the case of tenants, in both cases expenditures for clothing as well as sundry expenses and incidentals were showing a phenomenal increase. On balance, we may conclude that there was a substantial improvement

Figure 3. AGRICULTURAL PRODUCTION INDICES (I) (1914=100)



Source: Kayō Nobufumi ed., *Nihon nōgyō kiso tōkei*, pp. 220-221.

in the farmers' livelihood and that their living standards were definitely raised; while on the other hand, we may conclude that the fact that their improved livelihood was not necessarily supported by a corresponding increase in their incomes helped make the farmers' lives less stable.

The substance of the changes which occurred in Japanese agriculture during the First World War is suggested by the trends of farm household economy, as outlined above. It may be worth-while, then, to review the over-all development of the situation during these years.

Firstly, rising prices stimulated farm production considerably. Figure 3 demonstrates this through the use of production indices. Total agricultural production recorded an increase of some 10% during the 8-year period; though, due to bad harvests for two consecutive years in 1917 and 1918, rice production failed to achieve the average increment, it still maintained an upward trend while other cereals (wheat, barley and others) showed a declining tendency. The greatest increase was witnessed in cocoon and livestock production, followed by fruit production. The cocoon production increase was obviously due to its favourable price, which was supported by brisk raw-silk exports to the prospering American economy, while the production increases in livestock and fruit are attributable to an upward shift in the consumption level of the Japanese as a whole and, specifically, to an increased demand for the higher-priced foodstuffs represented by these farm products.

The change in the production pattern can be seen through a comparison of the breakdown of gross production value by kinds of crop between pre-war years (1908-1912 average) and war years (1918-1919 average): rice production hardly moved, going from 52.4% to 53.7% of the total; barley fell from 12.1% to 9.5%, and other cereals, from 10.5% to 8.9%; cocoon production, which represented 9.3% of the total proceeds in the pre-war years, advanced to 12.5% in the war years, and livestock, from 2.9% to 3.1%.<sup>5</sup> The traditional rice-centred production pattern, which was and still is basic to Japanese agriculture, suffered no drastic change, but it should be noted that the tendency towards investment in sericulture and livestock was strengthened during this period.

Secondly, this farm production increase was partly made possible through the expansion of arable land. Farmland as a whole increased by 3.2%, from 5,815.7 million *chō* 町<sup>6</sup> in 1914 to 6,084.3 million *chō* in 1920; in particular, this devoted to mulberry-orchards area expanded by nearly 19%, from 450,000 *chō* to 534,000 *chō*, a phenomenon caused by

<sup>5</sup> Kayō Nobufumi ed., *Nihon nōgyō kiso tōkei*, pp. 222-223.

<sup>6</sup> 1 *chō* equals 10 *tan* equal to 2.45 acres or approximately 1 hectare.

the enlarged cocoon production. Farmland expansion was achieved through reclamation of both new paddy fields and upland fields which, in this over-cultivated country of Japan, meant the extension of cultivation beyond the frontier towards marginal land; we may interpret this as another factor threatening the stability of farm management.

The increase in production, however, was primarily due to an increment in per *tan* 反 output. The yield of paddy per *tan* was raised by 7% from 1.824 *koku* 石<sup>7</sup> (1913-1915 average) to an average of 1.949 *koku* during 1919-1921. The per *tan* output increases of other foods were: 9% for wheat, 4% for barley, 1% for naked barley, 9% for sweet potatoes, and 4% for white potatoes.<sup>8</sup>

These production increases per unit of farmland were made possible through advances in farming technique. During these years, the treadle-thresher was perfected for practical use, and petroleum-engines and electric motors were introduced, though on a limited basis mainly for irrigation purposes. Advancement in farm-tools and machinery was thus notable, but the most direct contribution to higher yields was made through the use of fertilizers and land-improvement projects which were undertaken both extensively and intensively after the "Kōchi seiri hō" 耕地整理法 (Arable Land Readjustment Law) was amended in 1909. The reclamation of new farmland, land-adjustment, irrigation and drainage works and other relevant undertakings were enthusiastically supported by progressive farmers, working with government assistance. In contrast, by that time, landlords were less interested in agricultural improvement works and had gradually developed a cold attitude towards investment meant for such purposes; as a result, cultivating farmers in many cases were forced to improve land at their own expenses, which eventually caused the increase in their indebtedness.<sup>9</sup>

While the effects of land-improvement works were limited to various localities, those of fertilizer application were felt all over the country. Table 2 shows that fish manures became less popular while use of soya-bean cakes more than doubled; Japanese farmers also started using

<sup>7</sup> 1 *koku* equals 150 kilogrammes or 4.95 bushels.

<sup>8</sup> Calculated from Ministry of Agriculture and Forestry, *Nōrinshō ruinen tōkeihyō* 農林省累年統計表 (Annual Statistics Prepared by the Ministry of Agriculture and Forestry), Tokyo, 1955.

<sup>9</sup> Rural indebtedness increased by 2 times, from 750 million yen in 1911 to 1,500 million yen in 1916. A considerable part of it is supposed to have been incurred in connexion with land-improvement work. (Tōbata Seiichi 東畑精一 & Morinaga Shuntarō 森永俊太郎 eds., *Nihon nōgyō hattatsushi* 日本農業發達史 (History of Agricultural Development in Japan), Vol. 6, Tokyo, Chūōkōronsha, 1955, pp. 119 f.

chemical fertilizers in a considerable amount. The increase of fertilizer costs in the farm household budget, as indicated above, can be properly understood in this context.

Thirdly, we need to pay attention to the increased mobility of the farm population. As the first national census was conducted in 1920, the figures pertaining to prior years are inevitably uncertain; yet Table 3 will provide a fair picture of the distribution of the labour force by sector in the years of our immediate concern.

Spurred by the First World War, mining and manufacturing industries made a rapid advance and the proportion of the labour force engaged in agriculture and forestry began decreasing both relatively and absolutely. The increment in the non-agricultural-forestry labour force, amounting to approximately 1.62 million during 1915-1920, and 1.26 million during 1920-1925, was made possible through the drafting of 0.89 million and 0.08 million, respectively, from the agricultural-forestry sector. In the

**Table 2.** CONSUMPTION OF COMMERCIAL MANURES & FERTILIZERS (I)  
(in 1,000 tons)

Year	Fish* Manure (fish meal)	Soyabean Cake	Super- phosphate	Calcium Cyanamide	Ammonium Sulphate	Compositional Consumption		
						N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
1914	152	647	492	11	122	81	105	14
1922	89	1,385	562	102	168	159	128	29
INDEX	59	214	114	930	138	197	122	208

Note: \* Including bone-meal.

Source: Compiled from Ministry of Agriculture and Forestry, *Hiryō yōran* 肥料要覧 (Fertilizer Handbook), Tokyo, 1938, p. 20, and Kayō Nobufumi ed., *Nihon nōgyō kiso tōkei*, p. 199.

**Table 3.** DISTRIBUTION BY INDUSTRY OF THE JAPANESE  
LABOUR FORCE  
(in 1,000 persons)

Year	Agri- culture and Forestry	Fisheries	Mining	Manu- fac- turing	Trans- portation	Com- merce	Civil Servants and Profes- sionals	Others	Total	Total Popula- tion
1915	15,174 (57.1)	542 (2.0)	385 (1.5)	4,797 (18.1)	842 (3.2)	2,933 (11.1)	1,344 (5.1)	510 (1.9)	26,527 (100.0)	54,936
1920	14,287 (52.2)	537 (2.0)	448 (1.6)	5,139 (18.7)	952 (3.5)	3,662 (13.4)	1,517 (6.0)	721 (2.6)	27,261 (100.0)	55,963
1925	14,209 (50.0)	553 (1.9)	381 (1.3)	5,524 (19.5)	1,056 (3.7)	4,284 (15.1)	1,638 (5.8)	797 (2.7)	28,441 (100.0)	59,736

Source: Yamada Yūzō, *Nihon kokumin shotoku suikei shiryō*, pp. 152-153.

former case, the shift of population from the agricultural sector to the non-agricultural sector was as important in its size as it was grave in its consequences.

No thorough explanation is possible as to the process and manner of this huge rural-urban migration. But, considering that the industrialized sector was dominated by light industry, which typically employed a high proportion of women workers, we can presume that quite a number of farmers' daughters took part in this migration of labour from the villages. Still, we must not underestimate the number of young men who, (as the second or third sons of their parents, were not entitled to inherit their fathers' property) walked out of their villages to join either the heavy and chemical industries which were just beginning to be fully developed, or transportation and public-utility concerns which were then making big strides forward. The World War Boom also encouraged the mushrooming of a variety of small- and medium-sized enterprises, even in districts far from industrial centres; and thus farmers must have been provided with not a few means of earning a non-agricultural wage-income. The considerable increase in the role of wage-incomes in farm household economies touched upon above, particularly in the case of tenants, can be explained as the consequence of phenomenon.<sup>10</sup> The agricultural population was thus given opportunities of a much wider scope to enter external labour markets.

Fourthly, both in spite of and irrespective of the significant outflow of population from the villages, the number of farm households as a

**Table 4. FARM HOUSEHOLDS BY SCALE OF MANAGEMENT**  
(Excluding Hokkaidō) (in 1,000 households)

Year	Total	Less than 5 <i>tan</i>	~10 <i>tan</i>	~20 <i>tan</i>	~33 <i>tan</i>	~50 <i>tan</i>	More than 50 <i>tan</i>
1914	5,286	1,977	1,802	1,066	304	110	27.2
1915	5,278	1,969	1,805	1,069	300	108	26.3
1916	5,281	1,967	1,799	1,080	303	106	25.7
1917	5,282	1,948	1,808	1,091	305	105	25.1
1918	5,291	1,927	1,805	1,109	316	109	25.4
1919	5,293	1,918	1,808	1,116	317	109	25.8
1920	5,297	1,914	1,818	1,117	318	107	24.1
1921	5,275	1,896	1,811	1,127	312	106	24.2
1922	5,262	1,891	1,810	1,140	299	100	21.9

Source: Kayō Nobufumi ed., *Nihon nōgyō kiso tōkei*, pp. 134-136.

<sup>10</sup> Statistically speaking, the increase of farm households in this category ought to be expressed in terms of an increment in "part-time farm households." The full-time vs. part-time farm household statistics for those years, however, are far from accurate and reliable.

whole continued to multiply. The changes among farm households, grouped according to scale of management, are shown in Table 4. Generally speaking, there was a continuous decrease in the numbers of petty farmers or peasants operating less than 5 *tan* each, and large-scale farmers managing more than 5 *chō*, while there was a steady increase in the numbers of middle-size farmers managing 1-2 *chō* of land; those operating 0.5-1 *chō* as well as those with 3-5 *chō* class maintained their position, and those with 2-3 *chō* showed some tendency to increase.

The answer to this paradox of an increasing number of farm household set in the context of a decreasing rural population as a whole is of a social nature: it lies in the break-up of the extended family into multiple nuclear families, a phenomenon continuing from the preceding era. The decline in the number of large-scale farms can be explained by the collapse of landlord management dependent on hired labour: this pattern of farm-management became prohibitively expensive because the wages claimed by the employees became too high under the influence of prosperous business elsewhere.

On the contrary, medium-scaled farmers managing 1 to 2 *chō*, or at the best up to 3 *chō*, made headway, on the crest of the Boom. They were mostly owner-farmers, working primarily on their own land with any additional land rented from landlords. While big farmers were hurt by the increase in labour costs and small peasants preferred to sell their labour in the growing non-agricultural labour market, medium-scaled farmers expanded their operations to the fullest extent possible given the size of their households. The phenomenal production increase during this period was mainly due to these medium-scaled farmers. Among other factors accounting for their success, we may point out that rents lagged behind the advance of farm product prices and the productivity increase per *tan* which made farm-management on other men's land much less burdensome.<sup>11</sup>

It can be conclusively said that, during the boom-period of the First

<sup>11</sup> This was obviously true when rent was paid in cash. Rent in Japan, particularly for paddy fields, was mostly paid in kind and it could be argued then that the rent was raised in proportion to the price of rice. Still, the tempo of per *tan* yield increase was evidently quicker than that of the rise of rents; the national average rent for medium-grade paddy fields was brought down from 54% during 1908-1912 to 51% during 1916-1920. [Ministry of Agriculture and Forestry, *Nōchi mondai ni kansuru tōkei shiryō* 農地問題に關する統計資料 (Statistical Data Regarding the Farmland Problems), Tokyo, 1946, p. 23; Figures pertaining to single-crop paddy fields only.] Even when the rental rates remained unchanged, the absolute gain of the tenants could have been very much more through farm product price increases.

World War, medium-scaled farmers made great advances while landlords gradually retreated from actual production and eventually turned into so many lenders of, not producers from, farmland.

## II. THE INTENSIFICATION OF THE AGRICULTURAL DEPRESSION

After enjoying the prosperous years of the First World War, Japanese agriculture was subjected to a fairly severe shock in the spring of 1920, a shock which was related to the business panic which the country as a whole was undergoing. As was seen in Figure 1, farm product prices fell even more sharply than general commodity prices in 1920-1921. Consequently, many farm households were reduced to economic distress and even upper-class farmers' account-books were marked with red ink.

Severe though the shock was, what mattered most was the prolongation of the agricultural depression—it came in 1920 and lingered for many years. Though there was some slight ebb and flow all through the twenties, Japanese agriculture was adrift on the lowest economic tide it had known until it was engulfed by the Great Depression. Even after the country's economy as a whole began to recover around 1934, the farmers had to wait for yet a few more years; it was only in 1936 that they could raise their heads out of the water. It is no exaggeration to say that the Agricultural Depression was a long drawn-out one, running for more than ten consecutive years.

Let us first look back on this Agricultural Depression from the point of view of prices. As indicated in Figure 4, farm product prices tumbled from 1920, to reach bottom in 1931, when the average farm product price was 40% of that in the base-year 1919. There may be some exaggeration in the figures, since the base-year 1919 is the year when farm product prices were the highest after the outbreak of the First World War, yet no one can deny the fact that the price fall did great damage to the rural economy.

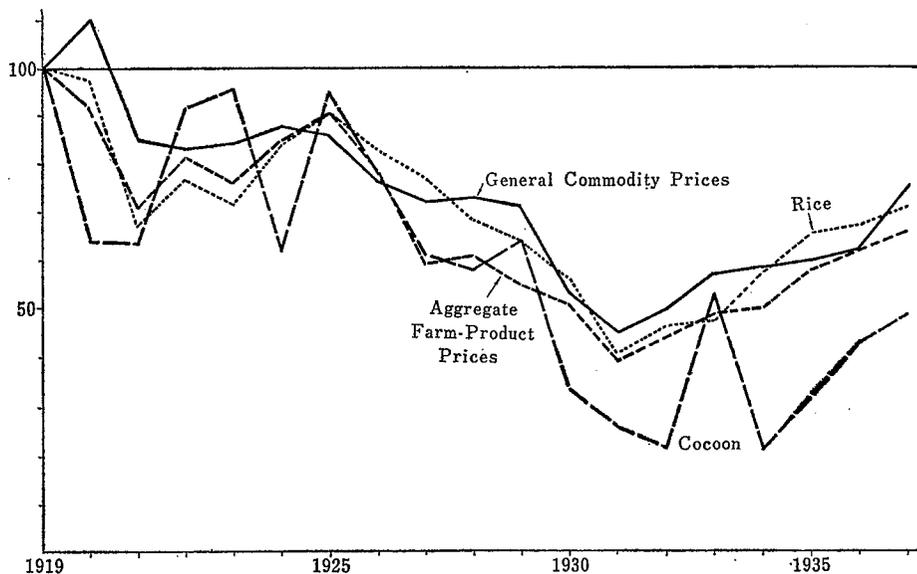
Furthermore, it must be noted that except for the brief period of 1925-1927, farm product prices consistently ran below the general commodity price-line. The headlong fall of farm product prices and the adverse price-gap between them and general commodity prices as shown on the graph will never fail to bring home the wretchedness of the plight in which Japanese farmers and their family members lived for so many years.

Figure 4 also shows that the fall in cocoon prices was much severer than that of rice—cocoon prices fell in 1920 (the year of the

Panic), and after recovering somewhat in the following years, they dropped from the 1925 recovery peak and plummeted to their rock-bottom level in 1932, when they fetched less than a quarter of the money they earned in their heyday. Their subsequent recovery, again, lagged behind that of other commodity prices; it was only in 1937 that they regained half their peak price. If we keep in mind the fact that cocoon production had been enormously enlarged during the First World War Boom period, we can well understand how devastating were the effects of the price collapse upon the already poverty-stricken villagers.

Thus, Japanese agriculture was directly hit by the wholesale decline of farm-product prices and remained severely depressed for more than ten years for considerable reasons. Most generally, it may be stated that the situation in agricultural sector was the reflection of the national economic crisis. What, then, were the noteworthy characteristics of the Japanese economy, specifically, during the third and fourth decades of the twentieth century? It is a fact that the third decade of this century was characterized by the post-war 1920 panic which persisted throughout the twenties. Entering the thirties, recovery was delayed by the World Depression until 1933-1934, when the situation improved owing to the demand for material for the armed forces after the outbreak of the

Figure 4. GENERAL COMMODITY PRICES AND PRICES OF AGRICULTURAL PRODUCT (1919=100)



Source: Same as Figure 1. But as for Cocoon Prices, *Hompō nōgyō yōran*, 1940 edition.

Manchurian Incident. The twenties were not, however, totally stalemated by depression. As Figure 4 indicates, there were a number of cyclical business movements such as the "Interim Recovery" from the second half of 1921 to the first half of 1922, the "Great Earthquake Recovery Boom" in the latter part of 1923, and the upward trend between the latter part of 1928 and the beginning of 1929. Yet they were inevitably short-lived and weak; they were actually man-made booms backed up by the government's inflationary policies. Naturally enough, they collapsed almost immediately under the influence of such events as the "Bank Run" in the fall of 1922 and the "Financial Crisis" in the spring of 1927. In addition, all through this period, Japan was unable to return to the gold standard due to fluctuations of the exchange rate and various other adversities. The lifting of the gold embargo, an action upon which Japan ventured with grave determination in January, 1930, simply served to push her economy off the precipice into the World Depression which had originated in the Wall Street chaos of the previous autumn. To sum up, the Japanese economy could not experience during the twenties the "eternal prosperity" of the USA, and even the "period of relative stability" enjoyed by the European countries in the latter half of the twenties was far beyond her reach.

No detailed explanation of the causes for this miserable plight of the Japanese economy will be given here.<sup>12</sup> It should be noted, however, that the economic trends which have been indicated above were very much responsible for aggravating the Agricultural Depression. The agonies of the Japanese farmers were doomed to be longer and more acute than in any other country.

There were a number of conditions which amplified the impact of the general depressive tendencies upon the farmers. We shall begin by analysing these conditions in connexion with rice. The decline of the rice price obviously followed the logical sequence of *contraction of demand* → *relative surplus* → *price decline*; but the pressure of imported rice, particularly from such colonies as Taiwan and Korea, definitely helped make the situation worse. Table 5 will be useful in throwing light on this situation.

The amount of rice imported from the colonies increased year after year, until in 1934 it was nearly 7 times that of 1920, and represented

<sup>12</sup> For details, see Kajinishi Mitsuha 梶西光速, Ōshima Kiyoshi 大島清, Katō Toshihiko 加藤俊彦, and Ōuchi Tsutomu 大内力, *Nihon shihon-shugi no botsuraku* 日本資本主義の没落 (The Fall of Japanese Capitalism), 8 vols., Tokyo, Tokyodaigaku-shuppankai, 1960-1961.

Table 5. SUPPLY OF RICE IN JAPAN

(in 1,000 *koku*)

Rice-Year	Production in the Previous Year	Imported Rice			Total	Amount Carried Forward to the Following Year
		Total	From Formosa and Korea	From Other Parts		
1920	60,819 (95.0)	3,066 (5.0)	2,316 (3.6)	750 (1.4)	63,995 (100.0)	1,346 (2.1)
1925	57,170 (82.3)	12,087 (17.7)	6,951 (10.4)	5,136 (7.3)	69,257 (100.0)	290 (0.4)
1930	59,558 (87.5)	8,607 (12.5)	7,352 (10.8)	1,248 (1.7)	68,159 (100.0)	Δ1,308 (Δ1.9)
1931	66,876 (85.3)	11,521 (14.7)	10,691 (13.6)	830 (1.1)	78,396 (100.0)	3,421 (4.4)
1932	55,215 (82.6)	11,602 (17.4)	10,617 (15.9)	985 (1.5)	66,817 (100.0)	Δ 233 (Δ0.4)
1933	60,390 (82.3)	12,747 (17.7)	11,749 (16.1)	998 (1.6)	73,137 (100.0)	100 (0.1)
1934	70,829 (83.0)	14,248 (17.0)	14,076 (16.4)	171 (0.6)	85,077 (100.0)	7,423 (8.7)

Note: Rice-year runs from the November of the previous year to the October of the current year.

Source: Ministry of Agriculture and Forestry, *Beikoku yōran* 米穀要覽 (Rice Handbook), Tokyo, 1935, pp. 4-5.

almost 16% of the total supply of rice. Assuming that approximately 60% of the rice harvested in Japan was consumed by the cultivating farmers and their dependants, one-third of the total rice available in the market was of colonial origin. This naturally caused an over-abundance or superfluity of rice in the domestic market: the balance of rice which was carried forward from the rice year 1934 to 1935 was 110% of the previous year, or over 16 million *koku*, with which the whole nation could have been supported for 3 months.

The rice price was depressed due to the fact that imported rice was usually sold 20-30% more cheaply than domestic rice. The requirements of colonial administrative policy did not make it feasible to put any import-control or tariff-barrier on rice coming from the colonies, although its import from anywhere else was discouraged by the government through an import licence system plus a 25% *ad valorem* duty. Under these circumstances, the supply-demand relation of rice could be adjusted only through government procurement of specific amounts of both domestic and colonial rice from time to time.<sup>18</sup>

<sup>18</sup> Government procurement of surplus rice in each of 1930, 1931, 1932, and 1933 amounted to: 2.5 million, 2.1 million, 0.2 million, and 2.1 million, respectively, each in *koku*.

Generally speaking, the continuous increase of rice imports from the colonies would seem synonymous with economic development in those territories and the enrolment there of an increasing number of farmers within the market economy. More precisely, however, this phenomenon was due to a combination of two factors. One was a rapid increase in colonial rice-production as the result of a large-scale, government-sponsored campaign to "grow-more and better-rice," a campaign undertaken to avoid repeating the rice-shortage difficulties experienced during the First World War. The other was an increase in the amount of rice marketed by the cultivating peasants in the overseas territories, for whom a bare subsistence level amid the adverse economic conditions of the depression was attainable only through selling more rice than before, by either cutting down home consumption or substituting coarse cereals and pulses for their staple food. In a word, it was one of the consequences of the imperialistic policy of Japan.

Secondly, the situation with regard to cocoons also had multiple origins. The sharp decline of cocoon prices was primarily due to the slow pace of business in the USA, the principal export market of Japanese raw silk. It should be noted, however, that the prices of cocoons began to decline in the latter half of the twenties when the American economy was still in prosperity; the influence caused by the rapid strengthening of the competitive power of the US rayon industry since the First World War had gradually appeared in Japanese raw silk exports. The speedy tempo of development of this new industry can be seen from the rayon consumption figures between two points of time: rayon consumption was nearly 18,000 pounds in 1921, and 150,000 pounds in 1931, a more than 8-fold expansion within 10 years' time. Meanwhile, raw-silk consumption in the USA increased from 43,000 pounds to 79,000 pounds, or less than doubled in the same ten-year period, and raw-silk exports to the USA stopped increasing by any noticeable degree after about 1927.

The above two cases have been introduced to explain the adverse conditions affecting demand. We shall now look into the adverse conditions affecting supply. The first point to be noted is the fact that agricultural production in Japan did not decrease but rather increased in spite of the bad price decline. As will be seen from Figure 5, the aggregate production index went up by more than 20% through brisk ups and downs, and the output of rice went up by not less than 10%. It is not surprising that cocoon production turned downward after it climbed to its peak in 1930, but its production was still maintained at

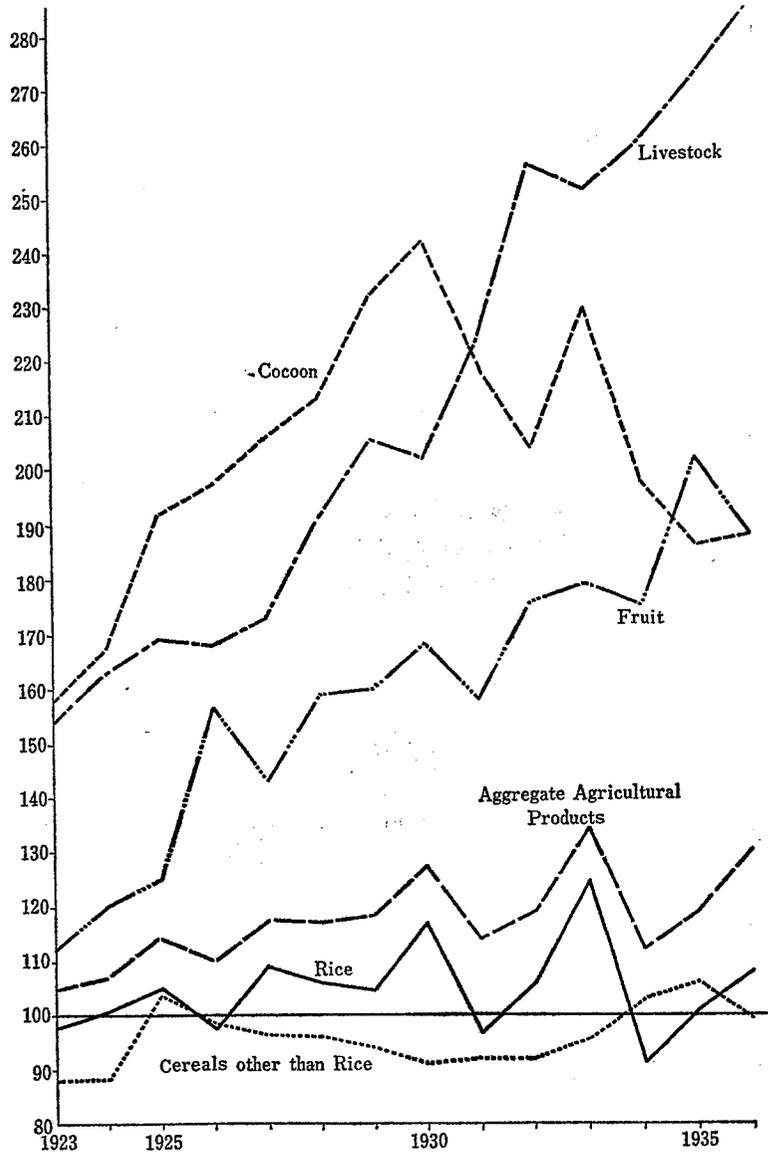
a fairly high level. The production of livestock and fruit apparently increased steadily.

An increase rather than a decrease in production during a depression is not a rare phenomenon when the production system is based on the peasantry. Peasantry cannot often afford to curtail their production, even when they may be driven to severe economic distress owing to a sharp decline in the price of their produce. The pattern of behaviour peculiar to the peasantry under such circumstances is to try harder to secure a certain sum of income by compensating for the reduction of the unit-price of their produce with an increase in the quantity sold; the net result is obviously overproduction, which accelerates the price fall. This was especially true when the population-pressure in Japanese villages became extremely high from the back-flow, plus decrease of out-flow, of the rural population, which will be studied later. In order to support an increased number of population, there remained no ways for farmers other than to work excessively hard to enlarge production.

There are more points which may be taken up in regard to enlarged production. When circumstances forced the farmers to increase production, they no doubt tried to produce rice in more quantity; but at the same time, they were led to increase the production of such other products as cocoons, livestock, fruit, etc., to an even greater extent than that of rice. Naturally, it was most difficult for farmers to enlarge the scale of paddy field; thus, they could only expand their production in the direction of land-saving farms of agriculture or of agriculture which could be carried out on such lands as mountainous areas, etc. Agricultural products obtained from such production was stimulated all the more for the very reason that they provided a source for obtaining ready money. The demand for both livestock and fruit showed an outstanding increase from the First World War and their increased output in the post-war period might be taken as a natural course of development. During the period of time under discussion, however, the supply of even these kinds of agricultural produce became excessive, and, in spite of declining prices, their production was continuously expanded.<sup>14</sup>

However unimportant these various activities might have been, some investment or fixed assets were required for their operation, and farmers often incurred heavier debts and liabilities through one or another unsuc-

<sup>14</sup> As this inclination was further strengthened, Japanese farmers began nursing small animals, only such as rabbits and canary-birds, remotely connected with their normal farming practices. They also became seriously involved in cottage industries as supplementary employment.

**Figure 5.** AGRICULTURAL PRODUCTION INDICES (II) (1914=100)

Source: Same as Figure 3.

cessful venture of this sort.

The second point for consideration is that the increase in production had to be supported by technical improvements. The choice of technique

almost exclusively preferred by the farmers in those days was one which involved intensive farming through the application of an increased dosage of fertilizers. For instance, compare Table 6 with Table 2. During the short period of time dealt with at present, the net consumption of fertilizers more than doubled and, compared to pre-war standards increased 4 to 5 times on the basis of a compositional calculation (excepting  $P_2O_5$ ). It can be seen from the above that the use of chemical fertilizers, ammonium sulphate in particular, became accepted practice among the Japanese farmers during this time.

The abundant use of fertilizer as a farming technique was not yet well established, however, during this period. And in the cold-weather damage of 1934, this method rather exacerbated the loss. It was, nevertheless, the consequence of the farmers' desperate efforts to maximize the yield from a limited space of land. The farmers' struggle to maximize output under adverse conditions thus hurt their own interests, helping to accelerate rather than to alleviate their economic distress: the more they produced, the lower the price fell. Apart from this vicious cycle, the investments meant to increase production often failed to bring a rewarding return, making the farm-household economy even tighter.

The costliness of such investments might be illustrated by examining two factors relevant to the subject of fertilizer. First, fertilizer—especially chemical fertilizer—production was almost completely under the control of monopoly capital by that time<sup>15</sup> and, therefore, its price was more or less rigid. Except for ammonium sulphate, which was

Table 6. CONSUMPTION OF COMMERCIAL MANURES AND FERTILIZERS (II)

Year	Fish Manure	Soyabean Cake	Super-phosphate	Calcium Cyanamide	Ammonium Sulphate	(in 1,000 tons)		
						Compositional Consumption		
						N	$P_2O_5$	$K_2O$
1930	179	1,087	922	232	488	273	193	67
1935	257	714	1,151	223	813	356	231	76
INDEX (1914=100)								
1930	118	168	187	2,320	400	337	184	479
1935	169	110	234	2,050	666	440	220	544

Source: Same as Table 2.

<sup>15</sup> For details, see Ōuchi Tsutomu, *Hiryō no keizai-gaku* 肥料の経済學 (The Economics of Fertilizer), Tokyo, Hōsei daigaku shuppan-kyoku, 1957, Chap. II.

obtainable at a fairly low price due to the quickly advancing technical innovations in this industry, the price of fertilizer did not fall as readily as that of farm products. In short, this is an example of the so-called *Schere*. Second—and more important—fertilizer application has a specific saturation-point beyond which additional dosage does not bring a corresponding yield increase. These two factors could not but aggravate state of the farm household economy.

After studying various factors responsible for the long-term price decline, both inside and outside the agricultural sector, we might summarize their basic trends as follows. Japanese agriculture was drawn into the "money-economy" during the First World War period; agricultural production became increasingly market-oriented, while agricultural operation itself became increasingly difficult without commodities supplied by outside markets (the best example is the farmers' fatal dependence on chemical fertilizers). The farmers' livelihood was no longer based on a self-sufficient economy and the means to increasing their consumption level had to be sought through the maximization of cash purchasing-power. Willingly or not, Japanese farmers thus made their production as well as consumption more vulnerable to the vicissitudes of fortune in the non-agricultural world, and the external influences upon their condition became more direct and acute. Japanese agriculture was now exposed to shocks originating not only in the home-market but also in the world market in general, including the colonies and protectorates of the Big Powers.

What is more important is that once Japanese farmers became subject to these outside influences, they could no longer retreat to their old order of "self-sufficiency" to avoid the adverse effects to which the market-mechanism made them subject in the days of the Agricultural Depression. They could find no other way to meet this situation than to exhaust their strength in diversification and in the maximization of the physical volume of their marketable products, while the lavish use of chemical fertilizers increased their production costs. In addition to these aspects of their economic distress were hidden the difficulties of village life, as will be touched upon later. It is clear that the structural change of Japanese agriculture was the basic factor amplifying the destructiveness of the Agricultural Depression and extending it over many long years.

III. THE FARM HOUSEHOLD ECONOMY IN AUSTERITY

The plight of the farm household economy during the Agricultural Depression is best indicated by the "Farm Household Economic Survey" undertaken annually by the Ministry of Agriculture and Forestry starting in 1921. Unfortunately, between 1930 and 1931, an over-all change was introduced in its survey procedures, farm households to be covered and the method of data-collection, which prevents us from making continuous time-series observations. Accordingly, comparisons between the different points in time have been divided into two parts in Table 7: one between 1924 and 1930 and the other between 1931 and 1936.

Table 7. SUMMARY OF FARM HOUSEHOLD ECONOMY (II)

(in yen)

	Owner-Farmers				Tenants			
	1924	1930	1931	1936	1924	1930	1931	1936
Scale of Management (Size of Land under Operation in <i>tan</i> )	18.2	17.1	13.0	12.8	14.5	16.2	12.0	12.4
Number of Family Members (heads)	7.5	7.6	6.6	6.5	5.8	6.9	6.3	6.5
AGRICULTURAL RECEIPTS & DISBURSEMENTS								
Receipts	2,546	1,440	790	1,250	1,928	1,285	719	1,178
Operating Expenses								
Total	1,037	734	218	320	1,176	867	384	580
Land Rent Only	17	15	14	14	463	278	204	321
Farm Income	1,508	705	572	930	753	418	335	598
Non-Agricultural Income	389	273	168	185	246	195	137	205
Income Total	1,897	978	740	1,115	999	613	482	803
To Be Deducted:								
Taxes & Assessments	190	142	96	93	35	29	19	25
Interest-payable	8	18	17	18	8	13	11	18
DISPOSABLE INCOME	1,699	818	627	1,004	956	571	452	760
Household Expenditure	1,343	901	616	816	807	654	464	65.8
Net Surplus	356	Δ 83	10	188	149	Δ 83	Δ 10	101

Note: Δ indicates deficit.

Source: Calculated from *Fukkokuban nōka keizai chōsa hōkoku*, pp. 48-93.

This table provides considerable and varied information, but we shall limit our immediate attention to the following:

(1) At the nadir of the Depression, gross farm income suffered from an extraordinary decline but net farm income was afflicted with an even greater deficit. Gross farm income in 1930, when compared to those of 1924, stood at 56.5% for owner-farmers and 66.7% for the tenants, while a similar comparison in net farm income turned out to be 46.7%

and 55.5% respectively. The sharp drop in net farm income was due, in both cases, to the relatively slow decrease in operating expenses and, in the case of tenants, a comparative lack of elasticity in rent.<sup>16</sup>

(2) The decline in non-agricultural income, or part-time income, was also responsible for declining net farm income. Owner-farmers apart, tenants were unable to cover their household expenditure without part-time income even in the year 1924, when the situation was not yet so devastating. Earnings from part-time or supplementary non-agricultural jobs thus had become an indispensable part of the farmers' total income, a situation which dated from the days of the First World War, when expanded employment opportunities were associated with the upward movement of the farm household consumption level. While the adverse effects of the general depression were being felt throughout the economy, farmers were doubly affected, first through the lowering of wages and second, from the increased unemployment difficulties.<sup>17</sup>

(3) While farm income was dropping so drastically, taxes and other public charges stubbornly remained constant, while interest payable on debts and liabilities continued to increase as the farmers' borrowings grew bigger and bigger.<sup>18</sup> The disposable income of farmers was thus sliced away by one means or another.

(4) The farmers' livelihood expenditure was considerably reduced through the processes described in (2) and (3). While general commodity prices declined by nearly one-half, this reduction remained rather moderate and, as it is usually hard to curtail one's expenses when income drops, the farm family budgets as a whole turned to deficit. The need to support an increased number of dependants was apparently one of the important reasons why it was difficult for the farmers to reduce household expenses. Another important reason was the fact that farmers living

<sup>16</sup> Comparison between 1924 and 1930 in the case of tenants in Table 7 indicated a bigger decrease in rents. But the ratio of rents to the total agricultural receipts—1924 through 1930—reads as follows: 25.0%, 20.6%, 23.8%, 21.8%, 20.4%, 21.0%, and 21.6%; the upward trend since 1928 needs to be taken note of. While comparison between 1931 and 1936 makes it clear that the ratio of rents to agricultural receipts as a whole was 28.4% vs. 27.2%, the latter being less.

<sup>17</sup> Between 1927 and 1931, approximately 1 million labourers working in factories and mines lost their jobs and one-third to two-fifth of them returned to their home towns. The pressure of the home-coming of these unemployed was painfully felt in the form of the dwindling-down of the earnings from supplementary jobs, the increase of dependants and the relative expansion of the families' living expenses.

<sup>18</sup> According to the "Farm Households Economy Survey," rural indebtedness represented 44% of the gross farm-household income (in the case of owner-farmers alone) during 1924, but it went up to 114% in 1932. The major part of such indebtedness was made up of the borrowings from usurers and merchants at surprisingly high interest rates.

in the tradition-bound communal life of the village could not afford to cut educational expenses, social expenses and ritual expenses for marriages, funerals and other ceremonies, etc. Instead, they economized on essential items like housing, clothing, food and drink, etc. All these factors combined to make the farmers' life one of absolute destitution. Table 8 may serve to further clarify this situation.

Table 8. THE DETERIORATION OF THE FARMERS' LIFE IN 1930  
(1924=100)

Expenditure Category	Owner-Farmers	Tenants
Housing	62.5	70.9
Food & Drink	61.0	74.1
Clothing	51.4	60.0
Fuel & Light	70.6	77.6
Education	95.1	130.0
Social	77.0	88.5
Luxuries	79.4	71.6
Recreation	43.3	55.0
Medical & Personal Care	57.4	118.5
Ritual	97.8	191.5
Others	88.6	119.5
TOTAL:	67.0	81.0

Source: Calculated from *Hukkokuban nōka keizai chōsa hōkoku*, pp. 56-57.

It should be kept in mind that all these figures in the "Farm Household Economy Survey" are average figures taken, as a rule, from among comparatively well-to-do farm households. Lesser farm households were living under much worse economic conditions. The paddy-crop failures of 1936 and 1939, which involved a wide area in northern Japan, hit these handicapped farm households with many cruel blows. Tens of thousands of boys and girls were sent to school without lunch-boxes and were given publicity under the name of "empty-stomached school-children" by newspapers and radio. Countless peasant families barely sustained existence by filling their stomachs with grass-roots and herbs; many of the peasants' daughters were forced to sell themselves in bondage and turned prostitutes for insignificant sums of money borrowed in advance. These were only a few cases among the many "social problems" vexing the poverty-stricken rural society which attracted the attention of serious-thinking people in the country.

We shall not dig deeper into these problems here except for one grave issue. The destitution of village life culminated in the conspicuous deterioration of the physiques of the young men who appeared at the conscription examinations when they reached the proper age. Moreover,

many were found to have tuberculosis, and those who passed the examinations were said not to be able to devote themselves to their military drills and other duties because of the grave economic distress at home. These and other social problems helped for the smouldering Fascist movement centring around the army officers. The young army officers—many of whom themselves were from agricultural villages—who were in daily contact with the conscripts were overwhelmed by a grave sense of menace to the backbone of national defence: they felt that the national defence as built on “Prosperous Country—Strong Army” was being undermined through the weakness of the conscripts’ physiques and morale.

It was groups of these young army officers who organized a number of ‘coups’ demanding politico-economic reform in this country; they caused a fatal swerve in the course of social development in Japan, eventually plunging the whole nation into the Second World War. Deprivation of the essential requirements of life due to the uttermost poverty among the village folk may be said to have prepared the background for this historical development.

#### IV. THE TRANSFORMATION OF VILLAGE SOCIETY

After analysing the effects of the Agrarian Depression on the village economy, the last question to be asked is what kind of changes were actually brought about in the social structure of the Japanese village. First, let us look at the reshuffling of farm households among different scales of management (Table 9). The dominant tendency is the continuous growth of middle-class farmers working 1 to 2 *chō*, as contrasted with the fairly quick decline of the peasant-class working less than 0.5 *chō* as well as the rich farmer-class holding more than 3 *chō*. This trend of a growing middle-class started at the time of the First World War and became all the more conspicuous during the period of the Agricultural Depression. This trend reflects the underlying situation in which: (1) conditions were least favourable for large-scale capitalist management to develop; and (2) family-based management of a 1 to 2 *chō* scale which could take full advantage of its family-members’ own labour had the greatest adaptability in coping with the adverse conditions during the Agricultural Depression and even an aptitude for growth under such circumstances. Large-scale farm-management operating with hired labour could not enjoy a wholesome growth in this country; and landlord management which took advantage of the old patterns of social

Table 9. CHANGES IN THE FARM HOUSEHOLDS ACCORDING TO FARM SIZE (Excluding Hokkaidō, 1923=100)

Year	Total	Less than 5 <i>tan</i>	~10 <i>tan</i>	~20 <i>tan</i>	~30 <i>tan</i>	~50 <i>tan</i>	More than 50 <i>tan</i>
1924	100.1	99.3	101.0	100.9	100.1	97.5	94.6
1925	100.4	99.7	101.8	101.1	100.0	95.8	87.5
1926	100.5	99.5	102.0	101.5	98.6	97.6	81.4
1927	100.7	99.1	102.8	101.9	98.6	91.6	76.5
1928	100.9	99.2	102.3	103.2	98.4	90.0	72.6
1929	100.8	98.4	102.9	104.0	97.2	86.9	65.0
1930	101.0	98.4	103.6	104.6	96.1	84.6	61.1
1931	101.6	98.2	104.5	105.3	97.5	85.2	59.6
1932	101.8	98.1	104.4	106.0	100.0	84.5	58.4
1933	101.1	97.3	104.0	106.5	97.5	84.0	57.9
1934	101.0	97.1	103.8	106.9	98.0	83.7	56.5
1935	100.9	96.5	103.6	107.0	98.6	82.6	55.5
1936	100.8	96.0	103.3	107.8	98.0	81.6	55.0

Source: Same as Table 4.

relations (the Japanese pattern of 'Junker' type farm-management) and was based on the employment of extremely cheap labour could achieve only limited growth. The fatal blows to the fragile position of landlord farm-management were: (1) the sharp decline of the price of farm products, (2) the disintegration of the old social order under the influence of the First World War, and (3) the relative increase in wage rates. Under these circumstances, it was more befitting to the landlords to limit their operations within the confines of land workable by their own family labour and to lease the surplus land to tenants.

Together with the growth of middle-class farm households, other subtle changes appeared around 1931-1932. For instance, the total number of farm households began decreasing and at the same time the number of farm households working 0.5 to 1 *chō*, which had been slowly increasing till then, started to decline. On the other hand, 2 to 3 *chō* scale farm households seem to have reversed their gradual decline to become self-maintaining. This phenomenon, involving such subtle changes as the decrease in the over-all number of farm households, the quickening tempo of decline of minute-scale farms, the spreading of a similar tendency among small farms and in contrast the tendency towards growth among middle- and upper-class farms, might be taken as a precursor of the general trend which assumed an unmistakable form in the post-Second World War period, particularly since 1950.<sup>19</sup>

<sup>19</sup> For details, see Ōuchi Tsutomu, "Nōmin-sō no bunkai: senzen to sengo 農民層の分

No ready answer can be given to the question as to the causes for these changes. Nevertheless, the following point is probably one of the most important factors. With the outbreak of the Manchurian Incident in the year 1931, the heavy and chemical industries began to operate in full force in Japan and the mode of labour outflow from the villages underwent a radical change. Before that time, the labour outflow from the village, took the form of quasi "migrant labour" of the peasants' daughters, who were almost exclusively destined for the textile industry. While the absolute majority of male-labourers were employed by small or medium enterprise, with some becoming artisans and craftsmen. Only a negligible few were absorbed in large industries. A new outlet was now opened to rural labour in the heavy and chemical industries or in their sub-contracting plants. It became somewhat easier for peasant-class farmers to give up farming, and the pressure to multiply the number of petty farm households through establishing branch families or the adoption of heirs was lessened. On the other hand, a nation-wide introduction of small engines and electric motors to farming came side by side with the development of the machinery industry within the country. The utilization of machinery, however, remained limited to the fringe-zones of cultivation, that is, for irrigation and drainage and threshing and husking purposes rather than for tilling itself. Nevertheless, this degree of mechanization admittedly increased labour productivity to such an extent that a considerably larger land area could be worked by the family members of a single farm household. Conditions were thus prepared for family-based small-holding operations to expand steadily in Japan.

Next, we will intend to examine the internal movements of farm households among owner-farmers, tenants, and part-owner farmers, indicated in Table 10.

Some change is observable before and after the Shōwa Depression. Until 1928-1929, both owner-farmers and part-owner farmers were increasing in number while tenants were decreasing; the use of farmland under owner-farming was increasing accordingly. A reverse movement appeared at the time of the Depression. In 1930 and immediately afterward, a portion of owner-farmers began abandoning their land through either voluntary disposal or mortgage foreclosures, and were reduced to

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解：戦前と戦後 (The Pre-War and Post-War Disintegration of Farmer Classes), in Ōkōchi Kazuo 大河内一男 & Naitō Masaru 内藤勝 eds., *Nihon no keizai: senzen sengo* 日本の経済：戦前戦後 (The Japanese Economy Before and After the War), Tokyo, Tōyōkeizai-shimpōsha, 1963.

Table 10. FARM HOUSEHOLDS BY KIND OF OPERATION AND FARMLAND UNDER TENANCY

Year	Number of Farm Households				Farmland under Tenancy as % of Total Farmland (%)
	Total	Owner-farmers	Part-owner Farmers	Tenants	
1922	100.0 (5,525)	100.0 (1,721)	100.0 (2,254)	100.0 (1,550)	46.5
1923	100.0	100.0	100.2	99.6	46.5
1924	100.2	100.3	100.9	98.8	46.0
1925	100.4	100.3	101.9	98.4	45.8
1926	100.5	100.7	102.7	97.3	45.8
1927	100.7	101.0	103.3	96.4	45.9
1928	100.8	101.6	104.0	95.6	45.8
1929	100.8	101.0	104.7	95.1	47.7
1930	101.3	101.3	105.4	95.9	47.8
1931	102.0	102.1	105.7	96.4	47.0
1932	102.1	102.0	106.0	96.7	47.2
1933	101.8	101.4	105.4	96.7	47.2
1934	101.7	101.2	105.1	97.3	47.0
1935	101.5	100.7	104.8	97.9	46.6
1936	101.3	100.6	104.2	97.8	46.5

Source: *Nōrinshō ruinen tōkeihyō*, pp. 2-3, 10-11.

tenancy; however, this was a temporary phenomenon and the basic trend was for an increase in the number of part-owner farmers and an expansion of farmland under owner-farming.

Such a movement corresponds to an advancement made by small farmers whose scale of management averaged between 1 and 2 *chō*. To improve the stability of their own farm-management, this category of farmers were desirous of establishing themselves as owner-farmers by possessing land. In Japan, where farmland was relatively expensive, however, enlarging the scale of management through procurement of additional land was not without difficulties. Under these circumstances, those owner-farmers who were desirous of expanding their management<sup>20</sup> followed the alternative course of renting land and making themselves part-owner farmers as the first step in attaining their ambition. Naturally, as the next step in their effort, they tried to accumulate enough money to buy the rented land. The census of 1938 brought to light, for the first

<sup>20</sup> It is not to be denied that the enlargement of the scale of farm-management was sometimes achieved by those who started from the status of tenants but, as a matter of fact, these cases were rather rare under the prevailing conditions in Japan, where the heavy pressure of rents did not allow tenants to expand their management through the procurement of additional land. Most of them had to remain stagnant among the petty-peasant group; they had general urge to liberate themselves from farming at the first opportunity.

time, the fact that farm-operation of 1-2 *chō* tracts was almost exclusively undertaken by part-owner farm households. We may say that the preceding arguments dealing with this subject-matter are supported by the results of the 1938 census.

The declining amount of land under tenancy and the expansion of owner-farming, mainly through the increase in part-owner farmers, coincided with the decline of the landlord system as can be clearly seen from the wholesale disposal of land by the landlords. The pattern of proprietorship of farmland underwent a big change between 1920 and 1936. Table 11 shows that the number of farm-proprietors increased due to a remarkable expansion of the small land-holders, while both big landlords having 50 *chō* and above and small-medium land owners with from 3 to 5 *chō* experienced a fairly speedy downfall.

Table 11. LAND-OWNING FARM HOUSEHOLDS BY THE SIZE OF THEIR HOLDINGS

Year	(in 1,000 households)							Total
	Less than 5 <i>tan</i>	~10 <i>tan</i>	~30 <i>tan</i>	~50 <i>tan</i>	~100 <i>tan</i>	~500 <i>tan</i>	More than 500 <i>tan</i>	
1920	2,441 (49.2)	1,203 (24.3)	894 (18.1)	229 (4.6)	123 (2.5)	47 (1.0)	4.3 (0.1)	4,940 (100.0)
1936	2,557 (49.6)	1,305 (25.4)	910 (17.7)	219 (4.3)	111 (2.2)	46 (0.9)	3.3 (0.1)	5,150 (100.0)
INDEX (1920=100)	104.2	108.1	101.6	95.6	90.2	96.6	77.0	104.1

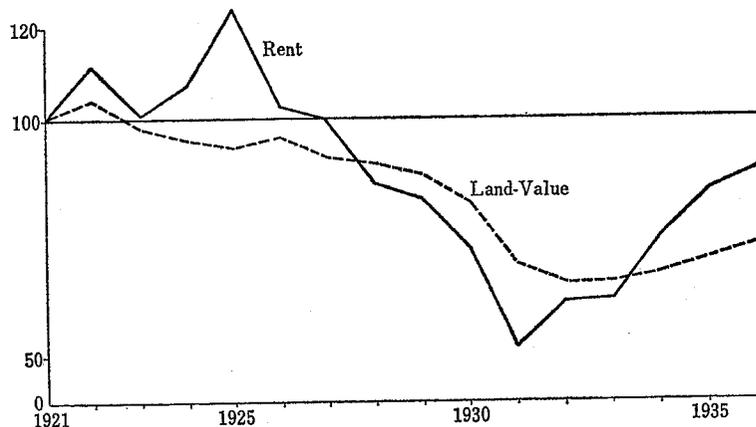
Source: *Hompō nōgyō yōran*, 1940 edition, pp. 46-47.

Table 11 tells the true story of the landlords who hastened to sell their land to the land-hungry small-farmers and of the process through which owner-farming practices were expanding. But, why did landlords sell their land? Some of them were no doubt forced to do so because of failures of the new ventures which they started during the First World War period but which collapsed due to the Depression. Most of the cases, however, were understandably due to the fact that the decline in the rice price led to a drastic reduction in rental receipts, making land-owning no longer economically justifiable. Figure 6 indicates that after 1927, rents declined much more sharply than land-values. From another viewpoint, this means that "returns or yield" from land-owning [(land-rent *minus* land-tax, etc.)/land-value] diminished accordingly.

According to a survey by the Ministry of Agriculture and Forestry,<sup>21</sup> for example, the yield from farmland in 1925 was 5.67% (paddy field)

<sup>21</sup> See *Nōchi mondai ni kansuru tōkei shiryō*, p. 26.

Figure 6. RELATIONS BETWEEN RENT AND LAND-VALUE



Notes: (1) The land-value refers to "average value of ordinary paddy field within the country" computed by the Japan Kangyō Bank.  
 (2) The rent was calculated from "rent accruing to ordinary paddy field within the country" of the Japan Kangyō Bank, multiplied by the national average of the quotations in the principal rice market.

Source: Based on *Hompō nōgyō yōran*, pp. 28-29, 226-227, 287-290.

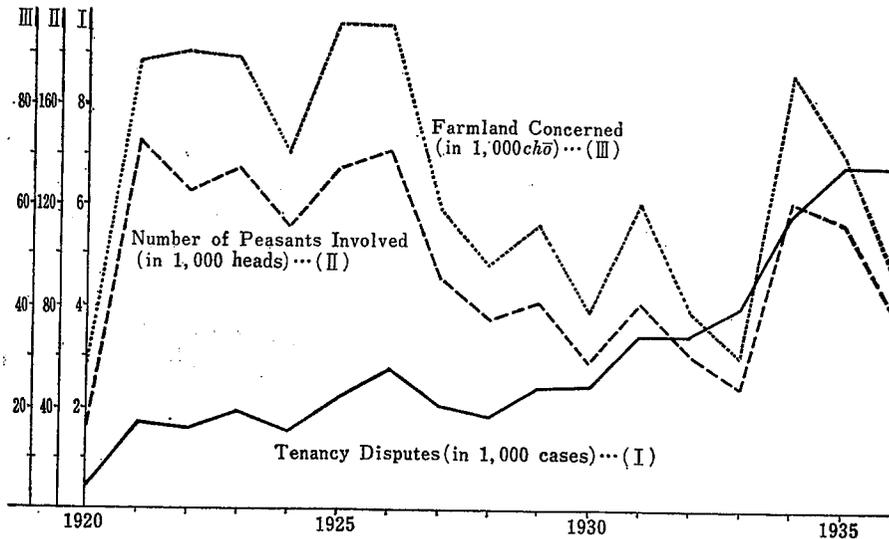
and 5.32% (upland field), while in the same year national bonds and corporation debentures brought 6.03% and 8.17% interest, respectively. Thus the difference in investment-profit between farmland and securities was not very big. But in 1931, the yield from land had fallen to 3.69% in the case of paddy fields and 3.89% in the case of upland fields, far less attractive compared the 5.40% of national bonds and the 6.49% of corporation debentures. It was but natural for the landlords, then, to invest in securities rather than farmland.

Among the multiple reasons which kept land-values high in relation to rents, we may be able to point out one major reason, very important from the standpoint of the cultivating farmers. The cultivating farmers did not aim at an investment-profit from the rents they might receive by obtaining additional land; their utmost concern was focused on the income-increment resulting from enlarged farm operations. In expanding their farm-operations on additional land, the incremental costs incurred by petty farmers, with the exception of fertilizer and seed expenses, were not sizeable; therefore, the investment required for the expected income-increase was rather insignificant. Farmers' appetites for additional land were thus wetted and this again worked to keep the value of farmland at a high level.

Purely economic reasons alone, however, were not the only cause

for the low rents and the increasing disposal of land by the landlords. Due attention must be given to tenancy disputes which were developing into a strong agrarian movement in Japan at that time. Its scale can be fathomed from Figure 7. Tenancy disputes in those days went through two stages of development. In the first stage, which ran till 1926 or so, most of the disputes took place in the western part of Japan and were usually manifested by the pressing demands of the tenants for the reduction of rents; later, the stage was shifted to eastern Japan where landlords in coping with the decline of the rice price, tried to enlarge their scale of management by means of the large-scale eviction of tenants from their land; tenants' opposition to such action on the part of the landlords ignited most of the disputes there.

Figure 7. TENANCY DISPUTES: THEIR FREQUENCY, NUMBER OF PEASANTS INVOLVED AND SIZE OF FARMLAND CONCERNED



Source: *Hompō nōgyō yōran*, p. 279.

Whatever the case might have been, these disputes were staged in a socio-economic background unknown before the First World War. As explained above, after the outbreak of the War, agriculture came to be closely knitted into the fabric of the market-economy and farmers could not but develop some techniques of entrepreneurship: in such a climate, it was not surprising that the peasants who had for a long time been tolerant of the existing rental arrangements with their landlords turned rebellious when they came to realize that the same rentals were eco-

nomically unjustifiable and, therefore, unreasonable. The agrarian movement was thus spontaneous, and yet it would not have gathered as much strength as it did if it had not been stimulated and even led by the various social movements, the labour and socialist movements in particular, which took root after the First World War.

These tenancy disputes did not bring easy victory to the combating peasants, but they no doubt made it increasingly irksome for the landlords to keep on holding land to let. The landlords wanted to spare themselves such troubles by selling their land. In this situation, the government too stepped forward to protect tenants either through the strengthening of controls on landlords or by providing low-interest government loans to facilitate the acquisition of land by tenants. These policies of the government were not as thoroughgoing in limiting the privileges of the land-owning class as the later Land Reform programme proved to be. They were, in a sense, half-way measures, well calculated not to impinge upon the landlords' interest to a great extent. Nevertheless, the fact that the consciousness on the part of the government of the necessity of forcing the landlord system to make a compromising retreat before the imperative need of pacifying social unrest and preventing the farmers from being enlisted in the socialist movements came to be reflected in agricultural policies, and must be evaluated as a momentous modification in agricultural administration in Japan. That this policy-change was urged not only by the feeling of compulsion to counter the socialist movements, but also by the "sense of crisis" promoted by the military Fascists as referred to above, deserves the attention of the readers.

In conclusion, the Agricultural Depression brought about far-reaching consequences, as severe economic distress to the farmers throughout the nation which, in turn, resulted in a drastic structural change in village society. The middle-class farmers were able to further intensify and diversify their farm-management and thereby acquired strong competitive power *vis-à-vis* the large-scale farmers who were fated to decline; the advancement achieved by the middle-class farmers on the one hand, prepared for the gradual retreat and eventual fall of the landlord system and, on the other, promoted the general increase of owner-farming. The cornerstone of the present agricultural structure, which consists primarily of small-scale owner-farmers, was laid during the period of the Agricultural Depression, although its superstructure remained to be built through the agonies of the Second World War and the dictum of the post-war Land Reform.