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LAND REFORM

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by

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AGENCY FOR INTERNATIONAL DEVELOPMENT

SPRING REVIEW OF LAND REFORM

JAPAN

Table of Contents

	page
I. SUMMARY	1
II. PRE-REFORM PERIOD	
A. Introduction: Economic and Political Background	8
B. Land Tenure Structure	10
1. Characteristics	
2. Changes	
C. Land Resource Information	12
1. Land Availability	
2. Classification	
3. Identification and Titling	
D. Rural Production and Productivity	13
E. Rural Population, Employment and Underemployment	13
F. Income Distribution	14
G. Supplementary Services and Supplies	14
1. Information	
2. Credit	
3. Supplies	
4. Infrastructure	
5. Crop Procurement and Marketing	
H. Peasant Association and Power	16
1. Co-ops and other Associations	
2. Political Power	
III. LAND REFORM PROGRAM	
A. Legislation	17
B. Institutional Arrangements	32
C. Program Objectives	42
1. Economic	
2. Social and Political	

D.	Program Implementation and Enforcement	43
	1. Redistribution of Land Ownership	
	2. Changes in Tenancy Systems	
	3. Colonization	
	4. Consolidation and Enclosure	
	5. Classification, Identification and Titling	
E.	Financial Aspects	50
	1. Valuation Procedures	
	2. Program Financing	
	a. Landowner	
	b. Peasant Repayment	
	c. Government Expenditures	
	3. Land Taxes	
F.	Supplementary Measures	54
	1. Information	
	2. Credit	
	3. Supplies	
	4. Infrastructure	
	5. Crop Procurement and Marketing	
G.	Mobilization of the Peasantry	59
	1. Economic Aspects	
	2. Political Aspects	
H.	The Politics of Implementation	61
IV.	EFFECTS OF THE LAND REFORM	
	A. On Land Tenure Structure	63
	B. On Production and Productivity	64
	C. On Rural Employment and Underemployment	67
	D. On Income Distribution	68
	E. On Services and Supplies	68
	F. On Peasant Participation in Decisions	69
	G. On Character of Rural Society	71
	H. Broader Effects on the Economy, Society and Polity	73
	I. Mechanization and other Capital Investments	74
V.	CRITIQUE AND EVALUATION	74

Bibliography

References

Appendix A	Figures
Appendix B	Tables

I. Introduction and Summary

The long history of land reform in Japan started in the seventh century and continues to the present day. As a case study, Japan is an excellent example of a land reform process continuous in nature and part of the overall societal development process. To proceed in this context, it is necessary to clarify the definition of land reform. The author uses that of the Third Progress Report, (U.N.1962,iv),

"It clearly includes changes in land tenure...But it also includes the establishment or strengthening of essential governmental, cooperative or commercial agencies or services relating to agricultural credit, supply, marketing, extension, and research. So conceived, the ideal land reform programme is an integrated programme of measures designed to eliminate obstacles to economic and social development arising out of defects in the agrarian structure."

This recently presented definition is by no means widely used by analysts of land reform cases. More popularly used is the narrow concept which sees land reform as nothing more than the distribution of land to the cultivator present on the land. Other analysts use a number of variations between these two definitions. This practice results in the large number of analytical studies talking past each other and the fact that, as yet, no analyst has abstracted, from these numerous studies, a dynamic model of land tenure forces in society.

The repeated failure and the unrealistic nature of land reform measures must be traced back to the lack of identification of (1) forces which caused the existing land tenure situation, and (2) forces which can be employed to alter this situation, as desired. Modern economic factors, where applicable, are generally well discussed; however,

political and social forces are rarely objectively analyzed.

Moralistic concerns, although well represented, cannot compensate for the lack of sociological, anthropological and political science methods insight. These 3 social sciences, however, seem to have shown little concern for land reform. (The major exceptions are R.P. Dore's analyses of land reform in Japan (1) and the Fourth United Nations Status Report on Land Reform (21).)

The analysis presented in this paper attempts to abstract, from the well-documented Japanese experience, the basic land tenure change process. This process is inseparable from the overall societal development process.

Figure A in the Appendix presents a simplified model of the dynamic process: the catalytic factors of agricultural and health technologies, supplemented by processing and other natural resource technologies and structured by the economic, social and political control technologies. Figure B and Table A try to trace the above factors through the many "land reforms" or tenure changes from pre-feudal to future levels of societal development.

Present day land reform measures concern primarily those identified as the transitional period between the feudal land tenure periods and the modern period. The factors creating the feudal land tenure structure are basically those of limited land and productivity technologies, high population pressure and social control structures

strongly favoring governing elites. The basic factors making desired land tenure changes possible during the transitional period are the rapidly improving productivity technologies (in agriculture and non-agriculture sectors) which effectively reduce the population pressure on land and food production. Without drastic social and political changes, as well as population control, however, this is greatly slowed down. It seems that, generally, changes in land tenure structure, i.e., land reform, were always caused by catalytic developments in agricultural, political, health or processing technologies. In Japan, at least, land reform has never been catalytic but only a reaction to the need to establish control over land as a scarce resource (feudal phase) or to remove a constraint to reduce land scarcity problems by increasing productivity (transitional phase).

This paper concentrates on the transitional phase, the most crucial and difficult phase for land reform action. The sequence of occurring developments and land reform actions taken presented in Table B and Figure C can be most important for governments contemplating land reform action. These data may indicate not only what reform and supplemental actions are required but also which are possible at their stage of societal development.

The topography of Japan is characterized by mountains and little arable land. Population pressures on land developed quite early. Feudal land reforms, from the seventh century to the sixteenth century, aimed at the construction of tenure structures by which surpluses could be siphoned off for the creation of a government class above the subsistence cultivator. The need to improve security through establishing ever larger centralized organizations of population, widely scattered on arable land, was a major force in creating the feudal state.

The final feudal land reform established the most effective land tenure structure under traditional technology. It included the first land survey in 1586. Modernization influences resulted in the rise in the living standards of the elite. Modern health practices further increased population pressure. Both factors brought about the deterioration of the feudal tenure structure during the nineteenth century. Western colonialism created a feeling of national insecurity which necessitated the abolition of the weak feudal system for national survival. This led to the first transitional land reform in 1868.

Transitional land reform in Japan has to be seen in two phases (hereafter, referred to as the First and Second land reform), each phase starting with a major land reform program which was followed by numerous amending and supplementary actions. For the purposes of the process-concept and the outline specified for this study, both phases will be analyzed together under each subtitle of the outline.

The first land reform in 1868 freed the peasantry from feudal bondage to the land and created unconditional private land ownership for the purpose of cash taxation. A second cadastral survey was made. The possession of a written deed was necessary to establish private ownership. However, this land reform measure overlooked tenancy, perhaps unintentionally, since tenancy was illegal under the previous feudal structure. Still, 70% of all arable land came under the ownership of owner or part-owner cultivators who made up about 80% of all farmers. The new government may have considered the 20% full tenants a minor problem. However, this figure rose to approximately 40% by the turn of the century due to the establishment of uncontrolled economic market forces, heavy land taxes and the absence of any protection of owner-cultivators or tenants which caused many owners to lose ownership.

The first land reform also created and strengthened an exploitive landlord class which depended solely for its livelihood and high living standard on tenant labor. After the turn of the century with universal education and suffrage taking effect and an agricultural depression reducing incomes, peasant agitation through organized unions and the courts caused the government to attempt to reverse the trend. Efforts were made through the legislature to provide tenant and owner-farmer protection, but they were always severely weakened by the landlord political power. Still these measures were at least able to halt the trend of increasing tenancy until the second World War. The growth of a pseudo-feudal rural structure of servile peasants and paternalistic

lords was ideologically idealized and continued to influence all of Japanese society until it was undermined by the second World War. Direct wartime subsidies to cultivators, whether owner or tenant to increase production and the worsening labor shortage reduced both, resources and power, of the landlord class.

The first land reform, however, had an immense effect on production and productivity of Japanese agriculture. The reform provided strong motivation and resources for increased production to both the owner-cultivator and the progressive landlord. Motivation was provided by the carrot and the stick method, namely, higher income and high land taxes. The government also pushed extensive supplementary programs to create all modern input institutions required: infrastructure, agricultural schools and extension, farmer organization, production and distribution of chemicals, new breeds and varieties, and credit. The growth rate of Japanese agriculture during these first 30 years after the first reform in 1868 has been equalled only by that of the first decade after the second land reform in 1947. After the turn of the century this growth rate was slowed down by the developing political and social problems of tenancy as well as by an economic depression.

The second land reform phase started in 1946 with the end of the war. Its primary aim was to correct the biggest mistake of the first tenancy. The Japanese Government, itself, passed a fairly revolutionary land reform which would have, nevertheless, permitted a landlord class to survive. A much stronger land reform measure "supported" by the

occupation government and Japanese public in 1947 abolished the land-lord class and in effect was virtually punitive. This land reform affected primarily the rural social structure which it fundamentally modified and democratized. Its effect on productivity and total production, must be seen as only marginal, by adding to the already existing trend of increasing productivity since the first land reform phase. Democratization of rural society can be seen as either the removal of a constraint to, or the creation of a foundation for the democratic development of the whole society. With the rapid growth of the non-agricultural population and the accelerating trend in the absolute reduction of the rural population, the removal of a constraint seems more applicable. Unlike during the first land reform phase, agriculture was not, economically and socially, the controlling sector in Japanese society but was rapidly becoming a very dependent and subsidized one.

A major constraint on the egalitarian development of Japanese society is emerging out of the second land reform. The restriction on maximum farm size and land transfers, through either sale or modern land renting causes agricultural income to lag more and more behind that of non-agricultural sectors. Price subsidies to agriculture which were initially provided to increase production, and later to shore up agricultural income, have produced growing food surpluses. This is especially true of rice. To prevent the growth of a new dual society with very disparate income levels, a new land reform is in the making. It will permit viable owner-operated farm units to develop by

removing size limitations. An earlier attempt to create viable farm units through cooperatives has had little effect.

II. Pre-Reform Period

A. Introduction: Economic and Political Background^{1/}

Modern land reform in Japan started in 1868 with the Meiji restoration. This land reform process in Japan, which is still not completed, can be seen in two major phases: 1) commercialization phase, and 2) the tenancy abolition phase.

The pre-reform period constituted the long period of feudalism in Japan. It started with a most radical land reform in the mid-seventh century which ended the tribal stage of development of Japanese society. Using the Chinese example, this reform declared all lands in the country as belonging to the central government which would parcel it back to each family depending on its size. The new system was to facilitate the payment of taxes in kind for the support of a central government. It is not clear how thoroughly this system became established but by the end of the twelfth century it had totally disappeared and a decentralized feudal structure taken its place.

The Japanese social and economic development levels could not yet support a centralized political system. The breakdown occurred through the slow process of distributing land into permanent holding rights without tax obligations to the central government for meritorious service and to shrines and temples. During the early feudal period by the end of the twelfth century a first beginning was made to establish

laws governing rights to the land. Courts backed up by the government were established to make judgment on the ownership of these rights in any part of Japan. With the final breakdown of the central government, this system soon had disappeared.

By the mid-fourteenth century, total anarchy reigned and the right to collect taxes depended on the temporary powers of the individual lords. Continuing through the fifteenth and sixteenth centuries, the lack of a central government and the preoccupation of the feudal lords with fighting each other left the peasant and his village largely self-governed and free, except for the payment of taxes to whatever lord was able to enforce them.

By the sixteenth century, the trend toward centralized power, especially central military authority, permitted the establishment of a new land use structure, and other feudal land reforms. A new central government established and enforced new legal principles for a clear definition of ownership and land cultivation rights. Measurements were standardized and the national cadastral survey was conducted in 1586. Final elements of the Japanese feudal structure were added in form of a prohibition of the sale of peasant holdings (1693) and a prohibition of their division by inheritance (1673). At this time about a quarter of the total land area was in central government hands (royal family) and the rest was divided into about three hundred fiefs of various sizes.

B. Land Tenure Structure

During the last feudal land reform, the country's population was practically divided into three castes: the lord-warrior caste, the artisans and the peasant caste. Peasants were now given total security of tenure by being chained to their land and occupation. Peasants who left their land for other occupations in town could be forced to return to it.

It is important to note that initially, this feudal structure did not include any type of tenancy. However, taxes to the lord-warrior caste and the central government were high and grew higher throughout the period. The living standard of the lord-warrior caste rose rapidly, often to a level which they found beyond their power to satisfy from the tax payment of their peasantry. Deficits were financed through loans at first by the lord caste and eventually as well by the peasants, whenever peasants were unable to produce enough to cover their tax or social obligations or subsistence needs. This proved to be the destructive factor of this feudal system. Peasant rebellions occurred increasingly toward the end of the eighteenth century and throughout the nineteenth century. These rebellions were local acts of desperation and not nationally organized.

These same factors caused tenancy. Though illegal, land was given as security for money loans both by lords and peasants. Peasants who were unable to repay their loans became tenants to the mortgage holder. Mortgages made by lords were later used by the moneylenders to claim ownership over land.

Land reclamation became another cause of tenancy. Easily cultivatable lands were exhausted by this time and making marginal lands arable was beyond the financial and material resources of peasants. The financiers of such land reclamation eventually became the land owners, who, in turn, rented the land to the same peasants who developed it for labor wages.

The immediate pre-reform period from about 1800 to 1868 thus saw an increasing amount of tenancy and a generally exploited peasantry. A growing money-lending class of merchant-artisans and rich peasants owned the tenant-cultivated land.

At the same time, due to the pressures exerted by the need to satisfy an ever-rising standard of living, the lord-warrior caste became more exploitative of the peasant population. A number of lords operated their own land holdings with serfs. The growth of this serf class is nowhere identified. The peasant's inability to pay taxes and consequent direct takeover of land rights by the lord may have been a primary method to make the small peasant a serf. Another source may have been the landless peasant, i.e., the excess population from small holdings.

C. Land Resource Information

1. Land Availability

No statistics are available to determine exact arable land areas in the pre-reform period. However, Japan is an extremely rugged mountainous country where three-quarters of the total land area is estimated to slope more than fifteen degrees. Despite terracing, irrigation and other development investments, only 16% of the total land area is cultivated.^{2/} Population pressure on the sparse land resources must have occurred very early in Japanese history. The prohibition to divide peasant holdings by inheritance as early as 1673 indicates the early necessity to preserve economies of scale of peasant holdings. The extremely small holdings of land ownership by the time of the first modernization and land reform in 1868 further emphasizes the fact that land availability relative to population growth has been the most crucial factor of Japanese rural social structure until most recent times. Figure 1 shows the relative position of Japan with other industrial nations in 1955. This same relative situation may have existed for several centuries.

2. Classification

Very little information is available on land classification in feudal Japan. The first cadastral surveys conducted in 1586 for the purpose of land taxes were based on the average yield of a particular number of years. This, in itself, is a form of land classification but not in modern agronomic terms of soil types. A general climatic classification is illustrated in Figure 2, "Crop Limits in Japan". Table 1 gives some indication of the types of land by crops starting 30 years after the first modern land reform.

3. Identification and Titling

The cadastral survey conducted in 1586 was mentioned above. This land identification and titling remained the base for tax purposes until 1870 when the first modern cadastral survey was conducted. Apparently, whenever possible, land development, since that first survey, neither reported nor titled so as to avoid tax levy. The second survey substantiates this statement by showing an increase of the total amounts of agricultural and residential land by 48% over the first survey.

D. Rural Production and Productivity

Rural production in the pre-reform period was able to keep up with the population growth. However, during the last century of the period, the productivity of land and peasant was increasingly forced to its very margin under the existing technology. Increasing tenancy, expensive land development schemes and peasant riots indicate the growing problems of rural production and productivity.

E. Rural Population, Employment and Underemployment

There is very little information available regarding the absolute, as well, as the percentage rural population of the pre-reform period. There are no statistics on employment and underemployment during this period. Very little unemployment seems to have been possible in the heavily exploited rural sector. Underemployment, however, may have been severe. Most of Japan can grow one crop only per year (see Figure 2). This leaves the majority of the population idle during the winter season, except those involved in cottage industry. There is no information on peasant cottage industry employment during the pre-reform period.

F. Income Distribution

Income distribution figures are not available. However, the desperation riots by the peasants and the high living standards of the aristocracy and money lending classes indicate that income distribution was extremely disparate.^{3/} Table 2 gives some data on the relative position of the tenant to his landlord at the end of the period.

G. Supplementary Services and Supplies

1. Information. There is nearly no information available on the type or amount of technical information available to the agricultural population in Japan before the Meiji restoration in 1868. Definitely no organized extension service or research institutions existed. The extent to which individual cultivators, especially large landowners, tried to improve their agricultural technology by testing and selecting improved seeds or breeds cannot be determined. High intensity production was required of the Japanese cultivator by the high population pressure on land and the high taxes levied by the government and the aristocracy. These demands caused the Japanese peasant to be highly motivated in extracting the most from his little plots of land.

2. Credit. No central government modern banking credit was available before the first land reform. Certain urban occupations and the wealthiest peasants gave credit at usurious rates. This practice proved to be the major cause of the breakdown of the initial feudal caste structure constructed during the late 16th century. Both peasants and aristocracy were forced to take loans from these moneylenders and quite often lost land ownership rights they had under the feudal laws.

The rather large sums required for land reclamation and improvement were generally available only to the same moneylending class. There are no data available showing how much of the reclaimed land ownership title went to the moneylender and how much to the sponsoring feudal lords in the area. It appears that small peasants were not able to obtain credit to undertake land improvements.

3. Supplies. No statistics could be found on either production or application of fertilizers and other agricultural chemicals. Since no industry existed in Japan before the 1870's, it can be assumed that none or very few industrially-produced chemicals were available. However, local industry, manufacturing hand tools and other farm implements must have been highly developed and adequately supplied the rural sector for its level of development needs. The high intensity of agriculture also required the application of farm-produced fertilizers, such as animal and green manures, possibly night soil. (Table 19)

4. Infrastructure. The extent of the existing infrastructure at the time of the first reform can only be surmised from certain historical facts: A relatively central government for over 200 years indicate at least the existence of adequate dirt roads for transportation by animal drawn vehicles. Water transportation must have been relatively easy in this island nation. Considerable irrigation systems must have been in existence since they were an attraction for capital investments during the 19th century. Infrastructures of modern water supply, railroads, telegraphs, etc., were absent.

5. Crop Procurement and Marketing. Peasants were under heavy restrictions regarding the kinds of crops they could produce. They were also prohibited to engage in any form of trade. Rice merchants are mentioned as a powerful urban class second only to the local feudal lord. A large portion of agricultural production, often as high as 60%, was demanded by the feudal government as taxes.^{4/} This left barely enough for subsistence for the majority of peasants. Consequently, very little production must have been available for free trade.

H. Peasant Association and Power

1. Co-ops and Other Associations. Cooperatives or other peasant associations were not allowed under the feudal structure and did not seem to have existed anywhere.

2. Political Power. By modern standards, the peasantry seems to have had very little or no political power. However, the feudalistic system, ideally, is based on mutual obligations between peasants and lords. The breakdown of the ideal feudal structure as established in the late 16th century through mortgaging and the growth of shadow tenancy indicates the waning customary power of the peasantry. But the peasantry must have had political channels in this system to at least influence decisions concerning its interest. The increase of peasant riots indicates insufficiency of these channels but the peasant riots were not politically organized. Their effect may have been, on the one hand, increased suppression, and, on the other, a deterrent on further tightening the screws to extract taxes.

III. Land Reform Program

A. Legislation

1. First Land Reform Legislation 1868-1945. Japan's history of legislation affecting land tenure is long and voluminous. Modern Japanese land reform began in December 1868 with a government decree proclaiming that all plots of land held by every village should be placed under the private ownership of farmers. It further returned all the feudal fiefs to the Emperor and abolished the clans, i.e., the disposal of fiefs and stipends of the feudal lords and the establishment of prefectures. The major omission of this decree was its failure to define which farmers were to be the new land owners.

To facilitate the modernization of the land tax system from tax in kind to tax in cash, the previous feudal restrictions on the production of certain kinds of crops were removed in 1871, thus allowing owners to plant any crop they desired.

Restrictions on the sale and transfer of land were removed in 1872; thereafter, any land could be bought and sold without restrictions.

In 1873 the Land Tax Revision Ordinance was announced. Taxes were now based on the price of land and not on the yield of land. Taxes were to be paid in cash. The tax rate was fixed at 3% of the land price, payable to the central government, plus 1% to the local government.

These rates were not to be changed by either good or bad crop years. No stipulation was made regarding the rent paid by tenants. Rent continued to be paid in kind. However, this tax law, had much more far-reaching effect. It necessitated the documented ownership of land.

The Registration Law of 1868 established land certificates as proof of ownership. New land registers were compiled to replace the old registers of the 16th century. The tax laws further legalized and consolidated tenancy. Taxes had to be paid by owners; therefore, ownership had to be clearly established. Under the feudal system dual ownership, permanent tenancy and many other rights had existed by tradition. Generally, cultivators of dually-owned land became tenants if they could not buy out their co-owner who was usually the financier of land development. Later permanent tenancy rights which reduced land values and ownership rights were changed to 20 and 50-year term tenancy.

These events produced an important effect on communal lands of villages, usually grasslands and forests vitally needed by the peasants. These lands were placed under state ownership and often sold to wealthy landlords or owner-cultivators. The loss of these use-rights of the peasants contributed to peasant rebellions in the 1870's and 1880's.

The Civil Code of 1895 finally clarified and legalized tenancy. This Code was heavily biased in favor of the landlords. It restricted freedom of subletting, transferring and mortgaging of land by tenants and identified tenancy as the mere right to lease land but no other right in itself. It abolished any customary rights tenants previously held under the feudal system.

The Code began to set the maximum permissible tenancy term at 20 years without setting a minimum term. This did not cover existing perpetual tenancy rights which were changed to 50-year terms. It recognized the freedom of a landowner to cancel tenancy contracts at will and evict tenants. Previous customary exemptions or reductions of rent in case of bad crops were replaced with the provision that a tenant could ask his landlord to reduce his rent to equal his earnings if his earnings were less than his rent. Unlike the landlord who could cancel a contract at any time, a tenant had this right only after his earnings had been less than his rent for two consecutive years, for reasons beyond his control. On the other hand, the tenant could claim compensation from landlords for those expenses incurred which were useful or necessary for the management of production. The Civil Code established a tenure system under the overwhelming dominance of landlords. It helped to establish a landlord class that was solely dependent on rent for its income.

Increasing tenant pressure during the first two decades of the 20th century caused the appointment of the Tenancy Systems Research Committee in 1920. This commission submitted a bill for mediating tenancy disputes which was debated by the Diet in 1923 and passed in 1924. This bill intended to end legally the paternalistic landlord-tenant relations. Previously, tenants had to petition their landlords for temporary relief in case of hardship. Now, demands were made by the tenant organizations to legally and permanently alter contract provisions of tenure. However, under pressure from the landlord block, the law only provided that, in principle, tenancy disputes were to be settled by conciliation rather than by compulsory arbitration.

Three bodies of persons could serve as conciliators: Law courts, mediation commissions or a qualified private person. The law did not provide for equal representation of landlords and tenants in the mediation commissions. Neither did it recognize collective representation, such as a farmer's union. It also authorized courts to take whatever action they thought necessary, prior to the mediation, which provided them with means to suppress tenant movements. This law again was heavily biased in favor of the landlords and was challenged by the growing farmers' union movement. The declining profitability of tenancy and the growing agitation by tenants organized in unions caused additional action.

In 1924, the Tenancy System's Research Council had supplanted the earlier committee and made a recommendation of measures regarding the creation of owner-farmers. Finally, in 1926, the Ministry of Agriculture and Forestry issued a ministerial ordinance concerning the regulations for a system for the creation and maintenance of owner-farmers. These regulations aimed to increase the area of cultivated land owned by farmers by 113 thousand hectares in 25 years. The government was to grant farmers' subsidies for the payment of interest on loans extended by bodies which were responsible for the creation of owner-farmers, such as municipal township and village authorities or Industrial Cooperatives Associations. But the government subsidies covered only 1.3% of the 4.8% annual interest rate on such loans. It also left landlords free to sell or not sell their land.

A report made in 1929 by the Tenancy Research Council (formed in 1926) was made the basis for a Tenancy Bill by a new government in 1931. This bill recommended the strengthening of tenancy rights in settling tenancy disputes. However, it failed to pass and no further attempts at tenancy legislation were made until 1937. Efforts to formulate a Tenant Union Bill started in 1921. The bill was never passed.

The Farmland Adjustment Bill of 1938. The objectives of this bill were to stabilize the status of both cultivators and landowners through mutual help and to enable economic rehabilitation of agricultural areas and the maintenance of peace in rural districts. This law, for the first time, amended the Civil Code on tenancy relations. The law recognized rights of tenancy as established without prior registration at a government office, thus having effect against a third party. It also recognized that the landowner could not refuse to renew a contract unless the tenant did not pay rent or broke faith with the landlord. The settlement of disputes between landlords and tenants, otherwise, was not changed but was left as established by practice.

Regulations for Assistance in the Creation and Maintenance of Owner-Farmers, 1937. These new regulations gave the right to municipal township and village authorities to make loans to tenants for the purpose of purchasing the land they cultivated or uncultivated land. These regulations were made to supplement the above mentioned Farm Land Adjustments Law of the same year.

The Farm Rent Control Ordinance and the Price Control Ordinance, 1939. These laws were enacted at the beginning of the war economy in Japan with the start of the China War. It had become necessary to check rising prices of farm products and farmland. Rents, especially, began rising and needed to be controlled in order to sustain

high production. The Rent Control Ordinance kept land rents at the level of September, 1939. The Ordinance, however, did nothing to alter the type of payment; tenants, paying in kind, were to continue to do so. But farmland committees and governors of prefectures were invested with the authority to order cuts in farm rents should they feel it necessary.

Emergency Farm Land Prices Control Ordinance - 1939. This ordinance fixed the official price of lands which had not been covered by previous price control ordinances. Their price was fixed at the price level of 1939.

The Emergency Farmland and Other Matters Control Ordinance, 1941, (amended 1944). The rapid rate of war industrialization necessitated controlling the conversion of farmlands into industrial sites. With the high growth rate of industrial jobs, many peasants began abandoning their land. This law gave powers to the prefecture, not only to cultivate abandoned land, but, generally, to order cultivation of crops, such as staple foods, deemed necessary for the war economy.

Expansion of the Projects for Assistance in the Creation and Maintenance of Owner-Farmers, 1944. This effort was greatly strengthened under the wartime economy and the pressure to increase food production. The maintenance of owner-farmers as a social force supporting the existing regime became politically important. Subsidies for the expenses necessary to develop uncultivated lands were increased

from 40% to 50% of cost. A Farmland Development Corporation (government controlled) was set up for the development of uncultivated land.

The Rice Autonomous Control Law, 1940. This law put all rice production under government control, not only the surplus produced by tenants but also that portion delivered to landlords as rent in kind. Only personal consumption quotas for resident landlord and tenant were exempt. Absentee landlords did not receive a quota in kind for personal consumption. The law also encouraged the tenant to deliver the landlord's portion of rent-in-kind payments directly to the government. This policy finally caused rent payments in kind to be widely replaced by the rent payments in cash.

To increase production of rice, the government decided to pay direct subsidies to the rice producers, allowing the landlords only the rent payment at the fixed original rice price of 1939. The establishment of the dual price system meant that any price boosts introduced by the government bypassed the landlord completely and solely benefited the farmer-cultivator. Toward the end of the war, the gap between the producer's sales price and the landlord's price became larger and larger. (See Table 3) Cash payments of rents became firmly established and profitability of tenancy holdings had nearly disappeared for landlords.

2. Second Land Reform Phase Legislation-1946-Present

The Directive for the Emancipation of Farmers, 1945. This first directive by the occupying American Forces ordered the complete dissolution of the landlord system. It caused the Japanese Government to introduce its so-called 'first land reform bill' which was weakened but passed by the wartime landlord-controlled legislature.

The Amendment to the Farm Land Adjustment Law-1945. This so-called first land reform after the second World War provided that farmland exceeding five hectares leased by a resident landlord and all farmland leased by an absentee landlord should be surrendered to tenants if the latter request it within five years. All rents in kind were to be completely replaced by rent in cash. Contracts on lease of land could not be cancelled without the approval of the Agricultural Land Commissions of the municipalities. It also required the establishment of new commissions comprising five members elected from landlords, owners-farmers and tenants and three neutral members.

The Revised Farm Land Adjustment Law, and the Bill Concerning Special Measures for Establishment of Owner-Farmers, 1947. The occupation authorities, dissatisfied with the first land reform measure, "recommended" to the Japanese Government the establishment of this more radical land reform law. Under this law, all farmlands owned by absentee landlords and all land exceeding one hectare owned by resident landlords were to

be bought by the government. About 80% of the tenanted land or a total of two million hectares of farmland appear to have been covered by this provision. The government, in turn, was to sell this farmland to the tenant farmers occupying it. This was to be accomplished within two years. Prices paid by the government to the landowners were fixed, based on the current (1947) rice price and production costs and the interest rate of government bonds. The law further strengthened restrictions on cancellation of tenant contracts for the small area of tenant land remaining (about 10%). Farmer rents were fixed at 25% of harvest of paddy fields or 15% of upland fields. These contracts were to be put in writing and had to be registered at the Agriculture Land Commissions. (See Table 4 for exact provisions.)

The Composition of the Land Commission was changed to contain three landlords, two owner-farmers, and five farm tenants. Commissions were given much stronger authority to draw up local purchase and sale plans for farmland as required by law, carry out these plans, control farmland rentals and supervise transfer of farmland rights. The second law went into effect by 1947 and was to be completed by autumn, 1949.

The Agricultural Land Law, 1952. This law took the place of the by-now-expired Second Land Reform Law. Except for some emergency measures in the above law, all other provisions were retained. It added, however, some more protective controls on tenancy and fixed the maximum size of farm holdings. The maximum farm size holdings in most of Japan, except the northern island, was three hectares. Absentee land ownership was prohibited; the maximum for tenant-operated land per resident landlord was set at one hectare.

Amendments to the Agricultural Land Law and Agricultural Co-operative Association Law, 1962. To cope with increasing pressures of economy of scale and the attractions of the rapidly modernizing non-agricultural sectors of Japan, it became necessary to permit enlargement of owner-family-operated farm units beyond the three hectares limit. However, the bureaucratic process to obtain permission and acquire land remained very involved. The local Agricultural Committee was to insure that the farmer actually was in residence on his farm and engaged full-time in farming it. ^{6/} Agricultural cooperatives were also allowed to acquire land beyond the three hectares limit and farm it as a unit. They were furthermore allowed to take land in "custody" (rent it) from those small holders who wanted to give up farming and move to town.

The Agricultural Land Management Corporation, 1965. Since the 1962 amendment did not obtain the desired effect, the government created this corporation to assist in expanding the scale of viable farm units. It mediates the scale and transfer of land and even buys and operates certain lands itself. The corporation is completely financed by the government. It oversees the approval of long-term loans at low interest for the purchase of lands and the special tax privileges land sellers receive on capital gains taxes.

The Proposed Agricultural Land Law Amendment, 1968-70. Neither the 1962 Amendment nor the 1965 Corporation proved very effective in helping to reduce part-time farm units and overcome the size limitations of fulltime farms. More fundamental changes in restrictions of farm size and modern land tenancy are required. The amending bills pushed by the Ministry of Agriculture and Forestry would abolish farm size limitation for family-operated farms. Agricultural committees still would assure family operation of a larger farm.

Land for farm-unit expansion must be obtained from inefficient part-time holdings whose owners generally try to keep land as inflation-immune investments. These owners would, however, like to rent out their land and leave the village for urban employment. This practice makes them absentee landlords and is illegal.

The bill revises tenancy provisions. It makes it easier for landowners to break leases with tenants by having the local courts, instead of the governor's office mediate disputes. It also authorizes

private negotiations concerning rent between landlord and tenant up to the maximum level established by the local agricultural committees. Previously, the committees established the rent for each plot of land.

The Amendment also authorizes absentee land ownership for up to one hectare (four hectares on the northern island). This latest, very surprising, provision would permit extremely small landholders now engaged in only part-time farming to leave their land, by sale or rental, and to engage full-time in industrial or urban employment. ^{7/}

The Rice Land Reduction Plan by the Ministry of Agriculture, 1970. In the fall of 1969, Japan had one million tons of rice in stock left over from the 1967 crop. At this time, this rice was rapidly deteriorating and becoming unfit for human consumption. It was estimated that the annual rice surplus would continue to be one million tons per year. The Ministry of Agriculture and Forestry, therefore, drew up a plan submitted to the Diet in 1969 to reduce the rice acreage by 10% annually for the next three years beginning with the 1970 crop. The plan included the payment of 300,000 yen per hectare to divert a total of 350,000 hectares to other crops. No information was available whether the Diet approved and financed this plan. In the meantime, Japan is increasing its rice exports to Korea and Okinawa. It used rice to provide economic aid in kind to Indonesia. ^{8/}

3. Supplementary Agricultural Legislation. The large amount of supplemental legislation directly or indirectly affecting tenure dynamics in Japan can only be listed in this paper.

a. First Land Reform Phase. The laws which laid the foundation of modernized agriculture in Japan were enacted during the first 30 years (1890-1920). These laws, listed below, established or regulated the required modern rural institutional framework in Japan.

The Hypothet Bank of Japan Law (1896)
The Agricultural Industrial Bank Law and Supplementary Laws (1896)
The Farm Land Adjustment Law (1899)
The Law of State Subsidy for Perfectural Agricultural Experiment Stations (1899)
The Agricultural Association Law (1899)
The Cattle and Horse Breeders Association Law (1899)
The Industrial Cooperative Association Law (1900)
The Water Utilization Association Law (1908)
 and others.

The following laws of the 1920's and early 1930's aimed to control rural law and order and the production of agricultural inputs and outputs:

The Peace Police Law (1900)
The Public Maintenance Law (1925)
The Farm Land Adjustment Law (1938)
The First Protective Customs and Duty on Agricultural Imports were levied in 1911.
The Rice Law to control exports and import of rice was first established in 1921 and strengthened in 1931.
The Silk Price Stabilization Facility Law (1936)
The Fertilizer Distribution Improvement Regulation (1930)
The Major Fertilizer Industrial Control Law (1936)
The Livestock Insurance Law (1929)
The Agricultural Insurance Law (1938)
The Central Bank for Industrial Cooperative Association (1923)

Most of these laws established basic economic policy for the purpose of strengthening and subsidizing an agricultural structure dominated by larger (relatively speaking) landowners.

Thereafter, the legislation passed was primarily to strengthen the cultivator or to increase production for the war economy. Those laws affecting directly the tenancy relations have been mentioned above. Others were:

The Food Control Law (1942) and laws which were controlling studs and military horses (1939), feed stuffs (1938), dairy products, 1939) and sericulture (1941). In 1943, the Agriculture Organizations Law combined agriculture organizations and industrial cooperatives into a single organization, the Agricultural Association. Some of the laws of only marginal importance to landowners have been listed to show to what extent the Japanese government initiated and regulated basic agricultural institution building during the first phase.

b. The Second Land Reform Phase. Additional agricultural laws were passed after the Second World War: The Ordinance on Emergency Food Measures (1946) ordered punishment for failure to deliver harvested food grains. In 1948, a law authorizing government to allocate quotas for planted areas and crop delivery before planting time of rice was passed. These quota measures were supplemented by policies and efforts to increase yield until 1955 after which bumper crops continued and

Japan achieved self-sufficiency in food. Thereafter, agricultural production control was relaxed progressively. Price control was relinquished in 1950, followed by a large number of laws effectively democratizing those laws passed between 1870 and 1945 and enumerated above. The institutional and structural development these laws initiated or supported is described below.

B. Institutional Arrangements

1. The First Land Reform Phase, 1870 to 1946. After the very general declaration in 1868 that all lands should be placed under the private ownership of farmers, it seems that the newly established prefectures and the municipalities were responsible for identifying owners and dispensing titles. Apparently, new offices for the cadastral survey and land registration were under their direction. No detailed description of the new institutional arrangements could be found. The rising tide of disputes caused by the abolition of customary tenant rights and dual ownership of lands involved heavily the local courts. Both the courts and the commissioners in charge of issuing title deeds, often, were subject to influence from rich or powerful claimants. This indicates that the new institutions were built and controlled by the previous feudal elite.

With the increase of organized tenancy protests following the First World War, several institutions arose or were created. On the tenant side, tenant unions grew rapidly after 1920 (see Table 5), only to be largely dismantled or changed into government-controlled organizations later in the 1930's. The government created several institutions in an attempt to arbitrate or control tenant problems and agitation. As indicated above under legislation, most of these institutions were so weakened or controlled by the landlord influence in the government that they served primarily to protect landlord interests. At any rate, they were usually powerless to effectively represent or assist the interests of tenants. It was only during the Second World War when tenants and owner-cultivators received more effective support from government institutions. The new government institutions created to control and increase production prices, distribution of food and raw materials had to provide incentives to the producers.

Aside from the above governmental institutions, the landlord-tenant institutional system which emerged from and continued the previous feudal structure needs to be identified. ^{9/} R.P. Dore (1), in his analysis of Japanese land reform, classifies the landlords into three categories:

- (a) absentee landlords,
- (b) non-farm residence landlords,
- (c) farmer landlords.

In 1947, these categories each amounted to 18%, 24% and 58%, respectively. The proportion of absentee landlords was somewhat larger before the Second World War.

Dore, furthermore, identifies several types of landlords under each category. Absentee landlords were principally of two types. The first type were the elite families who held either of these two life styles: Residence in villages, where they did or did not farm combined with owning land in neighboring villages; thus, by definition, they were absentee landlords. (2) Residence in town and pursuing a non-farm occupation, because possession of high education had caused them to leave the village.

The second type of absentee landlord was a merchant or moneylender from a nearby town. The opportunity of this class to acquire land was strongly exploited as early as the pre-reform period under the feudal system. With the illegality of such activity removed, it was now exploited to the limit. This may account for the increase in tenancy between 1870 and 1920.

Resident landlords, either farmers or non-farmers were also of several types. The most powerful type of resident landlord was the rich large landholder who could live solely on the rents he received. These landlords generally controlled power in a locality, mostly dominating it from behind the scenes. The second kind of non-farmer resident landlord was the holder of other occupations. These were the teachers, officials and local artisans whose land holdings, although small, were retained as an investment and security because tenancy was profitable.

Resident farmer-landlords comprised more than one-half of all the landlords in Japan. There were those who temporarily rented out some of their land because the absence of a son or other members of the family temporarily reduced the manageable size of the unit workable by the family. The most important category were those farmers who permanently held more land than could be cultivated by their family. In 1947, nearly 20% of all farmers in Japan were in this category. On the other side of this coin, of course, were the large number of farmers with smaller than average land holdings who needed to rent more or less land to obtain a holding adequate for the minimum income requirements of their family. This adjusting of operational units around the average workable farm unit, however, had little institutional significance on the social and political life of rural Japan. Most important here were the large resident landlords, farmer and non-farmer, which actively upheld the traditional paternalistic feudal structure in the village.

Active landlords, again, were of several types. Dore distinguishes among the traditional-paternalistic, the paternalistic-progressive, and the paternalistic-progressive-didactic landlord.

a. The traditional-paternalistic landlord was not only in, but of, the village. He accepted traditional peasant values and was proud to be of the peasant class. Because of this, he strove to achieve peasant values in their ideal form. He opposed both risk and extravagance

and, therefore, was opposed to progressive change. His uppermost aim was to preserve and, if possible, increase the property of his ancestors. Generally, he had the reputation of being a tolerably good landlord and had much less tenant unrest and membership in peasant unions. On the other hand, this landlord could, if he chose to, exercise complete power over the livelihood of his tenants. His only sanctions were the customary standards of fair conduct. These, of course, were one of the pillars of his value system. To his tenants, this landlord was an exalted being. He was to be approached with respectful humility and his lofty superiority was constantly recognized and placated. He never dealt directly with his tenants but only through the go-between of his manager who usually were his most loyal tenants. Quite often, the tenants belonged to the extended family of the landlord. While this landlord quite often was addressed as "father", this paternalism was not in terms of benevolence but more in the context of the traditional Japanese family institution, with the accent on authority rather than affection.

b. The paternalistic-progressive landlord must be seen as the most important institution rising out of the first Japanese land reform phase. While his attitudes and relationships to the tenants were similar to those of the traditional-paternalistic landlord, he devoted his whole energy towards progress in modernizing agriculture through his tenants.

The guiding principles of this type of landlord, according to Dore, were:

- to devote one's energies to public works and be uncorrupting in using one's wealth for the general good;
- to be thrifty and do hard work as demanded by one's ancestors;
- to make no alliances with rich families and to choose brides and sons-in-law from families with simplicity and nobility;
- to train one's children well, especially the heir, in the problems of the country and have him travel far and wide;
- to establish principles of reward and punishment, encourage agriculture and treat tenants well;
- wealth was imposing many obligations in prudence:
 - one quarter was to be reserved to make humble contributions to the authorities whose protection was imperative;
 - another quarter of one's wealth was to be reserved for gifts to shrines and temples to obtain the protection of gods and Buddha;
 - one quarter of one's wealth was to be spent on the subsistence of one's tenants since the prosperity of the family depended on them; only the remaining quarter was to be used for household expenses but this was to be guided by hard work and thrift to produce a surplus which could be saved.

There are no data as to how large this category of landlords was in Japan. However, many of these landlords had studied at agricultural colleges or universities and were trained and motivated to be progressive leaders in modernizing the agriculture over which they had control. Their contributions toward the progress of agriculture production in Japan may have been large during the first 30-50 years of the first land reform phase.

c. The paternalistic-progressive-didactic landlord was simply a more zealous type than the one above. He also showed a strong concern for the moral welfare of his tenants. His idealistic extremism in teaching tenants a strong moral code began and ended with thrift, industry, piety and respect of authority. It can be judged with some cynicism regarding its self serving content. Moreover his contribution may have been strong in continually blocking tenancy reforms by explaining the problems of poor tenants as coming from their own lack of thriftiness and hard work.

The last type identified by Dore--the modern nonpaternalistic landlord is an inactive landlord type. He was most resented by tenants, especially as his numbers grew with increasing urbanization in Japan. This type of landlord had chosen to sacrifice the advantages of paternalism in order to avoid the obligations that it imposed. He saw tenancy as a purely economic-contractual relationship, to be exploited as much as possible for his personal profit. Without legal tenancy

protection, these landlords were the most parasitic and exploitive. Their position was further strengthened by the intense competition for land by the growing rural population. Tenants who, through their own efforts, made improvement on the land were frequently robbed of any compensations by the sale of their higher value land to other landlords who had no obligations to them.

It must be emphasized, however, that the largest institution created by the first land reform as intended was the land owner-farmer. By far the majority of the farmers were not tenants, but owner-operators. Only because of one serious omission were the latter's numbers somewhat eroded, especially during the first fifty years of the first land reform phase. Table 6 identifies this process.

2. The Second Land Reform Phase 1946-Present.^{10/} The institutional growth under the second phase land reform is much more clear cut and the time period much shorter. This phase covers approximately two years, compared to the thirty years of the first phase period.

The primary institutional structure for the second land reform phase were the three levels of so-called land committees. The most important and primary level were the local land committees of village and town. These were comprised of ten members, five of which were tenants, three were landlords, and two were owner-operators.

This local committee was charged with the execution of the land reform. It determined which land, up to the one hectare acre, a landlord was to retain. It determined which lands were to be sold to which tenants. It was to arbitrate disputes. It was to enforce the letter of the law, even in cases where tenants failed to take the stipulated actions.

The next higher level were the prefectural land committees which had twenty-five members. Of these, ten were tenants, six were landlords, four were owner-operators, and five were neutral persons with an interest in neither of these three groups. These committees were charged with supervision of the village committees to assure that land reform was actually executed according to the law. Especially in remote areas, where the traditional social structure and the hold of the landlords over their tenants were very strong, the prefectural committees often had to intervene to get land reform initiated by the local committees in the first place. The prefectural committees also were to determine what unused but potentially arable lands could be distributed to enlarge non-viable small holdings or used for the settlement of new farmers. Both the village and the prefectural land committees were to supervise the small amount of tenancy allowed to remain and to see that contracts were according to the law.

The third level, the central land committee, was government appointed. It had twenty-three members: eight tenants, eight landlords, two representatives of the peasant unions, and five university professors. The function of this committee was primarily policy setting and interpretation and scrutiny of administrative orders issued under the act.

At the village level, the land committees were elected. Each group represented and elected its own representatives. The prefectural committee was elected by the members of the village and town committees. Three additional neutral members could be added to deadlocked village committees upon a unanimous vote of the committee.

Since all the lands affected by the land reform for distribution was purchased by the government and later resold to the recipients of this land, other government agencies became involved. The literature on land reform, however, does not specify the number of agencies involved and to what extent they participated in the land reform. It seems that for the financial transaction, primarily, the prefectural offices were involved, and for certain enforcement action, perhaps the police were involved. The courts were used by the landlord class to dispute everything from individual committee decisions to the legality of the whole land reform program. The various agricultural agencies, were ordered to supplement land reform programs; all existed prior to the Second World War and had been created during the first land reform phase. Their actions are described in more detail below.

The second land reform phase, however, by no means ended with the major redistribution of land and the practical abolition of tenancy during 1946 to 1949. The land committees were later changed into agricultural committees which had now the major duty of overseeing the provisions on tenancy, maximum size of holding, and, later, when the latter rule was eased, the assurance that larger holdings were owned and operated by resident farmers only.

C. Program Objectives

Economic, Social and Political. It is necessary to distinguish the two land reform phases in Japan.

1. The First Phase, initially had two objectives:

(1) The unconditional private ownership of agricultural land in order a) to provide for clear, easy taxation of land, and b) to modernize agriculture for rapidly increasing production.

(2) The development of the country by: a) producing taxes for modernization of the nation in both industry and the civil service sectors; and b) to free and feed the surplus rural population for the growing industry and military establishment.

After the First World War, two more objectives developed:

(3) The maintenance and the increase of owner-operated farm structure for both economic and social-political reasons; and

(4) the maintenance of rural peace and order, especially after the growing tenant unrest and peasant union strength in the 20's.

2. The Second Phase, at first, had three major objectives:

(1) the elimination of traditional exploitive tenancy; and

(2) the elimination of a landlord class and the fundamental change of rural social structure, i.e., the democratization of the Japanese rural sector.

(3) during the first decade following the Second World War, an increase in food production for the rapidly growing non-agriculture population remained a major objective. ^{11/}

Later, about 1960, two other objectives developed:

(4) to make the average farm unit economically and socially viable, i.e., economically competitive and socially producing an adequate income, for fulltime farmers; and

(5) to help generally the rural population levels of living catch up with those of the rapidly rising nonrural sector.^{12/}

D. Program Implementation and Enforcement

1. Redistribution of Land Ownership. At the beginning of the first land reform phase in 1868, no actual land redistribution took place, but only a redistribution of political and legal ownership definitions and rights of control. Land control rights were taken from the feudal lord class and transferred to those who had ownership claims by either custom or mortgage, or other kinds of debt claims on land. In this sense, then, land was distributed to owner-operators and landlords.

The second phase of land reform distributed all lands operated by tenants in excess of one hectare acre per residence landlord. All lands of absentee landlords were distributed. The law first required the government to buy the land from the landlords and then sell it to those most capable of working it. In practice, these were nearly always the tenants working the land at that time. The intermediate

government step prevented landlords to use their traditional social powers over their tenants to obtain higher prices for their land or otherwise government execution of the law.^{13/}

2. Changes in Tenure Systems. In practice, the tenure system was changed very little by the first land reform phase. In name, however, it changed considerably. Peasants, under the previous laws of the feudal system, were hereditarily bound to the land and peasants' occupations. With the first land reform, peasants not only became, in most cases, the full owners of their land but also were free to dispose of it as they pleased. They could either continue working it as farmers or sell it and obtain other employment in town or industry. Eighty percent of all peasants were thus made free owner-farmers. One-half of these, however, ended up owning farm units smaller than necessary for family subsistence and had to rent some additional land from those who had more than they needed. The large number of these small scale "landlords" did not belong to the paternalistic types described above.

At the same time, tenancy was legalized and the existing tenancy system was strongly consolidated in favor of the landlord. The tenants lost most of their traditional tenure security and other tenure rights which they had enjoyed under the feudal system. The owner-farmer unit was not given any protection nor subsidies. Under heavy

land taxes and severe competition for land and with a majority of farm units at marginal subsistence level, any economic depression, individual financial difficulty or bad crops often resulted in a certain portion of owned land being mortgaged and thus passing into tenancy. Land under tenancy increased rather rapidly between 1870 and 1900, from thirty to forty-one percent. Tenancy change was a creeping process whereby an owner-operator slowly became a part-owner, then an owner-tenants, and then a full tenant. Table 6 identifies the percent range of families in each category. After 1920, tenancy remained at around the forty-six percent level of all cultivated land but the absolute figure of acreage under tenancy increased with the general increase in cultivated land due to land development. Table 7 identifies the quantities involved in this process.

The worst part of the tenancy structure created by the first land reform phase was the so-called parasitic landlord. He depended for his livelihood solely on the rent he received from his tenants. Table 8 gives an indication of the land area necessary for such a landlord to meet his cost of living relative to the cost of living in that particular year and the average rental income per area of land. The table also shows the heavy squeeze on tenants for 1919 and 1925, the period of heaviest organized tenant agitation.

Tenancy rates did not much increase after 1920 because rural unrest produced enough government concern and action which provided some tenancy protection. The stagnation in productivity changes in Japan during this decade also made tenancy less profitable and discouraged investment in land for profit taking from tenancy cultivation. Though enough intellectual, academic and bureaucratic voices agitated for a reduction in tenancy, landlord political power watered down any legislation. Even the implementation of enacted legislation in favor of tenants was effectively slowed or blocked. Thus, the trend in tenancy was not reversed but only remained stagnant from 1920 to 1940.

The first reversal of the tenancy trend began to show during the war when the government had to provide maximum incentives to agricultural producers to bridge the growing food shortage. Subsidy payments to the producer, by-passing the landlord, were mentioned above. Profitability to landlords practically disappeared and the land investment was only valuable as anti-inflationary savings. The surplus income of tenants, in turn, was often used to buy some of the land they cultivated.^{14/}

The second land reform phase after the Second World War brought about the most radical change in tenancy systems in Japan. Ninety percent of all the tenant land was turned into owner-operator land within a few years. Table 7 shows the quantities and percentages involved. Traditional paternalistic tenancy was eliminated. The

remaining tenancy of about ten percent, and in 1965 only five percent, of all arable land, is permitted only under strictly prescribed written contract which, by law, heavily favors the tenant. Tenure security is practically indefinite as long as the tenant so desires. The landlord owner can only refuse renewal of contract if he shows good cause to the Village Agricultural Committee which holds the power of decision.^{15/}

A substantial change in tenancy regulations is again imminent, should the tenancy laws established by the land reform in 1947 be amended as proposed. The changes would reduce the severity of tenancy protection. They would permit enlargement of farm operations by permitting small land owners presently forced to work their land on a part time basis to rent their land to enlarging units. They would thus avoid sale of valuable inflation immune assets. Under the present conditions (since 1967) of over production and numerous job opportunities outside of agriculture, population pressure on land has ceased. Moreover, the economic conditions prevent a return to the previous, exploited tenancy structure in Japan, even with the proposed tenancy amendment.^{16/}

3. Colonization. Colonization efforts through the development of new cultivable land by land development investments were not renewed until the beginning of the twentieth century when resources for such investments became available from the modern non-agricultural sectors.

Even then, except for the most northern island of Hokkaido, the relative importance of land reclamation to increase the amount of arable land was perforce relatively unimportant in Japan. The difficult terrain of Japan does not permit further extensive conversion of waste or forest lands for agricultural purposes. (Table 9) Another renewal effort to recalim lands was planned since 1950, after the second land reform. (Table 10) Because it requires exceedingly high investments, it has proceeded only very slowly. Lately, over-production in rice and other agricultural products have removed any reasons for further expansion of cultivated lands.

During the 1930's, and into the war years of the 1940's Japan pursued another type of colonization in her conquered lands. She acquired as quasi-colonies, Manchuria, primarily, plus Taiwan and other islands in the Pacific. Exact numbers on the extent of Japanese farm settlements outside of Japan are lacking. This brief interlude of Japanese colonialism and imperialism was reversed when, with Japan's defeat, all Japanese settlers were returned to Japan. While it lasted, this policy of overseas settlement hoped to relieve the pressure on land in Japan and to help solve the tenancy problems.^{17/}

4. Consolidation and Inclosure. No further enclosures took place after the 1870's. But repeated efforts were made (Figure 3) under both land reform phases to solve the problems of extreme fragmentation of farm units in Japan. Consolidation to this day has not been very

successful. Table 11 indicates the degree of effort being made and the conditions existing by 1960. The present maximum limit put upon units is presently seriously hampering further consolidation efforts. So do the tenancy and land transfer laws which force extremely small land owners to hold on to their lands rather than sell or rent them to enlarging modern farm businesses.^{18/}

5. Classification, Identification and Titling. This work was essentially completed during the major re-survey done in the 1870's at the beginning of the first land reform phase. That effort not only resurveyed all lands first assessed in the 1560's but also was able to register and title all lands brought under cultivation since that date. This amounted to an increase of about 48% of cultivated land. The issuance of written title deeds which established the unconditional ownership of land was a further improvement.^{19/} This land classification and titling system has remained enforced to the present.

During the second land reform phase, only a type of classification was involved to establish the value of tenant lands for reimbursement to landlords and to identify tenant lands which were to be left to resident landlords (one hectare per landlord). This classification work was not done by the cadastral service but by the village land committees.^{20/}

E. Financial Aspects

1. Valuation procedures. Valuation procedures for the first land reform phase conducted during the 1870's are not quite clear. It appears that the prefectural authorities conducting the land classification, titling and valuation for tax purposes were given gross land value quotas up to which the evaluation of the land in the prefecture was to amount. In most areas this meant an increase in the previous feudal period valuations, while, in others, it means a reduction. The government intended to maintain its revenue equal to that obtained under the feudal system, only now, revenue would be in cash terms. After the evaluation, taxes set at about four percent amounted to about thirty-five percent of the annual crop.^{21/}

Institutional procedures for the second land reform, from 1947 to 1950, were substantially different. The purchase price of land to be taken from landlords was calculated in 1945 prices based on an estimate on the owner-cultivator's annual profit capitalized at the current market rate of interest and in terms of a fixed multiple of the official land value used for taxation purposes. An additional bonus payment was made in cash. It represented a difference between the above estimated sum and an estimated landlord's value. The latter was calculated taking rent minus taxes and other costs multiplied by a reciprocal of the current interest rate. This bonus payment, however,

was only applied for the first three hectares. While the bonus payment was made in cash, the rest was made in bonds with an interest of 3.6 percent to be redeemable after thirty years.

The total payment, bonus and all, at the time of the bill's passage would on the average amount to one half the annual crop but by the time the money was paid it equalled in real value to only five percent of an annual crop. Money value had depreciated about ten times by this time. In real terms, the same plot of land would have bought thirty-one tons of coal in 1939 and 0.24 tons of coal in 1948.^{22/}

2. Program Financing

a. Land-Owner Compensation. Under the first land reform, the aristocratic lords who lost their feudal rights over land received compensatory payments. Payments were, initially, on an annual basis. However, in 1877, annual payment was replaced by public bonds which were redeemable in cash. Information on the amounts involved and percent of land value compensated, etc., could not be found.^{23/}

The second land reform proved to be extremely disadvantageous to the landlords. As indicated above, the valuation of their land and their reimbursement soon became a farce due to the rampant inflation. Organized landlord efforts to increase their compensation proved fruitless, except for some minor additional payments made later by actions through the courts.^{24/}

b. Peasant Repayment. During the first land reform phase, peasants and landlords receiving ownership title did not have to make payments since they had been customary owners of this land. The high feudal tax burden, however, remained the same generally, only now it was to be paid in cash. The land tax rate was raised to 5.5 percent of appraised land value by 1904^{25/} but it was substantially reduced in real money terms due to the constant depreciation of the nominal money value.

Under the second land reform, tenants had to pay the same face value price for their lands as the government paid to their landlords. They had the option to either make payments in cash or spread payments over thirty years with an interest rate of 3.2 percent. An additional protection was a provision which allowed for a reduction in interest payments in years when the total burden of taxes and debt repayment amounted to more than a third of the annual proceeds from the land. These provisions were made obsolete by the inflation which allowed all tenants to pay the now nominal cash payments for the land they obtained. Within one to two years, most tenants had completed payment for their land purchases.^{26/}

c. Government Expenditures. It appears that all expenditures of both the first and second land reform phases were borne by the government out of their tax revenue. No data were found in the literature reviewed on the amounts involved.

3. Land Taxes

One of the prime objectives of the first land reform was to increase the collection of taxes from the rural sector. The objective was to finance, at least, the initial stages of the modernization of Japan by squeezing off all available surplus from rural production. Table 12 shows how much the new government was dependent on land taxes for revenue. In 1889 through 1892, land taxes made up almost eighty-six percent of the total central government revenue. Thereafter, the percentage rapidly declined to amount to only forty-three percent in 1912 and to barely nominal amounts by the Second World War. Table 2 shows the consistent decrease of tax as an expense to a tenant. It amounted to only four percent of his crop in 1943, compared to the thirty-seven percent at the start of the first land reform phase in the 1870's.

Apparently, the heavy squeeze on agriculture to finance early development did pay off. Japanese agricultural and industrial development was rapid during the time between the first land reform in 1870 and the First World War. Neither did agriculture lose all these siphoned off surpluses. Japanese infrastructure which heavily benefited agriculture was mostly constructed during this period. ^{27/}

The early taxing policy of the central government did not go unchallenged. It was set initially at three percent of assessed land value for the central government, with an additional one percent for local government. During the 1870's and early 1880's the combined, sometimes violent, agitation of landlords and owner-cultivators, now controlling 100 percent of all arable land, forced the government to reduce the tax rate to $2\frac{1}{2}$ percent for the central government and $\frac{1}{2}$ percent for the local government. The tax rate was raised later to reach 5.5 percent in 1904.^{28/} However, as indicated above, due to inflation and failure to reassess land values, this rate became more and more unimportant.

Since the World War II period, a kind of negative tax is increasingly being applied to agriculture. Price subsidies to owner-cultivators started during the Second World War. Since 1960, production subsidies were, initially, to provide increased incentives for increased food production. They were then used to prop up the income level of the rural sector. They, at least, helped to keep farm family incomes from further falling behind those of the non-agricultural sectors. The now heavily industrialized country can easily afford to pay its debt, incurred for four generations, to the remaining farm population.

F. Supplementary Measures

1. Information. Supplementary measures to the first land reform were immediately taken, especially in the field of agricultural education, extension and research. The first agricultural school was

opened in 1876. In 1877, the first agricultural promotion experiment stations and breeding stations were established. In 1894, general rules to prefectural agricultural experiment stations were issued and, in 1899, a law of state subsidy for prefecture agricultural experiment stations was enacted. During these first twenty-five years of the first land reform phase Japan established not only a number of research institutions but also a number of training institutions and a network of experiment stations at the prefectural level.

(Tables 13 and 14) Foreign experts were imported especially from Europe, mainly Germany and Holland, whose agriculture on small scale units was more suited for Japan.^{29/}

All this was supplemented by initially voluntary associations of peasants for the introduction of modern agricultural techniques, practices and inputs. In 1899, these agricultural associations were regulated and supported by the Agricultural Association Law. Thereafter, these associations became mandatory for every village. Many modern techniques were made compulsory and compliance to rules was supervised by these associations. These associations, organized through the higher level of prefecture towns and regions, were eventually tightly controlled by the central government.^{30/}

After the second land reform use of the agricultural information service is voluntary. This and other agencies are offering a service by the central government to the farmer. Nearly every farmers has an extension agent available in the vicinity. ^{31/}

Detailed statistics on the modern information effort however were not available.

2. Credit. The modern rural banking system was established somewhat later during the first land reform phase. A number of banks, such as the Hypothec Bank, the agricultural industrial banks were established between 1897 and 1900. The agricultural industrial bank law was enacted early in 1896. It caused forty-six prefectural and industrial banks to be established by 1900. These banks made medium-term loans up to five years and long-term loans up to thirty years against security of immovable property, primarily land. By 1908, 67.5 percent of the thirty-one million yen loans were in agriculture. Because of the security requirements for these loans, only land owners benefitted from these institutions. Tenants were not eligible to obtain loans and presumably had to obtain their credit from the traditional source, the money lending rice merchant or the landlord. ^{32/}

With the second land reform, the agricultural cooperative associations were newly established and played an important role in the new owner-farmer agricultural structure. Thirty-two percent of all savings made by farm households were deposited in these farm

cooperatives and about 47 percent of all loans made to farmers came from farm cooperatives. Figures 4 and 5 demonstrate the growth of the cooperative finance system; Table 15 identifies sources and purposes of other functions. A major handicap in increasing agricultural loans is the small size of Japanese farms.^{33/}

3. Supplies. The best example for the growing supply of modern industrially reproduced inputs is fertilizer. Tables 16 through 20 show many of the details for both the first and second land reform phases. The building of the production institutions for fertilizer and other agricultural chemicals, the introduction of their use and the build-up of a distribution system were all accomplished during the first twenty-five years of the first land reform phase. By 1900, fertilizer use and production had increased many fold. The rapid industrialization of Japan facilitated this development. The price ratios between these inputs and farm output prices constantly improved to the advantage of the farmer. By the time of the second land reform phase, no special measures seem to have been necessary except to channel much of the fertilizer distribution and financing through the cooperative system. (Figure 6)

4. Infrastructure. As mentioned above, no data were found in the literature. Only a brief reference mentions that most of the infrastructure, meaning here in the very narrow sense the physical facilities for transportation and irrigation, were built during the

first twenty-five years of the first land reform phase.^{34/} All infrastructures since then have constantly been expanded and improved though this was more as part of the general modernization and development process of the country rather than a special effort for the sake of agriculture.

5. Crop Procurement and Marketing. During the first land reform phase, rice procurement and marketing was primarily done by the larger landlord. He took this function over from the previous feudal lord who quite often controlled rice merchandizing. The feudal rice merchant probably remained the same after the reform. After the turn of the century, however, the rapid growth of the urban industrial population caused repeated food shortages and, in 1918, rice riots. The government was forced to increase its control over rice procurement and marketing and set up agencies and legislation for these functions. By the time of the Second World War, all marketing and procurement was done by government agencies. Price controls were established early.^{35/}

During the early part of the second land reform phase, throughout the 1950's this strict control over rice procurement and marketing, and in fact over most foodstuffs, remained in government hands. Black marketing, however, handled a substantial amount of the food crop. This secured considerably higher prices to the producer. Tables 21 through 22 indicate rice production and rice prices as well as some of the price differentials between the black and the controlled markets.

Today, the government's subsidy system, originally set up to increase production, is accumulating huge surpluses in order to stabilize and keep rice prices at the set levels and farm incomes up. Action will soon have to be approved by the legislature to subsidize the reduction in rice production and increase production of other food, especially animal protein products.^{36/}

G. Mobilization of the Peasantry

Peasants were effectively mobilized in Japan at various times and for various reasons.

The primary aim of the first land reform phase was taxation to furnish the revenue for civil service and industrial development. Though unintended, peasants from the richest to the poorest were mobilized most strongly when excessive taxes, at 4 percent of assessed land value, amounted to up to 38 percent of the average annual crop. However, peasant agitation reduced this tax temporarily to 3 percent. By the middle of the inter war period, inflation reduced it further to a nominal amount.^{37/}

The second aim of the first land reform phase was increased production to feed the rapidly growing nonagricultural population. The establishment of ownership provided some motivation for this aim. However, the many supplemental measures to change farm technology and introduce many new inputs required peasant mobilization on a grand scale which was achieved rather dramatically during the first twenty-five years, as described above.

Another form of mobilization occurred spontaneously when the growth of tenancy and tenant conditions resulted in the rapid growth of tenant unions and their, sometimes, violent and, more often, legal agitation. Tables 5 and 23 clearly identify the extent and the period of this type of peasant mobilization. The reduction and eventual diffusion of this mobilization was achieved by suppression and the ideology of the government which was controlled by landlord interests.

Emerging military fascist governments in the 1930's contained many young officers with a genuine concern for the tenant problem. Peasant and tenant life were idealized as the foundation and backbone of the nation. The military also provided a real outlet for social mobility for many poor peasant and tenant sons. It appears that the peasantry genuinely supported the military fascist government during the wartime years.^{38/}

The second land reform phase had two objectives of peasant mobilization. One was to rapidly increase agricultural production in order to feed the starving Japanese population cut off from supplementary food imports. The real economic incentives, especially from the black market, and the motivation released by the tenants' achievement of real ownership did mobilize the farm population into achieving an unprecedented rise in productivity. Table 32 demonstrates this rather dramatically.

However, increased production could have been obtained without land reform. The more important necessity for tenant mobilization was the democratization of the rural social structure. One of the major means of implementation of the second land reform phase was the involvement of the tenant in the execution of the land reform. This took place in the land committees whether at village, prefecture or central government levels. After the initial reluctance to stand up to his landlord and reduce his power to nothing, the tenants' self-confidence and spirit quickly grew. Farmers' unions, using the land reform issue in seeking voluntary membership, grew to several millions within two years. However, their membership fell as dramatically as it rose after the land reform was completed and no other cause appeared. This mobilization was not uniform but showed distinct regional variations. In the more remote areas, less socially and economically developed, the landlords' traditional power remained longer and stronger. Overall, however, the democratic mobilization of tenants was strong and most effective. ^{39/}

H. The Politics of Implementation

The Meiji government in a single-minded effort to create a strong, practical base for revenue established unconditional ownership rights. In the process, tenancy problems were ignored. The landowners' rebellion against the excessive tax rate shows that they were also squeezed beyond endurance. The government may not have been aware

of the tenancy problem since tenancy had been illegal under the feudal system. When tenancy, after it had rapidly increased under the dynamics of the uncontrolled laissez-faire system, became a problem, it was too late. Landlord interests had consolidated and controlled the government. The same interests were able to proselytize the vice as a virtue (see above the didactic-paternalistic landlord). Nevertheless, tenant agitation and the many bills submitted to reverse the trend of tenancy increase, at least, resulted in the status quo.^{40/} Tenancy neither increased nor decreased percentage wise. (Tables 6 & 7)

The second land reform phase contained an opposite bias. Now the cards were thoroughly stacked against the landlord. Though many fought back, either individually or in organized groups, it was to little avail. The landlord class carried the fight all the way through the supreme court and lost. Generally, popular opinion was against them. The U.S. occupation government was a force that simply could not be influenced or fought down.^{41/}

At the tenant level, in each village, politics were much more intensive and varied. On the tenants' side, they ranged from total timidity to vindictive fervor. On the landlords' side, again depending on the village and regional situation, they ranged from the old shenanigans of the superior being to the hopeless apathy of the obedient subject towards official power. Generally, the better

education and experience, as well as the connections of the landlord class, put them locally at an advantage. (Tables 24 and 25) However, the law, as well as the authorities, were on the side of the tenant, and assisted them, if not quite often pushed them, to take what was to be theirs.^{42/}

IV. Effects of the Land Reform

A. On Land Tenure Structure

The first land reform phase only consolidated and accelerated the trend already in progress under the feudal tenure system. Growing tenancy and paternalistic, absentee, and parasitic landlordism were established in the modern state of Japan. Later agitation and measures to reverse this trend at best resulted in the status quo. (Tables 6 & 7)

The second land reform phase, however, brought about a most dramatic change of land tenure structure. Tenancy, as such, was eliminated. The small percentage of modern contractual tenancy is so controlled and protected by the state that its conditions are more favorable to the tenant than in many Western democratic countries, including the U.S. (Table 4) What the second land reform, however, did not solve was the extremely small size of farm units in Japan and their incredible fragmentation. Tables 26 through 27 throw some light on this problem. The second land reform in fact nearly froze this situation. Tables 28 through 31 shows the kind of land transfer from size to size during the war and after the land reform.

The accelerating process of development of Japan with its decreasing rural population and ever increasing opportunities in the non-agricultural sectors make the frozen owner-operator tenure structure a growing problem. Legislation to amend the tenure structure created by the last land reform have repeatedly been submitted to the Diet since 1967. In 1970, it hopefully will be passed.^{43/}

B. On Production and Productivity

The effect of land reform on production and productivity is easily the most controversial because it is the most difficult one to establish. Figure 7 shows the dilemma. The increases of production and productivity after both land reforms are quite obvious. The increases in productivity after the second land reform in 1947 are much greater than those after the first land reform. In fact, writers have hailed this higher rate as being attributable to the second land reform. If one, however, continues the trend from 1895 to 1939 and thus bridge the big slump during the war years, the post-war productivity increase is only little more than the past trend. Only after about 1960 can one say that the agricultural production index shows a higher rate than the prewar trend. Notably, the rice production index levels off in 1960 to the prewar trend.

How much of this productivity increase can be attributed to land reforms-either the first or the second-and how much simply to technological development in agriculture and to industrial and general development in the whole country? Supplementary programs for these land reforms have been identified above and tables 32 through 33 and figures 8 and 9 show the increasing trends in production for the various crops. One can say, however, that without the first land reform, modernization of agriculture as well as the total Japanese society would have been impossible. Modernization under the rigid, existing feudal structure would not have been possible. Had the second land reform already been included in the first one, that is, had tenancy been prevented or strongly protected to make it unprofitable for non-cultivator investments, productivity might have continued to rise steeply after the first thirty years and might not have stagnated during the 1920's and 1930's.

Similarly, one can argue that the rapid rise in production and productivity would have been possible after the Second World War without the second land reform phase. Tenancy of the pre-war type was practically dead anyway. Rapid industrialization after the war would have withdrawn enough rural labor to basically change the tenure structure by natural evolution. Adjustments, however, would have been much more difficult, with social violence much more prevalent than experienced in the 1920's. The effects on production and

productivity again would have been strongly negative. In conclusion, one can say that the second land reform had only a strong supplemental effect on production and productivity but not a fundamental one.

However, presently, the second land reform has a negative effect on labor productivity. Limiting farm size seriously impedes mechanization of farm units at a scale which can only utilize relatively inefficient small scale machinery. A worse effect on labor productivity is caused by the large percentage of holdings sub-marginal for full-time agriculture. Part-time work in both agriculture and non-agriculture limits this portion of the rural population to inefficiency and lower skilled work in both sectors. While the first land reform phase increased land productivity through increasing technological and labor intensities, the second land reform is beginning to have a serious constraint on increasing income equality with the rest of society by limiting labor productivity.

Tables 34 through 37 and figures 7 through 11 identify, in detail, the increases in production and productivity for individual crops, comparisons with manufacturing and other sectors of the society and the different performances of the various farm unit sizes. Overall, they repeatedly emphasize that while agriculture, has shown an impressive growth rate over the last 100 years, manufacturing and other sectors have grown much more. They also show that another land reform action of the kind now before the legislature is required as identified above.

C. On Rural Employment and Under-Employment

The first land reform phase had little or no effect on the percent total employment by the rural sector. Non-agricultural employment grew only fast enough to absorb the surplus rural population until the Second World War. The war caused the first absolute reduction and percentage reduction of rural employment by demanding large numbers of the male population into military service. The developing shortage of labor had an immediate effect on the tenancy structure. (Table 7.)

Under-employment, however, may already have been reduced by the first land reform phase. The intensification of labor in agricultural production through double-cropping and labor intensive practices had such effects. The development of home industries, encouraged by both the government and the progressive landlord, must have had another marginal effect on under-employment.

The second land reform had, at first, very little effect on rural employment. The growing non-agricultural labor market, however, had a strong effect. Eventually, in the 1960's, land reform had a negative effect on rural employment by chaining much of its labor force to sub-marginal units of land which their owners can neither sell nor rent. To a degree, these people can also be considered under-employed inasmuch as they are forced to certain underproductivity. (Tables 38 through 41.)

D. On Income Distribution

The first land reform major effort was the solidification of a widely disparate income distribution. It created a structure whose dynamics further widened the gap between the rich and the poor. The first land reform phase, therefore, rapidly made the rich richer and the poor poorer, at least until the 1920's when tenant violence at least halted the process. The large middle portion of owner-farmers, however, benefitted from ownership, increasing productivity and decreasing taxes.

The second land reform phase had the opposite effect. It produced an almost extremely equitable income distribution in the rural population. Also, government price supports are raising the income level of the rural sector (Figure 12). However, the dynamics of the structure it created increasingly condemns the rural population as a whole to a growing inequity of income with the rest of society, the non-agricultural population. Tables 42-a, to c clearly demonstrate this trend and show the degree of inequity which has developed between these two major parts of Japanese society. Tables 43-45 show the income distribution trend within agriculture.

E. On Services and Supplies

The first land reform phase caused the development of an extremely high demand for these factors, especially for fertilizers and chemicals; for technical services; for training, demonstration,

and research; for the construction of infrastructures of transportation and irrigation. In turn, this demand stimulated strongly the development of agriculture-related industry, agricultural science, and a large number of public and private institutions. This demand developed directly from the first land reform, which freed the majority of peasants, many of whom were highly educated landlords, to make their own economic decisions and become highly motivated to do so. Demand and use of these services and supplies were caused directly by government policies which partially encouraged but also used coercion. (Table 46)

Directly, government policy, through heavy taxation, necessitated higher production through the increased use of services and supply. The rapid increase in using modern agricultural services and supplies leveled off after 1920, when the major constraints produced by the first land reform phase, tenancy, seriously took effect.

The second land reform phase certainly renewed the high demand for supplies and services by removing the tenancy constraint on agricultural development. (Table 47 and figures 13 and 14) Soon, however, its own built-in constraint took effect--the scale of farm size units, and its effect on farm mechanization. This is described in more detail below.

F. On Peasant Participation in Decisions

The first land reform phase, by giving peasants nearly total participation in economic and technological decision making, had a strong effect. It affected all land owners, majority of which were

cultivators. But many non-farmer landlords actively participated in the management of their lands, at the expense of their tenants, who emerged as the most circumscribed participators in any form of decision making. After the turn of the century, when the paternalistic type of landlord more and more changed into the modern, parasitic landlord, even tenants were forced to make their own technical and economic decisions but more under duress of economic hardship rather than by incentives of economic and social progress.

Tenant efforts to increase their power for participation in political decision making during the 1920's had only very limited success in obtaining redress of the distribution of economic opportunity and security of livelihood.

The second land reform phase simply removed all remaining limitations on economic decision making participation, except for the food shortage emergency measures during the few years before 1955.

The biggest effect of the second land reform phase, however, was the unprecedented degree of social and political decision making participation. Moreover, it not only provided the opportunity for this participation but forced it upon those most inexperienced--the tenants. Quite often it took the prodding and intervention of the prefectural and central land committees to make tenants in many village committees stand up for their rights and effectively reduce the power of their lords to a level equal to their own. The social and political emancipation of a large portion of the rural population must be seen as the most important and biggest effect of the second land reform phase.

As indicated above, the second land reform phase still holds limitations on full technical and economic decision making participation. Unrestrained decision making participation is not only impossible in modern society but is highly undesirable. The equal opportunity, however, for decision making participation, whether economic, technological, social or political, is the basic aim in any modern society. It has to be the guiding principle for making reforms, whether land tenure or otherwise, whenever constraints on equal participation in decision making develop during the course of societal development. It is such a constraint which developed out of the second land reform phase in Japan which requires another amending land reform action.

G. On Character of Rural Society

The first land reform phase had the net effect of worsening the character of rural society. It strongly increased the power and influence of the traditional feudal landlord (not feudal lord) and strengthened an idealized feudal value system without the constraints of mutual dependency and obligations between lord and peasant under which traditional feudalism had evolved. This modern perversion of a once perhaps optimal form of society led, as is shown by sufficient circumstantial evidence, to the ideological power of military fascism,

an evolutionary path always containing forces which lead to missionary, self-righteous imperialism by military means. Eventually, in the 1930's the, more or less, sincere, if self-serving, preaching of landlords of the supreme values of sacrifice, service and discipline made the poor peasantry, whether owner or tenant, lacking any other avenue of escape or advancement, to seek the military service. It was there that ability and performance was rewarded and promoted. Without the perverted feudal character of rural society and with a more egalitarian modern structure, this would hardly have taken place. ^{44/}

The second land reform phase totally demolished the character of Japanese rural society which resulted from the first land reform phase. It certainly was not the only cause of its destruction. The effect of Japan's defeat, the occupation, and the fact that the majority of the Japanese population had become non-agricultural, that the overwhelmingly major part of Japanese resources and power were produced and lay outside of the agricultural sector, already had destroyed foundations of the traditional society. The second land reform phase did remove, however, all neo-feudal structures and power bases, and accomplished this major social upheaval extremely rapidly and without violence. ^{45/} Japanese rural society, therefore, came out of the second land reform without the shackles of class hatreds and yearnings for and fears of revenge which always are the harvest of

violent revolutions. The give and take between landlord and tenant to preserve the rights of one and the economic survival of the other left the landlord, grudgingly perhaps, but the tenant, proudly and with a clear conscience, remain part of a very viable, modernizing rural society.

H. Broader Effect on the Economy, Society and Polity

The first land reform phase had strong positive effects, especially initially, on the industrialization of the country. The agricultural sector, in attaining the reforms' aim, provided capital resources through taxes, surplus food and surplus population for the rapid industrialization of the country. However, it also had strong negative effects. It strengthened and rigidified neo-feudalistic social values and structures which became the foundation and major support for the evolution of military fascism and the failure of democratic forces during the 1920's and 1930's.

The second land reform phase had a strong reverse effect, socially and politically, in removing a constraint for the democratization of society. It contributed to the security of food self-sufficiency and therefore a feeling of national security. The only negative effect that evolved is the present trend toward the creation, again, of a dual society composed of a small, aging rural class with lower living standards and a majority urban population with increasingly higher living levels. (Tables 48-50 and Figure 15)

I. Mechanization and Other Capital Intensification

The first land reform phase generated few forces towards mechanization and other capital investments at the farm unit level. Investment capital for such purposes were not made available by the state; private investment capital was too attracted towards land development because of the high profit-taking potential from tenancy on newly developed lands. During the 1930's, some non-motorized mechanization increased which lightened the most drudging kinds of hand labor, such as threshing and weeding. However, it is fair to say that the general level of development of the country which continued to leave a labor surplus in the rural sector until the Second World War was the strongest constraint on motorized agricultural mechanization.

The second land reform phase greatly accelerated the creation of a farm business structure and had a strong effect on farm mechanization. Tables 51 to 54 illustrate this fact. These same tables also demonstrate the constraints created by the small-scale farm units which were artificially frozen at that size. This scale of farming can utilize only small-scale machinery which is much less efficient than the medium-scale machinery utilized in Europe or the large-scale equipment generally utilized in the U.S.

V. Critique and Evaluation

Japan provides an excellent demonstration of land reform as a process, not a single action or a program. It also demonstrates that land reform is an integral part of the development process of the

whole society. In some cases, land reform may push societal change. In the Japan case, it generally lagged behind societal developments. Often, reform was simply to legitimize a land tenure structure which had already evolved, sometimes illegally.

Land reforms during the feudal periods created the feudal land tenure structure. Land reforms during the modern history abolished it, and created modern commercial land tenure. Always, strong forces outside of agriculture--political, economic and technological, as well as environmental--were at work, forcing, eventually, a wholesale action. Each action contained the seeds of new constraints which evolved and hampered further developments of society and agriculture. Invariably, new reform action had to be taken.

Figures A and B and Table A are an attempt to abstract the schema of the factors and dynamic forces at work leading to certain stages of agricultural and societal structure. These, in turn, generate forces from these same factors leading to reform and the creation of the next stage.

On Figure B is a rough chronology of the Japanese land reform process. It shows the historical events of land reform actions and developments related to it and generally follows the sequence of the model suggested. While this chronology is extremely simplified, and more or less a skeleton outline, all details are contained in the large volumes of published, scientific research as well as historical analyses.

What is impressive is the strength and purity of the feudal system which developed in Japan, a system similar to many feudal systems in Europe, and yet, in no way, influenced by them. It suggests that basic societal development forces are at work which are separate from particular individualistic factors of ethnic, geographical and historical peculiarities.

Even more impressive is the rapidity of modernizing change from the feudal system to a modern, democratic, industrial society. In Japan, this process took only a hundred years, by benefiting from Europe, where it took two to four hundred years. Japan is presently at the final step of joining the small club of most developed industrial countries. Her industrial production and technology already equals these countries. However, as in the past, the agricultural sector lags behind, despite its surplus production, constrained by a land tenure structure which again needs reform. Societal and agricultural forces are pushing Japan towards the next stage already existent in the United States and many European countries: the growing agricultural-business stage. What the next land tenure stage for Japan will be after the present one is consolidated, will be speculation for Japan as much as it is for all the developed countries in the world.

The last stages suggested on Figure B and Table A verge on interpretative science fiction; however, such predictions have been made in popular magazines. The only certain thing that can be said is that a permanently perfect land tenure structure may never be reached by any nation. Land reform action will continue to be necessary. After all, each generation wants and needs its own chance at improving the world.

The purpose of this exercise, however, is to find abstract common denominators of land reform problems for the benefit of those countries urgently facing the decision on what land reform action to take. For these countries, the Japanese model, in abstraction, may be most useful. It not only identifies how various land tenure constraints on society or agriculture developed and how they were removed, but also shows a more general development process and the sequence of land reform actions in relation to the supplementary general development actions required or possible.

There is some evidence that the sequence suggested by Japanese history is not unique but that it is operating generally in developing countries. Figure C contains a Guttman scale of 15 Asian countries ranging from early feudal stages of development to the most modern stage of development in Japan. The scale contains a number of institutional performances related to agriculture which are either absent or present in each country. The scaling technique ranges these institutional developments in a particular sequence. The position of effective land reform actions roughly follow the sequence outlined by Japanese history. Most important, the agricultural development sequence is strikingly similar.

Much of the data for Figure C are rough estimates from somewhat subjective analyses made by the agricultural survey of the Asian Development Bank. The scale, therefore, must be regarded as highly tentative. The model suggested in Figure B and Table A, as well, is,

for the moment, more hypothetical than validated, even though the Japanese case generally seems to support it. Perhaps a comparative analysis of the countries reviewed for this A.I.D. exercise will yield some valuable data to either validate or modify the model. Much further research certainly will be required.

The Japanese land reform process contains several suggestions on how the basic dynamic factors combine and lead to a certain land reform action. Feudal land reforms created near-optimal land tenure structures because land was the only resource which could produce a surplus to support a societal structure above mere cultivator subsistence. Under pressures of population growth and continuing severe constraints of technology which determined the productivity of land and labor, the distribution of the small surpluses had to be tightly organized and a political organization created which recognized mutual dependencies between peasants and lords. Population increase and the competition for land and production, while modern influences raised the living standards of elites, led to the breakdown of the feudal system and caused the first modern land reform action.

Abstracted, this cumulative process can be seen as a simple formula:

- (1) Land plus people plus rising living standards results in the first transitional land reform.
- (2) Plus land, plus technology, plus industry, plus education, minus people, results in the third transitional land reform.
- (3) Minus land, plus technology, plus industry, plus education, minus people, results in the first modern land reform presently in progress.

Another important insight from the Japanese case is that the evolutionary transition from feudal to modern land tenure is not smooth. Modernization first reaches the elite which has to become exploitive of a non-modernized agricultural sector in order to increase the production of surpluses required for modern living standards. At the same time, modernization increases the elite's power to become more exploitive. The position of power this elite finds itself in can be used to prevent modernization and maintain the status quo for the rural population for a long time. The period between the first land reform phase and the second in Japan demonstrates this very strongly. Democratization and modernization of rural society, therefore, is not automatic in the short run (100 years) but totalitarian detours are always highly probable. Japan demonstrates the detour to the political right; perhaps China is an example of the detour to the political left. The creators of the first land reform phase in Japan may have been guilty of ignorant oversight on the tenancy problem. It may have been deliberate to preserve personal interests. Whatever it was, its consequence was the entrenchment of the powerful feudal interest groups which managed to control and use the development process of the whole country for the following three-quarters of a century. The price to pay for this mistake was high for both Japan and its neighbors. How to prevent such mistakes or how to undo them is one of the most important points to ponder for both, the developing countries requiring land reform action, as well as those who give advice and assistance.

SUPPLEMENT

Bibliography
References
Figures
Tables

BIBLIOGRAPHY

1. Dore, Ronald P., Land Reform in Japan. London: Oxford University Press, 1959.
2. Ogura, Takekazu (Ed.), Agricultural Development in Modern Japan. Tokyo: Japan FAO Association, 1963.
3. Food and Agriculture Organization of the United Nations, "Land Reform in Japan", World Land Reform Conference. Rome, Italy, 20 June-2 July, 1966. (Country Paper: Japan)
4. Warriner, Doreen, Land Reform in Principle and Practice. Oxford: Clarendon Press, 1969.
5. Millikan, Max, and David Hapgood, No Easy Harvest: the Dilemma of Agriculture in Underdeveloped Countries. Boston: Little Brown & Co., 1967.
6. Long, Erven J., "The Economics of Land Reform in Underdeveloped Economies", Land Economics, 37:113-23, May 1961.
7. Kajita, Masaru, The Land Reform in Japan, Agriculture, Forestry, and Fisheries Productivity Conference, 1958. Publisher not specified.
8. Hewes, Laurence I., Jr., Japan-Land and Man, An Account of Japanese Land Reform Program, 1945-51. Ames, Iowa: Iowa State College Press, 1955.
9. Doper, Arthur F., and Wolf Ladejinsky, Seven Articles on Land Reform, Asian Studies Papers Series 2, 1964-65. Michigan State University.
10. Southworth, Herman M., and Bruce J. Johnson (Eds.), Agricultural Development and Economic Growth. Ithaca, N.Y.: Cornell University Press, 1967.
11. CERES, FAO Review, Vol. 2, No. 6, Nov.-Dec. 1969.
12. Food and Agriculture Organization of the United Nations, Rural Institutions Division, Land Reform, Land Settlement and Cooperatives, No. 2, pp. 14-39, 1968.
13. Annual Report on the State of Agriculture, 1962, The Ministry of Agriculture and Forestry, The Government of Japan.

14. Agriculture in Japan. Tokyo: Japan FAO Association, 1963.
15. "Japan: Agricultural Land Law Amendment Fails pass Diet". U.S. Foreign Agricultural Service, Tokyo, 8/14/69 (Report by U.S. Agricultural attache)
16. "Japan: Grain and Feed", U.S. Foreign Agricultural Service, Tokyo, 11/7/69. (Report by U.S. Agricultural attache)
17. Bowers, John Z., Western Medical Pioneer in Feudal Japan. Baltimore: Johns Hopkins Press, 1969.
18. Crowley, James B. (Ed.), Modern East Asia: Essays in Interpretation. New York: Harcourt, Brace and World, Inc., 1970.
19. Voelkner, Harold E., "The Rice Productivity Case Study", in Participatory Democracy thru Effective Institutions: New Approaches to Program Planning, Part II-The Philippine Country Study, Arnold Kotz (Ed.), Stanford Research Institute, Menlo Park, Calif., 1969.
20. Webb, Herschel, Research in Japanese Sources, A Guide, New York Columbia University Press, 1965.
21. Shimoda, Minoru, The Founding of the Kama Kura Shogunate, 1180-1185. New York Columbia University Press, 1960.
22. U.N., Progress in Land Reform, Fourth Report, N.Y. United Nation,

REFERENCES

Number in Parantheses () refer to the Bibliography

- 1/ This section is based on (1), pp. 8-14.
- 2/ (1), p. 1
- 3/ (17a) in
- 4/ (1), pp. 10-13
- 5/ This section is based on (2), pp. 107-180 unless otherwise indicated.
- 6/ (3), pp. 12-18
- 7/ (15)
- 8/ (16)
- 9/ Most of this section is based on (1), pp. 23-53.
- 10/ Most of this section is based on (1), pp. 149-165
- 11/ Objectives of land reforms (1), pp. 14-15 and 315-316
(2), p. 121.
- 12/ For past 1960 objectives see (15) (16) and (3)
- 13/ (1), p. 139
- 14/ (2), pp. 57-62
- 15/ (1), pp. 195-197
- 16/ (15) + (16)
- 17/ (1), pp. 116-117
- 18/ (15) and (3)
- 19/ (1), p. 14
- 20/ (1), pp. 150-153
- 21/ (1), p. 15

- 22/ (1), p. 137
23/ (2), p. 21
24/ (1), pp. 168-169
25/ (2), p. 169
26/ (1), p. 140
27/ (2), pp. 297-345
28/ (2), pp. 17-18 and p. 169
29/ (2), pp. 300-301 and 332-333
30/ (2), pp. 303-304 and p. 16
31/ (2), pp. 314-317
32/ (2), pp. 262-266 and pp. 20-22
33/ (14), pp. 91-98
34/ (2), p. 4
35/ (2), p. 19-20
36/ (16)
37/ (2), pp. 22-23
38/ (1), pp. 120-124
39/ (1), p. 316
40/ (2), pp. 127-134
41/ (1), pp. 170-173
42/ (1), p. 154 and p. 168
43/ (15)
44/ (1), pp. 123-129
45/ (1), p. 173

Conversion Factors

Some tables and figures are based on Japanese measurement units. The most important is the land area unit the cho which for all practical purposes equals one hectare. The exact conversions are as follows:

1. Area:

1 cho=10 tan=0.99174 hectares=2.45072 acres

2. Volume and weight of crops:

1 koku of rice (unmilled)=150 kg

1 koku of wheat " =136.9 kg

1 koku of barley " =108.8 kg

1 kon (weight) =3.75 kg

APPENDIX A

Figures

FIGURES

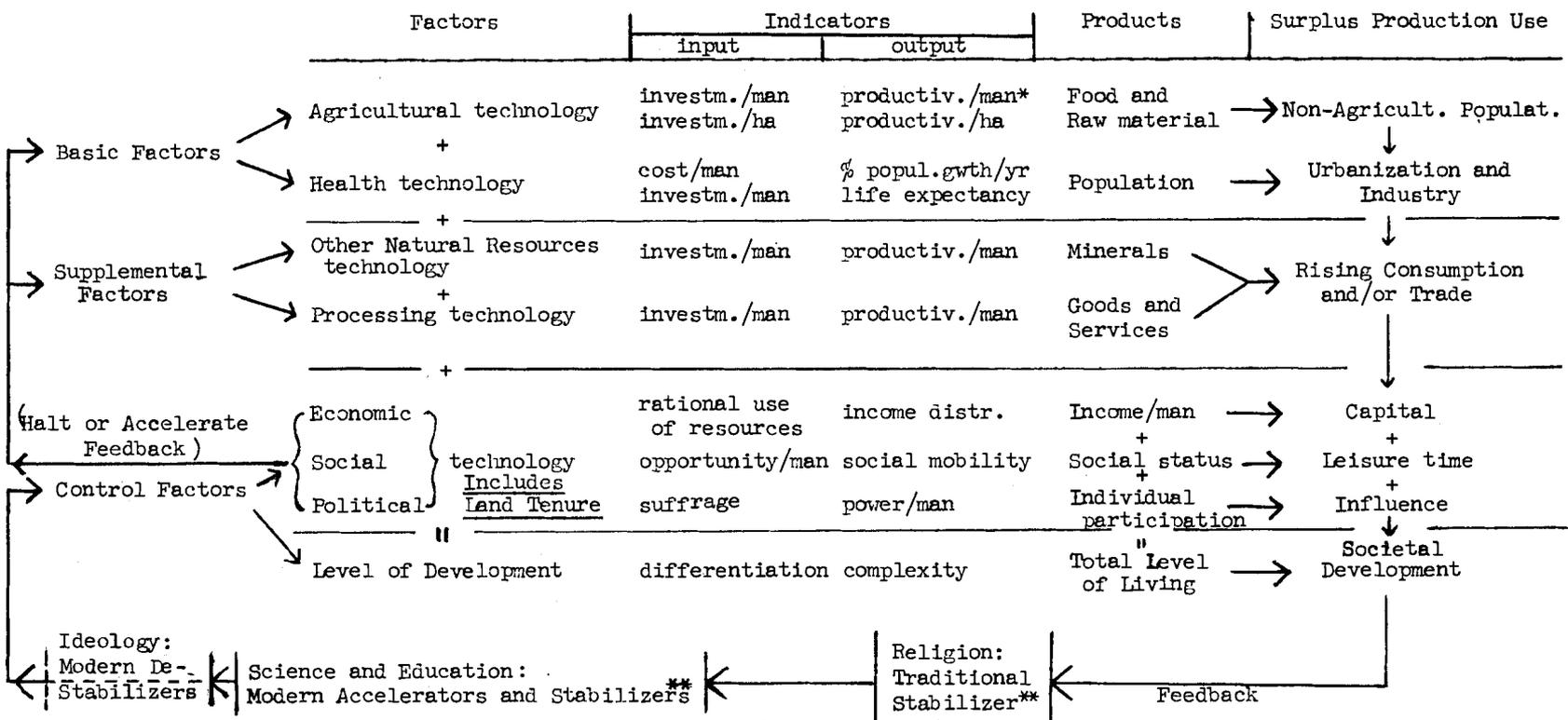
<u>Figure Number</u>	<u>Title</u>	<u>Reference Page</u>
A	Simplified Dynamic Model of Factors Effecting Land Tenure Structure	2
B	Simplified Model of the Land Reform Process	2
C	Development Scale of Agricultural Institutions	3
1	Cultivated Land Area per Farm and per Person Engaging in Farming in Selected Countries	12
2	Crop Limits in Japan	12
3	Change in the Area of Replotted Land, 1900-36	48
4	Deposits with and Loans from the Cooperative Finance System	57
5	Percentage Distribution of Creditors of Money Invested in Fixed Capital (per Household for the Nation)	57
6	Distribution Channels of Fertilizer	57
7	Production Index Graph 1895-1964	64
8a	Agricultural Production Indices	65
8b	Trend of Fruit Production	65
9a	Improvement of Agricultural Productivity	65
9b	Agricultural Productivity	65
9c	Rice Productivity	65

<u>Figure Number</u>	<u>Title</u>	<u>Reference Page</u>
10	Per Agricultural Worker Net Product	66
11	Comparative Productivity of Agriculture	66
12a	Comparison between Agricultural Support Prices and Non-support Prices	68
12b	Agricultural Prices and Prices of Commodities Purchased by Farm Households	68
13a	Trends in Prices of Agricultural Produce, Agricultural Necessities, Agricultural Wage Rates Paid to Temporarily Employed Man Laborers	69
13b	Price Movement of Commodities Purchased by Farm Households	69
14a	Changes in Percentage Distribution of Agricultural Necessities Input Values	69
14b	Amount of Producer Goods and Consumer Goods Purchased by Farm Households and Its Rate in Domestic Market	69
15	Indices of Demand for Agricultural Products	73



Figure A

SIMPLIFIED DYNAMIC MODEL OF FACTORS EFFECTING LAND TENURE STRUCTURE



Dynamics:

A change in any one factor causes or is dependent on changes in any one or more other factors, resulting in a spirally upward or downward trend in the total level of living. The Total Level of Living includes social and political as well as economic aspects. Any one factor or combination of several may at any time act as a constraint or a catalyst in the development process. Land Reform is required and possible only if land tenure acts as a constraint. It may be only one of a group of constraints which must all be removed before it becomes effective. Most often these co-constraints are within the political, agricultural and processing technologies. Land Reform may also be used as catalyst if forces develop which can bring it about ahead of its time. Usually such forces must come from outside the system.

*The popular man-land ratio is meaningless; a man-land productivity index identifies the active factor over time, taking sedentary subsistence technology as a base. No such index seems to have been constructed

** stability of evolutionary development not stagnation is meant here.

Figure B

Simplified Model of the Land Reform Process

Land Reforms (L.R.) (Japanese dates in parenthesis)	Catalytic Factors	overcome	Constraining Factors	Land Tenure Structure
Pre-Feudal Evol. (pre 7th Century)	Agricultural technology causing sedentary agric.	→	Scarcity of population in widely scattered pockets	cultivator land ownerships
1st Feudal L.R. (end 7th century)	Production of some surplus; need for protection of land and settlements; King and warriors	→	Tribal warfare; lack of government superstructure and services	King becomes nominal co-owner of land with cultivator
2nd Feudal L.R. (end 12th century)	Tribute for secular and religious protection of dispersed settlements by decentralized government system, local lords by merit	→	lack of easy communication and transportation	local lords become co-owners for the King; cultivators become peasants
3rd Feudal L.R. (end 16th century)	Rising population pressure causes scarcity of arable land and smaller farm units; higher level of living of hereditary lords raises taxes to maximum possible; urban artisan class developing	→	limited or declining productivity of lord and cultivator causes decline of surplus production for lord and government	caste system bonds peasant to land cultivation to prevent flight

Figure B con't

Land Reforms(L.R.)	Catalytic Factors	overcome Constraining Factors	Land Tenure Structure
1st Transit. L.R. (1868-1920)	external threat from modern states; internal desire to modernize; require new system to produce surpluses by modern technology; improved health technol. causes population pressure to become critical	feudal social structure; levels of modern public and private institutions; lack of modern production inputs, knowhow, and incentives;	change from feudal to unconditional commercial land ownership and production dependent on input & output institutions
2nd Transit. L.R. (1920-1945)	falling rate of production increase; rising organized tenant rebellion; rising concern and power of non-agricul. population; population growth rapid	unprotected small owner and tenant exploited by uncontrolled free market forces; rapid rise of neo-feudal tenancy and absolute-parasitic land lord	change from neo-feudal to contractual and protected tenancy; absentee land ownership controlled.
3rd Transit. L.R. (1946-1962)	food i.e. land most critical problem of large non-agricul. population. Land lord elite loss of majority power; industrial society values gain upper hand	conservative neo-feudal values in rural society effecting whole country and gov't giving rise to fascism	abolition of neo-feudal tenancy and social structure and absentee land ownership; land ownership limited
1st Modern L.R. (1962-?)	lagging levels of living of agricul. population lagging growth of labor productivity because of farm size economics of scale; food and land surplus; part-time farming uneconomical.	legal farm size limitations; part-time farming artificially perpetuated by prohibition of absentee lord ownership	removal of limitations on owner-farm size production quantity limited
2nd Modern L.R. (?)	living standards require high labor productivity thru automation; capital investment very high; public needs of protection from over and under production	individual ownerships unable to finance required mechanization nor carry responsibility to public	large corporate automated farms; production quotas and public utility status required

?

Figure 8 ESTIMATED 1968 DEVELOPMENT SCALE^{4/} OF AGRICULTURAL INSTITUTIONS AND 'BREAK THRU'
IN MODERN AGRICULTURE IN ASIA^{1/}

Nepal	Laos	Cambodia	Burma	Indonesia	Ceylon	S. Vietnam	Thailand	India	Pakistan	Malaysia	Philippines	Korea	Taiwan	Japan	INSTITUTIONAL CAPACITIES DESCRIBING AGRICULTURAL DEVELOPMENT LEVELS ^{3/}
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
0	0	0	0	0	0	0	0	0	0	0	0	(1)	1	1	31 Instit. Dupl. and/or Overlap Minimized
0	0	0	1/	0	0	0	0	0	0	0	0	(1)	1	1	30 Farm Unit Consolidation Being Undertaken
0	0	2/	0	0	0	0	0	0	0	0	0	(1)	1	1	29 Land Reform Successful
0	0	0	0	0	0	0	0	0	0	0	0	(1)	1	1	28 Farm Mechanization
0	0	0	0	0	0	0	0	0	0	0	0	(1)	1	1	27 Farmer Assoc. Econ. & Polit. Viable
0	0	0	0	0	0	0	0	0	0	0?	(1)*	1	1	1	26 Production Price Support Effective & Sustained
0	0	0	0	0	0	0	0	0	0	0	(1)*	1	1	1	25 Modern Farm Mechanization at Least Starting
0	0	0	0	0	0	0	0	(1)?	(1)?	(1)	0	(1)	1	1	24 Processing Instit.
0	0	0	0	0	0	0	0	(1)	(1)	(1)	(1)*	(1)	1	1	23 Farmer Coops become Viable
0	0	0	0	0	0	0	0	0?	0?	(1)	1*	(1)	1	1	22 Price Info. Reaches Farm Pop. Rapidly & Consistently
0	0	0	0	0	0	0	0	(1)	(1)	(1)	(1)*	1	1	1	21 Rice Ylds. Clearly Abv. Subsis. Fert. Lev.
0	0	0	0	0	0	0	0	(1)?	(1)	(1)	(1)*	1	1	1	20 'Break Thru' in Mod. Agri.
0	0	0	0	0	0	0	0	0?	0?	(1)	(1)*	(1)	1	1	19 Inst. Coord. Func. at Nat'l and/or Local Level
0	0	0	0	0	(1)	0	0	(1)	(1)	(1)	(1)*	1	1	1	18 Agri. Chem. Distri. Reaches Farm Lev.
0	0	0	0	0	(1)	0	0	(1)	(1)	(1)	(1)*	1	1	1	17 Fertilizer Distri. Reaches Farm Lev.
0	0	0	0	0	(1)	0	0	(1)	(1)	(1)	1*	(1)?	1	1	16 Appl. Agri. Resch. Reaches Farm Lev.
0	0	0	0	0	(1)	0	5	(1)	(1)	(1)	1	1	1	1	15 Agri. Trng. Reaches Farm Lev. in Sign. Area
0	0	0	0	0	0?	0	(1)	(1)	(1)?	1	(1)	(1)	1	1	14 Consumer Goods Distri. Reach Farm Lev.
0	0	0	0	0	0?	0	(1)	(1)	(1)	1	(1)	1	1	1	13 Modern Mktg. Inst. Effect. at Farm Lev.
0	0	0	0	0	0?	0	(1)	(1)	0?	(1)	(1)	0?	1	1	12 Modern Irrig. Expan. by Domest. Cap. & Hard Loans
0	0	0	0	0	0?	0	(1)	(1)?	(1)?	(1)	(1)	(1)	1	1	11 Transp. Sys. Expan. by Domest. Cap. & Hard Loans
0	x	x	0	0	0	1	x	(1)	(1)	(1)	1	1	1	1	10 Land Reform at Least Started Where Required
0	x	x	0	0	0	1	x	1	1	1	1	1	1	1	9 Land Reform at Least Legislated Where Required
0	0	0	0	0	(1)?	1	1	(1)	(1)	1	1	1	1	1	8 Instit. Coord. at Least Attempted
0	0	0	0	0	(1)	0	(1)	(1)	(1)	1	1	1	1	1	7 Modern Rural Credit at Least Being Started
0	0	0	0	2	(1)	1	(1)	(1)	(1)	1	(1)	1	1	1	6 Maint. of Rd. Sys. by Domest. Instit. & Resources
0	0	0	0	(1)	(1)	(1)	(1)	(1)	(1)	1	(1)	1	1	1	5 Maint. of Irrig. Sys. by Domest. Instit. & Resources
0	0	0	0?	(1)	(1)	(1)	(1)	1	1	1	1	1	1	1	4 Extens. Serv. Reaching Sign. Portion of Farm Level
(1)?	(1)	(1)	(1)?	1	1	1	1	1	1	1	1	1	1	1	3 Irrig. from at Least Some Modern Dam Systems
(1)	(1)	(1)	(1)	(1)	1	1	1	1	1	1	1	1	1	1	2 Road Systems Present in Sign. Portion of Farm Area
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1 Marketing of Rice thru Traditional Middle Man
-1.36	-1.06	-.55	-.41	-.40	-.35	-.49	.50	-.22	-.08	n.a.	.56	.85	1.05	1.63	Adelman Factor Scores of Socioeconomic Lev. of Develop. ^{4/}
53	60	101	58	83	137	89	97	80	79	n.a.	117	73	145	502	Per Capita GNP

Coefficient of Reproducibility: $\frac{17}{435} = .04$ 1.00 - .04 = .96 Coefficient of Scalability $\frac{17}{143} = .12$ 1.00 - .13 = .88 ^{2/}

*Institutional Capacities not present in 1964 in Philippines. n.a. = not available.
Source: (19) Figure 8.

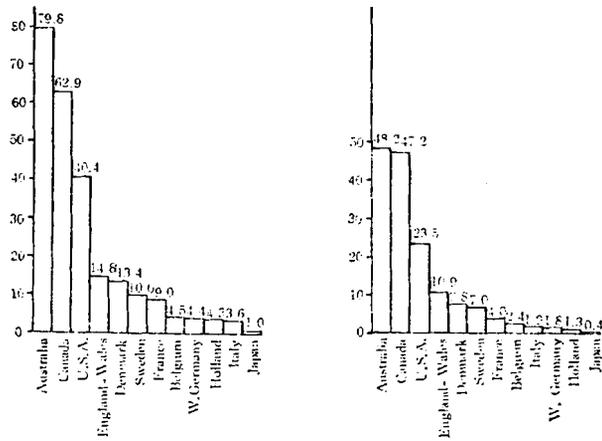
FOOTNOTES

FIGURE C

- 1/ All data in scale estimated from:
- a) Asian Development Bank, Asian Agricultural Survey 1968, pp. 719-854. Mukherga, P. I., Role of Rural Institutions in Asian Agricultural Development.
 - b) Research in Philippines 1969 by SRI team.
 - c) Authors limited knowledge of institutional situation in the Asian countries listed.
- 2/ Explanation of Symbols in Figure 8.
- a) Definite national presence indicated as 1.
 - b) Tentative presence indicated as (1), i.e. Present in significant but limited area in a nation or functioning significantly but not yet permanently institutionalized.
 - c) Nationally significant - absence indicated as 0.
 - d) Uncertain estimate indicated by ?
 - e) Not required indicated by x.
- 3/ Explanation of Institutional Capacities used in Figure 8.
- The presence or absence of the identified capacities in the scale are not judged in absolute terms but in their national significance. They usually are at first only present in the most advanced areas of a country. As soon as the affects of such an institutional capacity becomes nationally significant but not yet generally present or operative throughout a country it is indicated by "(1)". The 14% rice land area of the Philippines under high yielding varieties in 1968 raising the national yield/ha. average and produced a national surplus is such a case. A "1" means general national presence, although nationally insignificant areas may still be without it. The so-called rural poverty areas in the U.S., such as in Appalachia and elsewhere, are examples. More exact quantitative delineations are not necessary for relative comparison of development levels and their capacities between countries at this stage of analysis. Internal measurement of regional or community development levels of all countries will eventually permit a more detailed international development scale.
- 4/ Adelman, Irma and Morris, C. T., Society, Politics and Economic Development, p. 170, John Hopkins Press, Baltimore, Maryland, 1967.
- 5/ Scaling method employed is Guttman Scaling

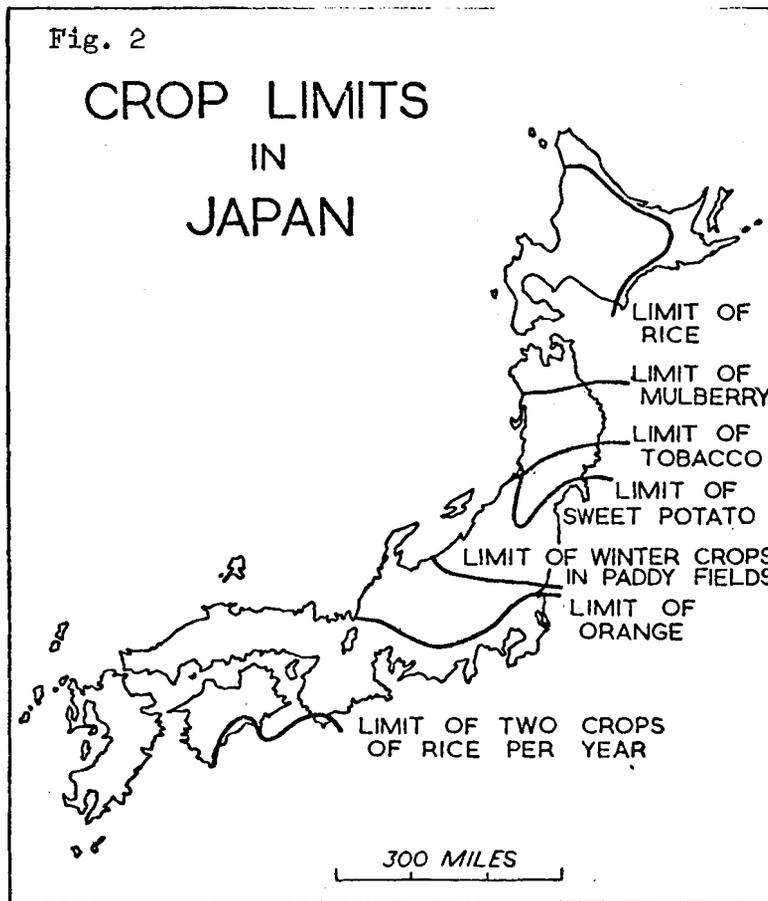
Fig. 1 Cultivate Land Area per Farm and per Person Engaging in Farming in Selected Countries

Cultivated area per farm Cultivated area per person engaging in farming



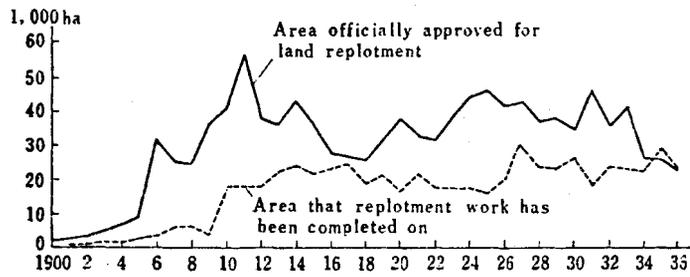
Source: (14) p. 21

Note: Figures regarding Japan are for 1955 and those regarding other countries for around 1950.



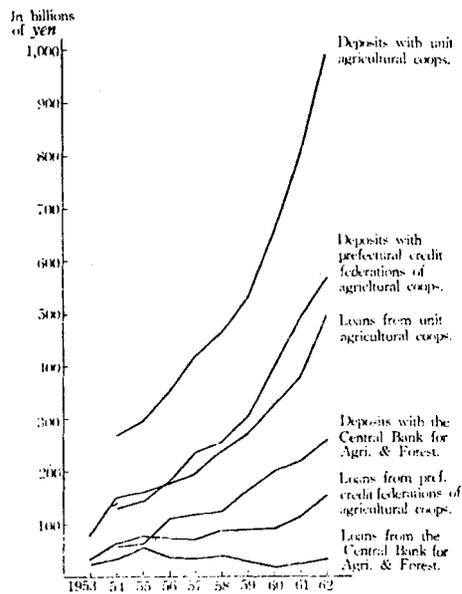
(1) p. 4

Figure 3. Change in the Area of Replotted Land, 1900-36



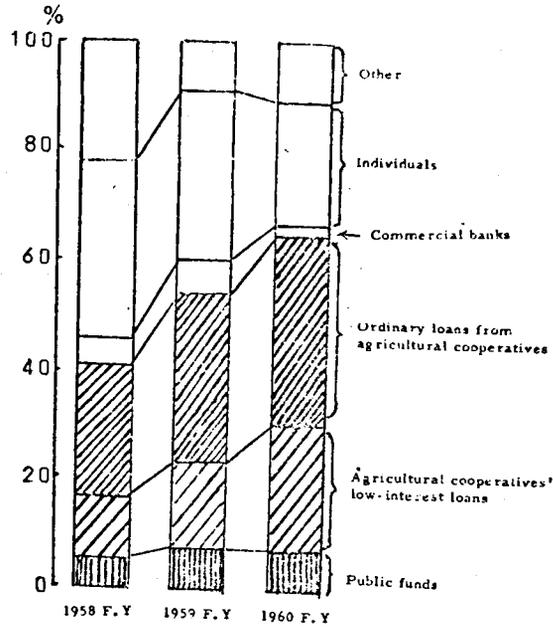
(2) p. 399

Fig. 4. Deposits with and Loans from the Cooperative Finance System



(14) p. 97

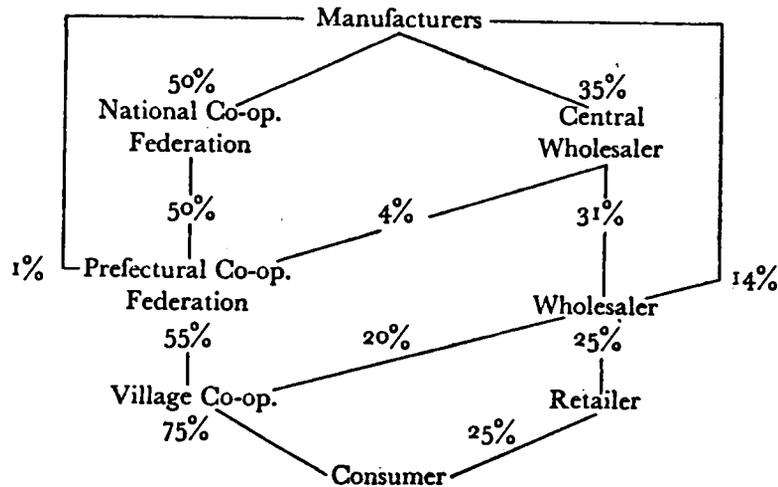
Figure 5. Percentage Distribution of Creditors of Money Invested in Fixed Capital (per Household for the Nation)



(13) p. 105

Figure 6.

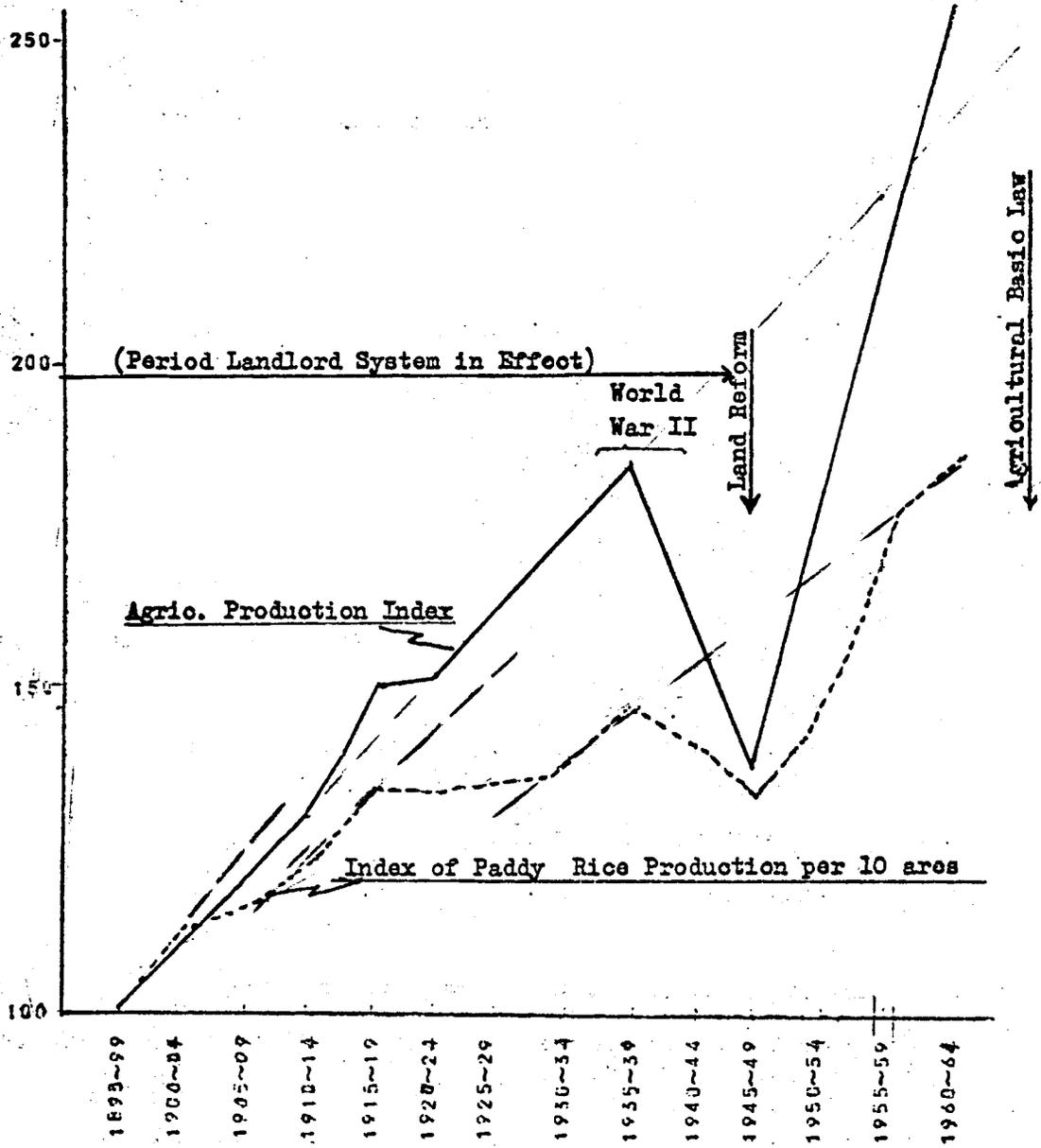
DIAGRAM
Distribution Channels of Fertilizer



(1) p. 288

Figure 7

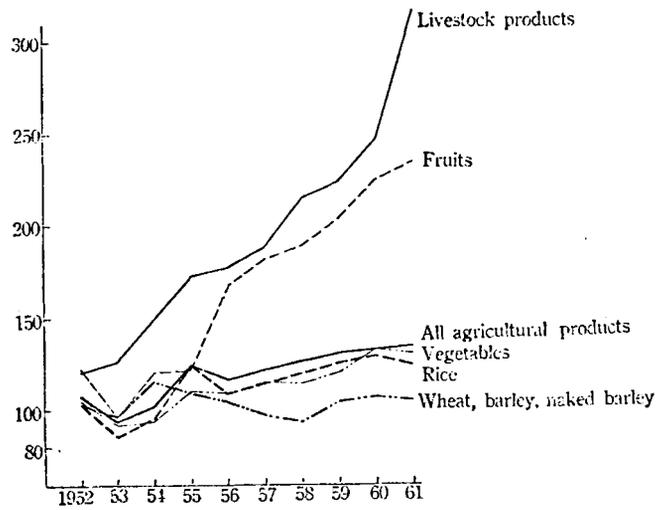
AGRICULTURE AND RICE PRODUCTION INDEX



(3) p. 15

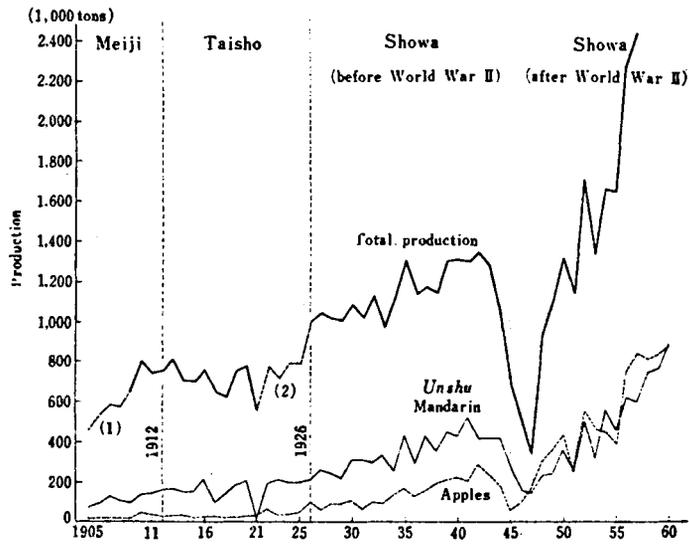
Broken trend lines added by author

Fig. 8a Agricultural Production Indices
(1950-52=100)



(14) p. 27

Figure 8b Trend of Fruit Production

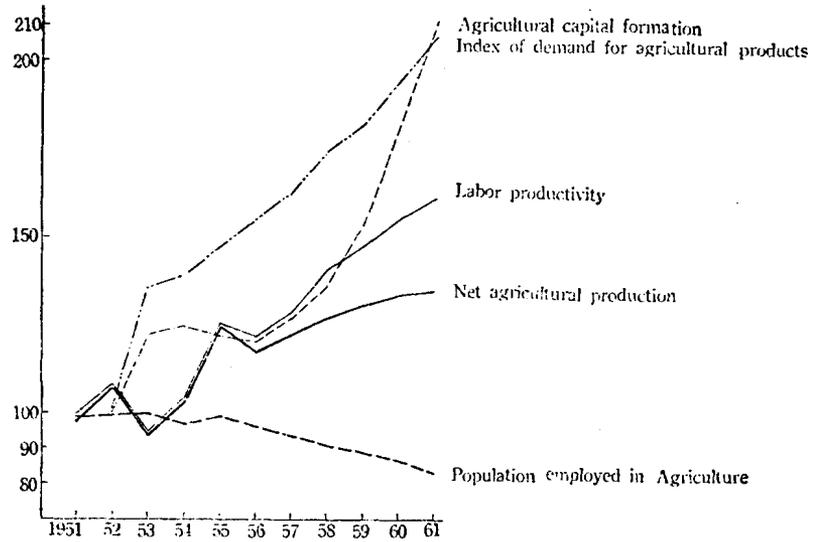


Note: The production includes mandarin oranges, apples and 12 others varieties of fruits.

1. Naval orange, pears (*pyrus communis*), loquates and chestnuts are excluded.
2. Chestnuts are excluded.

(2) p. 500

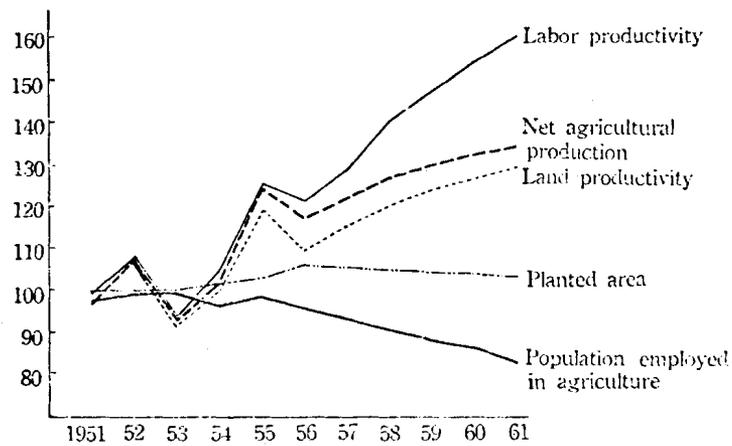
Fig. 9a Improvement of Agricultural Productivity



(14) p. 8

Fig. 9b Agricultural Productivity

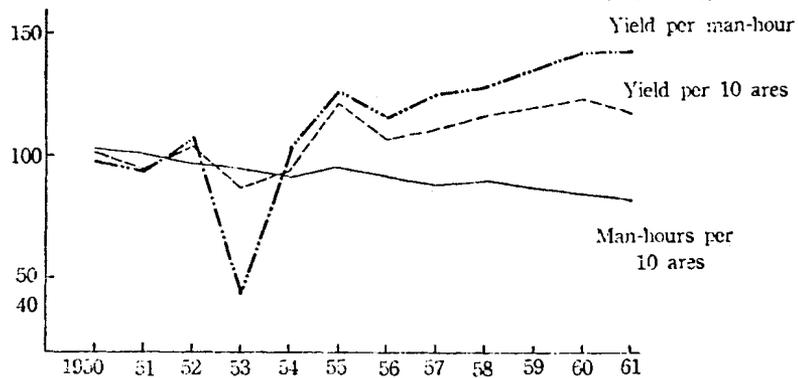
(1951=100)



(14) p. 51

Fig. 9c Rice Productivity

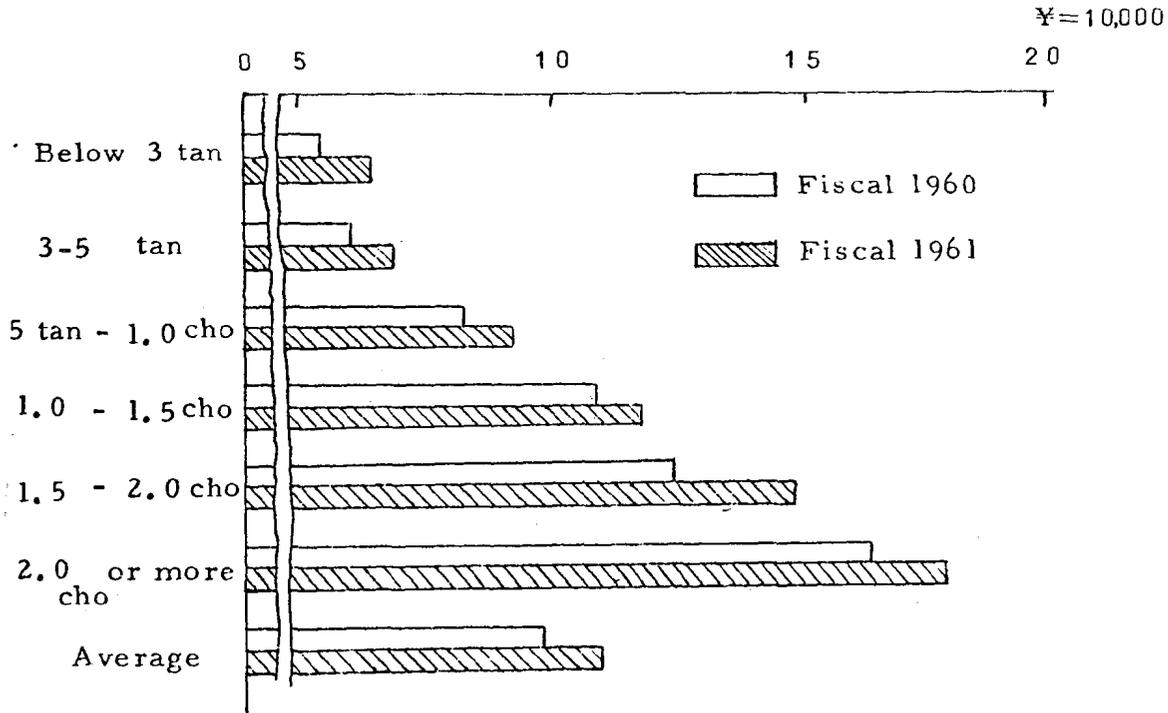
(1950=100)



(14) p. 52

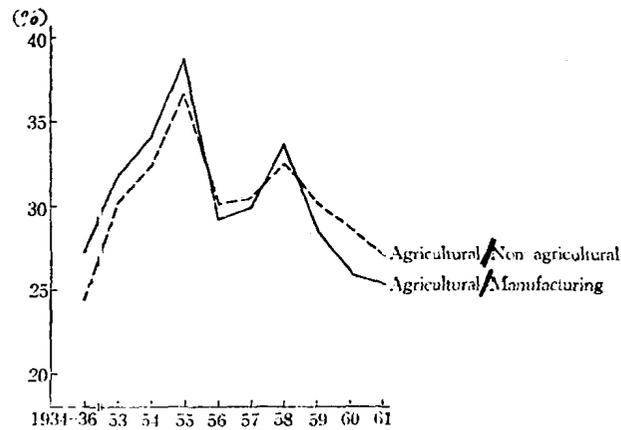
Figure 10

Per Agricultural Worker Net Product
by Farm Size Groups



(13) p. 35

Fig. 11 Comparative Productivity of Agriculture

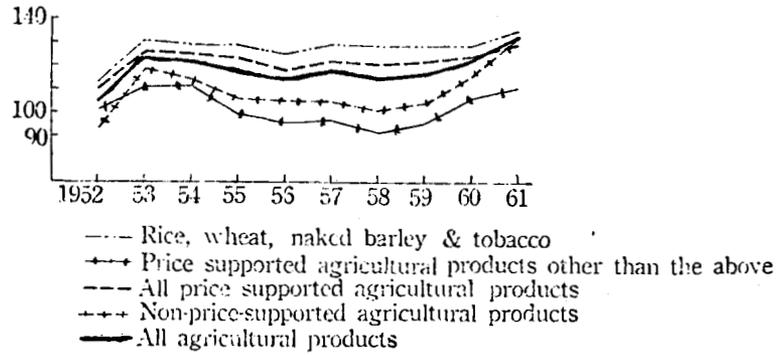


Source: Economic Planning Agency, "National Income Statistics"; Ministry of Labor, "The Labor Force Survey".

Note: The above graphs show the average per capita per diem real income of those engaged in agriculture against that of those employed in manufacturing and non-agricultural industries as a whole. The real national income is based on the 1955 prices and the general deflator for the national income calculated by the Economic Planning Agency is applied to all the above cases.

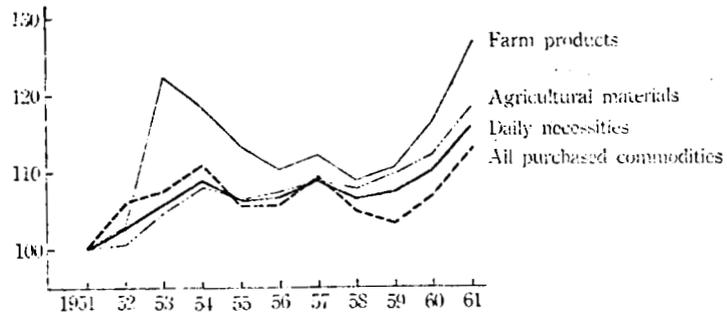
(14) p. 16

Fig. 12a Comparison between Agricultural Support Prices and Non-support Prices (1951=100)



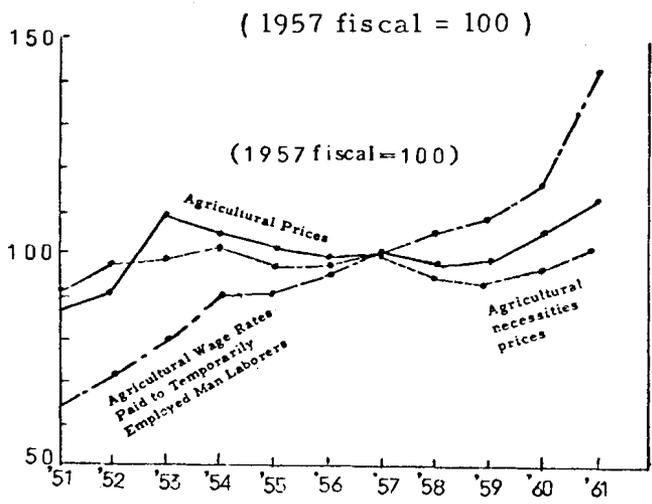
(14) p. 42

Fig. 12b Agricultural Prices and Prices of Commodities Purchased by Farm Households (1951=100)



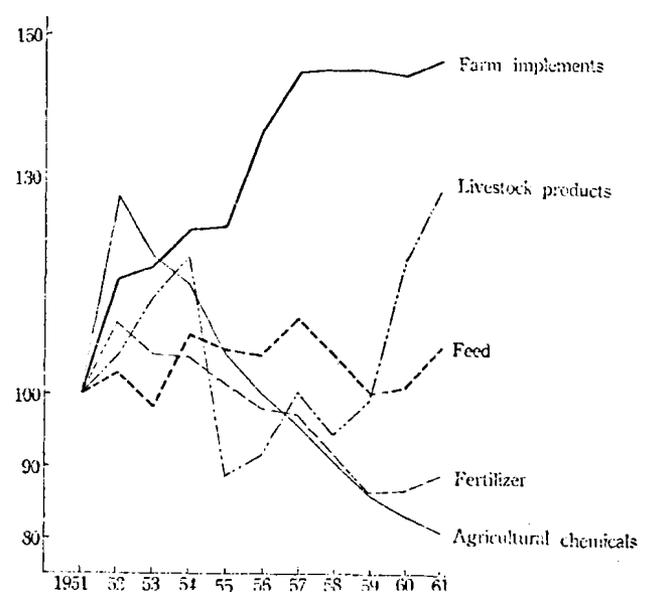
(14) p. 43

Figure 13a. Trends in Prices of Agricultural Produce, Agricultural Necessities, Agricultural Wage Rates Paid to Temporarily Employed Man Laborers



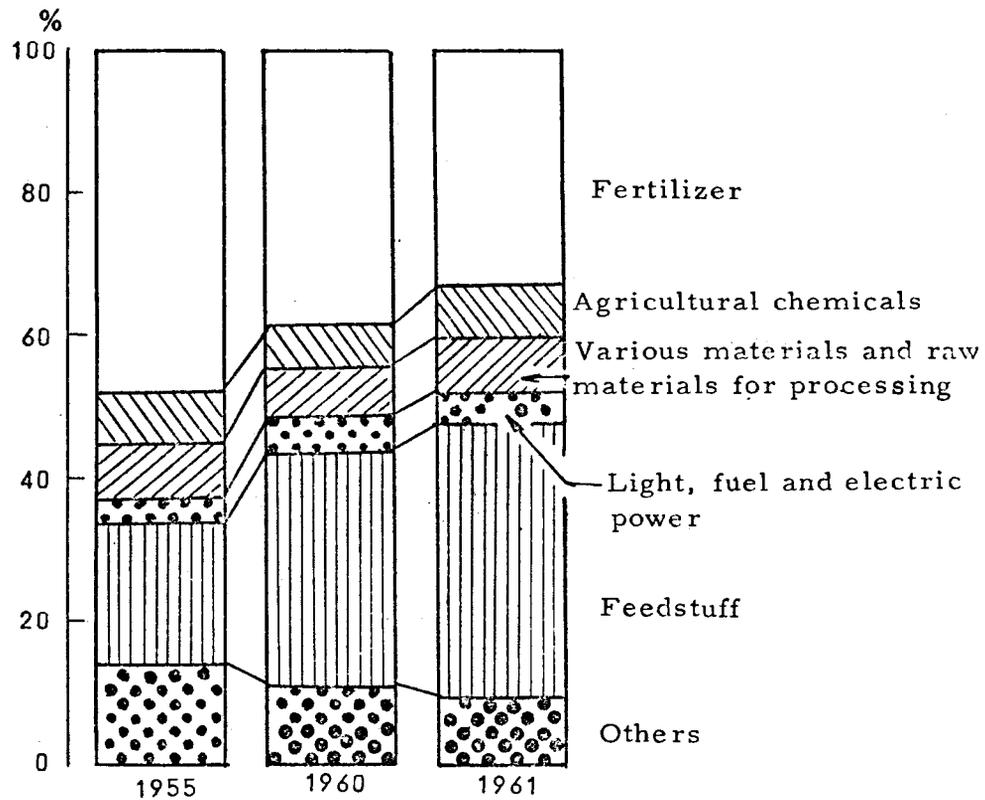
(13) p. 14

Fig. 13b Price Movement of Commodities purchased by Farm Households (1951=100)



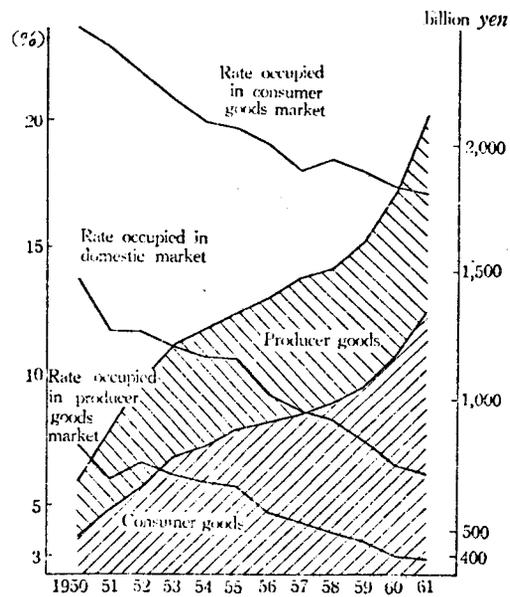
(14) p. 44

Figure 14a Changes in Percentage Distribution of Agricultural Necessities Input Values



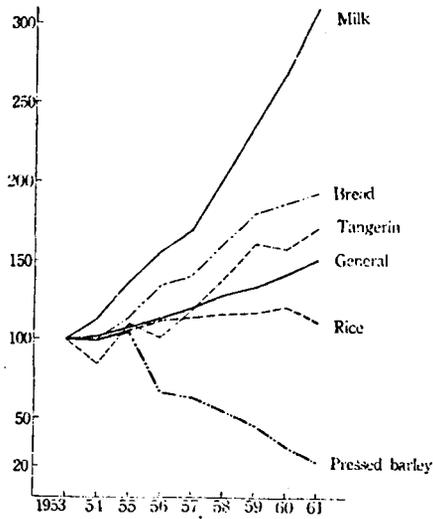
Source: (13) p.11

Fig.14b Amount of Producer Goods and Consumer Goods Purchased by Farm Households and Its Rate in Domestic Market



Source: (14) p.10

Fig.15 Indices of Demand for Agricultural Products



Source: (14) p. 23

Note: The above graph indicating the general index is drawn through dividing the index number of per head expenses for food and beverage of the living expenditure of nationwide city dwelling households by the consumer price index and multiplying the quotient thus obtained by the index of household consumer members. The index of individual item is obtained by multiplying the average per head consumption of households in all cities by the index of consumers' household members.

APPENDIX B

TABLES

T A B L E S

<u>Table No.</u>	<u>Title</u>	<u>Reference Page</u>
A-a	Factors of Change, and Interdependence in the Land Reform Process	2
A-b	Health Technology, plus.....	2
A-c	Other National Resources and Processing Technology, plus.....	2
A-d	Societal Control Technology, result in.....	2
A-e	Land Tenure Structure	2
1	Area Under Important Crops, Forests and Grassland-Meadow	12
2a	Percentage Distribution of Rice Harvested from Tenant's Paddy-Field to Total Rice Harvested	12
2b	The Increase in Landowner's Share in Earnings from Land	12
3	Rice Prices for Landlords and Tenants, 1940-5	24
4.	The Substance of the Agricultural Land Law (including the revisions of 1962)	26
5.	Number of Disputes, Tenant, Landlord, and Conciliation Unions and Membership, 1917-41	33
6a	Changes in Composition of Farm Families Classified by Owner-Farmer and Tenant Farmer	45
6b	Number of Farm Families	45
6c	Changes in the Number of Farm Households by Type of Management	45

<u>Table No.</u>	<u>Title</u>	<u>Reference Page</u>
7a	Proportion of Area of Land Cultivated by Tenant Farmers to Total Land under Cultivation	45
7b	Changes in the Amount of Agricultural Land Cultivated by Owner-farmers and tenants	45
8	Minimum Scale of Non-Cultivation, Parasite-Like Landowners	45
9	Decreases in Wast Lands and Grasslands (1877-1951) Food of Mt. Kirshima, in South Kyushu	48
10	Progress of Land Reclamation ('000 cho and 000' households)	48
11	Condition of Fragmented Farm Lands by Number of Land Pieces per Farm Household and by Land Area per Piece	49
12	Land Tax	53
13	The Number of Agricultural Schools and Their Enrollments	55
14	Establishment of National Advanced Educational Institutions for Agriculture	55
15	Government-Supported Loan Schemes in Operation in 1956	57
16a	Fertilizer Input Index	57
16b	Change in Domestic Consumption of Major Fertilizers (1917-60)	57
17	Changes in Fertilizer Application in the Backward District (Tohoku) of Japan	57

<u>Table No.</u>	<u>Title</u>	<u>Reference Page</u>
18	Intensity of Labor and Fertilizer Input in Rice Cropping	57
19	Changes in Application of Fertilizers in Kanaya-machi, Shizuoka Prefecture	57
20	Index of Prices of Agricultural Products and of Agricultural Production Materials	57
21	Omitted	58
22	Government-paid Average Rice Prices and Black Market Prices in Producing Areas	58
23	Numbers of Cases of Farm Tenant Disputes Since 1917	60
24	Reasons Given by Landlords for Requesting Return of Leased-out Land	63
25	Chairmanships of Town and Village Land Committees, March 1947	63
26	Distribution of Farm Household by Farm Size	63
27	Changes in the Composition of Farm Households by Size of Cultivated Area	63
28	Changes in the Number of Farm Households during the War, by the Scales of Farm Management	63
29	Number of Farm Land Ownership Transfers by Size of Land Areas	63
30	Number of Farm Households, Area of Cultivated Land and Transfers of Owner-Farmed Land	63

<u>Table No.</u>	<u>Title</u>	<u>Referenced Page</u>
31	Increase or Decrease Rates of Farm Households by Economic Regions and Farm Size Groups (1950-60, All Prefectures)	63
32a	Agricultural Output (1878-1912)	65
32b	Changes in the Agriculture Production Index and Yield of Paddy Rice per 10 hectares	65
33a	Percent Production Changes 1908-1937 various crops	65
33b	Changes of Farm Production Indices during the War	65
33c	Agricultural Production Indices	65
34	Increases in Land and Labor Productivity, 1878-1960	66
35	Real Net Output by Industrial Sectors (1928-32 Prices)	66
36	Indexes of Physical Productivity in Agriculture and Manufacturing Industry	66
37a	Demand and Supply for Agricultural Products	66
37b	Supply and Demand for Rice (brown rice)	66
37c	Real Net Output by Industrial Sectors	66
38a	Changes in the Number of Part-time and Full-time Farm Households during the War (excluding Okinawa)	67
38b	Number of Farm Households Classified by Full-time and Part-time	67

<u>Table No.</u>		<u>Referenced Pages</u>
38c	Farm Families with at least One Member Wholly or Partially Engaged in Occupations other than Agriculture	67
39	Distribution of Farm Households by Size of Holding under Management and by Types of Full-time and Part-time	67
40	Managerial Factors by Size of Cultivated Land under Management, 1961	67
41	Changes in the Number of Persons Engaged in Agriculture	67
42a	Real National Income per Capita of Working Population	68
42b	Changes in Gross Food Expenditures	68
42c	Percent Distribution of Agricultural Income by Productive Factors, before and after the Land Reform	68
43a	Change in Farm Economy in Prewar (1934-36) and Postwar (1952-54) Periods by size of Holding	68
43b	Farm Household Economy by Size of Farm Land under Management	68
44a	Average Income and Expenses per Owner-farmer Household	68
44b	Changes in Farm Household Economy during the War	68
44c	Trend of a Farm Household Economy	68
45a	Living Expenditure of Farm Household and Its Relative Importance for Major Items in Selected Years	68

<u>Table No.</u>	<u>Title</u>	<u>Referenced Pages</u>
45b	Extension of Durable Goods among Farm Households	68
46a	The Number and Value of Imported Bulls and Studs for Breeding Purposes	69
46b	The Number and Value of Imported Sheep	69
47a	Input of Agricultural Materials	69
47b	Rice: Rice, Yield, and Fertilizer Consumption	69
48	Number of Workers for Farming, by Sex and Age Groups	73
49a	Number of Graduates Engaged in Agriculture	73
49	Urban and Rural Population by Grades of Schooling	73
50	Composition by Items of Family Budget	73
51a	Value of Major Agricultural Products in Foreign Trade	74
51b	Agriculture in the National Economy	74
52a	Formation of Fixed Agricultural Capital	74
52b	Capital Equipment of Manufacturing and Agricultural Industries	74
52c	Efficiency of Capital by Size of Holding under Management	74
53a	Popularization of Power Machines (1920-42)	74
53b	Number of Power Machines Possessed by Farmers	74

<u>Table No.</u>		<u>Referenced Pages</u>
54a	Types of Tiller or Plow and Efficiency	74
54b	Number of Large-Type Tractors Possessed by Farmers	74
54c	Changes in the Labor Requirements for Rice Culture	74

Table A-a

Factors of Change, and Interdependence in the Land Reform Process:*I. Agricultural or Land Use Technology, plus.....

Societal Development Phases	Land Fertility dependent on:	Labor Productivity dependent on:	Land Reclamation or Improvement by
Traditional	Natural fertility high on best bottom lands	Hand tools	Clearing forest
	Fallow periods to restore fertility	Animal tools	
	Organic waste, manures, green manures and Crop rotation	With declining land fertility only by extra effort and time	Ditching, terracing, draining, hedging small irrigation systems by hand labor
Transitional	Weeding, spacing, new varieties, basic chemical fertilizers & pest controls	Animal machinery Small motorized machinery	Large irrigation systems and high cost land reclamation by mechanized labor
Modern	Compound chemical fertilizers and pest controls; new varieties	Large motorized machinery	Soil banks, reforestation and public parks
Future	Optimized chemical varietal combination with climate control	Automated	Landscaping, gardening (?)

* These are the same factor categories identified on Figure A as they change in the development process. No one can change much individually; lateral inter-dependence of all factors has been found to be determinative within a narrow range in the development process. Items are only indicative examples not an exhaustive list.

Table A-b

II. Health Technology, plus.....

Societal Development Phases	Medical Knowledge & Practice	Facilities	Population Pressure on Food Prod.	Rate Population Growth &	Life Expect.yrs.
Traditional	Mostly superstitious use of herbs and symbols by witch doctors, no conscious hygiene	Home only	None (population deficit)	nearly none encouraged	30-35
	Semi-religious folk doctors with some effective use of medical herbs and compounds, better hygiene	"	Up to minimum subsistence	0.5-1% encouraged	35-40
Transitional	Secular medical practice, improved hygiene	House & clinics & simple hospitals, family care	Causes occasional starvation	1.5-2.0 encouraged	40-45
	Medical general practitioner, modern medicines & hygiene	Professional care	None to occasionally minimum requirements	2.5-3.5 discouraged	45-55
Modern	Modern medical research & development, highly specialized personnel	Modern hospital and mechan. care	Negative, have chronic surplus of food	0.0-2.5 controlled	60-75
Future	Abolition of disease automated curative & preventive medicine	?	None, in Balance	0.0-0.5 regulated	75-100 (+) 2

Table A-c

III. Other National Resources and Processing Technology, plus.....

Societal Development Phases	Nat. Resources Used for Consumption, Food and Government Budgets	Production and Consumer Goods	Production and Consumer Services
Traditional	Some land and water surface resources only	Mostly by family or village members	Only by family or village members
	Some deeper mining & fishing	Artisan class developing home industry and exchange of goods with peasant population	some regional & state services organized around security & justice
Transitional	Mechanized deep exploitation of natural resources for national industry and export	Modern industrial production of agricultural inputs & processing of agr. outputs beginning; farms begin specializing	State & local bureaucracy and private commercial system developing services: banks distributors; extension services; cadastral & tax agencies, infrastructure; etc. -- the modern institutional service system develops Market regulated and research supported by state to insure production
Modern	Processing creation or modification of basic resources	Agriculture totally dependent on industrially produced inputs; all farms specialized; farm population has "urbanized" consumption.	Agr. integrated into modern, public and private service system. State regulates market to reduce excess production
Future	Total recycling of all natural resources	Agr. production is part of automated total production	All services part of integrated, balanced system

Table A-d

IV. Societal Control Technology, result in

Societal Development Phases	Economic Resources (R) Use (U) and Distribution (D) determined by:	Social: Individual Mobility	Political: The Distribution of Decision Making Power
Traditional	(R) Expanding; U & D by religious and social customs	Relatively free & egalitarian within village or tribe	Village & tribal chiefs; primitive democracy
	(R) Expanding; U & D by growing needs of tribal elite	Hampered by warrior-peasant distinctions	Weak or no monarchy and local lords; loose feudal structure, merit aristocracy, peasantry limited political influence
	(R) Nearly fixed, U & D by growing needs of feudal lords, state and population	Nearly none; status hereditary, but loosening into growing middle class	strong or absolute monarchy and hereditary aristocracy; rigid feudal caste structure peasantry nearly no political power, middle class gaining
Transitional	(R) Slowly expanding; U & D by growing production, standards of living & population	Loosening in and between all classes of society; dual society, tradit. & modern co-existing	Constitutional monarchy or republic; aristocratic & middle class elites hold most power & gain more
	(R) Rapidly expanding; U & D by growing production, levels of living & slowing population growth	Fairly open; based on merit, family assistance and class; limited by regional, social & ideological constraints	Industrial State; private &/or public managers run state under elected officials; universal suffrage; mass organizations of interest developing
Modern	(R) Rapidly expanding; U & D by growing production, levels of living & social welfare	Open; based on merit with state and family assistance, limited by regional, social and ideological constraints	More or less welfare State; private &/or public bureaucracy runs State & mass organizations; electorate concerned with distribution & external protect. of level of living
Future	(R) Expanding but recycled; U & D automated and by optimal levels of living & population	Open; based on choice & ability; limited by levels of productive work & decision making needs	Leisure State; routine decisions automated; electorate connected to computers; boredom & frustrated aggressiveness; growing problems

Table A-e

V. Land Tenure Structure

Societal Development Phases	Laws	Ownership	% population on productive Land	Land tax % of gov. Revenue
Traditional	Primitive religious & tribal common	Temporary individual & communal	100	no tax
	Local comm. & royal or lord decree on land occupation and tribute	Permanent individual and communal; feudal* free holding transferable by King or lord	95-90	100
	Royal decree and local common on land, production, commerce, occupation, tax, subscription, division of farm units	Permanent individual and communal; feudally* bonded holding not transferable	90-80	90-80
Transitional	Legislated and gov. decree on: land title, tax, trade, infrastructure, organizations, institutions, etc.	More or less unconditional individual ownership; registered, written titles; free commercial transfer; not if public ownership	80-50	80-10
	Tenancy regulated & protected (more or less)	Private ownership limited to control tenancy growth		
	Absentee land ownership regulated if not abolished; conservation	Size farm units regulated	50-10	10-5
Modern	Public parks, land banks, crop limitation, pollution control	Corporate or public ownership of large farm business; no size limitation by state	10-5	5 - (-) 5
Future	? Production regulated in balance with population	? Semi-private	? 2-1	? Not applicable

* Feudal here means ownership shared with King and lord

**Table 1 Area under Important Crops, Forests, and
Grassland-Meadow**
(In thousand cho)

<i>Period</i>	<i>Total taxable area</i>	<i>Forests</i>	<i>Grass- land- meadow</i>	<i>Paddy rice</i>	<i>Upland rice</i>	<i>Wheat</i>	<i>Barley</i>	<i>Soy- beans</i>
1908-12	14,448	7,508	1,259	2,863	94	473	618	484
1913-17	14,905	7,879	1,337	2,929	126	513	588	462
1918-22	15,279	8,040	1,396	2,980	139	533	528	451
1923-27	16,029	8,343	1,612	3,018	137	473	453	401
1928-32	16,672	8,620	1,829	3,094	135	497	388	353
1933-37	17,108	8,831	1,955	3,060	135	668	338	332

Source: (2) p. 37

TABLE 2a

Percentage distribution of rice harvested from tenant's paddy-field						
	Total harvest- ed rice	Tenant's rice distributed into			Equivalent to farming expenses (excluding his own labour cost)	Net revenue taken by tenant (Living cost)
		Tax	Land-lord	Total		
At the end of Tokugawa period	100	37	28	65	15	20
Meiji Restoration Land tax revision inspection order	100	34	34	68	15	17
1885	100	17	41	58	25	17
1890	100	12	46	58	24	18
1899	100	12	45	57	25	18
1912	100	11	44	55	22	23
1915	100	13	37	50	29	21
1931	100	14	33	47	36	17
1936	100	8	40	48	27	25
1943	100	4	42	46	32	22

Notes: Increase of landowner's share is based on the decrease of land tax and increase of production per unit area ("tan").

(7) p. 8

Table 2b. The Increase in Landowner's Share in Earnings from Land
(In per cent)

Period	Land tax and local rates	Share of landowners	Share of cultivators
Closing years of Tokugawa Era	37.4	19.8	42.8
At the time of the Land Tax Revision	30.5	28.8	40.8
1921-1922	7.8	41.8	50.4

Source: (2) p.184

TABLE 3
Rice Prices for Landlords and Tenants, 1940-5

Year	Yen paid per koku to:		
	The landlord (a)	The tenant, as bonus on rice paid in rent to landlords (b)	The owner-farmer (a + b)
1940	43	0	43
1941	44	5	49
1942	44	5	49
1943	47	15.50	62.50
1944	47	15.50	62.50
1945 (First plan)	55	37.50	92.50
1945 (Actual price)	55	245.00	300.00

(1) p.114

TABLE 5
Number of Disputes, Tenant, Landlord, and Conciliation Unions
and membership, 1917-41

Year	No. of disputes	No. of tenant unions	No. of members ('000)	No. of landlord unions	No. of members ('000)	No. of conciliation unions
1917	85	—	—	—	—	—
1918	256	—	—	—	—	—
1919	326	—	—	—	—	—
1920	408	—	—	—	—	—
1921	1,680	681	—	192	—	85
1922	1,578	1,114	—	247	—	176
1923	1,917	1,530	164	290	24	347
1924	1,532	2,337	232	414	32	542
1925	2,206	3,496	307	532	35	1,371
1926	2,751	3,926	347	605	41	1,491
1927	2,053	4,582	365	734	57	1,703
1928	1,866	4,353	330	695	56	1,909
1929	2,434	4,156	316	655	55	1,986
1930	2,478	4,208	301	640	53	1,980
1931	3,419	4,414	306	645	51	2,047
1932	3,414	4,650	297	662	50	2,098
1933	4,000	4,810	303	686	50	2,309
1934	5,828	4,390	276	633	49	2,219
1935	6,824	4,011	242	531	38	1,748
1936	6,804	3,915	229	513	36	2,878
1937	6,170	3,879	227	497	35	2,849
1938	4,615	3,643	218	473	32	3,158
1939	3,578	3,509	210	474	33	3,152
1940	3,165	1,029	76	304	23	4,025
1941	3,308	293	24	144	11	764

Source: (1) p.72

Table 4

The Substance of the Agricultural Land Law, 1952
(including the revisions of 1962)

- (1) Regulations on transfers of agricultural land
 - (a) All transfers of land require permission from the prefectural governors (in some cases, agricultural commissions)
 - (b) Permission will not be granted in the following cases
 - (1) When a person other than the tenant is to acquire the ownership of tenanted land
 - (2) When the person who is to acquire the rights does not farm himself
 - (3) When corporations other than farming corporations are to acquire the rights
 - (4) When anyone other than an agricultural cooperative association undertakes a land trust
 - (5) When the total farmed land and land leased out will exceed three hectares (12 ha. in Hokkaido) and hired labor is depended on for more than 50 percent of the work
 - (6) When the farmed area will not amount to 3 ha. (12 ha. in Hokkaido) even with the acquired land
 - (7) When agricultural land which was acquired in the Land Reform is to be leased
 - (8) When tenanted land is to be subleased
 - (9) When a decline in agricultural production through transfer of ownership is clear
 - (c) Converting agricultural land for other uses requires the permission of the government authorities. Permission will not be given when there is no urgent need for conversion, and when a change is permitted, the conversion will start from around urban areas and the preservation of an area of excellent agricultural land will be given consideration.
- (II) Limitations on the ownership of agricultural land
 - (a) No one except the state can own the following tenanted land:

(1) Tenanted land which is outside the city, town, or village of the owner's residence

(2) More than an average of one hectare of tenanted land which is within the city, town, or village of the owner's residence

(b) In cases in which the above stipulation applies the owners must sell the tenanted land to the tenants.

(c) If the person neglects to sell this tenanted land, the state will compulsorily buy it.

(III) The protection of cultivation rights

(a) The permission of the government authorities is needed to cancel a lease contract or to refuse to renew it.

(b) Permission will not be granted except in the following cases:

(1) When the leaseholder did not act in good faith

(2) In appropriate cases when agricultural land is being used for purposes other than agriculture

(3) When in appropriate cases in consideration of the livelihood of the leaseholder and the farming ability of the lessor, the lessor is to cultivate the land himself

(4) When there are other justifiable reasons

(IV) The regulation of rent

(a) The maximum rent on each parcel of agricultural land is to be fixed

(b) The standard of the fixed rent is to be determined by the government in such a way as to stabilize farming and to secure just labor compensation.

(3) pp. 5-6

Table 6a Changes in Composition of Farm Families Classified by Owner-Farmer and Tenant Farmer
(In per cent)

Year	Owner-farmers	Owner-tenant farmers	Tenant farmers	Total
1885-84	37.4	42.9	19.7	100
1888	33.3	45.1	21.6	100
1899	35.4	38.4	26.2	100
1902	33.9	38.0	28.1	100
1907	33.7	37.7	28.6	100
1912	32.5	39.8	27.7	100

Source: (2) p.18

Table 6b Number of farm families

	Owner-farmer	Owner-tenant farmer	Tenant farmer
1908	1,799,617 (33.3)	2,117,013 (39.1)	1,491,733 (27.6)
1912	1,763,840 (32.5)	2,176,391 (40.0)	1,497,820 (27.5)
1917	1,695,854 (31.0)	2,237,801 (40.9)	1,533,622 (28.1)
1922	1,662,479 (30.6)	2,235,651 (41.1)	1,541,279 (28.3)
1927	1,679,799 (30.7)	2,307,023 (42.1)	1,488,061 (27.2)
1932	1,694,806 (30.5)	2,366,978 (42.7)	1,489,676 (26.8)
1937	1,673,941 (30.5)	2,316,806 (42.3)	1,491,794 (27.2)
1940	1,645,701 (30.5)	2,286,651 (42.4)	1,457,862 (27.1)
1942 ¹	1,679,536 (31.0)	2,164,548 (39.9)	1,553,217 (28.7)
1947	2,153,611 (36.5)	2,180,394 (36.9)	1,573,836 (26.6)
1949			
1950 ¹	3,821,531 (61.9)	2,001,433 (32.4)	312,364 (5.1)
1955 ¹	4,199,355 (69.5)	1,593,340 (26.4)	239,180 (4.0)
1960 ²	4,552,382 (75.4)	1,308,582 (21.7)	177,939 (2.9)

(2) p. 23

Table 6c. Changes in the Number of Farm Households by Type of Management

(Unit: 1,000 households)

	Owner-farmer	Mainly owner-farmer, part tenant	Mainly tenant, part owner-farmer	Tenant	Other	Total
Pre-Land Reform (1945)	1,729(31%)	1,114 (20%)	1,102(20%)	1,574(29%)	18(0%)	5,537(100%)
Post-Land Reform (1950)	4,228(70%)	1,310 (22%)	286(5%)	240(4%)	11(0%)	6,075(100%)
Present(1965)	4,538(80%)	857 (15%)	157(3%)	100(2%)	12(0%)	5,665(100%)

(3) p.3

Table 7a Proportion of Area of Land Cultivated by Tenant Farmers to Total Land under Cultivation
(In per cent)

Year	Proportion
1883-84	36.8 (34.2)
1887	39.3
1892	40.0
1903	44.5
1908	45.4
1913	45.5

Note: The figure in parentheses is the average of an estimate for less than half of the prefectures in Japan. (2) p.18

	Total cultivated land (in hectares)	Land under tenancy
1908	4,936,769	2,499,092 (45.4)
1912	4,903,258	2,614,850 (45.4)
1917	4,853,042	2,751,147 (46.2)
1922	4,868,531	2,824,809 (46.4)
1927	4,929,640	2,774,744 (46.1)
1932	5,038,209	2,819,926 (47.5)
1937	5,057,691	2,823,315 (46.8)
1940	5,001,507	2,759,646 (45.9)
1942 ¹	5,758,521	2,661,222 (46.2)
1947	5,011,690	1,980,787 (39.5)
1949	4,957,833	648,004 (13.1)
1950 ¹	5,090,567	not available
1955 ¹	5,183,210	"
1960 ²	5,323,668	"

1. Farm households not cultivating their own land are not included in this table: 1942, 0.4%; 1950, 0.6%; 1955, 0.1%.

2. [9] No. 37, 1960, p. 4. (2) p. 26

Source:

Table 7b Changes in the Amount of Agricultural Land Cultivated by Owner-farmers and Tenants

(unit: 1,000 ha)

	Owner-farmed Land	Tenanted Land	Total
Pre-Land Reform (1945)	2,787 (54 %)	2,368 (46 %)	5,156 (100 %)
Post-Land Reform(1950)	4,685 (90 %)	515 (10 %)	5,200 (100 %)
Present (1965)	4,819 (95 %)	272 (5 %)	5,091 (100 %)

(3) p.3

TABLE 8

Minimum scale of non-cultivation, parasite-like landowners			
Year	Average income of land owners per tan of paddy-field or upland (1)	Cost of living per Owner-farmer (2)	Area of land necessary for landowners to get enough revenue for maintaining their cost of living by tenanted rent (2) / (1)
1890	¥ 4.493	¥ 195	4.3 cho
1899	6.616	304	4.6
1908	8.694	449	5.2
1912	14.207	622	4.4
1919	28.41	1,216	4.3
1925	25.23	1,531	6.1
1931	12.87	631	4.9
1937	19.72	893	4.5

Note: 1890 - 1912: Based on investigation of agricultural village conditions by Mankichi SAITO.

1919 - 1937: Landowners' income is based on the Japan Hypothec Bank investigation, and living cost is based on an investigation of farm household economy by the Ministry of Agriculture & Forestry/
(7) p.37

Table 9 Decreases in Waste Lands and Grasslands (1877-1951),
Foot of Mt. Kirishima, in South Kyushu
(In per cent)

Land	1877	1951
Grassland	9.2	6.5
Waste land	14.8	4.2
Firewood & charcoal forests	—	3.6
Shrub	2.7	—
Forestland	73.3	85.3
Total	100.0	100.0

Source: (2) p. 369

TABLE 10
Progress of Land Reclamation ('000 chō and '000 households)

	Hokkaido		Rest of Japan		Total	
	Mar. 1951	Mar. 1955	Mar. 1951	Mar. 1955	Mar. 1951	Mar. 1955
Area surveyed for suitability	947	1,040	1,601	1,785	2,548	2,825
Area found suitable	653	719	866	955	1,519	1,674
Area requisitioned	657	720	615	687	1,272	1,407
Area resold	182	362	278	522	460	884
Area put into cultivation:	115	177	321	389	436	566
For establishment of new farms	89	150	147	196	236	345
For expansion of holdings	27	27	173	194	200	221
No. of farm families newly established	30	—	167	—	198	230
No. of such deserting holdings	—	—	—	—	61	77
No. of existing holdings expanded	19	—	678	—	698	940
No. of these relinquishing land	—	—	—	—	123	152

Source (1) p. 184

Table 11 Condition of Fragmented Farm Lands by Number of Land Pieces per Farm Household and by Land Area per Piece

	Number of land pieces per farm household		Land area per piece (are)	
	1953	1960	1953	1960
All Japan except Hokkaido	6.12	5.24	1.25	1.48
Size:				
Under 0.5 ha	3.72	3.19	0.75	0.85
0.5 to under 1.0 ha	6.80	5.71	1.08	1.27
1.0 to under 1.5 ha	8.50	7.24	1.43	1.67
1.5 ha & over	9.02	7.99	2.21	2.51

Notes: 1) The number of land pieces for 1953 is obtained from calculating that mentioned in "Statistical Tables on Land Use, Winter 1953" by MAF against the number of farm households and land area shown in "The Inter-census Survey of Agriculture" in order to make the figures for 1953 connect with those for 1960.

2) The figures for 1960 are based on "The 1960 World Census of Agriculture".

(14) p. 101

Table 12 Land Tax

Year	Amount in thousand yen	Percentage to total main tax revenue
1888-92	38,446	85.6
1893-97	38,679	80.4
1898-1902	44,632	63.2
1903-07	71,579	55.8
1908-12	79,541	42.9

Source (2) p.23

Table 14 Establishment of National Advanced Educational Institutions for Agriculture

<i>Year of establishment</i>	<i>Name of institution</i>	<i>Year of establishment</i>	<i>Name of institution</i>
1890	Agr. Dept. Tokyo Imperial Univ.	1921	Mie College for Agr. and For.
1903	Morioka College for Agr. and Forestry	1922	Utsunomiya College for Agr. and For.
1907	Agr. Dept. of Hokkaido Imp. Univ.		Agr. Dept. of Kyoto Imp. Univ.
1908	Kagoshima College for Agr. and For.		Gifu College for Agr. and For.
1910	Ueda Sericultural College	1924	Miyazaki College for Agr. and For.
1914	Tokyo Sericultural College	1929	Chiba Horticultural College
	Kyoto Sericultural College	1935	Tokyo College for Agr. and For.
1920	Agr. Dept. of Kyushu Imp. Univ.		
	Tottori College for Agr. and For.		

Source: (2) p. 338

Table 13 The Number of Agricultural Schools and Their Enrollments

<i>Year</i>	<i>Vocational continuation school, agriculture section</i>		<i>Agricultural schools</i>		<i>Agricultural colleges</i>		<i>Agricultural department in univ.</i>	
	<i>Number of schools</i>	<i>Enrol.</i>	<i>Number of schools</i>	<i>Enrol.</i>	<i>Number of schools</i>	<i>Enrol.</i>	<i>Number of schools</i>	<i>Enrol.</i>
1883	—	—	—	—	—	242	—	—
1893	—	—	—	—	12	591	1	121
1903	1,121	47,845	107	11,442	2	468	1	104
1913	6,032	253,147	249	31,445	5	1,099	2	679
1923	11,862	763,869	320	51,970	10	2,658	4	634
1933	12,160	967,767	336	66,218	12	4,432	5	1,884
1943			587	142,126	24	8,937	5	2,597

[Continued]

<i>Year</i>	<i>Agricultural high schools</i>				<i>Agriculture and related depart. in junior college</i>		<i>Agricultural and related depart. in univ.</i>	
	<i>Night schools</i>		<i>Ordinary schools</i>		<i>Number of schools</i>	<i>Enrol.</i>	<i>Number of schools</i>	<i>Enrol.</i>
	<i>Number of schools</i>	<i>Enrol.</i>	<i>Number of schools</i>	<i>Enrol.</i>				
1953	1,032	72,697	481	131,042	12	942	43	22,917
1957	845	63,289	488	147,058	16	1,320	47	25,597
1960	757	58,142	500	157,488	11	1,353	45	28,040

Source: (2) p. 339

TABLE
Government-Supported Loan Schemes

Title	Purpose	Source of funds	Interest % p.a.
Agricultural Bills	Current working capital	Co-operative funds	9.1
Establishment of Livestock Farmers' Credit	Purchase of live-stock	"	up to 7.5
Disaster Relief Credit	General working capital	"	3.5-6.5
New Settlers' Credit Guarantee	Working capital for new settlers	"	up to 8.6
Agricultural Improvement Fund	(a) Purchase of materials for improved techniques	National & prefectural budgets	No Interest
	(b) Agricultural installations	Co-operative funds	5.5-10.5
Sericulture Credit Fund	Building co-op. cocoon-drying plants	"	8.7
New Settlers' Credit	Initial credit to new settlers	National budget	3.6-5.5
Agriculture, Forestry & Fishery Credit	Agricultural, &c. installations	Special Account national budget	4-7.5

15.
in Operation in 1956

Repayment	New loans per year (billion yen = approx. £ million)	Official assistance
Less than 11 mths.	26.5 (1955)	Loans from Bank of Japan to Central Co-operative Bank
3-5 yrs. (1 yr. deferment)	2.1 (1954)	State grants to prefectures to supplement interest and guarantee losses
2-5 yrs.	10.0 (1954)	"
Less than 1 yr.	0.5 (1955)	State-supported Central Guarantee Association covers losses of Prefectural New Settlers' Credit Guarantee Associations
1-3 yrs.	1.4	Payment from Special Account, prefectural budget. Govt. grant for interest payments
3-10 yrs. (1 yr. deferment)	(1956 plan)	" " Also state guarantee of losses
1 yr.	?	State support for National Sericulture Credit Fund Association
8-25 yrs. (1-5 yrs. deferment)	1.5 (1954)	Direct state administration, Special Account of national budget
5-25 yrs. (1-5 yrs. deferment)	26.2 (1954)	Government funds, administered by Agriculture, Forestry, & Fishery Credit Corporation

(1) p. 224-5

Table 16a Fertilizer Input Index
(Five year averages)

Year	Fertilizer
1878-82	100
1883-87	109
1888-92	171
1893-97	239
1898-1902	597
1903-07	1,494
1908-12	2,792

Source: (2) p.14

Table 16b Change in Domestic Consumption of Major Fertilizers
(1917-60)
(In tons)

Year	Ammonium sulphate	Calcium cyanamide	Urea	Ammonium nitrate	Ammonium chloride	Sodium nitrate
1917-21	12,315.4	73,971.6	—	—	—	61,873.4
1922-25	193,207.8	91,353.2	—	—	—	39,390.2
1926-30	449,851.4	68,310.6	—	—	—	55,076.8
1931-35	650,012.2	91,069.4	—	—	—	39,878.0
1936-40	1,095,904.4	250,507.4	—	—	—	73,689.0
1941-45	882,578.2	178,092.8	—	—	—	9,300.8
1946-50	940,601.2	278,028.8	3,648.2	159,724.8	118.0	—
1951-55	1,525,242.6	445,894.2	69,781.4	15,701.6	29,695.2	5,002.8
1956-60	1,662,200.0	413,515.6	248,082.6	20,827.0	125,294.8	9,029.0

(Continued)

Year	Super-phosphate	Double superphos.	Fused phosphate	Thomas phosphate	Potassium chloride	Potassium sulphate
1917-21	503,397.8	—	—	—	—	2,910.4
1922-25	451,080.2	—	—	—	—	11,355.2
1926-30	872,027.0	—	—	—	14,530.0	42,749.6
1931-35	986,773.8	—	—	—	39,671.6	40,426.4
1936-40	1,258,559.0	—	—	19,764.8	197,648.0	90,036.4
1941-45	470,944.2	—	—	64,221.8	115,953.0	—
1946-50	858,919.2	371.6	3,293.8	7,841.0	115,953.0	17,820.0
1951-55	1,053,538.0	1,574.0	16,094.4	43,754.6	354,536.4	151,256.0
1956-60	1,271,361.2	2,246.8	33,986.8	18,859.0	170,168.0	117,607.6

Source: (2) p.

Table 17 Changes in Fertilizer Application in the Backward District (Tohoku) of Japan.

(In kan—3.75 kilograms—per 10 ares)

Fertilizer	1913	1920	1930	1935
Wood ashes	—	—	15	20
Night soil	—	—	—	—
Composts	—	—	—	400
Stable manures	280	300	200	—
Fish cakes	4	2	—	5
Soybean cakes	—	3	—	—
Superphosphate	4	5	4	8
Ammonium sulphate	—	2	15	—
Calcium cyanamide	—	—	—	5

Table 18 Intensity of Labor and Fertilizer Input in Rice Cropping ¹⁹³⁴

Size of holding	Area planted to rice	Working days per 10a		
		Family labor	Employed labor	Total
	ha	days	days	days
under 0.5 ha	0.38	21.4	4.6	26.0
0.5-1.0 ha	0.75	19.0	2.7	21.7
1.0-1.5 ha	1.20	18.3	3.0	21.3
1.5-2.0 ha	1.70	17.2	2.9	20.1
2.0-2.5 ha	2.11	14.7	4.3	19.0
2.5-3.0 ha	2.72	14.6	4.3	18.9
3.0-3.5 ha	3.17	11.6	6.0	17.6

(Continued)

Size of holding	Fertilizer cost of the total production cost	Fertilizer cost of the total direct production cost	Yield index	
			Husked rice yield per 10a	Husked rice yield per unit labor
	%	%	koku	koku
under 0.5 ha	16.3	32.6	2.850	0.110
0.5-1.0 ha	14.6	34.6	2.753	0.127
1.0-1.5 ha	15.7	33.1	2.697	0.127
1.5-2.0 ha	15.9	32.9	2.653	0.132
2.0-2.5 ha	17.9	29.9	2.676	0.139
2.5-3.0 ha	18.7	29.5	2.672	0.141
3.0-3.5 ha	19.0	29.5	2.520	0.143

Note: Koku = 180 liters = 5 bushels.

Source: (2) p. 376

Table 19 Changes in Application of Fertilizers in Kanaya-machi, Shizuoka Prefecture (1877-1957)

Year	Major manures or fertilizers	Paddy field (Rice)		Paddy field (Barley)		Tea farm	
		Level area	Mountain area	Level area	Mountain area	Level area	Mountain area
877 887	Home made	Grass. (About 1887)	Grass.	Night soil.	(Unknown)	Soybean cake, shrimps.	(Unknown)
307	Fish cakes, soybean and rapeseed cakes, and green manures	Grass, compost, soybean & fish cake. (About 1904-5)	Grass, compost, soybean & fish cake.	Night soil, compost, soybean cake, superphos.	Night soil, compost.	Soybean cake, shrimps, org. mixed fertilizer.	—
117		Grass, compost, soybean & rapeseed cakes, distillery lees, green soybean. (About 1914-18)	Grass, soybean & rapeseed cakes, sea weeds.	Night soil, compost, soybean cakes, superphos.	Night soil, compost, superphos.	Night soil, shrimps, org. mix. fert., soybean cake, green soybean.	—
27		Grass, compost, soybean & rapeseed cakes, Chile saltpeter, P ₂ O ₅ , ammo. sulph. superphos. (About 1924)	Grass, soybean and rapeseed cakes, ammo. sulphate, P ₂ O ₅	Night soil, compost, superphos., soybean cakes, ammonium sulphate.	Night soil, compost, superphos.	Night soil, cakes, org. mix. fertilizer, shrimps.	Soybean cakes, fish cakes.
37		Grass, compost, cakes, fish, ammo. sulph., Chile saltpeter, mix. fertilizer. (About 1931)	Grass, compost, night soil, org. mix. fertilizer, superphos., ammo. sulph., P ₂ O ₅ , N	Night soil, compost, ammo. sulph., mixed fertilizer.	Night soil, cakes, superphosphate, mixed.	Night soil, cakes, green soybean, org. mix. fertilizer	Grass, org. mix. fertilizer, superphos., ammo. sulphate.
47	Mineral fertilizer	Compost, fish, ammo. sulphate, superphos., Pota. chloride, calcium cyanamide, ammo. phos., synthetic, mixed. (About 1941-45)	Grass, compost, wood ash, night soil, ammo. sulph., calcium cyanamide, superphos., K ₂ O mixed.	Night soil, compost, ammo. sulphate, superphos., P ₂ O ₅ synthetic.	Night soil, compost, ammo. sulphate, superphos., mixed.	P ₂ O ₅ , ammo. sulphate, mixed.	Rapeseed cake, grass, ammo. sulphate, mixed.
57		Rapeseed cake, ammo. sulph., calcium cya., urea, K ₂ O, pota. chloride, fused phos., synthetic, mixed. (About 1958)	Night soil, compost, ammo. sulph., K ₂ O, urea, solid, fused phos., synthetic, mixed.	Mixed, synthetic, calcium cyanamide, ammo. sulph., K ₂ O, compost, night soil.	Night soil, compost, ammo. sulph., mixed, superphos., synthetic.	Grass, ammo. sulphate, calcium cyanamide, mixed.	Fish and rape cakes, ammo. sulph., calcium cya., mixed, urea, synthetic.

nrcc: [48]. (2) p. 37

Table 20 Index of Prices of Agricultural Products and of Agricultural Production Materials

Period	Price index for agricultural products (wholesale)	Price index for agricultural production materials (prices paid by farmers)
1913-17	100	100
1918-22	209	180
1923-27	199	137
1928-32	134	90
1933-37	142	95

Note: Prepared from Table 4-9 in [8] Part 1, p. 189.
(2) p. 39

Table 22 Government-paid Average Rice Prices and Black Market Prices in Producing Areas

	Government-paid average prices (a)	Black market prices in producing areas (b)	(b)/(a) %
	yen	yen	%
1953	10,682	13,713	128.4
1954	10,008	13,300	132.9
1955	10,259	11,933	116.3
1956	9,964	10,450	104.9
1957	10,261	11,655	113.6
1958	10,256	10,928	106.6
1959	10,389	10,583	101.9
1960	10,420	10,453	100.3
1961	11,024.50	10,680	96.9

Source: The Government-paid average prices were studied by the Food Agency; and the black market prices are based on the "Rural Commodity Prices and Wage Rates Survey".
(13) p. 56

Note : (1) The Government-paid average price represents an average price of 1st to 4 grade including a variety of differential payments, additional payments packing charges the Government paid in effect to rice farmers every year.
(2) The producer's black market prices mean an annual average price based on the "Rural Commodity Prices and Wage Rates Survey".

Table 23 Numbers of cases of farm tenant disputes since 1917				
Year	Nos. of cases	Tenants concerned	Landowners concerned	Nos. of disputes brought to the court
	case	persons	persons	cases
1917	85	-	-	-
1918	256	-	-	-
1919	326	-	-	-
1920	408	34,605	5,236	-
1921	1,680	145,898	-	-
1922	1,578	125,750	29,077	-
1923	1,917	134,503	37,712	-
1924	1,532	110,920	27,223	27
1925	2,206	134,646	33,001	654
1926	2,751	151,061	39,705	954
1927	2,052	91,336	24,136	1,522
1928	1,866	75,136	19,474	1,686
1929	2,434	81,998	23,505	1,583
1930	2,478	58,565	14,159	1,638
1931	3,419	81,135	23,768	1,703
1932	3,414	61,499	16,706	2,020
1933	4,000	48,073	14,312	2,853
1934	5,828	121,031	34,035	3,323
1935	6,824	113,164	28,574	4,274
1936	6,804	77,187	23,293	4,249
1937	6,170	63,246	20,236	3,750
1938	4,615	52,817	15,422	2,777
1939	3,578	25,904	9,005	2,592
1940	3,165	38,614	11,082	2,500
1941	3,308	32,289	2,037	2,482
1942	2,756	33,185	11,139	1,876
1943	2,424	17,738	6,968	1,629
1944	2,160	8,213	3,778	1,391
1945	5,171	-	-	-

TABLE 24
Reasons Given by Landlords for Requesting Return of Leased-out Land

<i>Reasons</i>	<i>Applications</i>		<i>Approved</i>
	<i>No.</i>	<i>%</i>	<i>%</i>
Landlords starting farming:			
Returned colonial emigrants	5,744	(4.9)	52.7
Town unemployed and victims of bombing	5,923	(5.0)	47.5
Other non-cultivating landlords	7,841	(6.7)	36.9
Landlords expanding cultivated holding, owing to:			
Holding too small to maintain standard of living	13,049	(11.1)	42.4
Increase in family labour force	15,536	(13.2)	45.6
Other reasons	7,113	(6.0)	39.3
Exchange of plots to consolidate holdings	7,372	(6.3)	46.3
Prospective use of land for non-agricultural purposes	2,984	(2.5)	70.8
Breach of faith on part of tenant	2,402	(2.0)	39.6
Termination of temporary leases	31,006	(26.3)	74.6
Other reasons	18,788	(16.0)	44.1
Total	117,758	(100)	52.7

(1) p. 164

TABLE 25
Chairmanships of Town and Village Land Committees, March 1947

	<i>Per cent.</i>
Tenants	24.8
Landlords	39.1
Owner-cultivators	34.5
Neutral*	1.6
	100.0

* Up to three neutral members could be co-opted by an unanimous vote of the Committee.

(1) p. 153

Table 26 Distribution of Farm Household by Farm Size
(In per cent)

Year	Total number	0.5 ha	0.5-1.0 ha	1.0-1.5 ha	1.5-2.0 ha	2.0-3.0 ha	3.0-ha
1910	5,497,918	36.96	32.54	19.05	5.86	5.59	
1915	5,535,008	35.94	32.92	19.73	5.96	5.45	
1920	5,573,097	35.64	33.23	20.52	6.17	4.44	
1925	5,548,599	35.17	33.83	21.36	5.82	3.82	
1930	5,599,670	34.63	34.22	21.92	5.65	3.57	
1935	5,610,607	34.02	34.20	22.37	5.75	3.66	
1940	5,479,571	33.65	32.74	24.33	5.70	3.59	
1947	5,909,227	41.48	31.04	15.66	6.16	3.56	2.10
1950	6,179,419	40.84	31.94	15.56	6.13	3.37	2.17
1954	6,105,049	32.95	32.36	18.14	8.03	5.24	3.28
1960	6,056,534	38.01	31.74	16.74	6.88	3.84	2.79

Source: (2) p.648

Table 28 Changes in the Number of Farm Households during the War, by the Scales of Farm Management (excluding Okinawa)
(In thousand)

Year	Total	Non-cultivating households	Under 0.5 ha	0.5 ha	1.0 ha	2.0 ha	3.0 ha	Over 5.0 ha
1938	5,356 (100.0)		1,813 (33.8)	1,591 (29.7)	1,454 (27.1)	306 (5.7)	116 (2.2)	75 (1.4)
1941	5,412 (100.0)	24 (0.4)	1,783 (32.9)	1,623 (30.0)	1,461 (27.0)	333 (6.2)	118 (2.2)	70 (1.3)
1946	5,698 (100.0)	3 (-)	2,233 (39.2)	1,786 (31.3)	1,337 (23.5)	211 (3.7)	77 (1.4)	51 (0.9)
Increase or Decrease during 1938-46	+286 (+5.3)	-21 (-87.5)	+450 (+25.2)	+163 (+10.0)	-124 (-8.5)	-122 (-25.6)	-41 (-34.7)	-19 (-27.1)

Note: Figures in parentheses indicate percentages.

(2) p. 62

Table 27 Changes in the Composition of Farm Households by Size of Cultivated Area
(1,000 households/percent)

Period	Size of Cultivated Area					Total
	Less than 0.5 ha	0.5 - 1 ha	1 - 2 ha	2 ha & over	Other	
Pre-Land Reform (1945)	1,783 (33%)	1,623 (30%)	1,461 (27%)	521 (10%)	24 (0%)	5,412 (100%)
Post-Land Reform (1950)	2,522 (41%)	1,973 (32%)	1,340 (22%)	333 (5%)	8 (0%)	6,176 (100%)
1965	2,118 (38%)	1,775 (31%)	1,371 (24%)	388 (7%)	12 (0%)	5,665 (100%)

(12) p. 17

Table 29 Number of Farm Land Ownership Transfers by Size of Land Areas

Size of Land	1957		1959		1961	
	Transferred	Received	Transferred	Received	Transferred	Received
Idle land	—	756	—	1,189	—	1,301
Under 0.3 ha	68,810	25,050	66,803	25,214	72,880	27,555
0.3 to under 0.5 ha	66,154	69,127	62,956	67,668	66,876	65,135
0.5 to under 1.0 ha	123,185	141,770	123,683	137,090	132,912	146,145
1.0 to under 1.5 ha	71,937	89,836	75,683	85,637	77,101	98,548
1.5 to under 2.0 ha	28,664	34,835	29,792	35,101	31,715	39,858
2.0 to under 3.0 ha	16,656	18,593	17,814	19,585	18,893	21,459
3.0 to under 5.0 ha	3,156	3,638	3,482	3,443	3,665	4,130
5.0 ha & over	50	7	51	28	164	80
Total	383,612		374,955		404,211	

(14) p. 103

Table 30 Number of Farm Households, Area of Cultivated Land and Transfers of Owner-farmed Land (HOKKAIDO excluded)

Scale of Farming	Less than 70 a.	70 a. - 1.5 ha	1.5 ha and over	Total
% of Farm Households (1960)	54 %	35 %	11 %	100 %
(1965)	53	35	12	100
% of F.H. who sold Land (1960)	50	36	14	100
(1965)	50	36	14	100
% of F.H. who bought Land (1960)	39	44	17	100
(1965)	38	43	19	100
% of cultivated Land (1960)	25	46	29	100
(1965)	24	45	31	100
% of Land Sold (1960)	43	38	19	100
(1965)	42	38	20	100
% of Land Bought (1960)	36	42	22	100
(1965)	33	43	24	100

Source: (3) p. 17

Table 31 Increase or Decrease Rates of Farm Households by Economic Regions and Farm Size Groups (1950-60, All Prefectures) (unit: %)

	Total	Below 3 tan	3-5 tan	5 tan-1.0 cho	1.0-1.5 cho	1.5-2.0 cho	2.0-3.0 cho	3.0-5.0 cho	5.0 cho or more	Exceptional provisions
On the outskirts of large cities	△ 6.9	△ 13.9	△ 4.8	△ 6.8	0.3	7.5	2.5	△ 14.7	△ 50.0	85.6
On the outskirts of local cities	△ 1.9	△ 10.0	△ 0.1	△ 1.7	3.7	5.2	7.6	21.2	30.6	77.7
Plain agricultural villages	△ 1.1	△ 9.8	△ 3.6	△ 3.7	4.9	8.4	8.3	12.3	29.5	147.7
Agricultural-mountain villages	△ 2.4	△ 14.4	△ 6.4	△ 1.7	8.5	17.0	29.3	82.7	149.8	217.5
Mountain villages	△ 2.1	△ 11.2	△ 4.9	△ 0.5	6.8	20.9	48.3	135.1	129.3	154.9

(13) p. 130

Table 32a Agricultural Output (1878-1912)
(Five-year averages)
(In million yen at 1928-32 prices)

Year	Agricultural gross output		Agricultural net output	
1878-82	960	(100)	825	(100)
1883-87	1,088	(113)	934	(113)
1888-92	1,349	(140)	1,089	(131)
1893-97	1,420	(147)	1,196	(144)
1898-1902	1,688	(175)	1,432	(173)
1903-07	1,842	(191)	1,517	(183)
1908-12	2,129	(221)	1,722	(208)

Source: (2) p. 9

Table 32b Changes in the Agriculture Production Index and
Yield of Paddy Rice per 10 ares

	Agriculture production index	Yield of paddy rice per 10 ares	
		Kg	Index
1895 - 1899	100.0	214	100.0
1900 - 1904	110.8	240	112.2
1905 - 1909	119.9	250	116.8
1910 - 1914	132.6	262	122.5
1915 - 1919	151.7	286	133.8
1920 - 1924	150.7	287	134.3
1925 - 1929	163.7	289	135.0
1930 - 1934	173.5	293	137.0
1935 - 1939	185.3	314	146.8
1940 - 1944	163.5	302	141.3
1945 - 1949	135.0	285	133.1
1950 - 1954	176.7	312	146.0
1955 - 1959	222.8	376	175.7
1960 - 1964	257.6	398	186.2

(3) p. 14

Table 33a.

Per cent increase between
the annual average
in 1908-12 and
in 1933-37

Commodity	
Total agricultural production	38
Total crops	22
Rice	26
Other cereals	no change
Fruits	103
Vegetables	49
Cocoon	123
Industrial crops	45
Livestock products	190

(2) p. 31

Table 33b Changes of Farm Production Indices
during the War
(1933-35=100)

Year	Farm produc- tion	Crops						Seri- cul- ture	Stock- rais- ing	
		Com- bined	Rice	Cereals other than rice	Beans and pease	Fruits	Vege- tables			Indus- trial crops
1937	110.6	113.2	110.5	105.1	112.5	107.2	112.6	169.3	95.4	107.4
1938	107.3	110.9	109.7	95.5	98.9	108.6	108.2	172.9	83.5	113.2
1939	116.1	118.4	114.9	116.7	100.7	119.5	104.4	203.2	100.8	117.3
1940	106.4	106.2	101.4	121.3	93.7	121.9	105.9	127.9	97.1	126.0
1941	91.7	96.5	91.7	106.6	87.9	128.4	102.7	115.2	77.5	103.5
1942	101.7	109.2	111.2	104.6	103.3	125.9	101.9	198.5	62.0	85.2
1943	96.1	113.7	104.7	87.1	83.7	119.2	111.7	88.0	60.0	70.8
1944	77.6	98.3	97.5	107.8	80.1	97.0	100.3	89.7	44.7	47.6
1945	59.7	68.6	65.2	76.5	58.9	63.1	88.5	46.2	25.0	23.9

Source: (2) p. 50

Table 33c Agricultural Production Indices
(1960=100)

Year	Total Agriculture	Total Crops	Rice	Fruit	Animal Products
1950	68.8	74.8	78.3	44.9	28.9
1955	90.4	93.7	96.3	57.8	70.0
1960	100.0	100.0	100.0	100.0	100.0
1963	105.2	96.2	100.0	106.2	155.6
1966	115.9	101.3	99.4	140.3	201.0

(12)

Table 34 Increases in Land and Labor Productivity, 1878-1960
(Five Year Averages)

Year	Land productivity (Net output/arable land)	Labor productivity (Net output/labor force)	Labor force (thousands)
	<i>yen</i>	<i>yen</i>	
1878-82	17.3 (100) ¹	53.0 (100)	15,573 (100)
1883-87	20.5 (118)	60.2 (113)	15,511 (99)
1888-92	22.2 (128)	70.4 (132)	15,466 (99)
1893-97	23.8 (137)	77.7 (146)	15,397 (98)
1898-1902	28.3 (163)	93.5 (176)	15,303 (98)
1903-07	28.5 (164)	99.9 (188)	15,184 (97)
1908-12	30.5 (176)	115.2 (217)	14,490 (95)
1913-17	31.2 (180)	125.2 (236)	14,613 (93)
1913-17	31.2 (100)	125.2 (100)	14,613 (100)
1918-22	32.5 (104)	142.3 (114)	13,876 (95)
1923-27	31.3 (100)	138.1 (110)	13,760 (94)
1928-32	35.3 (113)	153.4 (123)	13,744 (94)
1933-37	38.0 (122)	168.6 (135)	13,670 (93)
1946-50	52.1 (100)	151.0 (100)	17,290 ² (100)
1951-55	61.0 (117)	186.0 (123)	16,560 (96)
1956-60	61.8 (119)	210.0 (139)	15,660 (91)

1. Figures in parentheses show the series as relatives in each period.

2. Figures include forestry.

Table 35 Real Net Output by Industrial Sectors
(1928-32 prices)
(In million yen)

Year	Primary industry	Secondary industry	Tertiary industry
1888-92	1,150 (100) ¹	356 (100) ¹	664 (100)
1893-97	1,467 (128)	528 (148)	829 (134)
1898-1902	1,757 (153)	793 (223)	1,177 (177)
1903-07	1,791 (156)	803 (226)	1,354 (204)
1908-12	2,040 (177)	1,037 (291)	1,820 (274)
1913-17	2,025 (176)	1,479 (415)	2,150 (324)
1913-17	2,025 (100)	1,479 (100)	2,150 (100)
1918-22	2,409 (119)	1,826 (123)	2,977 (138)
1923-27	2,551 (126)	2,253 (152)	4,529 (211)
1928-32	2,552 (126)	3,373 (228)	6,463 (300)
1933-37	2,862 (141)	4,713 (318)	7,420 (345)
1938-42	3,156 (156)	7,050 (477)	8,534 (397)
1946-50	3,289 (100)	3,134 (100)	4,005 (100)
1951-55	3,989 (121)	5,440 (174)	7,915 (198)
1956-60	4,471 (136)	9,097 (290)	12,350 (308)

1. Figures in parentheses show the series as relatives in each period.

Table 36

Indexes of Physical Productivity in Agriculture
and Manufacturing Industry
(1957 - 59 av. = 100)

Fiscal year	Agriculture			Manufacturing industry		
	Production indexes	Active popula- tion indexes	Produc- tivity indexes	Produc- tion indexes	Active popula- tion indexes	Produc- tivity indexes
1953	73.8	108.9	67.8	53.7	81.1	66.2
1954	81.3	107.8	75.4	55.7	82.4	67.6
1955	98.3	108.7	90.4	62.8	87.3	71.9
1956	92.7	105.9	87.5	78.5	90.8	86.5
1957	96.4	103.7	93.0	88.6	97.1	91.2
1958	100.5	99.8	101.5	91.5	101.0	90.7
1959	103.2	97.3	106.1	119.9	101.8	117.8
1960	105.3	94.4	111.5	149.4	108.1	138.2
1961	106.3	91.9	115.7	181.7	115.5	157.3

Source: The agricultural production indexes represent net agricultural production indexes based on the Ministry of Agriculture and Forestry's "Agriculture, Forestry and Fisheries Production Indexes", and the production indexes in manufacturing industry the Ministry of International Trade and Industry's "1955 Standard Production Indexes (added value weight)"

Note: (1) For the production indexes in agriculture, the data for calendar years were substituted for those for fiscal years.

(2) The active population indexes have been based on the Prime Minister's Office's "Labor Force Survey (Rectified)". The data for fiscal 1959 was estimated as values on a trend curve (an equation of the first degree) ranging from 1955 to 1961 excluding fiscal 1959 both for agriculture and manufacturing industry.

(3) The productivity indexes have been calculated/by dividing their production indexes by their active population indexes.

Table 37a. Demand and Supply for Agricultural Products
(Five year averages)
(In million yen)

Year	Domestic demand	Domestic supply
1878-82	420	431
1883-87	326	333
1888-92	463	460
1893-97	663	632
1898-02	1,058	959
1903-07	1,425	1,230
1908-12	1,754	1,501

Source: (2) p. 12

Table 37b Supply and Demand for Rice (brown rice)
(In thousand tons)

Year	Supply			Exports	Supply available for domestic use
	Production	Imports	Total		
1874-75	3,745	1	3,746	5	3,741
1878-82	4,349	5	4,354	38	4,316
1883-87	4,789	5	4,793	51	4,742
1888-92	5,786	5	5,871	128	5,743
1893-97	5,903	154	6,057	104	5,953
1898-1902	6,255	292	6,547	86	6,461
1903-07	6,579	654	7,234	46	7,188
1908-12	7,553	330	7,883	59	7,824

- Notes: 1. Imports and exports include shipment and to former Japanese colonies, namely Taiwan and Korea.
2. Estimates made by the Ministry of Agriculture and Forestry.

(2) p. 25

Table 37c Real Net Output by Industrial Sectors
(In million yen)

Year	Primary industry		Secondary industry		Tertiary industry	
1882-92	1,150	(100)	356	(100)	664	(100)
1893-97	1,467	(128)	528	(148)	892	(134)
1898-1902	1,757	(153)	793	(223)	1,177	(177)
1903-07	1,791	(156)	803	(226)	1,354	(204)
1908-12	2,040	(177)	1,037	(291)	1,820	(274)

Source:

(2) p. 7

Table 38a Changes in the Number of Part-time and Full-time Farm Households during the War (excluding Okinawa)
(In thousand of households)

Year	Total	Full-time households	Part-time households		
			Total	First category	Second category
1938	5,356(100.0)	2,421(45.2)	2,935(54.8)	1,641(30.6)	1,294(24.2)
1941	5,412(100.0)	2,245(41.4)	3,167(58.5)	2,019(37.3)	1,148(21.2)
1942	5,419(100.0)	2,062(38.1)	3,357(61.9)	2,101(38.8)	1,256(23.1)
1943	5,502(100.0)	1,895(34.4)	3,607(65.6)	2,237(40.7)	1,370(24.9)
1944	5,536(100.0)	2,068(37.3)	3,468(62.7)	2,118(38.3)	1,350(24.4)
Increase or decrease during 1941-44	+124 (+2.3)	-177 (-7.9)	+301 (+9.5)	+99 (+4.9)	+202 (+17.6)

Note: Figures in parentheses represent percentages.
First category: Those mainly engaged in farming.
Second category: Those mainly engaged in non-agricultural occupations.

(2) p. 61

Table 38b Number of Farm Households Classified by Full-time and Part-time (All Japan)

	Number in 1,000				
	1941	1950	1955	1960	1961
Total	5,412	6,176	6,043	6,025	5,898
Full-time	2,245	3,086	2,105	2,062	1,552
Part-time	3,167	3,090	3,938	3,964	4,346
Type I	2,019	1,753	2,275	2,028	1,800
Type II	1,148	1,337	1,663	1,936	2,546

	Percentage				
	1941	1950	1955	1960	1961
Total	100.0	100.0	100.0	100.0	100.0
Full-time	41.5	50.0	34.8	34.2	26.3
Part-time	58.5	50.0	65.2	65.8	73.7
Type I	37.3	28.4	37.6	33.7	30.5
Type II	21.2	21.6	27.6	32.1	43.2

Source:

Note: Type I of part-time farm households indicates those mainly engaging in farming while Type II those mainly engaging in non-agricultural occupations.

(14) p. 82

TABLE 38c

Farm Families with at least One Member Wholly or Partially Engaged in Occupations other than Agriculture (excluding Hokkaido)

Type of occupation	No. of families	Percentage of all farm households
Forestry, all forms	562,115	9.6
Independent charcoal-burner	326,293	5.6
Employee in forestry work (more than 30 days p.a.)	262,890	4.5
Fishing, all forms	218,000	3.7
Domestic handicrafts	116,528	2.0
Other independent, industrial, retail, service enterprise	393,607	6.8
Wage labour	1,203,716	20.6
Clerical, technical, teaching employment	948,971	16.3
Total farm households	5,831,088	100.0

(1) p. 209

Table 39 Distribution of Farm Households by Size of Holding under Management and by Types of Full-time and Part-time (Unit: %)

Size of Farm Households	Full-time			Part-time (Type II)		
	1955	1960	1961	1955	1960	1961
under 0.3 ha	11.6	12.5	9.1	73.9	77.2	87.1
0.3 to under 0.5 ha	19.8	18.6	10.6	39.7	50.5	73.0
0.5 to under 1.0 ha	37.1	34.5	29.6	11.6	18.1	44.0
1.0 to under 1.5 ha	55.3	53.5	42.8	2.2	3.6	8.1
1.5 to under 2.0 ha	54.4	63.3	55.2	0.8	1.4	2.5
2.0 ha and over	70.3	69.7	63.7	0.4	1.0	1.5
Exceptional farms	14.8	27.0	22.6	81.3	64.6	67.5
Total	34.5	33.7	25.4	27.5	32.3	43.8

Source: (14) p. 83

Note: The above percentages are those of full-time farm households or of part-time households in Type II against the total farm households.

Table 40 Managerial Factors by Size of Cultivated Land under Management, 1961 (National average per farm household)

	Unit	Under 0.3 ha	0.3 to 0.5 ha	0.5 to 1.0 ha	1.0 to 1.5 ha	1.5 to 2.0 ha	2.0 ha & over	Total
No. of workers for farming	person	0.9	1.5	2.3	2.9	3.2	3.6	2.2
Capital formation	1,000 yen	31.3	42.3	76.9	127.8	171.8	208.1	86.9
Fixed capital per worker for farming (except land)	1,000 yen	132.1	126.4	147.0	175.1	205.5	220.2	161.5
Purchase for commodities per 10 ares	1,000 yen	13.3	12.3	12.4	11.7	10.7	9.0	11.0
Labor input per 10 ares	hour	537.5	520.5	494.4	441.5	365.6	281.9	427.5
Net agri. production per worker	1,000 yen	65.3	67.7	92.0	119.7	149.4	188.6	109.7
Percentage of workers mainly engaged in farming	%	32.1	48.5	70.5	85.6	90.1	94.3	70.0
Percentage of agri. income against total farm household economy	%	15.1	24.7	52.3	77.7	93.2	106.2	55.4

(14) p. 88

Table 41 Changes in the Number of Persons Engaged in Agriculture

	Total Employed Population (A)	Active Agricultural Population (B)	$\frac{(B)}{(A)}$	Number of Farm Households
	Million (Index)	Million (Index)	%	1000 house-holds (Index)
1955	41.5 (100)	15.4 (100)	37.1	6,075 (100)
1960	44.9 (108)	13.4 (87)	29.8	6,057 (99.7)
1965	*46.9 (113)	*11.5 (75)	*24.5	5,665 (93.3)

Source: (3) p. 11

* — 1964.

Table 42a. Real National Income per Capita of Working Population
(In thousand yen)

Year	Agriculture (A)	Manufacturing industries (B)	$\frac{A}{B}$ (%)
Average of 1934-1936	57.8	212.4	27.2
1949	52.9	159.7	33.1
1950	62.4	194.6	32.1
1951	67.5	207.6	32.5
1952	68.9	201.5	34.2
1953	61.0	214.5	28.4
1954	64.9	212.3	30.6
1955	76.9	222.6	34.5
1956	68.6	254.1	27.0
1957	71.5	255.5	28.0
1958	78.5	255.4	30.7
1959	83.5	310.4	26.9
1960	87.3	366.9	23.8

Note: Based on the 1958 prices; aggregate deflators of national income were used in common.

Table 42b. Changes in Gross Food Expenditures
(In thousand million yen)

Year	Disposable personal income (A)	Personal consumption expenditure (B)	Expenses on food and drinks (C)	$\frac{C}{A}$	$\frac{\Delta C}{\Delta A}$	$\frac{\Delta C}{\Delta A} \cdot \frac{C}{A}$
1951	3,729	3,018	1,806	48.5	—	—
1952	4,358	3,679	2,094	48.1	45.7	0.950
1953	4,865	4,351	2,411	49.6	62.6	1.262
1954	5,288	4,740	2,611	49.4	47.1	0.953
1955	5,941	5,118	2,703	45.5	14.1	0.309
1956	6,468	5,501	2,899	44.8	37.2	0.830
1957	7,058	5,980	3,056	43.3	26.7	0.617
1958	7,450	6,294	3,179	42.7	31.2	0.736
1959	8,413	6,877	3,324	39.5	15.1	0.382
1960	9,551	7,694	3,577	37.5	22.2	0.592

(2) p. 102

Table 42c Percent Distribution of Agricultural Income by Productive Factors, before and after the Land Reform (Unit: %)

Year	Land	Capital	Labor	Ratio of agri. income remaining within farms	Ratio of agri. income flowing out of farms
Before the land reform					
1934	36.94	7.83	55.23	76.01	23.99
1935	34.89	6.84	58.27	76.44	23.56
1936	32.45	6.26	61.29	77.95	22.05
After the land reform					
1950	4.05	6.81	89.14	96.59	3.41
1951	3.22	6.56	90.22	96.57	3.03
1952	3.71	7.80	88.49	96.46	3.54

(14) p. 109

Table 43a Change in Farm Economy in Prewar (1934-36) and Postwar (1952-54) Periods by Size of Holding
(In per cent)

	0.5-1.0ha	1.0-1.5ha	1.5-2.0ha	2.0ha or more	
Agricultural receipt ²	100.2	100.4	112.8	122.4	
Agricultural income (A) ²	132.8	117.9	130.5	130.8	
Income of farm household (B) ²	130.1	128.7	131.1	127.7	
Tax and public imposts (C) ²	152.4	138.5	196.8	195.9	
Household expenses (D) ²	139.4	148.5	142.1	144.3	
Surplus (E) ²	50.7	46.8	64.6	63.4	
A/B	{ 1934-36 1952-54	{ 16.1 ¹ 62.6	{ 84.6 77.4	{ 84.0 83.7	{ 85.8 87.9
C/B	{ 1934-36 1952-54	{ 6.4 7.4	{ 7.6 8.2	{ 6.3 9.5	{ 7.4 11.4
A/D	{ 1934-36 1952-54	{ 68.3 65.0	{ 105.8 84.0	{ 103.0 94.7	{ 114.8 104.1
Rate of tenancy rent to management cost	{ 1934-36 1952-54	{ 39.2 0.8	{ 35.6 0.6	{ 44.1 0.5	{ 41.7 0.3
Rate of agricultural income ³	{ 1934-36 1952-54	{ 79.5 67.4	{ 76.6 74.8	{ 77.5 69.1	{ 79.9 69.4

1. In the prewar days, non-agricultural income occupied a larger proportion in the income of farmers of this group.
2. Figures under these items are indices to the base year 1934-36.
3. Rate of agricultural income = agricultural income / agricultural receipt. In the prewar period, the tenant rent paid was added to the agricultural income.
Agricultural receipt - Agricultural expenditure = Agricultural income.
Income of farm household = Agricultural income + non-agricultural income.

(2) p. 81

Table 43b Farm Household Economy by Size of Farm Land under Management

Size of land	Per capita income of farm household members (Fiscal 1961)	Ratio of non-agricultural income in farm household income (Fiscal 1961)	Degree of agricultural income meeting living expenditure	
			Fiscal 1957	Fiscal 1961
Under 0.3 ha	87,025.28	86.1%	19.7%	15.1%
0.3 to under 0.5 ha	82,689	77.0	31.3	24.6
0.5 to under 1.0 ha	75,223	51.0	58.3	52.3
1.0 to under 1.5 ha	79,766	31.0	80.2	77.7
1.5 to under 2.0 ha	89,178	21.5	90.7	93.2
2.0 ha & over	101,579	13.7	102.1	106.2
Average	81,033	49.7	59.6	55.4

(14) p. 112

Table 44a Average Income and Expenses per Owner-farmer Household
(In yen per year)

Item	Depression period		Post-depression period	
	1924	1930	1931	1935
1. Gross agricultural income	2,546	1,440	790	1,147
2. Agricultural expense	1,187	860	311	382
3. Net agricultural income	1,359	580	478	765
4. Side income	389	195	122	134
5. Family income	—	63	41	54
6. Total net household income (3-4-5)	1,748	837	641	954
7. Cost of living	1,392	919	631	794
8. Balance	356	(-)82	10	160

(2) p. 43

Table 44b Changes in Farm Household Economy during the War
(In yen)

Year	Gross agricultural income	Farm operating costs	Net agricultural income	Non-agricultural income	Household expenditure	Economic surplus
(In nominal values)						
1937	1,375	525	850	189	806	233
1938	1,519	571	947	210	869	288
1939	2,034	636	1,398	271	1,105	564
1940	2,260	762	1,498	316	1,280	534
1941	1,987	667	1,319	323	1,335	307
1942	2,654	867	1,787	308	1,547	548
1943	2,744	769	1,975	611	1,740	846
1944	3,316	787	2,529	977	2,072	1,434
1944/1937 (%)	241	150	298	517	257	616
(In real values)						
1937	1,375	525	850	189	806	233
1938	1,385	489	896	179	724	341
1939	1,479	459	1,020	195	744	471
1940	1,376	408	968	164	674	458
1941	1,227	368	859	178	665	372
1942	1,592	457	1,135	163	712	586
1943	1,562	396	1,166	314	713	767
1944	1,687	390	1,297	405	701	1,001
1944/1937 (%)	123	74	153	214	87	430

Note: The Farm Household Economy here means that of a part-tenant part-owner farmer with the scale of farm management of between 1.2 and 1.3 hectares.
Real values were derived by deflating the rural commodity price index (1937 = 100) as surveyed by the National Agricultural Association. (2) p. 58

Table 44c Trend of a Farm Household Economy
(All Japan average except Hokkaido)

	Unit	1934-36	1949	1952	1957	1961
Income of farm household	yen	838	172,634	280,160	336,459	455,406
Agricultural income	yen	842 ^a	124,100	193,866	189,124	229,196
Non-agricultural income	yen	161	48,534	86,294	147,331	226,210
Disposable income	yen	824	151,851	273,589	336,214	462,378
Family expenditure for living	yen	691	157,795	250,858	317,090	414,046
Surplus of farm household economy	yen	133	12,593	22,531	19,124	48,332
Agricultural income ratio ^a	%	61.6 ^a	74.0	71.1	64.8	60.7
Ratio of non-agri. income in income of farm household	%	19.3	28.1	30.8	43.8	49.7
Ratio of taxes & public imposts & obligations in income of farm household	%	7.0	15.9	8.8	7.6	7.6
Degree of agri. income to satisfy family expenditure for living	%	97.9	78.6	77.3	59.5	55.4
Size of agri. land under management	ha	1.41	1.02	1.01	0.86	0.88

(14) 108

Notes: a. Includes land rent.
b. Ratio of agricultural income to agricultural receipts.

147

Table 45a Living Expenditure of Farm Household and Its Relative Importance for Major Items in Selected Years
(per Farm Household, All Prefectures except Hokkaido).

Year	1934~1936	1949	1952	1957	1961
No. of household members	6.3	6.7	6.5	5.9	5.6
Total living expenditure of family members (yen)	691	157,795	250,858	317,090	414,046
Cash (%)	53.9	54.1	55.8	61.3	69.4
Structure of household expenditure (%)					
Food and beverages	51.3	52.9	50.9	48.4	41.2
Staple food	69.5	50.9	55.3	48.8	42.0
Clothing	9.3	10.4	12.3	11.0	11.2
Heat and light	4.8	6.9	5.4	4.8	4.5
Housing	3.4	10.8	10.5	11.2	15.8
Furnitures and utensils	3.0	4.2	4.4	3.9	9.0
Cultural and recreational	3.7	3.7	6.5	8.4	9.2

(14) p. 114

Table 45b Extension of Durable Goods among Farm Households

(Unit: %)

Item	Date	
	Feb. 1959	Feb. 1962
Dresser for kimono and underwears	—	95.0
Wardrobe	36.7	42.9
Sewing machine	52.5	62.8
Still camera	17.3	21.4
Radio	90.6	79.3
Transistor radio	—	15.6
Electric fan	—	12.4
Television set	4.3	48.9
Electric washing machine	6.8	22.9
Electric refrigerator	—	4.8
Electric rice cooker	4.7	19.4
Electric well-pump	9.4	19.5
Bicycle	89.5	89.3
Motorcycle and motor scooter	10.5	27.5

(14) p. 115

Table 46a The Number and Value of Imported Bulls and Studs for Breeding Purposes
(In head)

Year	Bulls				Studs			
	Private	Government	Total	Average value per head	Private	Government	Total	Average value per head
	head	head	head	yen	head	head	head	yen
1868	—	—	—	—	—	—	1	—
1869	7	20	27	—	—	—	—	—
1870	—	—	—	—	—	—	—	—
1871	2	3	5	—	—	—	—	—
1872	132	4	136	—	—	—	2	—
1873	13	22	35	—	—	—	—	—
1874	214	24	238	144	5	8	13	179
1875	83	17	100	51	20	1	21	199
1876	24	16	40	122	22	2	24	95
1877	21	45	66	342	11	48	59	183
1878	—	25	25	125	5	14	19	157
1879	356	7	363	262	16	4	20	222
1880	140	—	140	35	22	2	24	107
1881	145	—	145	45	30	3	33	162
1882	139	3	142	17	28	2	30	133
1883	5	—	5	84	5	15	20	335
1884	15	7	22	47	9	18	27	223
1885	68	—	68	32	11	4	15	178
1886	16	6	22	7	50	30	80	128
1887	87	3	90	53	71	105	176	73
Total	1,467	202	1,669	—	305	259	564	—

(2) p. 568

Table 46b. The Number and Value of Imported Sheep

Year	Private	Government	Total	Average value per head
	head	head	head	yen
1868	—	—	—	—
1869	—	8	8	—
1870	—	—	—	—
1871	—	—	—	—
1872	—	18	18	—
1873	—	128	128	—
1874	958	2	960	8.15
1875	1,692	884	2,576	7.25
1876	2,865	1,452	4,317	6.09
1877	2,015	1,582	3,597	8.66
1878	507	1,538	2,045	7.30
1879	1,647	195	1,842	10.99
1880	873	720	1,593	6.01
Total	10,557	6,527	17,034	—

(2) p. 570

Table 47a Input of Agricultural Materials

Year	Total (million yen)	Constitution (%)				
		Fertilizer	Agri. chemical	Materials incl. those for proces- sing	Feedstuff	Others
1952	23,814,400	56.8	4.2	7.6	11.8	19.6
1953	22,783,100	51.7	4.8	7.8	14.9	20.8
1954	25,154,800	48.9	5.6	7.4	17.4	20.8
1955	27,012,000	50.1	5.8	7.3	18.7	18.1
1956	29,748,300	46.6	6.1	7.8	21.2	18.2
1957	30,795,600	42.7	6.1	7.5	24.8	18.3
1958	32,130,300	41.3	6.0	7.4	27.2	18.1
1959	33,714,200	38.3	6.9	7.8	28.7	18.3
1960	37,500,500	34.8	6.7	7.7	33.1	17.6
1961	41,289,900	32.4	7.1	8.0	39.2	17.3

Source:

Note: Under the above column "Others", expenses for light, heat and power, clothing for farm work, small farm implements, repairs of such implements, repairs of agricultural building, and other miscellaneous items are included.

(14) p. 69

TABLE 47b PRICE: PRICE, YIELD, AND FERTILIZER CONSUMPTION

Country	Price of Rough Rice (U.S. Cents Per Kg.) 1960-61	Kgs. of Rough Rice Equiva- lent in Price to 1 Kg. of N 1960-61	Total Con- sumption of N,P,K, (Kg. Per Hectare) 1962-63	Yield (Kg. Per Hectare) 1961-63
Japan	15.6	1.78	270.1	5050
Taiwan	10.0 ¹	4.10 ¹	190.0	3210
India	6.6	5.58	3.4	1480
Philippines	7.8	4.13	9.4	1220
Thailand	5.5	4.36	2.1	1430
Pakistan	11.0	1.27	5.7	1590

¹ Estimated. Not given in source.

(5) p. 121

Table 48 Number of Workers for Farming, by Sex and Age Groups

Year	Age	1930		1950		1960	
		1,000	%	1,000	%	1,000	%
Age group	Total, 14 yrs or over	13,831	100.0	16,132	100.0	(15 yrs) 13,216.1	100.0
	14 ~ 19	1,998	14.4	2,232	13.8	(15~19 yrs) 703.6	5.3
	20 ~ 24	1,509	10.9	2,179	13.5	1,159.8	8.9
	25 ~ 39	4,142	29.9	4,590	28.5	4,465.8	33.8
	40 ~ 59	4,690	33.9	5,127	31.8	4,740.1	35.9
	60 ~	1,491	10.9	1,998	12.4	2,136.8	16.1
Male	Total, 14 yrs or over	7,544	100.0	7,819	100.0	(15 yrs) 6,057.2	100.0
	14 ~ 19	1,096	14.5	1,149	14.7	(15~19 yrs) 344.4	5.7
	20 ~ 24	751	10.0	989	12.6	484.4	8.0
	25 ~ 39	2,099	27.8	1,921	24.6	1,848.4	30.5
	40 ~ 59	2,576	34.1	2,550	32.6	2,108.5	34.0
	60 ~	1,021	13.6	1,208	15.5	1,271.5	21.8
Female	Total, 14 yrs or over	6,287	100.0	8,314	100.0	(15 yrs) 7,158.9	100.0
	14 ~ 19	903	14.6	1,083	13.0	(15~19 yrs) 359.2	5.0
	20 ~ 24	757	12.0	1,190	14.3	685.4	9.6
	25 ~ 39	2,042	32.5	2,670	32.1	2,617.4	36.7
	40 ~ 59	2,115	33.6	2,578	31.0	2,631.6	36.8
	60 ~	471	7.3	790	9.6	865.3	11.9

Source: (14) p. 58

Note: Figures in parentheses show a rate to the total of male and female workers 14 years old and over.

Table 49a Number of Graduates Engaged in Agriculture

Date	Total (graduates)	Working						
		Total (A)	Incl. agriculture (B)					
			Total (B)	(B) (A)	Incl. Male (C)	(C) (B)	Incl. graduates of senior-high. (D)	(D) (E)
Mar. 1950	1,842	831	439	52.9	233	53.1	25	5.7
Mar. 1952	2,248	1,079	420	38.9	217	51.7	57	13.6
Mar. 1954	2,212	943	233	24.8	135	57.9	48	20.4
Mar. 1956	2,628	1,188	252	21.2	145	57.5	58	23.2
Mar. 1958	2,673	1,222	185	15.2	103	58.4	46	24.7
Mar. 1960	2,704	1,256	127	10.1	78	61.4	42	33.4
Mar. 1962	2,964	1,302	81	16.1	51	62.9	26	32.1

Note: Figures are the total of graduates from junior and senior high schools.

Table 49b Urban and Rural Population by Grades of Schooling

(Unit: %)

	Age group	Elementary school ^a	Secondary school ^b	University ^c	Total
Urban area with denser population	20-29	48.2	41.7	10.1	100
	30-39	47.3	39.4	13.3	100
	40-49	61.0	30.0	9.0	100
	50-59	69.6	22.4	8.0	100
	60-69	79.0	15.2	5.8	100
	Total	55.6	34.3	10.1	100
Rural area with denser population	20-29	68.4	27.7	3.9	100
	30-39	76.1	19.7	4.2	100
	40-49	83.8	13.7	2.5	100
	50-59	83.9	9.0	2.1	100
	60-69	92.9	5.7	1.4	100
	Total	74.8	21.4	3.8	100

Notes: a. Includes higher elementary schools, junior high schools (under the new educational system after the war) and youths training schools.
 b. Middle schools (under the old system) and senior high schools (under the new system).
 c. Includes colleges and short course colleges (under the new system).

Table 50

Composition by Items of Family Budget

(Unit : %)

		1959	1960	1961
All-Japan farm households	Provisions	45.7	43.5	41.2
	(Cereals)	(47.2)	(45.0)	(41.9)
	Clothing	10.9	11.3	11.3
	Light and fuel	4.5	4.7	4.6
	Housing	13.0	13.9	15.7
	(Furnishings and utensils)	(6.0)	(7.7)	(9.0)
	Miscellaneous expense	25.9	26.7	27.2
	Total	100.0	100.0	100.0
All-city worker's households	Provisions	39.6	38.4	37.5
	(Cereals)	(30.8)	(28.9)	(25.4)
	Clothing	12.5	12.6	12.7
	Light and fuel	4.6	4.9	4.8
	Housing	9.9	9.8	10.9
	(Furnishings and utensils)	(5.0)	(5.0)	(5.4)
	Miscellaneous expense	33.4	34.4	34.1
	Total	100.0	100.0	100.0

- Note :1) The miscellaneous expense for a farm household includes an incidental expense.
 2) The figures for cereals represent staplefood rates (cereals / provisions).

Table 51a Value of Major Agricultural Products in Foreign Trade
(In thousand yen)

Five year average	Exports				
	All commodities	Agricultural products	Raw silk	Percentage of agricultural products	Percentage of raw silk
1868-72	15,600	13,127	5,934	84.1	38.0
1873-77	21,622	17,452	8,153	80.4	37.7
1878-82	29,939	22,164	10,633	73.9	35.5
1883-87	40,914	27,876	15,410	68.2	37.7
1888-92	71,826	43,506	26,421	60.6	36.8
1893-97	122,829	64,941	39,972	54.7	32.6
1898-1902	216,136	95,217	60,172	44.0	27.8
1903-07	352,612	146,693	92,511	41.6	26.2
1908-12	437,722	196,526	128,576	44.7	29.2

(Continued)

Five year average	Imports			
	Total	Agricultural products	Raw cotton	Percentage of agricultural products
1868-72	22,662	8,082	486	35.6
1873-77	26,585	4,460	520	16.8
1878-82	32,572	5,641	244	17.3
1883-87	32,751	8,213	646	25.0
1888-92	70,057	23,653	6,766	33.8
1893-97	145,042	64,653	27,438	44.6
1898-1902	262,059	142,600	61,682	54.4
1903-07	416,363	236,120	90,378	56.7
1908-12	482,751	272,810	141,078	56.5

Note: "Export of agricultural products" includes raw silk, and "import of agricultural products" includes raw cotton, sugar, and fertilizer.

(2) p. 24

Table 51b Agriculture in the National Economy

year	Production index		Agriculture's position	
	Agriculture	Manufacture	National income	Employed population
1934-36	—	—	16.6	44.4
1951	100.0	100.0	19.9	42.4
1952	110.6	107.8	18.8	41.2
1953	95.8	133.4	16.3	39.3
1954	105.5	146.4	16.7	38.1
1955	127.7	158.5	17.9	37.1
1956	120.4	195.7	14.4	35.5
1957	125.2	232.0	13.7	34.1
1958	130.5	233.0	13.5	32.4
1959	133.9	292.5	12.1	31.5
1960	136.7	374.5	10.9	29.8
1961	138.1	459.7	9.9	28.8

Note: "Agriculture's position" shows the rate of agricultural income to the national income and the rate of population employed in agriculture to the total employed population.

(14) p. 13

Table 52a Formation of Fixed Agricultural Capital
(percentage distribution)

(unit : %)

	Aggregate capital formation	Land	Buildings	Agricultural machinery & implements	Vegetables	Animals
1955 F. Y	100.0(1,880)	32.6	22.7	24.5	5.2	15.0
1956 F. Y	100.0(1,857)	32.5	21.2	28.0	6.0	12.2
1957 F. Y	100.0(2,020)	29.9	22.2	31.2	7.3	9.5
1958 F. Y	100.0(2,083)	29.5	19.2	30.8	7.6	12.9
1959 F. Y	100.0(2,294)	32.0	18.0	33.8	7.2	9.0
1960 F. Y	100.0(2,837)	28.9	16.6	35.3	6.5	12.8
1961 F. Y	100.0(3,459)	26.3	17.8	38.1	5.2	12.4
1961 capital formation in relation to a year earlier	121.9	110.1	131.0	131.8	104.4	118.5

Note : The unit value for the figures in the parentheses shows 100 million yen

Table 52b Capital Equipment of Manufacturing and Agricultural Industries

	Average 1951-53	Average 1958-60
Manufacturing		
Corporeal fixed capital (million yen)	826,609	3,797,395
Number of employes	3,811,138	6,603,508
Fixed capital per capita (yen) (A)	216,893	564,457
Agriculture		
Fixed capital (yen) (excluding land)	260,795	289,195
Fixed capital (yen) (including land)	498,516	634,923
Number of workers	2.93	2.36
Fixed capital per capita (yen) (excluding land) (B)	89,007	122,540
Fixed capital per capita (yen) (including land) (B')	170,142	269,035
(B/A)	(%)	41.0
(B'/A)	(%)	78.4
		21.7
		47.7

Note: "Fixed capital" is based on prices in 1957.

(14) p. 20

Table 52c Efficiency of Capital by Size of Holding under Management
(National average per farm household)

	Unit	Under 0.3 ha	0.3 to under 0.5 ha	0.5 to under 1.0 ha	1.0 to under 1.5 ha	1.5 to under 2.0 ha	2.0 ha and over	Total
1957								
Fixed capital	yen	24,037	45,423	109,983	171,329	235,500	318,491	100,712
Circulating capital	yen	27,088	37,542	68,645	101,998	136,360	181,679	71,485
Total (A)	yen	51,125	82,965	178,628	273,327	371,860	500,170	182,197
Net production (B)	yen	53,688	97,841	180,174	289,476	395,742	556,365	196,038
Efficiency (B)/(A)	Per-cent	105.0	117.9	100.9	105.9	106.4	111.2	107.6
1961								
Fixed capital	yen	32,695	58,884	136,624	223,350	300,265	334,665	143,271
Circulating capital	yen	31,960	50,276	94,453	142,938	183,700	233,876	98,742
Total (A)	yen	64,655	109,160	231,077	366,288	483,965	568,541	242,013
Net production (B)	yen	58,129	100,880	211,695	347,213	476,086	679,210	237,114
Efficiency (B)/(A)	Per-cent	89.9	92.4	91.6	94.7	98.4	119.4	98.0

(14) p. 90

Table 53a Popularization of Power Machines
(1920-1942)

Year	Electric motors	Petroleum engines	Power tillers	Power sprayers	Power pumps	Power threshers	Power huskers	Power milling machine
1920	683	1,785	—	—	—	—	—	—
1923	2,033	9,265	—	—	—	—	—	—
1925	4,690	24,849	—	—	—	—	—	—
1927	11,603	39,406	—	—	17,413	29,820	—	25,153
1931	28,306	63,459	98	—	26,940	55,954	76,744	35,970
1933	37,861	80,491	120	394	31,858	62,259	94,482	41,375
1935	47,138	96,353	211	636	32,586	91,735	104,498	51,116
1937	66,718	125,583	537	1,886	44,189	128,620	107,778	63,465
1939	91,053	202,046	2,819	4,630	83,115	210,579	132,701	72,597
1942	144,649	316,544	7,436	4,646	92,512	357,129	180,278	—

(2) p. 418

Table 53b Number of Power Machines Possessed by Farmers
(In thousands)

Year	Electric motors	Petroleum engines	Power tillers	Power sprayers	Power threshers	Power huskers	Power pumps
1935	42	96	0.211	1	92	105	33
1950	601	—	13	16	828	379	—
1953	810	642	35	43	1,269	540	97
							(in 1954)
1955	956	1,134	89	76	2,038	690	—
1958	1,034	1,601	227	—	2,283	—	—
1959	1,041	1,756	338	—	2,343	711	196
1960	1,124	1,696	517	263	2,476	843	283

(2) p. 414

Table 54a Types of Tiller or Plow and Efficiency
(In per 10 ares)

<i>Plow or tiller</i>	<i>Plowing per day</i>	<i>Harrowing per day</i>	<i>Plowing and harrowing per day</i>
Hand labor	0.47	1.06	0.31
Cattle-drawn plow	1.60	8.71	1.35
Power tiller	—	—	6.25

(2) p. 118

Table 54b Number of Large-Type Tractors Possessed by Farmers

<i>Year</i>	<i>Tractors</i>
1950	12
1955	1,036
1956	1,485
1957	2,002
1958	2,459
1959	2,196
1960	4,541

Table 54c Changes in the Labor Requirements for Rice Culture
(Per 10 ares)

<i>Year</i>	<i>Hand-labor</i>	<i>Animal-labor</i>	<i>Mechanical-power</i>
1899	20.0 man days	—	—
1922	23.3	—	—
1930	21.8	—	—
1937	20.5	—	—
1939	20.1	—	—
1944	20.4	—	—
1950	204.6 hrs.	14.3 hrs.	3.5 hrs.
1953	190.8	12.3 (in 1954)	3.8 (in 1954)
1956	183.3	11.8	5.3
1957	177.3	11.1	5.2
1958	182.0	10.4	6.3
1959	175.9	9.6	6.6
1960	171.5	8.3	7.5

(2) p. 422