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# THE POSITION AND THE CHARACTER OF THE LARGE-SCALE FARMING IN THE UNITED STATES (I)

—FROM FAMILY FARMS TO CAPITALISTIC FARMS—

By Isshin NAKANO\*

## I Introduction

### (1) Various views on U. S. family farms

“The Farm Tenure Conference—The Family Farm in the United States Land Policy” held at the University of Chicago in February, 1946, opened a major issue concerning family farms in the postwar U. S.<sup>1)</sup> The First Committee in which two leaders of the agricultural economics in USA, T. W. Schultz and H. C. Taylor, served in the capacity of Chairman and Vice Chairman, respectively and of which the subject of discussion was “The place of family farm in our land tenure system”, gave way to much animated discussions concerning the definition and appreciation of family farms, and the discussions eventually had far-reaching impacts on the bases of the Federal agricultural policy. The most controversial question of the committee was the definition of family farm, and broadly speaking, opinions divided themselves into two schools as follows:

The majority, led by Schultz, took the position of defining a family farm as an “ideal family farm”, a traditional image which American people had held ever since its foundation.<sup>2)</sup> The opponent, including H. C. Taylor and J. I. Falconer, criticized the majority opinion as a definition “too rigid to be useful” and maintained that such a definition must be made more realistically, on the basis of actual family farms as they existed.<sup>3)</sup> Needless

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\* Associate Professor.

- 1) *Family Farm Policy*, 1947, J. Ackerman and H. Harris, ed., is the detailed proceedings of the conference including the reports on family farm policies. See, Kurashiro Izumi “Structures and Evolution of Family Farm in USA”, Hidetoshi Isobe, ed., *Evolution Process of Family Farming*, 1962, pp. 93-119.
- 2) In the Report of Committee I, the majority opinion was adopted, and a family farm was defined as having all of the three characteristics as follows—(1) The entrepreneurial functions vested in the farm family. (2) The human effort required to operate the farm provided by the farm family with the addition of such supplementary labor as may be necessary, either for seasonal peak loads or during the developmental and transitional stages in the family itself (The amount of such regular outside labor should not provide a total labor force in excess of that to be found in the family of “normal” size in the community). (3) A farm large enough, in terms of land, capital, modern technology, and other resources, to employ the labor resources of the farm family efficiently (J. Ackerman & M. Harris, *op. cit.*, p. 389).
- 3) *Ibid.*, pp. 402-404.

to say, such a controversy arose because the U. S. agriculture, in the course of social changes from the great depression in 1929 and to the Second World War, had undergone a drastic change, with a result that the traditional image of independent farmers, an ideal since the time of Jefferson, was in fact about to go out of existence.

Following the Conference which was held immediately after the war, the controversy on the character of family farms continued to thrive in America, and a number of different opinions have been proposed.<sup>4)</sup> However, in so far as the definition of family farms is concerned, the one-time majority opinion has gradually not been predominate because the U. S. agriculture developed in the meantime at a pace far exceeding that of the wartime period, and this in more multifarious forms. Today, the most part of actual farmers are quite distant from the once realistic image of "ideal family farm". In order to close the gap between the traditional image and the reality, the opinion led by Taylor and others, which was more flexible in that it allowed the definition to evolve as the image of actual farmers changed, has become much more tenable and effective.

This shift in the leading opinion owes a great deal also to the change in agricultural policy objectives held by the Federal Government and industry at large. Because the traditional idea that independent family farms are the pillar of American democracy has so strongly permeated among the people, those who run the country found it politically difficult to deny openly continued existence of family farms. Although every U. S. Secretaries of Agriculture in the postwar period—be he democrat or republican—always developed his policies to foster small number of very efficient, large-scale farmers, he was obligated to put up the facade as the protector of family farms as the moral backbone of the nation. Since it was, nevertheless, too difficult to call those wealthy and large-scale farms—the real beneficiary of the U. S. agricultural policy—the "family farms" in the traditional sense, they were called "commercial family farms" which, although qualified as "commercial", still tried to dress them up as family farms, thus making it easier to obtain national consensus while promoting the selective policies.<sup>5)</sup>

We have so far reviewed the opinions of U. S. agricultural economists on the family farms. Then how Marxists understand the trends of evolution of agriculture in the United States?

V. I. Lenin published, in the first decade of this century, "New Data on the Laws Governing the Development of Capitalism in Agriculture, Part One. Capitalism and Agriculture

- 4) See, R. L. Mighell, *American Agriculture*, 1955. J. V. McElveen, "Family Farms in a Changing Economy", *Agriculture Information Bulletin*, No. 171, Mar. 1957., E. Higbee, *Farms and Farmers in an Urban Age*, 1963. R. Nikolitch, "Family and Larger-Than-Family Farms: Their Relative Position in American Agriculture", *Agricultural Economic Report*, No. 4, Jan. 1962, do., "Family-Operated Farm: Their Compatibility with Technological Advance", *American Journal of Agricultural Economics*, Vol. 51, No. 3, Aug. 1969.
- 5) Isshin Nakano, "Agricultural Policies and Capitalist Development of Agriculture in the United States", *The Kyoto University Economic Review*, Vol. XLII, No. 1-2, Apr.-Oct. 1972. In the United States, there are two major farmers' unions, both of which support family farms in principle: the American Bureau Federation and the National Farmers' Union. The former, however, represents the interests of large-scale farms and holds the view that the "commercial family farms" as the only beneficiary of Federal agricultural policy.

in the United States of America”<sup>6)</sup> (“New Data”) based on the U. S. Census of Agriculture, 1900 & 1910. He found out the evolutionary laws of capitalism in American agriculture, and criticized the theory of non-capitalistic evolution of U. S. Agriculture advocated by N. N. Himmer, one of the “small farmer” protagonists. Marxist researchers who followed Lenin based their study on his “New Data” to confirm the trend of capitalistic evolution of agriculture in USA in the period following the one studied by Lenin. A. Rochester and V. Pero are representative of such researchers in America.<sup>7)</sup> Following the Second World War, various studies on U. S. agriculture continued, using Lenin’s analytical method. In this connection, one of the remarkable trends is the fact that a large number of U. S. researchers are interested in the extremely multifarious forms of development in the postwar U. S. agriculture. They attach a particular importance to the direct control by monopolistic agriculture-related industry and financial capital over the process of farm production as one of the key characteristics of the American agriculture after the War. This means that the monopolistic farm-off capital has now penetrated in the agriculture of America which is subjected, as the result, to an accelerated process of capitalistic evolution at present.

Many researchers of American agriculture working outside of the U. S. A.—particularly those in USSR—share the view of the American Marxists. It was only after the Second World War that the USSR experts started to study American agriculture in a serious and positive manner. Based on positive analysis, they rediscovered in today’s U. S. agriculture the trend of capitalistic development just as Lenin had done earlier in his “New Data”. Also, they attach particular importance to the penetration of agri-business and financial capital into the process of farm production and the stronger control they exercise on agriculture, which is one of the keys to understand the spectacular development of agriculture in U. S. A. after the Second World War.<sup>8)</sup> Moreover, in the process of postwar entry of monopolistic agri-business, there occurred a tremendous progress in agricultural science and technology (mechanization, automation and chemical technology—in short, agricultural industrialization). In consequence, the organic composition of capital in the American farming heightened to a level closer to that of industry. Thus, it is one of influential views among the researchers concerned—particularly those in the Soviet Union—that in today’s American agriculture the rate of absolute ground-rent tends to go down.<sup>9)</sup>

6) V. I. Lenin, “New Data on the Laws Governing the Development of Capitalism in Agriculture Part One. Capitalism and Agriculture in the United States of America”, *Collected Works*, 1964, Vol. 22.

7) A. Rochester, *Why Farmers are Poor*, 1940, do., *Lenin on the Agrarian Question*, 1942. V. Pero, *The Negro in Southern Agriculture*, 1953.

8) В. А. Мартынов, М. А. Меньшикова и А. И. Тулупников, *Структурные сдвиги в сельском хозяйстве США*, 1965. М. А. Меньшикова, *Современный этап развития сельского хозяйства США*, Ю. П. Лисовский (ред.), *Развитые капиталистические страны: проблемы сельского хозяйства*, 1969, стр. 219-289.

9) В. А. Мартынов, *Земельные отношения в условиях современного капитализма*, Н. А. Цаголов и В. А. Киров (ред.), *“Капитал” К. Маркса и проблемы современного*

In Japan, such positive studies of the American agriculture started after the end of the last war (particularly in '50s), and there followed various arguments concerning differentiation of the farmers in USA, the character and direction of evolution which was taking place in U. S. agriculture. K. Suzuki (who were the first to start positive analysis of the U. S. agricultural census), A. Futami, T. Umekawa and some others, all confirmed that there exists a trend in American agriculture of capitalistic evolution, and they held the view that the same trend, discovered by Lenin in the beginning of this century, was also existing in today's America.<sup>10)</sup>

On the other hand, T. Ouchi is the leading protagonist in postwar Japan of the non-capitalistic evolution of agriculture in USA, K. Baba and A. Miyagawa also support Ouchi in essence.<sup>11)</sup> They consider that because today's agriculture in USA can be said to have entered the stage of imperialism, Lenin's general laws of capitalistic development in agriculture is no longer valid, and agricultural laborers are gradually being driven out of agriculture in which family farmers are becoming predominant. The trend of "enlarging the scale of small farmers" which have been modified "the standarization tendency medium farmers", characteristic of the differentiation of farmers in the stage of imperialism is, according to these scholars, "the law governing agricultural evolution in the state monopolistic capitalism".<sup>12)</sup> Moreover, it should be noted that Ouchi, in his recent analysis of the 1969 Census of Agriculture, has even gone out to use such terms as "gigantic small farmers" along with the earlier "enlarged small farmers". Thus, he foresees that in near future, even most of those gigantic farmers will do away with wage laborers and will be run by family members.<sup>13)</sup>

The above constitutes a synopsis of various opinions held by the Marxists researchers

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*капитализма*, 1968, стр. 403-436. Л. А. Булочникова, Методологические проблемы противоположности между городом и деревней при капитализме. Цаголов и Киров, там же, стр. 437-460. The author can not share their theories of declining the rate of absolute ground-rent although this essay is not intended to go into details in this respect. For critics of this theory, see, Yutaka Sakurai, *New Agricultural Policy*, 1970, pp. 83-90. Masamichi Kawakami, *Postwar Japanese Economy*, 1974, pp. 91-112. Ryuichi Ino, *Modern Capitalism and Agriculture*, 1975, pp. 68-72.

- 10) Keisuke Suzuki, "The Geographic Structure of Agriculture in the United States", *Journal of Social Science*, Vol. 5, No. 4, Dec. 1954, do., "Some Criteria of the Development of Capitalism in the American Agriculture", *Journal of Social Science*, Vol. 7, No. 1, Feb. 1956, do., "Capitalism in Agriculture and Differentiation of Farmers—an Essay Analysis of U. S. Agriculture", Hiromi Arisawa, ed., *Modern Capitalism*, Vol. 4, 1959, Akira Futami, *Structure of Modern Agriculture in USA*, 1965, Tsutomu Umekawa, "The Capitalist Relations in American Agriculture after the Second World War", *The Keizaigaku-Zasshi*, Vol. 42, No. 4/5, May 1960. Also, though it is not based on Marxist standpoint, ref. *Study of American Agriculture* of Nobutane Kikuchi and Yasuko Ichihashi, 1965, which stresses the capitalistic evolution of agriculture in USA.
- 11) Tsutomu Ouchi, *American Agriculture*, 1965, and do., *Modern Agriculture in USA*, 1975. Koji Baba, "Agricultural Problems in Modern Capitalism", Tsutomu Ouchi, ed., *Agricultural Economics*, 1967. Atsushi Miyagawa, "Trends of Main Träger of U. S. Agriculture", *Oikonomika*, Vol. 7, No. 1, June 1970, do., "Relative Importance of Hired Labor in U. S. Agriculture", *Oikonomika*, Vol. 8, No. 2, Sept. 1971.
- 12) Tsutomu Ouchi, *American Agriculture*, p. ii, pp. 387-389.
- 13) Tsutomu Ouchi, *Modern Agriculture in USA*, p. 138.

with respect to the evolutionary trends of agriculture in the United States. It can be said that the key issue over the capitalistic versus non-capitalistic evolution consists in the difference in appreciation of the small number of large scale farms which have achieved a very high degree of concentration of capital and production, and which account for principal portion of U. S. agricultural output of today. The author has felt appropriate to discuss, in the beginning, the controversy concerning the family farm, because in discussing the character of family farms—as to whether they are capitalistic or family farming—it will almost be inevitable in Japan that the definitions and views of the U. S. agricultural economists concerning the family has to be taken into consideration.

The author, in his analysis of the U. S. agricultural census of 1959 and 1964, tried to confirm the capitalistic evolution of U. S. agriculture up to the first half of '60's. We took into consideration those opinions of the non-capitalistic evolutionists mentioned earlier, while the analytical methods he used were those of Lenin in his "New Data".<sup>14)</sup> Now that the results of the 1969 Census of Agriculture have been published and various aspects of the latest agriculture in USA have become clear, he proposes to study the trend of evolution of the American agriculture which has undergone a drastic change in the preceding decade and to cast a light on the image of today's agricultural producers. It is of course not possible to make full analysis here of agriculture in USA of the decade '60, and for this reason, the author will concentrate his research to the major issues between those advocates of capitalistic evolution and their opponents, i. e., the controversy over the role of large scale farms in agricultural production and their character as a social class.

Specifically, Chapter II will review changes in the production structures of agriculture which took place in the recent years in America, in terms of farm labor and farm machinery. In Chapter III, we shall analyze the trend of concentration of capital and production in the large scale farms during the '60 decade. Actual states of farm income and government payments will be discussed in Chapter IV with emphasis on large-scale farms (the above at this essay). In Chapter V, we shall review various theories concerning classification of U. S. farmers and return to the method typified by V. I. Lenin and F. Engels with a view to define the farmers as a social class as well as to make class distinctions. Finally, in Chapter VI, we shall discuss classification of U. S. farms and definition of large scale farms in order to conclude the thesis (to be continued).

## (2) Reference Materials and their Limitations

Prior to start the analysis as proposed, it is necessary to clarify character of materials and data to be used and to see their inherent limitations. The basic material of our analysis is the 1969 Census of Agriculture<sup>15)</sup> which has some advantages well as disadvantages for the purpose of our study if we compare it with that of 1964 and the earlier ones. Broadly speaking, the 1969 Census, reflecting the trend of agricultural production and Federal

14) See, Isshin Nakano, "Large Scale Farming in the Contemporary American Agriculture", *Keizai Ronso*, Vol. 102, No. 3, Sept. 1968, do., "The Latest Trend in the American Agriculture—1959~1964—", *Keizai Ronso*, Vol. 106, No. 6, Dec. 1970.

15) U. S. Department of Commerce, *1969 Census of Agriculture, 1973* ("1969 Census").

policies, is made with a view to obtain more clear picture of large-scale farmers, and this makes it quite difficult for us to obtain conditions of smaller farmers.

Specifically, principal characters of the 1969 Census are as follows: firstly, while the 1964 Census combined all farms whose the value of farm products sold was over \$ 100, 000 and showed them as "large-scale farms", the new 1969 Census classifies the large-scale farms into seven groups, the top of which are those farms with the value of farm products sold of one million dollars or more. This makes it possible to gain much better insight for the large scale farms, while on the other hand, the 1969 Census contains very limited amount of information concerning small scale farms whose the value of farm products sold is \$ 2, 500 or less. Thus, analysis of small scale farms much more difficult in the 1969 Census, and moreover, it is now impossible to obtain those statistics and indices applicable to all farms in USA, and this constitutes a major handicap in order to study, for instance, the degree of concentration at large scale farms. In this article, therefore, we have often to abandon all farms including farms with the value products sold under \$ 2, 500 (i. e., those which are below the Class VI) and to confine our analysis to selected economic class groups (farms from Class Ia to Class V) for which the Ceusus has abundant figures.

Secondly, while the 1964 Ceusus contained data for principal farm machinery only, the latest Census shows "estimated market value of all machinery and equipment" used at farms, which enables us to see as a whole the degree of mechanization in American agriculture.

In the third place, because the new Census treats, for the first time, expenditures for contract labor as a separate item, it is now possible for us to gain better understanding of hired laborers (particularly seasonal laborers). Incidentally, expenditures for contract labor were included in "expenditures for hired labor" item in the 1959 Census, while the 1964 Census shows this as a part of expenditures for machine hire, so cares must be taken to compare these two earlier censuses with that of 1969.<sup>16)</sup> Another interesting aspect of the 1969 Census is that it contains a special report on "Agricultural Services"<sup>17)</sup> which provides survey results on the agricultural service establishments and these new features enable researchers to assess wage paid and number of laborers employed in the establishments.

In the fourth place, while the previous censuses limited their survey to major items of farm expenditures only, the 1969 Census makes it possible to calculate net gain or loss in farms by subtracting total farm production expenses from the total value of farm products sold.

Lastly, the new Census added those farm-related income items like government farm programs and agricultural services, but at the same time, it dropped those non-farm incomes as wages, pensions and social security completely.

16) *1969 Census*, Vol. II, Chap. 4, pp. 83-84.

17) *1969 Census*, Vol. III.

## II Advance of Mechanization and Decrease of Farm Labor

It is well known that mechanization of agriculture has made a spectacular progress in the recent years with a result that a very rapid decrease in farm labor also took place. Those Japanese researchers who maintain—as referred to in the preceding Chapter—the supremacy of family farm, base their argument on non-capitalist evolution of U. S. modern agriculture. Are they correct in their theory that machinery, by driving hired laborers out of farms, is actually “disintegrating” capitalistic relationships in the agricultural production in the United States?

In the following Chapter, we shall proceed to a positive analysis of inter-relationship between the farm labor and machinery (including other means of production) to see whether the protagonists of non-capitalistic evolution are right or not. However, prior to that, it would be appropriate for us to take a quick look at the status of farm labor and use of machinery in the recent years.

### (1) Decrease in Farm Labor

First of all, we should consider the trend of changes in number of farm workers in USA from the turn of this century until present. Since year to year comparison would be too cumbersome in considering such factors as temporary reflux of urban work force into farm because of depression, effect of mobilization or demobilization during the war, etc, we will use average figure for every five years as the bases of our analysis. As Table I shows, the total number of persons working on farms (family workers and hired workers) has constantly decreased since 1910. During a little more than 60 years, they decreased from 13,561,000 to 4,417,000 (in 1970) and then to 4,340,000 (in 1973), or roughly to one-third. The trend looks further accelerated in the decade of '50 in which the total number of persons working on farms for the first time, dropped below ten million level. Indeed, they decreased by one-half in a span of time of 20 years.

If comparison is made between family workers and hired workers, the figures show that both decreased to one-third in 60 years (from 10,162 thousand to 3,255 thousand for the family workers and from 3,399 thousand to 1,162 thousand for the hired workers respectively—however, during the period which follows the end of the Second World War, the rate of decrease of family workers is larger than that of hired workers). In the meantime, the ratio between family versus hired workers changes constantly, and the weight of hired workers in the total number of persons working on farms is fluctuating between 22% and 27% (the bottom was 21.2% in 1946, and the peak was 27.3% in 1961). The ratio of hired workers to total member of persons was relatively high in the decades '10 and '20 (25~26.5%), then it dropped in early '30 and stayed at a lower level until the beginning of '50 (from the Great Depression to the end of the Second World War) at 22~24%, and finally came up again to the level of 25.5%~27% from '50. The ratio has been around 26% in the recent years, which is a relatively high level.

On the other hand, since the decrease of family workers took place at a ratio exceeding that of the total number of farms in U. S., average number of family workers per



Table 1. Changes in Number of Farm Workers

(Unit: 1 thousand persons)

Year	All farm workers (A)	Family workers (B)	Hired workers (C)	C/A	Average family workers per farm <sup>1)</sup>	Number of farms <sup>2)</sup> (thousand)
1910~1914 annual average	13,561	10,162	3,399	21.1%	1.59	6,406
1915~1919	13,485	10,085	3,400	25.2	1.57	6,458
1920~1924	13,272	9,896	3,376	25.4	1.54	6,518
1925~1929	12,822	9,444	3,378	26.3	1.50	6,471
1930~1934	12,685	9,702	2,983	23.5	1.42	6,546
1935~1939	12,000	9,137	2,863	23.9	1.45	6,814
1940~1944	10,563	8,053	2,511	23.8	1.31	6,350
1945~1949	10,201	7,968	2,233	21.9	1.32	5,967
1950~1954	9,227	7,051	2,176	23.6	1.35	5,648
1955~1959	7,736	5,763	1,972	25.5	1.36	4,654
1960~1964	6,661	4,864	1,797	27.0	1.31	3,963
1965~1969	5,014	3,717	1,297	25.9	1.23	3,356
1970~1973	4,417	3,255	1,162	26.3	1.13	2,954

Note: 1) The column shows average number of family workers per farm in the first year of each line at the far left end.

2) The agricultural censuses in the past used different definitions of "farm", which makes reasonably accurate comparison of number of farms quite difficult. The figures used in this column, which the author used to obtain average per farm, have been the numbers of farms after adjustment of variations caused by the differences of definition of farm.

3) The table excludes the number of Hawaii and Alaska.

Source: U. S. D. A., *Agricultural Statistics 1967, 1974*.

U. S. D. C., *Statistical Abstract of the United States 1973*, p. 585.

U. S. D. C., *Historical Statistics of the United States, Colonial Times to 1957, 1960*, p. 278, p. 280.

farm decreased as shown in Table 1, except during the great depression period and the decade immediately following the end of the last world war. The trend was particularly conspicuous in the 60's, dropping to 1.1 family workers in 1970. This is a decrease of 0.5 from the peak of 1.6 in the beginning of this century, or a decrease of a little less than one third. Thus, the traditional assumption in USA of 1.5 workers per farm looks as if it is something of the past.<sup>18)</sup>

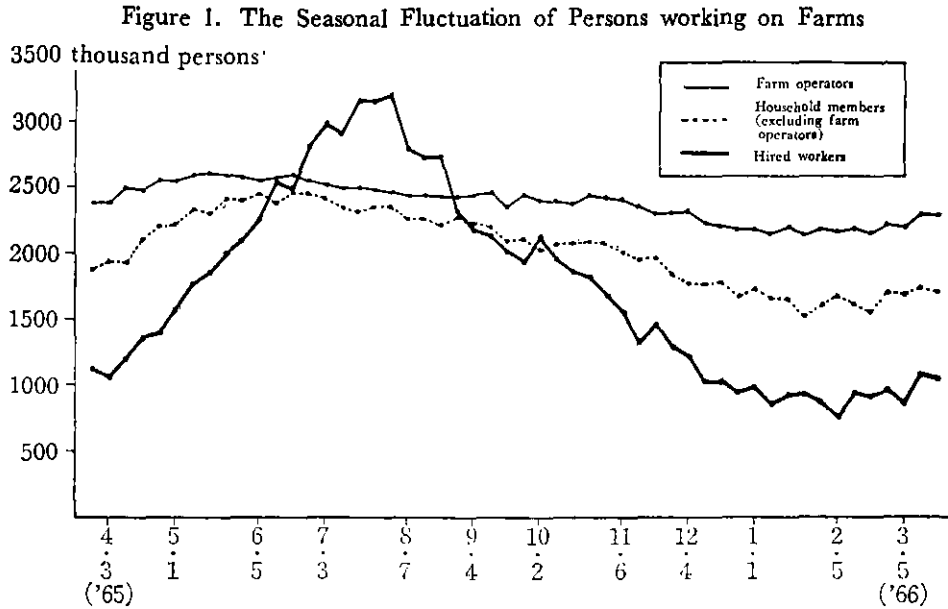
Another point we should touch upon here is the problem of seasonal fluctuations of farm labor. Because agriculture, unlike other industry, is essentially at the mercy of natural conditions, the amount of working hours required in various types of farms changes greatly from one season to another. Even in the United States, many farms require certain number of casual hired workers at a certain time of the year. As Lenin pointed out that "in farming, seasonal hired labor is highly important, and it should be the rule",<sup>19)</sup>

18) For instance, R. Nikolitch, in his analysis of the 1964 Census, estimates the average supply of family workers in a farm household to be 1.5 man/year. Ref. R. Nikolitch, "Family-Operated Farm", p. 531.

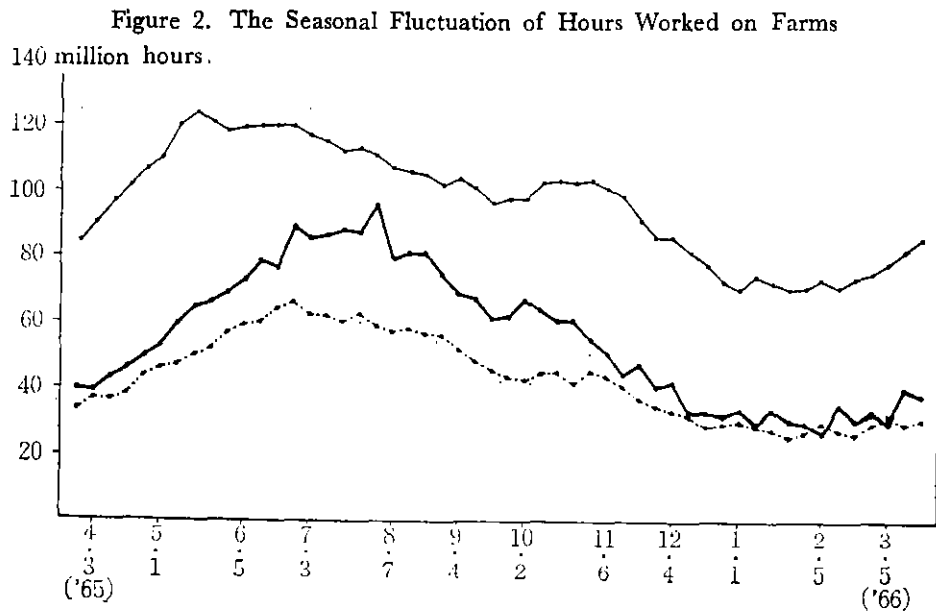
19) V. I. Lenin, *op. cit.*, p. 36.

dependence on hired labor for such farms could appear very small on a yearly basis, although the use of hired labor at peak season has a very important effect on farming.

Today, this problem of seasonal fluctuation has become even more important than in Lenin's day because of the advance of mechanization in agriculture. As we shall see in detail in following section, mechanization and automation in agriculture no longer means the tractors and other power driven machines. Each specific crop has special machinery



Source : U. S. D. C., 1964 U. S. Census of Agriculture, Vol. 3, Part 2, p. 15.



Source : U. S. D. C., 1964 U. S. Census of Agriculture, Vol. 3, Part 2, p. 16.

and equipment to reduce the need for farm labor in a drastic way. Those farms which once depended on a large number of hired laborers no longer need most of them except in time of sowing and harvesting. Even those large-scale farms which employ hired workers all the year round, while increasing considerably the number of workers during the busy season (and they may expenditure for contract labor or machine hire as well) normally employ only a limited number of persons like technicians capable of operating special machines, farm managers, veterinarians, bookkeepers and other higher grade employees".<sup>20)</sup>

The Figure 1 is a graphic indication of the seasonal fluctuation of demand for farm labor. In order to provide data on persons working on farms hired farmworkers and hours of work, the U. S. Census Bureau undertook special surveys. These surveys were initiated in March 1965 and they covered a period of 52 weeks. They provide on data concerning the number of hired workers and family workers (farm operators and other persons of their household not working for pay), and both hours of farmwork on every week ending. The results are compiled in the special report attached to the 1964 Census titled "Farm Labor".<sup>21)</sup> Fig. 1 and 2 are based on the data contained in this special report and show the annual fluctuation of farm labor in the United States.

Now, let us have a look at Fig. 1, which shows that the number of farm operators and that of their household members (excluding farm operators) are larger than the number of hired workers on an annual basis, although during the two months from end June to end August, the farmers' busy season, the number of hired workers is considerably larger than the other two. At the time of this survey, there were almost 3 million farms altogether in USA. Even in May-June period in which number of farm operators engaged in farming reaches the peak (2.6 million), there are half a million operators who work no more than once a week. On the other hand, the number of hired workers reaches 3.2 million in the peak season.

Moreover, as self-explanatory from the Fig. 1, magnitude of seasonal fluctuation in number of hired workers is very large. In the peak season (the fifth week of July) it increases 4.3 times from the bottom of the first week of February (0.7 million). However, the seasonal fluctuation concerns not only hired workers. Although the operators' fluctuation is relatively small, the household members increase 1.6 times from the bottom of 1.5 million (the fourth week of January) to the peak of 2.5 million (the third week of June).<sup>22)</sup>

20) V. I. Lenin, "Capitalism in Agriculture", *Collected Works*, 1964, Vol. 4, p. 144.

21) U. S. D. C., *1964 Census of Agriculture*, Vol. 3, Part 2, 1968.

22) Because of the vast size and a great variety of crops, the demand curve (fluctuation) of all workers on farms is different from one State to another. The fluctuations (percentage of the greatest number of workers in any month during 1969 as a percentage of the smallest number in any month) for some of the major agricultural States are as follows (the first figures are family workers including farm operators, and the second refer to hired workers): Maine, where large numbers of hired workers participate in the fall potato harvest, 127 and 591; North Carolina, where extra hands to pick tobacco in July are of critical importance, 191 and 1529; Florida, which relies upon large numbers of hired workers to pick the citrus fruits and to supply most of the labor needed for the production of vegetables for the winter market, 143 and 202; Oregon, where many hired workers help to pick fruits, 166 and 1180; and California, where large-scale

The magnitude of fluctuations in number of household members is even larger if we consider Fig. 2 (annual fluctuation of working hours). Between the fourth week of June or the peak period (65.8 million hours) and the fourth week of January, or the bottom (25.7 million hours), the former is 2.6 times larger than the lowest season. Also, in terms of the number of working hours of farm operators, there is a decrease of more than 40% from maximum (123.8 million hours) in the third week of May to the minimum (70.4 million hours) in the first week of January. Such a phenomenon can be explained by the fact that farm operators and their household members work much longer during the busy farming season but spend only very limited amount of time for farmwork in farmers' leisure season. For instance, an average farm operator spends 51.9 hours per week for farmwork during the peak week, but in the bottom season (week) he spends only 32.2 hours in his farm. In the case of his household members, the peak working hours are 26.7 per week, but this decreases to 17.1 hours in the week in which farmworks are at the lowest level. However, the trend is opposite for hired workers. A hired worker works 30.1 hours during the peak week (the fifth week of July) and 36.7 hours during the bottom week (the first week of February). In terms of aggregate total, during the peak week, they work 3.5 times more than they do during the bottom week (95.9 million hours versus 27.3 million hours). This means that seasonal fluctuations are smaller in terms of total number of working hours as compared with the number of workers as shown in Figure 1.<sup>23)</sup> This is because hired laborers working during the busy farming seasons include a considerable number of part timers (paid at hourly or piece-rate basis), resulting in shorter working hours per person per week in so far as the regular hired workers are concerned. On the contrary, during the farmers' leisure season, relative weight of regular hired workers increases and the hours of work per week per person get longer than those in the farmers' busy season.

Another feature of Figure 2 is that unlike Figure 1, the angles of hired workers' line are almost always located above those of the household members' line. Since the latter includes a good number of housewives or other female workers and aged or juvenile workers,<sup>24)</sup> the average hours of work per person (17.1~26.7 hours) are much shorter than those of hired workers (30.1~36.7 hours), while the former group is larger in number throughout the year, the latter provides more amount of farm work (hours).

The author already pointed out the fact that the average number of family workers per farm has been decreasing very rapidly in the United States lately, but it is now known definitely that not only the number of family workers decreased, but that household

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operations dominate the scene and hired laborers in large numbers are required at peak seasons to gather grapes and other fruits, and for a host of other purposes, 134 and 170 (T. L. Smith, "Farm Labor Trend in the United States, 1910-1969", *International Labor Review*, Vol. 102, No. 2, Aug. 1970, pp. 166-167).

23) The hours of work per week per person are based on the figures shown in the U. S. D. C., *op. cit.*, pp. 15-16.

24) The number of family workers including farm operators in U. S. farms is 4,423 thousand (weekly average for one year), of which 1,366 thousand (30%) are females, 840 thousand (19%) are juvenile workers between 10 to 15 years of age, and 387 thousand (9%) are old persons over 65 year of age (*ibid.*, p. 68).

members excluding farm operators work considerably less than hired workers. These observations are very important in considering, from an economic point of view, the character of modern large scale farmers as a social class.

## (2) Progress of Mechanization

Motorization of American agriculture, which started after First World War, has caused a tremendous change in the structures of farm production. Farm implements and machines which used to be driven by horses or steam engines began to use internal combustion engines, and it greatly expanded the scope of applications of farm machines and made them fit for use for many purposes which had been difficult to be mechanized. Initially, farm machines were no more than tractors and other power driven machines, but as time went on, a large variety farm equipment and facility were invented and used extensively. Today, special purpose machinery handles specific culture and various processes of farming. Also, in raising livestock, and intensive horticulture, various equipment and facility have also been developed, improving efficiency and saving manual labor. Some of such farms are so automated they appear more like modern manufacturing plant than a farm. Large scale farms make extensive use of machinery for tillage, sowing, planting as well as harvesting and stocking; in fact, almost all part of the farmwork are now done by machinery. Those operations like picking cotton, digging potato, sugar beets and onions which used to be too complicated for application of powered equipment have all been mechanized today. Only a very limited areas such as harvesting vegetables and picking fruits still depend on manual labor.<sup>25)</sup>

In order to illustrate the very rapid progress of mechanization, reference can be made to Table 2 which gives a total picture of use of principal farm machinery in USA, with a particular emphasis on the evolution in the decade 60's. It should be noted that in USA, statistical survey on special purpose machinery is far from complete.

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25) Lenin stated, in conjunction with his analysis of agriculture in USA, that 'capitalism in agriculture is at a stage more akin to the manufactory stage than to the stage of large-scale machine industry', and that 'manual labor still prevails in agriculture, and the use of machinery is relatively very limited'. Everyone agrees that mechanization of agriculture in USA today is far more developed than it was in Lenin's day in terms of quantity and quality. However, whether the U. S. agriculture has reached the stage of real 'large-scale machine industry' in the Marxian sense or in other words, whether the U. S. agriculture has already established those 'systems of machines as yet linked into one productive mechanism', is still a point of argument on which the author should like to withhold his judgement. Viz. V. I. Lenin, "The Agrarian Question and the 'Critics of Marx'", *Collected Works*, 1961, Vol. 5, p. 141, do., "New Data", p. 99. Martwinof holds a view that 'in many developed capitalistic states, agriculture has already reached the stage of machine industry in the last 20 to 30 years'. Similarly, Prof. Ryoichi Yamaoka observed that 'the actual stage of development of farm production in West Germany is at the point of turning from the manufactory stage into that of the large-scale machine industry'. Viz. В. А. Мартынов, *Аграрные проблемы развитых стран капитализма. Абсолютная и дифференциальная рента. Институт мировой и международных отношений АН СССР, Политическая экономия современного монополистического капитализма*, т. 1, 1970, стр. 257. Ryoichi Yamaoka, "Agrarian Modernization in the Present Day", *Shiso*, No. 484, Oct. 1964, p. 55.

Table 2. Changes in Number of Principal Farm Machines

(Unit: 1 thousand)

Machines \ Year	1920	1930	1940	1950	1960	1965	1970	1973
Tractors <sup>1)</sup>	246	920	1,545	3,394	4,688	4,787	4,619	4,387
(Horsepower of tractors)	Mil. h. p. (—)	(—)	(—)	(93)	(153)	(176)	(203)	(212)
Motor trucks	139	900	1,047	2,207	2,834	3,030	2,984	2,915
Grain-combines	4	61	190	714	1,042	910	790	703
Corn pickers	10	50	110	456	792	690	635	607
Pick-up balers	—	—	—	196	680	751	711	642
Field forage harvesters	—	—	—	81	290	316	304	294

Note: 1) Excluding garden tractors.

Source: U. S. D. C., *Statistical Abstract of the United States 1974*, p. 610

U. S. D. C., *Historical Statistics of the United States, Colonial Times to 1957*, 1960, pp. 284-285.

Following the tractors which were the first to use gasoline engines, it clearly shows that those principal farm machines like combines, corn pickers, pick-up balers, field forage harvesters and others came to be used throughout in the country and at a very fast pace since 1920. An interesting point in this connection, however, is that in the 60's—particularly during the latter half—a new phenomenon appears; that is to say, there is a conspicuous decrease in total number of principal machines in use.

This, of course, does not mean that the use of farm machinery is in a retrogression. If we take the official statistics pertaining to the use of these machinery at their face value, it may give a false impression that the trend of mechanization lost its momentum in the sixties, partly on account of the decrease in number of total farms (approx. one million farms went out of existence). However, it must be kept in mind that efficiency and power of machinery continued to increase greatly in the meantime. Furthermore, there have been various other types of new special purpose machinery not included in the table and which have become very popular during the decade. Taking the tractors for instance, we can see that in ten years from 1964 to 1973, while gasoline-engine powered tractors decreased more than one million from 3.9 million to 2.7 million, Diesel engine-powered tractors increased almost twice from 860,000 to 1,700,000.<sup>26)</sup> This means that the tractors now became much larger as they shifted from gasoline to Diesel engines. As Table 2 shows, total tractor horsepower in 1960 was 153 million, but it increased to 203 million in 1970 and to 210 million in 1973.<sup>27)</sup>

26) The Subcommittee for Foreign Agricultural Policy and Subcommittee on Agricultural Production, Marketing and Stabilization of Prices of the Committee on Agriculture and Forestry, United States Senate, *The American Agricultural System: Domestic and Foreign Elements Affecting U. S. Agricultural Policy*, Oct. 1973.

27) As this example shows, the traditional method of comparing numbers of farm machinery without taking their quality into consideration can no longer be a valid approach to understand the reality of agriculture in USA today.

The conversion from gasoline engines to Diesel is also conspicuous for other types of farm machinery, with a result that consumption of heavy oil is rapidly increasing in U. S. agriculture. While consumption of gasoline by farms declined in ten years from 1964 to 1973 from 4, 130 to 4, 023 million gallons, that of Diesel oil rose twice from 1, 146 to 2, 477 million gallons. In addition, demand for LP gas (mainly propane) for such purposes like drying of crops and space heating for breeding of livestock also increased from 1, 190 to 1, 264 million gallons. Altogether, consumption of these three types of fuel increased 20% from 6, 466 to 7, 764 million gallons in ten years. The shift from gasoline to Diesel engines not only means increased horsepower output for tractors and combines. It also has a significant economic advantage. In terms of fuel consumption, Diesel engines are 27% more economical in comparison with gasoline engines, and the cost per gallon is less for Diesel fuel. Consequently, the use of Diesel engine is particularly advantageous to those large scale farms which can utilize such larger and more powerful farm machines effectively.

At the same time, as the farms use more equipment and machinery like milkers, elevators etc., consumption of electric power is steadily increasing. In 1950, total consumption of electricity by U. S. farms reached 16.9 million kw/h. It then grew to 33.6 million kw/h in 1960, subsequently to 37.4 million kw/h in 1970, and finally to 39.7 million kw/h in 1973.

Thus, mechanization and automation of agriculture continues at a good speed in USA. In spite of the fact that number of farms is decreasing, labor productivity is rising even more, thus increasing production.

Lenin, in connection with his analysis of mechanization process of agriculture in USA, concluded that "the machine is steadily advancing, improving farming techniques, extending the scale of operations and making them more capitalist. In modern agriculture, machinery is used in the capitalist way."<sup>28)</sup> This opinion contradicts with the view of those protagonists in Japan who maintain supremacy of family farms as mentioned earlier, who state that because of the spectacular development of mechanization, hired workers are driven out of agriculture and farms in USA are under going an evolution which is not capitalistic. Would their opinion be justified? We shall look into this question in the following chapter.

### III Concentration of Capital and Production at Large-Scale Farming

The 1969 Census shows that in less than ten years from 1959, number of farms in U. S. A. decreased almost one million from 3.7 million to 2.7 million. As Table 3 indicates, there is a very remarkable difference in the evolution between those farms whose the value of farm products sold is \$ 20, 000 or more and those which are producing less. Those farms with sales of \$ 20, 000 or less—particularly those with sales of less than \$ 10, 000—show a very high percentage of going out of farms (around 40% for all farms).

28) V. I. Lenin, "New Data", p. 101.

Table 3. Changing in Number of Farms by Economic Class (Unit: 1 hundred)

Economic class	Year			Rate of increases or decreases ('59~'69)
	1959	1964	1969	
Toatal	37,080	31,579	27,302	△26.4%
\$ 100,000 or more (Class Ia)	200	314	520	160.2
\$ 40,000~100,000 (Class Ib)	821	1,105	1,697	106.6
\$ 20,000~ 40,000 (Class II)	2,104	2,599	3,310	57.3
\$ 10,000~ 20,000 (Class III)	4,830	4,671	3,955	△18.1
\$ 5,000~ 10,000 (Class IV)	6,539	5,046	3,904	△40.3
\$ 2,500~ 5,000 (Class V)	6,177	4,439	3,951	△36.0
Less than \$ 2,500 <sup>1)</sup> (Class VI and below)	16,378	13,382	9,945	△39.3

Note: 1) Excluding abnormal farms.

Source: 1959 Census, Vol. II, pp.1212-1213, Vol. V, Part 7, p.11.

1964 Census, Vol. II, pp.638-639, p.654.

1969 Census, Vol. II, Chap. 7, p.58, p.64, p.81.

On the contrary, farms producing more than \$ 20,000 a year are increasing for all sub-groups, and the growth in their numbers is higher as their value of products sold goes up. Farms whose sales of products are between \$ 40,000~\$ 100,000 (Class Ib), increased twice in number in ten years, and those producing more than \$ 100,000 (Class Ia) increased 2.6 times. Although it is not shown in the table, among the Class Ia farms, number of farms with sales of \$ 500,000 to one million dollars increased from 800 to 2,500, or more than three times. So-called "one million dollar farms", i. e., farms producing more than one million dollars a year, grew approx. four times in number from 400 to 1,600.

It is thus apparent that in USA, such large-scale farms are growing fast and accomplishing rapidly concentration of capital and production from year to year. In fact, the author, in his earlier thesis already mentioned, observed in detail the same trend of concentration up to the first half of the sixties. For this reason, it would be sufficient for the purpose of the present study to summarize the tendency to concentrate means of production (constant capital), hired workers (variable capital) and agricultural products at the large-scale farms, using the data available in the 1969 Census.

Table 4 takes up those U. S. farms with sale of farm products of \$ 2,500 or more which accounts for 95% of total farm products sold and compares the trends of concentration of capital and production for various economic classes (Class Ia to Class V).<sup>29)</sup> It can readily be understood that during the sixties, concentration of capital and production at large scale farms took place very quickly as evidenced by those indices like means of production, hired labor and farm products.<sup>30)</sup>

29) The share of those farms producing more than \$ 2,500 to the total farm products sold, is increasing from one year to another (95.1% in 1959, 96.8% in 1964, and 97.9% in 1969). Consequently, the share of farms producing less than \$ 2,500 is now at a negligible level (1969 Census, Vol. II, Chap. 7, pp. 11-12).

30) Machine hire expenses are an exception to the general trend but only in appearance, because these expenditures for Class Ia in 1964 are larger than these in 1969. In reality, however, this is purely due to a statistical reason, i. e., in 1964, machine hire included contract labor expenses. If contract labor expenditures are added to machine hire for 1969. The percentage of concentration for Class Ia will be 32.7%, which is well above the figure for 1964 (25.8%).



Table 4. Concentration of Means of Production, Hired Labor and Farm Products Sold (Unit: %)

Indices Economic class		Number of farms	Land in farms	Constant capital				Variable capital		Production scale
				Estimated market value of all machinery and equipment <sup>1)</sup>	Expenditure for petroleum fuel	Expenditure for machine hire <sup>2)</sup>	Use of fertilizer	Expenditure for hired labor <sup>3)</sup>	Regular hired workers	Value of farm products sold
1969	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Class Ia	3.0	18.7	11.7	15.1	20.3	21.5	50.0	49.2	34.4
	Class Ib	9.8	20.2	20.4	20.3	18.9	34.0	21.3	23.1	22.7
	Class II	19.1	22.6	25.8	24.8	22.1	24.2	14.3	15.6	20.8
	Class III~V	68.1	38.5	42.1	39.8	38.7	20.3	14.4	12.1	22.1
1964	Total	100.0	100.0		100.0	100.0	100.0	100.0	100.0	100.0
	Class Ia	1.7	13.1		11.8	25.8	17.1	41.6	36.9	25.1
	Class Ib	6.1	16.2		15.5	15.6	18.0	21.2	22.6	19.0
	Class II	14.3	20.1		21.4	17.2	22.5	16.5	19.4	20.9
	Class III~V	77.9	50.6		51.3	41.4	42.4	20.7	21.1	35.0
1959	Total	100.0	100.0		100.0	100.0	100.0	100.0	100.0	100.0
	Class Ia	1.0	12.1		8.3	16.3	11.6	31.4	28.7	17.2
	Class Ib	4.0	14.7		11.7	15.1	12.8	20.7	20.3	16.1
	Class II	10.2	17.7		17.6	16.5	18.0	19.2	20.5	19.5
	Class III~V	84.8	55.5		62.4	52.1	57.6	28.7	30.5	47.2

Note: 1) Estimated market value of all machinery and equipment is available only for 1969.

2) 1964 expenditures for machine hire includes expenditures for contract labor.

3) 1959 expenditures for hired labor include expenditures for contract labor.

Source: 1959 Census, Vol. II, pp. 1212-1221, Vol. V, Part 7, pp. 11-29.

1964 Census, Vol. II, pp. 638-649, pp. 654-664.

1969 Census, Vol. II, Chap. 7, pp. 64-71, pp. 81-87.

In 1969, 32~55% of the means of production such as machinery, fuel, machine hire and fertilizers were concentrated to farms whose sales of products exceeded \$40,000 (Class Ia and Ib). Class Ia farms, which account for only 3% of the total number of farms, used 12~21% of these means of production. Concentration of hired labor is particularly significant. Class Ia and Ib share more than 70% of expenditures for hired labor and regular hired workers, while Class Ia farms alone account for 50% of the total. Although total number of hired workers is declining as we have observed in the preceding chapter, there is a rapid concentration of workers to large scale farms at the same time. Presently, more than 50% of total hired farm workers in USA are employed by a little more than \$50,000 farms with sales of \$100,000 or more.

Because of such a high degree of concentration, those Class Ia and Ib farms produce 60% of the total agricultural products sold in the United States. If we add to these also those farms classified as Class II (i. e., if all farms with sale of \$20,000 are added together), then 60~80% of all the means of production and 85% of hired workers are used by these larger farms who produce 75% of the total U. S. agricultural products. While smaller farms producing less than \$20,000 a year (Class III and below) account for two-thirds in number of farms in USA, their share of production dropped from 47% to 22% in ten years.

Table 4 also makes it possible to compare the degree of concentration at large-scale farms in 1959 and 1969. Except for land in farms, the degree of concentration for all indices are approximately equal between the Class Ia to Class Ib farms in 1969 (about 221 thousand farms) on one part and Class Ia to Class II farms (about 312 thousand farms) in 1959 on the other part. We obtain the same result by comparing Class Ia farms in 1969 and Class Ia/Ib farms in 1959. In considering the fact that in 1959, there were 102 thousand farms belonging to Class Ia and Ib (total number of farms with sales of \$40,000) and that the number of Class Ia farms (whose sales of products was \$100,000 or more) in 1969 was 52 thousand or about a half of Class Ia/Ib in 1959, it is perfectly evident that concentration of capital and production at the large scale farms went on very quickly in these ten years.

T. Ouchi admits this trend of concentration of capital and production to the large-scale farms in the sixties, although he denies concentration hired labor on the ground that average hired labor expenditures per large scale farm decreased during that period.<sup>31)</sup>

We have already confirmed in Table 4, by comparing the degree of concentration at Class Ia/Ib farms in 1959 and Class Ia farms in 1969, that in 1969, about one half of the number of large-scale farms in 1959 have concentrated almost equal amount of production, as well as the means of production and hired labor. At this point, we are now trying to compare the degree of concentration for an *equal number* of the top class farms in 1959 and 1969 respectively, by utilizing the figures of 1969 Census concerning classification of farms by economic class. In other words, of these Class Ia farms reported in the 1969 Census, we are taking up the top-ranking farms of the same number of farms (19,979) that made up the total of those top class farms (Class Ia) in 1959, and by estimation, we

31) T. Ouchi, *Modern Agriculture in USA*, pp. 135-136, p. 254.

can see how their respective degrees of concentration compare with each other. The results are as shown in Table 5.<sup>32)</sup>

As seen from Table 5, all figures of indicies except land in farms increased in these ten years. In particular, those concerning hired labor (hired labor expenditures and number of regular hired workers) show a degree of concentration far superior than concentration of other indices, contrarily to the opinion of Ouchi. It can also be seen that the tendency to concentrate capital and production at the large scale farms continues regardless of increase or decrease in number of the farms with sales of \$20,000 or more.<sup>33)</sup>

Table 5 also shows average per farm for the 19,979 top ranking farms for 1959 and 1969. Because of the significant increase in agricultural productive force in the recent years and of the fluctuations of prices for agricultural products, a good number of farms who sold less than \$100,000 in 1959 or in 1964 joined Class Ia group in 1969. For this reason, if comparison is made between the 1959 per farm figures (for 19,979 Class Ia farms) and the 1969 figures for 51,995 farms belonging to this group in that year (the figures appearing at the right and column), the latter figures could be smaller simply

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32) Because the 1969 Census classifies the farms with sales of farm products of \$100,000 or more into seven subgroups, it is possible to make these estimations in the following manner: (1) Of the Class Ia farms in 1969, these are 16,687 farms with sales of \$200,000 and 35,308 whose value of products is between \$100,000~\$200,000. (2) If we take 19,979 farms from Class Ia farms in 1969 and rank them by their sales of products, there are 16,687 farms whose sales exceeds \$200,000 (total of farms selling more than \$200,000) and 3,292 farms with sales of products between \$100,000 to \$200,000 (19,979-16,689). (3) Those 3,292 farms correspond to 9.3% of the total number of farms in this subgroup whose sales of products is between \$100,000 to \$200,000. (4) Those figures of indices shown in table 5 are multiplied by 0.093 to obtain corresponding figures of indices for the \$100,000~\$200,000 class farms. (5) The figures of indices obtained as per (4) are then added to those for the top class farms (\$200,000 or more value of products sold) to obtain the figures of indices for the total of top-ranking 19,979 farms. Because this method of estimation uses average of the second-ranking class farms (\$100,000~\$200,000 value of products sold) rather than actual figures for the 3,292 farms in order of their rank, both degree of concentration and average per farm are less than the actual values (1969 Census, Vol. II, Chapt. 7, pp. 81-93.).

33) To be sure, concentration of capital and production is a predominant trend in industry and agriculture under a capitalist economy, regardless of increase or decrease of number of enterprises or farms. In USA of today, the concentration of capital and production is going on in parallel with increase in number of large-scale farms, but in future, a great number of small scale farms will be expelled by large-scale farms along with expulsion of small capitals by larger ones, just as it occurred in industry, thereby causing a decrease of number of large-scale farms themselves and further accelerating concentration in various types of farms. Actually, out of "other field-crop" farms (culturing potatoes, peanuts, sugar cane, sugar beets etc.) number of Class Ia farms decreased slightly in five years from 1964 to 1969 (from 2,237 to 2,198) while concentrations of these farms continue, to be higher for the following items: number of tractor from 21 to 22%, fuel consumption from 35 to 37%, regular hired workers from 63 to 71%, expenditures for hired labor from 66 to 72%, and sales of farm products from 49 to 52%, respectively (1964 Census, Vol. II, pp. 654-664, pp. 1066-1076; 1969 Census, Vol. II, Chap. 8, pp. 112-118, pp. 256-268). In the case of cotton farms, the decrease was drastic (from 3,465 to 1,127 farms) in five years, but this probably reflects more the impact of the Federal policy to restrict cotton production which we shall review in the next Chapter.

Table 5. Comparison of Concentration at the Top-Ranking 19,979 Farms —1959 and 1969—

Indicies	Rate of concentration <sup>1)</sup>		Average per farm		Average per Class Ia farm (1969)
	1959	1969	1959	1969	
Number of farms	1.0%	1.2%			
Land in farms	12.1	10.6	5,686 acre	4,879 acre	3,305 acre
Estimated market value of all machinery and equipment <sup>2)</sup>	—	6.2	—	69,000 \$	50,400 \$
Expenditure for petroleum fuel	8.3	8.6	5,800 \$	7,500 \$	5,100 \$
Use of fertilizer	11.6	13.0	101 t	171 t	109 t
Expenditure for hired labor <sup>3)</sup>	31.4	37.1 (37.9)	39,500 \$	60,500 \$ (70,700 \$)	31,300 \$ (36,300 \$)
Regular hired workers	28.7	36.6	9.6 persons	12.0 persons	6.2 persons
Value of farm products sold	17.2	24.8	249,400 \$	551,900 \$	294,800 \$

Note: 1) Percentage to the total of Class I to Class V.

2) Estimated market value of all machinery and equipment is available for 1969 only.

3) Hired labor expenditures for 1959 include those for contract labor. The 1969 figures shown between the brackets are the total of hired labor expenditures and those for contract labor.

Source: See, Table 4.

because number of the farms involved is much larger than that of 1959.

However, if we compare the figures for the same number (19,979) of farms ranking at the top for 1959 and 1969, the results will considerably be different. For instance, with regard to the hired labor expenditures, average for all of the Class Ia farms was (in thousand dollars) 39.5 in 1959, 35.8 in 1964 and 31.3 in 1969, showing a steady decline as Ouchi pointed out. If, however, a comparison is made for the top-ranking 19,979 farms in 1959 and 1969, the same expenditures actually increased more than 50% from 39.5 to 60.5 (furthermore, as the expenditures in 1959 include those for contract labor, we should in fact add the latter to the 1969 figure, which will result in a very large expenditure of more than 70 thousand dollars per farm). On the other hand, regular hired workers per farm—although the definition of regular hired workers differ somewhat<sup>34)</sup> for each year—increased from 9.6 to 12.0 in the meantime. In 1959, these farms sold on the average 249 thousand dollars worth of agricultural products. The amount for 1969 was more than double, or 552 thousand dollars. At the present, the largest farms represent no more than one percent of total farms in USA, yet they produce a quarter of total agricultural products sold.<sup>35)</sup>

34) The 1959 Census counted as regular hired workers only when they worked on the farm during the week preceding the census if they had worked there for 150 days or more during that year. However, the 1964 and 1969 Censuses define regular hired workers as those who worked or work more than 150 days during the year, regardless of whether they worked on the farm the week preceding the census (1964 Census, Vol. II, pp. 715-716, 1969 Census, Vol. II, Chap. 4, p. 40).

35) Needless to say, any change in structure of agriculture or means of production can cause a decrease in their degree of concentration as well as in average use of a particular production means. As

Table 6. Concentration of Capital and Production by Type of Farms—Wage-Machinery-  
Farm Products— (Unit: %)

Economic class		Total	Class 1 (Class Ia)	Class II	Class III	Class IV	Class V
Type of farms							
Expenditure for hired labor	① Poultry	100.0	93.4(78.1)	4.5	1.3	0.5	0.3
	② Vegetable	100.0	89.9(77.1)	5.7	2.5	1.2	0.7
	③ Other field-crop	100.0	88.0(72.4)	7.4	3.1	1.0	0.5
	④ Miscellaneous	100.0	85.8(72.2)	6.6	2.7	1.2	3.7
	⑤ Fruit and nut	100.0	75.0(53.5)	12.7	6.7	3.4	2.1
	⑥ Livestock ranches	100.0	74.0(52.4)	12.1	6.6	4.1	3.3
	⑦ General	100.0	67.9(45.9)	14.8	8.9	4.8	3.6
	⑧ Cotton	100.0	66.6(40.3)	17.2	8.8	4.1	3.2
	⑨ Dairy	100.0	63.8(32.9)	24.5	8.9	2.2	0.5
	⑩ Livestock <sup>1)</sup>	100.0	61.0(38.7)	16.3	10.5	6.6	5.7
	⑪ Cash-grain	100.0	56.0(24.6)	23.1	12.2	5.4	3.3
	⑫ Tobacco	100.0	29.6(18.4)	21.3	22.4	16.9	9.8
Estimated market value of all machinery and equipment	① Poultry	100.0	70.6(33.1)	15.6	7.5	3.7	2.6
	② Vegetable	100.0	64.9(45.6)	12.3	9.0	7.7	6.2
	③ Other field-crop	100.0	63.1(38.2)	18.2	10.3	5.4	3.1
	④ Fruit and nut	100.0	47.9(26.8)	16.7	13.9	11.7	9.8
	⑤ Miscellaneous	100.0	39.8(25.2)	12.7	11.3	10.2	26.0
	⑥ Cotton	100.0	39.1(16.8)	21.5	17.4	11.5	10.6
	⑦ Livestock ranches	100.0	36.0(18.5)	16.5	16.4	15.6	15.4
	⑧ Livestock <sup>1)</sup>	100.0	31.7(11.1)	23.6	18.7	14.0	12.0
	⑨ General	100.0	29.8(12.5)	22.5	20.8	15.2	11.7
	⑩ Dairy	100.0	27.5 (5.6)	38.3	23.1	8.4	2.7
	⑪ Cash-grain	100.0	25.3 (5.9)	28.4	24.2	13.9	8.2
	⑫ Tobacco	100.0	10.2 (2.5)	16.3	23.1	27.0	23.4
Value of farm products sold	① Vegetable	100.0	85.0(71.4)	7.0	4.1	2.6	1.3
	② Poultry	100.0	84.6(55.3)	11.5	2.8	0.8	0.3
	③ Miscellaneous	100.0	77.3(60.5)	10.6	6.1	3.7	2.3
	④ Other field-crop	100.0	74.6(52.1)	14.0	7.0	3.1	1.3
	⑤ Livestock ranches	100.0	72.8(57.1)	11.0	7.7	5.3	3.2
	⑥ Fruit and nut	100.0	68.8(48.2)	14.2	9.0	5.4	2.5
	⑦ Livestock <sup>1)</sup>	100.0	61.2(39.3)	17.9	11.3	6.2	3.4
	⑧ Cotton	100.0	54.4(29.6)	19.6	13.4	7.6	5.0
	⑨ General	100.0	45.7(24.3)	22.5	17.2	9.8	4.8
	⑩ Dairy	100.0	41.1(15.5)	34.8	17.8	5.2	1.2
	⑪ Cash-grain	100.0	35.4(10.4)	30.0	20.7	9.8	4.2
	⑫ Tobacco	100.0	18.6 (8.0)	21.3	25.1	22.3	12.7

Note: 1) Livestock farms other than poultry and dairy farms and livestock ranches.

Source: 1969 Census, Vol. II, Chap. 8, pp. 64-271.

So far, the general trend of concentration for the U. S. farms became clear as a whole. To conclude this Chapter, we are now going to consider the multifarious development of U. S. agriculture by type of farms. Table 6 is a comparison of degree of concentration for hired labor expenses, estimated market value of machinery and equipment and value of farm products sold by type of farms in 1969. Figures are arranged in order of the degree of concentration, and for Class I farms.

The Table shows that these types of farms having achieved high degree of concentration of hired labor expenditures generally have achieved likewise high degree of concentration for machinery and production—in other words, the order of concentration is approximately the same for all of the three indices shown in the table. Those Class I farms specialized in poultry and vegetable crops concentrated about 90% of hired labor, and their degree of concentration is the highest also for machinery and equipment (65~70%) and production (85%), followed by “other field-crop”, “miscellaneous” and “fruit and nut” farms. Other types of farms show the same trend, i. e., their degrees of concentration of means of production and sales of farm products are proportional to that of hired labor. Today, except for tobacco farms, these farms with sales of \$ 20, 000 or more (Class I and II farms) concentrate more than half of hired labor, machinery and production. This bears witness to the fact that throughout the U. S. agriculture, concentration of hired labor and that of machinery take place side by side regardless to the type of farms, and these two factors do not exclude each other in reality.

As Karl Marx pointed out once, “it is the nature of capitalist production to reduce the agricultural population continually as compared to the non-agricultural”.<sup>36)</sup> The process in which absolute number of agricultural workforce decreases along with progress of mechanization in farming is not, as those Japanese protagonists of non-capitalistic evolution maintain, the process of disintegration of capitalistic relationships in agriculture, it is, on the contrary, a process of expansion of the capitalistic relationships occurring as a result of development of organic composition of capital.

#### IV Farm Gains and Federal Government Payments

In the preceding Chapter, our analysis of the census led us to a conclusion that a small number of large scale farms have concentrated great portions of hired labor, machinery and other means of production to produce a large quantity of agricultural products. The next object of our review would be net gain situation of those large scale farms. Since the production expenses and their structure are different from one type of crop to another, the analysis by sales of farm products as we have tried earlier is not sufficient to

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the advent of farm machinery drove horses and cattles out of agricultural production and caused a drastic decrease of hired farm workers, thus leading to massive exodus of farm workers into cities. Further as organic composition of capital in large-scale farms become higher, the degree of concentration for them may increase while causing average employment of hired labor per farm to decrease.

36) Karl Marx, *Capital*, Vol. III, 1909, p. 746.

compare net gain levels of different types of farms. We must therefore extend our analysis to the production expenses themselves. In the 1964 and earlier censuses, data concerning the production expenses are rather limited. Figures are available only for major items of farm production expenses such as feed, fertilizer, petroleum fuel and wage expenditures, and it is difficult to estimate net gain of farms. However, the 1969 Census shows, in addition to the major expense items above-mentioned, "all other production expenses" and "total farm production expenses",<sup>37)</sup> and it is now possible to calculate net gain or net loss of farms by subtracting the total farm production expenses from their total value of farm products sold.<sup>38)</sup>

Table 7 shows the estimate of average value of farm products sold and average total farm production expenses per farm, the difference between the two being the average net gain or net loss per farm by economic class. The Class Ia farms (sales of \$ 100,000 or more) show the average sales of 295 thousand dollars and total production expenses of 263 thousand dollars which results in a net gain of 32 thousand dollars. The net gains for Class Ib and Class II farms are \$ 13,000 and \$ 7,500, respectively. Amid the Class Ia farms, those with sales of \$ 300,000~\$ 500,000 realizes net gain of 39 thousand dollars per

Table 7. Average Net Gain or Loss per Farm by Economic Class

(Unit: 1 hundred dollars)

Economic Class	Value of farm products sold (A)	All production expenses (B)	Net gain or loss (A-B)
\$ 1,000,000 or more	33,006	30,583	2,423
\$ 500,000~1,000,000	6,782	6,150	632
\$ 300,000~ 500,000	3,749	3,356	393
\$ 200,000~ 300,000	2,400	2,112	288
\$ 100,000~ 200,000	1,344	1,143	200
<hr/>			
A total of \$ 100,000 or more (Class Ia)	2,948	2,628	320
\$ 40,000~ 100,000 (Class Ib)	594	462	132
\$ 20,000~ 40,000 (Class II)	280	205	75
\$ 10,000~ 20,000 (Class III)	144	106	38
\$ 5,000~ 10,000 (Class IV)	72	56	16
\$ 2,500~ 5,000 (Class V)	34	39	△ 5
<hr/>			
The sum total (Class I~V)	257	209	48

Source: U. S. D. C., 1969 Census, Vol. II, Chap. 7, pp. 66-68, pp. 82-84.

37) In the 1964 Census, there are seven production expense items indicated, as follows: feed, purchase of livestock and poultry, seeds, fertilizer, petroleum fuel, machine hire and hired labor expenditures. The 1969 Census includes, in addition to the above, such items like contract labor, lime, agricultural chemicals and "all other production expenses" including those current expenses like taxes, insurance, electricity, veterinary services, trucking cost, charges for water of irrigation, depreciation, cash rents etc. (1969 Census, Vol. II, Chap. 4, pp. 83-84).

38) As for net gain or net loss of the U. S. farms, see, 1969 Census, Vol. II, Chap. 7, pp. 5-6, pp. 23-43.

farm, which increases to 63 thousand dollars for those farms producing between \$ 500, 000 ~ \$ 1, 000, 000. The largest farms, i. e., the farms whose sales of farm products is \$ 1, 000, 000 or more, the average sales of products reaches 3, 300 thousand dollars per farm and production expenses of 3, 058 thousand, or a net gain of 242 thousand per farm.

On the contrary, those farms with sales of less than \$ 20, 000 realize very small net gain. The average for Class III and Class IV farms, which are considered to represent typical family farms, their average net gain is no more than \$ 3, 800 and \$ 1, 600, respectively. For those small scale farms with sales of \$ 2, 500 ~ \$ 5, 000, the situation is even worse, with average net loss of \$ 550. Among those farms which the Census calls "commercial farms", smaller farms (with sales of \$ 20, 000 or less, and particularly those with sales of less than \$ 10, 000), net gain from agricultural productions is marginal. These farms cannot live without non-farm income.

Table 8 shows a comparison of average net gain/loss per farm according to type of farms. Except for cotton farms, net gain is larger as sales of farm products goes up, although there are significant differences in net gain (or net loss) between two farms of different type even though they belong to a same economic class. For instance, in case of Class Ia farms, net gain is the highest for tobacco (\$ 74, 566), followed by the "miscellaneous" (\$ 56, 624) and vegetables (\$ 55, 129), Net gain of a farm producing tobacco is five times of net gain realized by an general farm (\$ 15, 354). Similarly, among the Class Ib farms, tobacco farms as well as cash-grain, "miscellaneous" and dairy farms realize average net gain of 16~20 thousand dollars, the highest being tobacco, but for poultry farms and livestock ranches, net gain is below \$ 10, 000.

Such differences in gains depending on type of farms exist for small scale farms as well. In the case of Class III farms, the highest income (\$ 5, 806 for tobacco) is 15

Table 8. Average Net Gain or Loss per Farm by Type of Farms

(Unit: dollars)

Economic class Type of farm	Economic class						Total
	Class Ia	Class Ib	Class II	Class III	Class IV	Class V	
Cash-grain	34, 354	18, 249	9, 062	4, 127	1, 631	△ 304	4, 975
Tobacco	74, 566	20, 067	10, 549	5, 806	3, 263	1, 104	4, 073
Cotton	△13, 481	△ 108	1, 872	1, 072	374	△ 685	△ 79
Other field-crop	45, 699	11, 795	6, 289	3, 219	1, 923	136	7, 506
Vegetable	55, 129	13, 427	6, 740	4, 185	2, 100	31	9, 909
Fruit and nut	42, 054	10, 859	5, 735	2, 794	999	△ 1, 330	4, 694
Poultry	32, 213	8, 074	2, 261	383	△ 442	△ 1, 376	7, 917
Dairy	30, 559	16, 211	9, 288	4, 979	2, 390	486	7, 305
Livestock <sup>1)</sup>	29, 042	11, 885	6, 345	3, 145	1, 237	△ 557	3, 910
Livestock ranches	22, 606	9, 471	4, 366	1, 829	595	△ 1, 211	2, 602
General	15, 354	11, 782	7, 171	3, 510	1, 616	△ 406	3, 361
Miscellaneous	56, 624	18, 021	8, 633	4, 333	2, 093	△ 5, 364	4, 840

Note: 1) Livestock farms other than poultry and dairy farms and livestock ranches.

Source: U. S. D. C., 1969 Census, Vol. II, Chap. 8, pp. 66-265.



times of the lowest (\$ 383 for poultry). Likewise, for Class IV farms, tobacco, dairy, "miscellaneous" and vegetable farms get net gain of \$ 2,000 or more, while livestock ranches and fruit farms realize net gain of only \$ 1,000 or less, and poultry farms show a deficit of \$ 442. The situation is even more complicated for Class V farms. On one hand there are farms with net gain of \$ 1,000 or more, whereas four types of farms sustain, on the average, net loss of \$ 1,000 or more on the other hand.

So far, we have excluded cotton farms. As Table 8 shows, their gains situation is rather strange. The largest group of cotton farms, Class Ia and Class Ib, sustain average net loss of 13 thousand dollars (total expenses of 227 thousand dollars against total sales of products of 214 thousand dollars) and \$ 100 (total expenses of \$ 60,900 against total sales of \$ 60,800) on the average, respectively. In order to understand this, it is now necessary to study government payments made by the Federal Government to adjust production and support prices.<sup>39)</sup>

Towards the mid-sixties, volume of surplus cotton stock started to increase sharply in USA and the market price declined considerably. Under these circumstances, the Federal Government decided to implement an extensive control of cotton production in 1966.<sup>40)</sup> Its aim was to reduce 4 million acres of cotton field (approx. 30% of the total acreage planted in 1965, or 14,152 thousand acres) and to pay compensation to those producers who agreed to accept prescribed reduction of cotton fields. The total government payments in 1966 was 773 million dollars, which rose to 932 million in 1967 and then dropped to 787 million in 1968, but in 1969, it increased again to 828 million dollars.<sup>41)</sup> Total acreage planted of cotton in 1969 was 11,882 thousand acres and output was 9,990 thousand bales, or 1,055 thousand dollars in terms of value of cotton products.<sup>42)</sup> As it is, the Federal compensation payment of 828 million for that year was almost as large as value of products.

Cotton is not the only crop eligible for U. S. government payments, which is made also wheat, for feed grain and other major farm products. The total payments rose steeply in sixties when such crops, along with cotton, started to result in large surplus stocks. In 1969 when the Census was made, total government payments came up to 3,794 million dollars which is the highest record in the history of USA (the amount was 702 million in 1960 and 2,463 million in 1965). Apart from 828 million paid for cotton, 1,643 million dollars were paid for feed grain (corns, sorghum, etc.), 858 million for wheat, 78 million for sugar cane and beet, 61 million for wool, and some payments were made for other items too.<sup>43)</sup>

According to the 1969 Census, total government payments reported by the farms was 2,534 million dollars which is only two-thirds of the total amount reported to have been

39) For the characteristics of the Federal policy concerning production adjustment and price-support, as well as the system of the government payment, see, Murray B. Benedict, *Can We Solve the Farm Problem?—An Analysis of Federal Aid to Agriculture*, 1955, and Isshin Nakano, "The Agricultural Policies and the Capitalist Development of Agriculture in the United States", pp. 63-70.

40) U. S. D. A., *Agricultural Statistics*, 1973, p. 58, p. 526.

41) U. S. D. A., "Farm Income Statistics", *Statistical Bulletin*, No. 547, July 1975, p. 57.

42) U. S. D. A., *Agricultural Statistics*, 1973, p. 58.

43) U. S. D. A., "Farm Income Statistics", p. 57.

made by the Federal Government. If we look into the distribution of such payments according to the type of farms which were comparatively important beneficiaries, we can see that 864 million dollars (34% of the total) were paid to cash-grain farms mainly for wheat and feed grain, 635 million (25%) were paid to livestock farms (excluding poultry and dairy farms), 289 million (11%) to cotton farms, 264 million (10%) to general farms for various crops, and 69 million (3%) to "other field-crop" farms mainly for sugar cane and beet.<sup>44)</sup>

These five types of farms thus received more than 80% of the government payments. Table 9 is a comparison of the payments made to these five types of farms according to their economic class. It will be seen that in the case of cotton and "other field-crop" farms, Class Ia and Ib farms get almost one half (49%) and two-thirds (67%) respectively. Those farms with sales of \$ 20,000 or more receive 70~85% of the total payments. For the cash-grain and livestock farms which show relatively low concentration, Class I and II farms receive more than 50% of the all payments. Those whose sales of farm products is less than \$ 20,000, although the largest in number, on the contrary receive very little.

This situation is even more clear if we take a look at the average payment per farm, also shown in Table 9. Taking cotton for instance, Class II cotton farms receive an average of \$ 10,193 and Class Ib farms \$ 20,264 which are equal to 30% of their average value of farm products sold (in 1969, \$ 28,036 for Class II farms and \$ 60,811 for Class Ib farms). The top Class (Ia) farms get an average of \$ 66,503 per farm in government payment. The Federal Government thus compensates those larger farms generously by paying much more than their "net loss" of \$ 13,481 on the average, as indicated in Table 8.

Table 9. Concentration of Government Payments to Principal Types of Farms

Economic class Type of farm		Class Ia	Class Ib	Class II	Class III	Class IV	Class V	Total
Rate of concentration	All farms	14.5%	20.6	25.5	20.6	11.8	7.1	100.0
	Cotton	25.9	23.2	20.1	15.2	8.9	6.7	100.0
	Other field-crop	41.5	25.4	17.4	9.1	4.3	2.2	100.0
	General	23.1	19.4	21.0	18.8	11.0	6.7	100.0
	Livestock <sup>1)</sup>	13.3	21.6	25.3	19.9	12.0	7.8	100.0
	Cash-grain	6.1	19.3	29.2	24.8	13.5	7.0	100.0
Average payment per farm	All farms	6,589\$	2,875	1,821	1,235	714	424	1,366
	Cotton	66,503	20,264	10,193	5,751	2,978	1,369	7,129
	Other field-crop	13,075	3,541	1,795	969	507	310	2,218
	General	24,164	5,818	2,820	1,703	882	529	2,087
	Livestock <sup>1)</sup>	4,942	2,481	1,665	1,060	582	333	1,117
	Cash-grain	12,882	5,729	3,525	2,238	1,302	770	2,339

Note: 1) Livestock farms other than poultry and dairy farms and livestock ranches.

Source: U. S. D. C., 1969 Census, Vol. II, Chap. 8, pp.68-265.

44) 1969 Census, Vol. II, Chap. 7, p. 44, Chap. 8, pp. 40-41.

The Federal subsidies for price drop and production control are paid mainly to large scale farms in the case of the remaining four types of farms also. Particularly, for "other field-crop", general and cash-grain farms, Class Ia farms receive, on the average, \$ 13,000 ~ \$ 24,000, and Class Ib farms \$ 3,500 ~ \$ 5,800, while those many Class III and small farms which should be entitled to better protection from the Federal Government, actually receive only a small portion of the payments.

As the preceding analysis shows, during any period of time as it was in 1969 when the Federal Government strongly implements the production adjustment and price-support programs of main crops, making large payments out of the budgets, objective appreciation of farm income situation cannot be made without taking into consideration those government payments received by farms. Therefore, we shall now try to make Table 10 adding the average government payment per farm to the average net gain/loss per farm by type of farms (ref. Table 8).

First of all, it becomes evident that those Class Ia and Ib cotton farms which, according to Table 8, ended up with net loss of \$ 13,481 and \$ 108 respectively, actually increased their net gain as was the case with the other types of farms, and the gain was larger as the scale of farm increased. As we have already found out, a Class Ia farm received \$ 66,503 from the Federal Government, and if this amount is added, its net gain exceeds \$ 50,000. Class Ib and II farms also benefit from the payment and with the Federal payments, their average net gains reach \$ 20,000 and \$ 12,000, respectively. Thus, the superiority of large-scale farms in cotton production becomes evident only if we take the government payments into consideration.

Even general farms of Class Ia which show the lowest net gain except for the cotton farms as indicated in Table 8, pushes up the net gain more than twice to \$ 39,518 in

Table 10. Average Net Gain or Loss per Farm by Type of Farms, Including  
Government Payments (Unit: dollars)

Economic class	Class Ia	Class Ib	Class II	Class III	Class IV	Class V	Total
Type of farms							
Cash-grain	47,236	23,978	12,587	6,365	2,933	466	7,314
Tobacco	79,778	22,137	11,384	6,193	3,475	1,246	4,394
Cotton	53,022	20,156	12,065	6,823	3,352	684	7,050
Other field-crop	58,774	15,336	8,084	4,188	2,430	446	9,724
Vegetable	59,642	14,634	7,349	4,545	2,365	293	10,824
Fruit and nut	43,431	11,163	5,879	2,898	1,067	△1,277	4,870
Poultry	32,794	8,387	2,472	564	△ 290	△1,228	8,204
Dairy	31,982	16,942	9,784	5,334	2,629	654	7,733
Livestock <sup>1)</sup>	33,984	14,366	8,010	4,205	1,819	△ 224	5,027
Livestock ranches	25,819	11,120	5,381	2,422	940	△ 987	3,295
General	39,518	17,600	9,991	5,213	2,498	123	5,448
Miscellaneous	56,941	18,308	8,855	4,520	2,278	△5,206	5,035

Note: 1) Livestock farms other than poultry and dairy farms and livestock ranches.

Source: U. S. D. C., 1969 Census, Vol. II, Chap. 8, pp. 66-265.

Table 10. Likewise in cash-grain and "other field-crop" farms, the government payments has had the effect of inflating significantly the net gain for Class Ia and Ib farms.

For those crops supported by the government payments, the scale of net gain is being enlarged between the large-scale farms who benefit the most from the subsidy on one part and those small scale farms who are little, on the other part. The Federal policy of price support which is implemented in combination with production adjustment is allegedly aimed at "improvement of family farmers' income". Analysis of the government payments as we have made on the basis of 1969 Census clearly demonstrates that the Federal policy in reality is nothing but the one to promote the differentiation of farmers because it compels small scale farmers and family farmers to go out of farms rather than supporting them, as the government payments are actually encouraging, because of their preferential nature, concentration of capital and production at large scale farms.<sup>45)</sup>

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45) The U. S. Federal agricultural policy became a substantial means of controlling agriculture productions towards 1930. Generally speaking, it functions as an effective means of supporting price levels by combining production adjustment when surplus farm products exists and because the government payments are selectively made to large-scale farmers, it has an effect of accelerating concentration at the large-scale farmers and differentiation of farmers. On the other hand, when shortage exists, it is used as a means of promoting "market oriented agriculture" by relaxing production adjustment and encouraging free competition among farmers, which also has the same effect. As a matter of fact, the Federal Government promptly removed "the set-aside of cropland" of 60 million acres to boost production as soon as food shortage started to become a serious problem all over the world since autumn of 1972, and this had an effect of reducing the government payments in 1974 drastically to 530 million dollars (the amount of government payments in 1973 was 2,607 million dollars. U. S. D. A., "Farm Income Statistics", p.57). Ouchi, on the other hand, considers the Federal policy as a means of "supporting family farmers" or "protecting middle class farmers" with a view to put a break on differentiation of farmers. While he recognizes the fact that the larger farmers are the primary beneficiary of the Federal policy, he seems to think the price-support policy has been implemented in order to foster middle class farmers and family farmers in relation to his conception on the general character of agricultural policy under the stage of imperialism, and particularly that of the stage of the state monopolistic capitalism. Ref. T. Ouchi, *Modern Agriculture in USA*, pp. 204-205, and *American Agriculture*, p. 80).