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AGRICULTURAL STRUCTURE OF WEST GERMANY

By Ryoichi YAMAOKA*

I

The agriculture of West Germany has been confronted with many difficulties after the war. The loss of the 'Ostelbe' farming zone, the inflow of refugees from East-European countries¹⁾, the competition with foreign agricultural industries under liberalized economy²⁾, each and all of these factors involve problems related to the agricultural structure of West Germany. Besides, the agriculture of West Germany is now standing at an important turningpoint in the light of the historical development of the present agriculture. Actuated by the emancipation of farmers by Stein-Hardenberg at the beginning of the nineteenth century, about two million hectares of land were concentrated in the hands of large landowners, while farmers were either reduced to the day-laborers class or driven off to the United States. With the outbreak of the revolution of 1848, this movement was stopped at last. Frh. von Manteuffel, the then Prime Minister of Prussia, founded the National Rent Bank by virtue of the redemption law of 1850. The purpose was to assign it the role to act as an organ of credit between large landowners and farmers. In point of fact, the so-called farmer deportation stopped its progress at this moment. After the breakdown of Germany in 1945, the 'agricultural structure improvement' plan which is called the postwar version of 'the farmer deportation' appeared before the footlights from the present East Germany side. It is, we must say, an interesting question whether the plan will play a role in deporting farmers or it will serve to create more farmers on the contrary. Meantime, if the introduction of new agricultural management formula by Albrecht Thaer in the first half of the 19th century be looked upon as the first phase from the point of view of technological development, the technological progress attained by Liebig in the field of biology should be called the second phase, and the new aspect of technological progress initiated by the introduction of agricultural machines in the nineteen-twenties may be termed the third phase. The economic crisis of big management at this stage was not only attributable to the

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panic but also to the excessive technological advancement driven too rapidly. The result was that an immense tract of land was produced for inland-settlers through the irony of chance. Now the country is approaching the fourth phase of technological progress. As will be discussed later, the use of more and more motor-driven machines in agriculture is a striking aspect of West Germany. Now we see how important a turning point the agriculture of West Germany is standing at today. Further, the change of the agricultural policy-making body will come into question. The landed class of Junkers which, characterizing the German capitalism, has been the life of the organic unity of it, lost the foundation in consequence of the partition of the country and of the thoroughgoing land reform in East Germany, and was deprived of its political and economic power. Therefore, we can hardly think that it still maintains the principal role in agricultural policy-making as it did before the war. Even today, there are many gigantic landowners as well as a great number of forest owners in Schleswig-Holstein or Niedersachsen, but they do not have any significance comparable to that which the Junkers had in the past. Monopolistic capitalism has been pressed forward to shoulder the agricultural policy-making role in that highly developed capitalist country³⁾. In consequence of the dissolution of the Junkertum, big capital had to take it upon itself to bear the burden of the decision-making of agricultural policy. This recognition again leads us to a correct understanding of the fact that the agriculture of West Germany is standing at a turning-point.

Seeing that the agriculture of West Germany is standing at an important turning-point in various senses and is confronted with many difficulties, it is the primary purpose of this article to examine what kind of structure does today's West German agriculture have as an objective condition on which her agricultural policy is based.

II

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- 1) The farmer-refugees alone from East Germany totaled 400,000. They wanted to settle as farmers. However, West Germany could allow only 40,000 out of that many farmer-refugees to be engaged in farming as main occupation, and another 50,000 to own their land but to be engaged in farming as their second-class side-line. (Vgl. Aktionsgemeinschaft Soziale Marktwirtschaft, Tagungsprotokoll Nr. 10, 1958, S. 50.)
 - 2) The main question is how strong is she in the agricultural race with the member-nations of the European Common Market that started to work already. Lübke, the then Minister of Agriculture stated in 1958 that his country should get herself ready to compete in the common market at least within sixteen years. (Vgl. a.a.O. S. 47.)
 - 3) It is the point in dispute among East German scholars whether the "Junker-Bourgeois character" qualifying the peculiarity of the old German imperialism has been lost or not. (For the details, see Kosaku Sakiyama's "Some Problems of West German Agricultural Policy", *Keizai-gaku Zasshi*, Vol. 40, No. 1, Pp. 121-123.)

In the first place, let us see the agricultural structure of West Germany at present. Table I shows the number of farm-enterprises by acreage of agricultural land, and its distribution.

Viewing the agricultural structure from an angle of class-division, it is needless to say that the statistics by acreage of agricultural land are no more than an index. Also, it is evident that we need the statistics of landownership. Two standard yearbooks of government statistics, namely, "Statistisches Jahrbuch für die Bundesrepublik Deutschland" and "Statistisches Jahrbuch über Ernährung Landwirtschaft und Forsten" do not provide figures relating to landownership, excepting their figures for 1949. If we show the state of landownership by way of comparing the figures for 1939 before the land reform, and those for 1949-1950, in which period the land reform program was in operation, on the basis of the figures given in the edition for 1959 of the first yearbook, we obtain Table II.

In passing, let us touch on the land reform program of West Germany briefly. In accordance with the instruction of land reform by the occupation forces in 1946, the land reform act was promulgated and put in force in each state in 1946-1948. In 1952, the Federal Constitution Court gave

TABLE I. Number of Farm-Enterprises by Acreage of Agricultural Land, Acreage of Agricultural Land and Its Distribution

Acreage of agricultural land in hectares		0.5—2	2—5	5—10	10—20	20—50	50—100	over 100	Total
Number of farmenterprises (in 1000)	1949	583.1	543.0	400.7	254.8	112.4	12.7	3.0	1911
	1953	565.6	512.1	389.9	258.2	112.9	12.9	2.9	1855
	1955	553.7	487.5	382.3	262.6	114.0	13.0	2.8	1816
	1957	537.4	458.3	371.6	270.3	116.4	13.3	2.8	1770
	1958	526.7	443.7	366.0	274.1	117.7	13.4	2.8	1740
Variation of number of enterprises (in 1000)	1949-55	-29.4	-56.4	-18.4	+7.8	+1.6	+0.3	-0.2	-95
	1955-57	-16.3	-29.2	-10.7	+7.7	+2.4	+0.3	±0	-46
	1957-58	-10.7	-14.6	-5.6	+3.8	+1.3	+0.1	±0	-25
	1949-58	-56.4	-100.2	-34.7	+19.3	+5.3	+0.7	-0.2	-166
Acreage of agricultural land (in 1000 hectares)	1949	636	1807	2840	3525	3245	823	561	13437
	1955	612	1658	2746	3633	3293	844	506	13292
	1957	584	1527	2669	3756	3360	860	499	13255
	1958	566	1475	2634	3805	3391	866	494	13231
	1949-58	-70	-333	-206	+280	+146	+43	-67	-206
Distribution in 1958	Number of Enterprises	30.2	25.4	21.0	15.7	6.7	0.8	0.2	100
	Acreage of Agri. land	4.3	11.2	19.9	28.8	25.6	6.5	3.7	100

(Source: Statistisches Jahrbuch über Ernährung Landwirtschaft und Forsten, 1958, S. 31)

TABLE II. Number of Landed-Farmer and Tenant-Farmer Enterprises, and Respective Acreages of Farms (in 1000 or 1000 ha)

Year	Number of Landed-Farmer Enterprises	Acreage of Landed-Farming	Number of Tenant-Farmer Enterprises	Acreage of Tenant-Farming
1949-50	1890.7	19241.6	1147.3	2651.7
1939	1914.0	19358.6	1089.1	2548.0

decision that 'the Land Alienation Law for Land Reform' of Schleswig-Holstein was decidedly against the constitution, thus, the land reform virtually ended. The results of the land reform in West Germany that were realized before the tables were by the Tenancy Act of June 1952 approving tenancy in kind pure and simple, were extremely poor. In East Germany, 2,189,999 hectares of land was divided up and made over to the hands of 559,089 peasant-farmers as a result of the land reform program¹⁾, while in West Germany the private lands that were registered expropriated during the period between 1945 and 1952 did not amount to no more than 108,531 hectares in all. Besides, these lands were appropriated for the use by settlers. It is no exaggeration that an East German literature²⁾ states as follows: "About 100,000 hectares were registered as the lands to be expropriated on the basis of the Land Reform Act. This acreage occupies only 1.8% of the entire holdings by largest landowners—In spite of the fact that there were more than 300,000 peasant farmers entitled to the allotments, even such a bit of land as this was not allotted among them."

The above-mentioned statistics relating to land ownership, simple as they are, indicate that the number of tenant farm enterprises as well as the acreage of tenant farming are tending to increase while the number of landed-farmer enterprises as well as the acreage of landed-farming are showing a falling tendency. In fine, the Land Reform of West Germany only served to the advantage of large landowners who had extra lands to part with, hence the structural change of the West German agriculture brought about thereby has nothing worthy of our attention.

Let us go back to Table I. During the period from 1949 through 1958 the number of farm-enterprises with less than 2 hectares of agricultural land decreased by about 56,000, the number of those ranging in size from 2 to 5 hectares by approximately 100,000, and the number of those holding 5 to 10 hectares by about 34,000. On the other hand, the number of farm-enterprises, each operating on an agricultural land ranging in size from 10

1) Rainer Arlt, *Agrarrechtsverhältnisse in West-und Ostdeutschland*, 1957, S. 57. The minute details of the land reform of East Germany are given in Pp. 107-153 of this book.

2) "Revival of Imperialism in West Germany", edited by Shiro Toyota, Pp. 41-2.

to 20 hectares, increased by 19,000, the number of those enterprises holding from 20 to 50 hectares by 5,300, and the number of those enterprises ranging in size from 50 to 100 hectares by 700. In other words, while the number of farm-enterprises with less than 10 hectares of agricultural land decreased by about 191,000, the number of those ranging in size from 10 to 100 hectares increased by about 25,000. To see those farm-enterprises operating on an agricultural land of more than 100 hectares, the number decreased by 200. Thus we can notice that during the period from 1949 through 1958, both groups of less than 10 hectares as well as more than 100 hectares dropped in number while those groups of between 10 and 100 hectares showed a rising tendency; especially a marked increase was observed in groups of between 10 and 20 hectares. It has a great significance in our task of explaining the agricultural structure of West Germany how should we characterize this marked increase in the groups holding agricultural land of from 10 up to 100 hectares. When we regard the groups of between 10 and 20 hectares as large farm enterprises, we may interpret the upward tendency as "an expansion of large enterprises at the sacrifice of middle and small farmers". When we take the position of viewing the groups as small farm enterprises, we may as well regard it as a fruit of "the protection of small farmers by monopolistic capital" policy. With a group of our scholars represented by the late Momotoshi Kurihara³⁾ and Takeo Wataya⁴⁾ who talk about "the middle-class farm standardization at the stage of monopolistic capitalism" or with Mr. Sadao Ishiwata⁵⁾ who speaks of "the swelling of the middle-class farmers under monopolistic capitalism", it is quite possible, of course, to define the groups as the middle-class farmers.

Before entering the discussion of this subject, let us look back the definition of class division that Lenin established on the basis of the data provided by the census conducted in Germany in 1907. Table III shows his division of farm enterprises into the classes with respect to home labor power versus hired labor power. ("Capitalistic Structure of Modern Agriculture", The Complete Works of Lenin, Vol. 16, p. 455) In this Table, the majority of the farm enterprises holding an agricultural land of less than 2 hectares are wage-laborers by profession. It is considered by Lenin that in many of

3) "An Essay on Contemporary Japanese Agriculture", and "A Guide to Some Agricultural Problems" by Momotoshi Kurihara.

4) "Development of Capitalism and Class Division of Farmers", by Takeo Wataya, included in "Japanese Capitalism and Agriculture" by Tohata and Uno. Also many other interesting articles dealing with the same subject are found in *Nogyo-Sogokenkyu* "Collective Studies on Agriculture".

5) "An Introduction to Principles of Agriculture", by Sadao Ishiwata.

proletarian "farm enterprisers" of those days we could find the embodiment of some direct remains of the serfdom under capitalism. Counted into the category of the farmer-enterprises were those groups in which the majority of husbandmen belonged to the class of independent enterprisers on one hand, and the family laborers exceed the hired laborers in number on the

TABLE III. Class-Division of German Agricultural Enterprises

Enterprisers by group		Average number of laborers per enterprise		
		Total	Family laborers	Hired laborers
Proletarian enterprises	Less than 0.5 hectares	1.3	1.2	0.1
	0.5-1 hectare	1.9	1.7	0.2
Farmer-enterprises	2- 5 hectares	2.9	2.5	0.4
	5-10 hectares	3.8	3.1	0.7
	10-20 hectares	5.1	3.4	1.7
Capitalistic enterprises	20-100 hectares	7.9	3.2	4.7
	more than 100 hectares	52.5	1.6	50.9
Average		3.0	2.1	0.9

other hand. In the group of farmer-enterprises the enterprises holding 10 to 20 hectares are grouped independently in its subdivision. The average number of wage-laborers in this sub-group is 1.7 men, and if we treat the steadyjobbers separately, it will become clear that every and any enterprise cannot get along without depending upon hired laborers constantly. Hence, Lenin defined this group of farmers as "large farmers," that is, the farmer-bourgeoisie. The greater part of the farmer-enterprises are run by independent husbandmen, but he discriminated between the enterprises of 2 to 10 hectares and those of 10 to 20 hectares clearly. Those enterprises which hold more than 20 hectares are put under the category of the capitalistic enterprises in that they depend more heavily on hired laborers than on family laborers.

It is a question whether Lenin's class division of German agricultural enterprises based on the census of 1907 is still applicable half a century later. For example, comparing his class division derived from his study and calculation of the census data of West Germany of 1950 with Lenin's table, and after taking into consideration some factors prohibitive of direct comparison, such as the absence or scarceness of Junker-like large farm-enterprises in West Germany, Mr. Ishiwata points out the following differences: first, the quantity of input labor power to the same acreage and scale of enterprise has become smaller, which means an increase in the produc-

tivity of labor, and secondly, the use of hired labor power has decreased markedly. For this reason, the group of 10 to 20 hectares dropped from the level of large farming to middle-sized farming. (Sadao Ishiwata, "Introduction to the Theory of Agriculture", 1957, p. 80, ff.)

As was pointed out by Mr. Sakiyama already (Kosaku Sakiyama, op. cit. p. 128), the table shown in Page 81 of the said book of Mr. Ishiwata undoubtedly underestimates unduly the number of steady-jobbers per enterprise as a result of his confusion of "the acreage of agricultural land" with "the enterprise acreage", but his comments on those enterprises holding less than 20 hectares would not be very far from the truth. An elaborate essay "The Trend of Agricultural Labor Power in West Germany" (I) that Mr. Toshiaki Matsuura put out recently in reference to agricultural labor power before 1949 (Nogyo-sogokenkyu "Collective Studies on Agriculture", Vol. 14, No. 3) reads as follows: "If we classify enterprises into classes in view of the importance hired labor occupies in different enterprises, those which hold more than 50 hectares depend almost entirely upon hired labor power, one out of 15 enterprises among those which have less than 5 hectares is operating an intensive agricultural enterprise that depends on hired labor power (mostly, fruit-growing and growing of vegetables), the class of 20 to 50 hectares depends half of its all-season requirement of labor power on hired laborers, averaging three hired laborers per enterprise. The group of 5 to 20 hectares may be called a class with strong coloring of family farm." (Cf. op. cit., p. 249) These are the figures drawn from the year 1949, which is the very year in which the purges of the lost war and the inflowing refugees, hence, their shifting of employment to farm-laborers, resulted in an increase of farming laborers in rural districts. These farm-laborers have rapidly disappeared with the recovery of West German industry subsequently. If we take this into consideration, what Mr. matsuura pointed out in his discussion of class-division must take a clearer form, as long as hired labor power is concerne.

If we show the change of agricultural labor power in those Managements and household affairs of enterprises or farmer-families which hold more than 0.5 hectares of agricultural land in accordance with "Statistisches Jahrbuch über Ernährung Landwirtschaft und Forsten", 1958, S. 42, we obtain Table IV. It is clear from this table that since 1925 or 1939 the regular labor power continued to fall with no exception in both categories of family labor and hired labor, and that starting from 1939, the regular labor power recorded a decrease of as much as 1,277,000 persons. Offsetting an increase of 533,000 in the irregular labor power, it still remains a decrease of 844,000 persons. To see the hired labor power alone, we can find that

TABLE IV. Change of Agricultural Labor Power
(in 1,000 persons)

Year	Regular labor power			Irregular labor power		
	Family labor	Hired labor	Total	Family labor	Hired labor	Total
1925	4755	934	5689	—	—	—
1939	4433	753	5186	1130	360	1490
1950-51	4380	766	5146	1180	450	1630
1951-52	4230	701	4931	1210	460	1670
1952-53	4090	653	4743	1240	470	1710
1953-54	3935	613	4548	1275	485	1760
1954-55	3760	579	4339	1360	500	1860
1955-56	3580	552	4132	1450	520	1970
1956-57	3423	524	3947	1522	530	2052
1957-58	3309	500	3809	1484	539	2023

the regular labor power recorded a decrease of 253,000 and the irregular labor power an increase of 179,000, with a balance of 74,000 persons on the side of decrease. A look into the variation of the number of enterprises and of the acreage of agricultural land during the period between 1955 and 1958 in Table I and the change of the hired labor power in the same period in Table IV, shows that when we pick up the enterprises holding more than 10 hectares which have far greater possibility and need of hired labor, the number of enterprises increased by 15,600, and the acreage of agricultural land recorded an increase of 280,000 hectares, whereas the aggregate of regular and irregular hired labor powers decreased by 33,000 persons during the period between 1955-56 and 1958, and by 40,000 during the period between 1954-55 and 1958, hence a marked decrease in the quantity of average hired labor power per unit acreage of agricultural land or per enterprise. If we broaden the scope of our discussion to the enterprises holding more than 5 hectares, the number of enterprises decreased by 700 while the acreage of agricultural land increased by 168,000 hectares. This means a decrease in the quantity of average hired labor power as was the case with those enterprises holding more than 10 hectares. Foremost important is the regular hired labor power, and in spite of the fact that it decreased by 79,000 during the period between 1954-55 and 1958, the class of those enterprises holding more than 20 hectares which has not only the ability but also the need of hiring them increased by 4,100 in the number of enterprises, and by 108,000 hectares in the acreage of agricultural land during the period between 1955 and 1958. Here we can find one of the differences between the present stage of German agricultural development and that of 1907 which provided Lenin with

the data for his analysis of German agriculture.

I am going to show you in the next table the statistics of Bayern as the agriculture of this province is a miniature of West German Agriculture as we may call it in that all types of agriculture in West Germany are concentrated in this province, and also because it offers an interesting problem in the light of the use of hired labor power, although it is to be regretted that our data are a little bit too old and are limited to just one province. The source is "Die Bayerische Landwirtschaft in Zahlen", and I picked up the figures from its agriculture section for the period 1945-1950.

This table was worked out on the basis of the statistical table on the employment of labor power which is carried in Page 18 of the same book. Here it is clearly demonstrated that there exists a big gap between the groups holding more than 20 hectares of agricultural land and those which have smaller agricultural land than that. It also indicates how densely labor intensive enterprises are concentrated in the groups holding less than 2 hectares. Among them are included high level fruit or vegetable-growing farmers catering for urban districts, which fact serves as a vindication of the low productivity of labor at the same time. As I have stated earlier, a special consideration should be given to the fact that the year 1949 happened to be a period of very special nature when the agricultural labor forces swelled overwhelmingly as a consequence of the lost war, and Bayern was one of those districts which were affected most seriously. The greatest significance of this table is that not only it shows the scale of farm enterprise, the production relations, especially the ratio of family labor to hired labor, but also it adopted a point of view of labor productivity. If gross profits and net profits for different groups of enterprises operating on different scales together with some figures relating to machinery or other parts of constant

TABLE V. Labor Power Employed in Bayern Agriculture (1949)

Scale of enterprise owing to difference in acreage of agricultural land	Farm operator	Family labor power	Hired labor power	Total labor power	Acreage of agricultural land	Labor power employed by enterprises holding more than 0.5 hectares of agricultural land per 100 hectares		
						Total labor power	Family labor power	Hired labor power
0. -0.5 ha	2154	8261	16934	27349	3530	—	—	—
0.5-2	33615	87452	10749	131816	98813	133.3	122.5	10.8
2 -5	102400	215601	17193	335194	457102	73.3	69.5	3.8
5 -20	207711	507676	107073	822466	2185192	37.6	32.7	4.9
20-100	31274	91504	89314	212092	1021116	20.8	12.0	8.8
more than 100	241	579	17712	18532	103701	17.9	0.8	17.1
Total	377395	911073	258975	1547443	3870054	Average 39.3	33.0	6.3

capital could be integrated into this table, it would be perfect although no such statistics are available anywhere. Tentatively I prepared Table VI by adding the number of tractors which lead the recent mechanization movement according to the statistical table of agricultural machines offered in Page 30 of the same book to our Table V.

TABLE VI. Labor Power and Number of Tractors in Bayern

Scale of enterprise owing to difference in acreage of agricultural land	Acreage of agricultural land	Labor power employed	Number of enterprises owning tractors	Number of tractors	Number of tractors by horsepower			Labor power employed by enterprises holding more than 0.5 ha per 100 ha			Number of tractors used per 100 ha of agricultural land larger than 0.5 ha
					up to 18 h.p.	18-25 h.p.	more than 25 h.p.	Total labor power	Family labor power	Hired labor power	
0-0.5 ha	3530	27349	49	55	5	27	23	—	—	—	—
0.5-2	98813	131816	165	172	116	29	27	133.3	122.5	10.8	0.17
2-5	457102	335194	904	924	639	212	73	73.3	69.5	3.8	0.2
5-20	2185792	822466	8264	8367	4396	3329	642	37.6	32.7	4.8	0.4
20-100	1021116	212090	12705	13472	2477	8428	2568	20.8	12.0	8.8	1.3
Over 100	103701	18532	428	1036	83	333	620	17.9	0.8	17.1	1.0

Here, let us discuss the problem of labor power classified by scales of enterprises owing to differences in acreage of agricultural land and its relation to tractor ownership in 1949, deferring the discussion of the smaller number of tractors in Bayern as compared with the average of West Germany as a whole, the problem of farm mechanization, and the examination of their postwar trends. In reading this table, it will be necessary to notice the big difference existing between the group of 5 to 20 hectares, whose family labor is more than six times as large as hired labor, owing only 0.4 tractor per 100 hectares, and the group of more than 20 hectares, whose hired labor part nears its family labor part, being equipped with 1.3 tractors per 100 hectares. The table also tells us that the group of more than 100 hectares is depending almost entirely upon hired labor, and that in the number of tractors, this group owns 1.0 tractor, but in terms of the number of enterprises owning tractors we can see that more than 2 tractors are owned by each enterprise in this group, surpassing other groups in horse-powers. In consequence, it must be admitted that the 10-20 hectares group was drawn somewhat towards the 5-10 hectares group, and the 20-50 hectares group towards the upper group.

According to my personal observation of different parts of West Germany during my trip to that country, it will not be very wrong to say that one cho (2.45 acres) of our country is equivalent to 10 hectares of Germany especially with reference to labor power. Of course we cannot discuss on

equal basis those intensive farm enterprises in vine-growing districts situated in the upper reaches up Wiesbaden along the Rhine river or in fruit and vegetable-growing districts neighboring large cities like Hamburg or München, but West German agriculture on the whole is extremely extensive as grazing and pasture lands are usually included. A farm enterprise of 2 to 3 hectares corresponds exactly to a 2 or 3 tan (a measure of land, about 0.245 acre) peasant farming in our country, and it is unusual at all that a farm master wanders from one place to another, hunting jobs as a seasonal laborer during farmers' off-season. It is nothing but an proletariat farming or a farm enterprise by a wage laborer. The group of 2 to 5 hectares is the poor farmer class, and the group of 5 to 10 hectares is the typical peasant farmer class of West Germany, a class which is always complaining about high rent-in-kind. The class of 10 to 20 hectares needs hired labor, but an increase of the wage portion in total working expenses means an increased burden, hence the farmers of this class are trying to make up for their want of labor power by dint of farm mechanization. Nevertheless, they cannot do without casual hired labor. This means that the situation has changed greatly since 1907 when Lenin called this class "a class which cannot do without wage laborers all the time" (The Complete Works of Lenin, Vol. 16, p. 455), and defined the farmers of this class as large farmers or the farmer bourgeois. The so-called family type farmers is centering in this class. Due to differences in local natural and economic conditions, this class may come down to a 8 to 15 hectares level sometimes, or it may happen that its upper margin goes up to as much as 25 hectares. This is the class whose annual gross profits ranges from 8,000 to 16,000 German marks. I would rather like to define the group of 20 to 50 hectares as the large farmer class, and the group of 50 to 100 hectares as the capitalist farmer class.

When we follow this definition, we cannot help but interpret the above-mentioned concentration tendency towards the 10 to 20 hectares level as a middle-class farmers concentration phenomenon. I am more interested in examining the reason why the middle-class family-type farmers are on the increase, rather than simply disposing of the matter by branding it the "swelling of middle class farmers under monopolistic capitalism".

III

It is needless to say that such a tendency has become strong after the war is partly attributable to a series of policies adopted by the government of West Germany without question¹⁾. To be more exact, this tendency that did exist even before the war was certainly promoted or invigorated.

by the government. It is our present task, therefore, to grasp clearly what made this tendency distinct and strong.

First of all, it is important for us to determine, not in an abstract way but in the concrete, at what stage of development is the present West German agriculture standing. If we establish a rough division of two developmental stages of German agriculture from the point of view of the development of productivity; namely, the first stage being the period during which the achievements brought about by the progress of natural science, especially, biological science since the middle part of the nineteenth century were introduced into agriculture, and the second stage being the postwar period in which the use of motor-driven agricultural machines has increased rapidly, the increase of labor productivity was only of the secondary importance in the first stage. It was more important to raise the land productivity, that is, to increase the output per hectare. At this stage, any basic structural change in agriculture does not come into question. The decreasing demand for labor power mattered little, and farmers persistently devoted themselves to produce more crops by the application of advanced knowledges of biological science. What distinguishes this stage from the second stage is the replacement of cattle with motor. Indeed, the use of more and more motor-driven farm machines proved to be a decisive factor that marked the agricultural development of this stage. All those factors which acted to preserve old traditions, hence checked the development of productivity at the preceding stage, were destroyed at this stage. In other words, land and labor which were the two fundamental factors of production began to give way

1) At the general assembly of the Federal Republic of Germany that met on January 20, 1953, Chancellor Adenauer addressed as follows: "One of the sources of fundamental difficulties is the agricultural structure of our country today. Of a total of 14,000,000 hectares of our agricultural land, 7,000,000 hectares still await redistribution. In other words, our mechanization program to increase labor productivity is not as successful as it should be simply because half of our agricultural land is divided up too small." The Chancellor's idea of "the agricultural structure improvement" program evinced in this speech was materialized by the then Minister of Agriculture Lübke, and is known by the name of "the Lübke plan" or "the Lübke program". A number of important farm relations laws were legislated after the war, such as (1) the Tenancy Law (Das Landpachtgesetz) in March 1952, (2) the Law for Promotion of Farm Settlement (Das Gesetz zur Förderung der landwirtschaftlichen Siedlung) in 1953, (3) the Field Readjustment Law (Das Flurbereinigungsgesetz) in July 1953, (4) the New Realty Transaction Law (Das neue Grundstücksverkehrsrecht) in July 1954, (5) the Market Order Law (Die Marktordnungsgesetze), November 1950 - April 1951, and (6) the Agricultural Law (Das Landwirtschaftsgesetz) in September 1955. The basic principle underlying these laws was the creation of independent enterprises by means of promoting the combination and expansion of farming lands, the grouping of fields, and the tenant land circulation, and it was closely related to the agricultural structure improvement program embodied in the Lübke plan. It is told that in the concrete these laws were intended to create forcibly more healthy farm enterprises or those farmers who can operate rational farming business equipped with modern techniques.

to another factor or capital. In the past, farming was nothing but to combine land with labor, and for that reason, farm enterprise could maintain autarky. But now it has become more and more dependent upon other industrial departments which supply it with farm machines or means of farm production and management. It becomes necessary to put in *smaller* land and labor but *larger* capital in order to obtain the same quantity of output. One of the characteristics of this stage, therefore, can be found in the point that once the old balance of labor and land is lost, the diminution in demand for labor will begin to exceed the increase of demand for labor to be accompanied by the rising productivity. The second main feature of this stage is that the inflow of capital is a decisive factor to determine the progress of a farm enterprise, and therefore, as long as it is impossible to secure machines and other big means of production and management with his own capital, a farmer is obliged to rely upon loans from others. Even today the farmers of West Germany have an old prejudice imbued deep in their minds that debt is a vice, but soon they will be pressed to cast away this outdated concept. As the third characteristic, this stage urgently requires elimination of all conditions impeding the introduction of farm machines. The improvement of water facilities, Farm roads improvement, a large scale re-adjustment or exchange partition and annexation of farms according to their sizes and shapes are the questions in hand. In other words, West Germany has to complete all pre-conditions to allow rational use of modern means of farm enterprise. In the fourth place, this stage requires the improvement of the quality of farm operators who are to effect rationalization. The foregoing characteristics are of economic nature, but when we see the stage from a broad sociological standpoint, we shall notice some change in family structure. The compound family of old is turning to the simple family pure and simple by and by, and the servant system that was still alive before the war is doomed to disappear gradually. Also it is worthy of our attention that some change is taking place in farmer's consciousness. Farmers in the past used to be extremely seclusive. That means they adhered to the old type self-satisfaction and self-preservation in the past, while today's farmers are always looking outside their own community and compare their rural life with the life in urban communities. The old farmers' attitude of endeavoring to preserve their traditions is gradually being lost, especially in their economic life. They are becoming more and more rational-minded. The time has almost arrived that farmers no longer consider land as the important source of their income, but take it simply for a place of living or their ancestral home.

Let us examine the present status of farm mechanization in West Ger-

man agriculture as the progress of mechanization is the main index characterizing this stage. The changes in the number of tractors from 1939 and 1949 through 1958 that enable us to trace the progress of mechanization most directly can be shown as Table VII. We can see in this table that the ten year period from 1939 through 1949 recorded an increase of as small as 44,000 tractors, while the following period of less than ten years brought a phenomenal increase of as much as 590,000 tractors. ("Statistisches Jahrbuch über Ernährung Landwirtschaft und Forsten", 1958, S. 55) The number of tractors per 100 enterprises classified by groups holding differentsized agricultural lands may be tabulated as Table VIII. This table tells us clearly what class of farmers could adopt motor-driven machines when we see it by groups. Only 8 out of 100 enterprises owning less than 5 hectares could own tractors by 1957, while in the class of 5 to 10 hectares, half the enterprises owned a tractor each. The higher the class, the greater the number of tractors. To see the class holding more than 50 hectares, every enterprise of this class owned one tractor in 1949. In 1957, however, each owned more than 2 tractors. But it was in those three classes holding less than 20 hectares that the rate of increase in the number of tractors is grea-

TABLE VII Changes in Number of Tractors

Year	Tractors in Agriculture & Forestry	Tractors in Agriculture
May 17, 1939	30265	
May 22, 1949	74586	
Jul. 1, 1949	89743	
Jul. 15, 1950	116662	
Jan. 15, 1951	139028	
Jul. 1, 1951	162000	
Jan. 1, 1952	184548	
Jul. 1, 1952	216554	
Jan. 1, 1953	244964	
May 15, 1953	260548	
Jul. 1, 1953	276826	260892
Jan. 1, 1954	300065	
Jul. 1, 1954	334470	316827
Jan. 1, 1955	370470	
Jul. 1, 1955	422806	403662
Jan. 1, 1956	460661	
Jul. 1, 1956	512806	492221
Jan. 1, 1957	542859	
Jul. 1, 1957	588682	566931
Jan. 1, 1958	614176	
Jul. 1, 1958	665689	642243

TABLE VIII The Number of Tractors per 100 Enterprises Classified by Groups Holding Different-sized Agricultural Lands

Acreage and Scale of Agri- cultural land	1949	1951	1953	1954	1957
Less than 5 ha	0.4	0.7	1.9	3.3	7.7
5-10	1.9	5.1	13.0	20.4	40.6
10-20	6.3	16.5	32.4	43.7	72.6
20-50	26.9	45.9	65.2	80.1	112.1
More than 50	97.0	130.6	140.5	165.3	218.0
Average	3.8	7.2	12.8	17.6	30.3

ter than the average. It is needless to say that the slower increase in the number of tractors owned by the class holding more than 50 hectares is due

to the fact that firstly the class is constantly aiming at a higher level of mechanization as we shall see below, secondly, it was almost completely equipped with tractors by 1949, and lastly this class is using tractors of larger horse-power than those used by smaller enterprises.

As to combine or a larger machine than tractor, we shall borrow the statistics given in Page 57 of the same year-book although they are far from

TABLE IX Changes in the Number of Combines

Year	Individual-owned combines in farm enterprise				Joint ownership	Cooperative ownership	Industrialized farm enterprise ownership	Total
	Less than 20 ha	20-50 ha	More than 50 ha	Total				
1949	10	15	124	149				
1952				1074	206	19	83	1382
1953	85	534	1272	1891	332	20	241	2486
1954	172	1094	1898	3164	565	40	554	4323
1955	505	2292	2850	5647	966	90	1055	7758
1956								12898
1957								18000
1958								21500

perfect. According to the statistical figures, the number of individual-owned tractors in farm enterprise in 1958 was 642,243 tractors, which counts for more than one third of 1,744,000 or the total number of farm enterprises, enterprises, while in the case of combine or one scale larger machine than the tractor, the total number was no larger than 21,500 in the same year. To see it by groups of different scales of enterprise, there were only 505 combines that were owned by those groups holding less than 20 hectares. It should be worthy of special attention, however, that unlike the tractor, the introduction of the combine was delayed extremely so that the number barely rose up to 149 finally in 1949, that the joint-ownership and the co-operative ownership of this machine—two forms of ownership that were not seen in the case of the tractor—occupied a considerable weight; beside these two types of ownership are tending to increase more rapidly than individual ownership, and that the number of combines owned by industrialized farm enterprises depending on hired labor totaled 1055 in 1955, occupying one seventh of the nation's total of the year, which fact deserves special mention as an evidence that independently of individual enterprises holding more than 50 hectares, the figures of combines owned by industry-type farm enterprises have come up to the surface. In view of the facts that the total number of farm enterprises holding more than 50 hectares of agricultural

land is as small as 16,200, that the use of combines is confined to grain farming, and that according to the aforementioned statistical yearbook (*Statistisches Jahrbuch für die Bundesrepublik Deutschland*, 1959, S. 139), the acreage of grain farming lands in 1955 was 4,914,758 hectares, occupying a little over one third of the total acreage of agricultural land, it is not too much to say that practically all large grain farm enterprises holding more than 50 hectares own combines either in the form of individual ownership or some other form.

I believe that these differences of ownership between the tractor and the combine are conditioning the present stage of farm mechanization in West Germany and characterizing its limitation at this stage. The mechanization of West German agriculture is now in its first stage of progress and has not reached the second stage yet. It is, as it were, in the transitional period of progress. We should be able to draw the same conclusion as to the growing process of agricultural labor power. Let us look back at Table IV once again. The regular labor power has continued to fall in both family labor and hired labor ever since 1925 or 1939 without a year exception. On the contrary, the casual labor power has constantly increased at almost the same pace without any exception what-so-ever, in both family labor and hired labor. Taking 1939 as the starting point, the regular labor power dropped by 1,377,000 persons, while the casual labor power recorded an increase of 533,000 persons. This seems to suggest that with the progress of mechanization at its first stage, there would be invited a fall in the demand for the regular labor power on one hand, while the demand for the casual labor power would expand in some seasons mainly because high degree mechanization has not penetrated into all phases of the production process. What does it mean that during the period from 1956-57 till 1957-58 the casual family labor power dropped exceptionally by 38,000 persons while the casual hired labor power showed an increase of 9,000 persons as it used to? The future progress of it may develop a phenomenon that deserves our further attention.

IV

So far we have discussed what is the agricultural structure of West Germany today like, and tried to trace up by statistical figures its tendency chiefly since 1949. When we catch it in the phenomenal form, there could be observed a tendency of farming enterprises to concentrate into the so-called family-type farming or middle farming class. However, I wouldn't think that this is a permanent tendency. As we have seen above, this is a phenomenon that appears at the first stage of mechanization process. It

always has a prospect to advance to the second stage and is preparing itself to do so. It is, as it were, a phenomenon that appears in the transition period. This transition period may extend over a long space of time, but a transition period is a transition period no matter how long it may be protracted. During this transition period, some of the swollen middle class farmers may fall to the lower classes again due to their debts incurred by the purchasing of machinery or other means of production¹⁾, and a few others may rise to capitalist enterprisers. At any rate, as far as we view it from the standpoint of contracting variable capital and expanding constant capital, there is no doubt that West German agriculture is rising to higher levels, hence the socialization process of agricultural production is making a good progress. More use of motor-driven farm machinery, the simplification of family structure or the grouping of fields may be mentioned as the factors that help promoting this tendency. The socialization of production is now going well within a certain limit at the present stage with the labor power of simply families as the main force and by virtue of mechanization being introduced to the greatest possible extent. It is "not a suitable expression at all" but we may safely say that agriculture has finally reached the manufacture stage if we borrow the concept of the industry department. It is not until the progress of the socialization of production reached the point beyond which the agricultural productivity cannot be raised any higher that collectivized production or large scale industry-type farming will be called into being. In this respect, our Table IX presenting the figures of combines is very suggestive. Nevertheless, it is needless to say that it largely depends upon the direction and implementation of the agricultural policy of West Germany how will it change in future. If "the agricultural structure improvement" program is a contemporary version of "farmer deportation" as Peter Hess holds²⁾, it must assert itself in the shape of far intensified class division of farmers soon. If it aims at "the highly mechanized crop rotation of a farmer type" as Hermann Priebe maintains, the class division of farmers must undergo long lasting mild changes.

1) The amount of debts in West German agriculture increased from 3,090 million German marks of 1949 to 6,200 million German marks of 1954. For full information, refer to Rainer Arlt, a.a.O. S. 33 u. 34. Also, according to p. 136 of the "Statistisches Jahrbuch für die Bundesrepublik Deutschland" (the edition for 1959), the debts of 1957 totaled 9,250 million German marks.

2) Peter Hess, Zu einigen Fragen der Struktur des Westdeutschen Landwirtschaft nach dem zweiten Weltkrieg; Deutsche Akademie der Wissenschaften zu Berlin. Jahrbuch des Instituts für Wirtschaftswissenschaften. Band 1. Problem der politischen Ökonomie. S. 78-119. Here Hess states that the improvement of agricultural structure is exactly antagonistic to the democratic land reform, and is, as it were, a modern version of farmer deportation. His view

is resting on the following ground: "the monopolistic capital of West Germany is now under the pressure of the imperative necessity of expanding her domestic market to the maximum. The liberalization policy calling for establishing the supremacy of West German imperialism in Western Europe cannot but pursue after higher agricultural productivity so that it may compete with foreign rivals. The agricultural productivity must be raised from her political standpoint as well. The capitalist system and the socialist system are vying with each other for supremacy in the country of Germany". That is because he believes firmly that capitalistic intensive farm production would never come unless thoroughgoing farmer deportation is carried out. Vgl. a.a.O. S. 87. u. 88.

- 3) At the tenth general meeting of the Social Market Economy Promotion Council held in Bad Godesberg near Bonn in January 1958, Hermann Priebe gave a lecture on the subject of "The Possibility and Limitation of Structural Development" with reference to the basic idea underlying the "Agricultural Structure Improvement" program. It is his guiding principle to believe that there are two different directions of the structural development of agriculture; namely, the type of organic growth, and the type of revolutionary change. He always has in his mind the antagonism existing between East German agriculture and West German agriculture, and is interested in the comparative study of the collective farm type development and the independent family farm type development. He is, so to speak, an advocate of "the theory of farmer family economy" at an elevated level or "the theory of farmer's economy" at a highly advanced stage of the commodity economy. In his theory are found "the theory of organic farm production" of Eduard David which was developed in his "Socialism and Agriculture" together with some ideas borrowed from Tyajanov's "The Theory of Small Farmers". As a man responsible to the agricultural productivity of West Germany, he cherished an ideal image of "a farmer type highly mechanized crop rotation." (Der hochmechanisierte Fruchtwechselbetrieb bäuerlicher Prägung). He said that this type of farming enterprise is one of the highest forms of agricultural development that has even been attained until today. He held that the present agriculture of West Germany was approaching to this form, and should approach to it. Perhaps I may have another opportunity to introduce his position at length. Vgl. Hermann Priebe, "Möglichkeiten und Grenzen der Strukturentwicklung", in "Hilfe zur Selbsthilfe für die Landwirtschaft", 1958.