

Locality and Characteristics of Agricultural Structure Variation apparent in the Census: From an analysis of the *Overview of Agricultural and Forestry Census Results for 2015 (Definite Figures)*

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1. Introduction

The *Overview of Agricultural and Forestry Census Results (Definite Figures) for 2015* was published at the end of March this year. We have formed a census analysis team at our research facility and are currently undertaking comprehensive analytical work in agriculture and rural structures.

It should be noted that in the previous agricultural census in 2010, the variation in paddy-field agricultural structures was greater than expected. This was due to the establishment of many community farming throughout Japan, following measures for direct payment for land-extensive farming. Agricultural administration reforms have continued to advance during the change of governing party. The implementers of agricultural policy will pay close attention to how agricultural structures are changing in rural regions, which have rapidly decreasing and aging populations.

The aggregated results of this most recent census have not yet been provided in full, making it impossible to present proper structural analysis at this stage. However, using the limited data that is available we have examined the locality and characteristics of structural variations over the past five years.

2. Summary of Agricultural Structure Variation

An examination of changes in Japan's agricultural structure according to basic time series data from the 1995 agricultural census shows that in some areas the changes for the 2010 to 2015 period differ slightly from previous time periods (Table 1).

First, the rate of decrease in the number of agricultural management entities was higher than it was previously. However, if only considering the number of organized farm, then there has been a consistent increase over the past five years, especially in corporation farm. The rate of incorporation of organized farm increased by 14 points to 69%.

Second, while the number of noncommercial farm households has started to decrease, there was a slight increase in the number of non-farmer landowners, and the decrease in the number of households owning farmland accelerated considerably.

Third, there was a decrease of over 40% in the number of commercial farm households with a successor living in the same household, bringing the percentage of such farm households down to 30% (this number does not reach 50% even when external successors are included). Succession has clearly become more difficult for commercial farm households.

Fourth, with regard to the agricultural labor force of commercial farm households, there was only a slight decline in the rate of decrease of the population mainly engaged in farming, but the rate of decline in core persons mainly engaged in farming increased

Table 1. Trends in Agricultural Structure Basic Indicators (Japan)

(Units: 1,000 management entities, 1,000 households, 1,000 people, 1,000ha,%)

	Number of Management Entities			Number of Households Owning Agricultural Land					Agricultural Labor Force 【Commercial Farm Households】		Cultivated Land				
	Agricultural Management Entities	Organized farm	Corporation farm	Total	Commercial Farm Households	Lives with Agricultural Successor	Noncommercial Farm Household	Non-farmer Landowner	Population Mainly Engaged in Farming	Core Persons Mainly Engaged in Farming	【Agricultural Management Entities】		【Households Owning Agricultural Land】		
											Cultivated Land under Management	Managed Scale of 5 ha or more	Cultivated Land Rented from Other	Abandoned Cultivated Land	
Actual Number	1995	...	...	...	4,350	2,651	...	792	906	4,140	2,560	4,154	1,325	569	244
	2000	...	...	...	4,218	2,337	1,340	783	1,097	3,891	2,400	3,938	1,400	703	343
	2005	2,009	28	14	4,050	1,963	868	885	1,201	3,353	2,241	3,693	1,601	824	386
	2010	1,679	31	17	3,902	1,631	675	897	1,374	2,606	2,051	3,632	1,867	1,063	396
	2015	1,377	33	23	3,569	1,330	397	825	1,414	2,097	1,754	3,451	1,998	1,164	423
	Fluctuation Rate	95-00	▲ 3.0	▲ 11.9	...	▲ 1.1	21.1	▲ 6.0	▲ 6.3	▲ 5.2	5.6	23.5	40.3
00-05		...	...	...	▲ 4.0	▲ 16.0	▲ 35.2	12.9	9.5	▲ 13.8	▲ 6.6	▲ 6.3	14.3	17.3	12.5
05-10		▲ 16.4	10.4	23.1	▲ 3.6	▲ 16.9	▲ 22.2	1.4	14.4	▲ 22.3	▲ 8.4	▲ 1.7	16.6	29.0	2.6
10-15		▲ 18.0	6.4	33.4	▲ 8.5	▲ 18.5	▲ 41.2	▲ 7.9	2.9	▲ 19.5	▲ 14.5	▲ 5.0	7.0	9.5	6.8

Materials: Agricultural Census (1995, 2000, 2005, 2010, 2015).

Note: The cultivated land under management and cultivated land rented from other from 1995 to 2000 is the total of agricultural holdings other than farm households and commercial farm households.

significantly, with the actual number dropping to below two million people.

Fifth, while there is steady continuation of agricultural land liquidation via leasing, and of the integration of land into larger scale management entities, the pace of these processes has slowed, and we have started to see the signs of stronger decreasing trends in agricultural land, following the expansion of abandoned cultivated lands.

In the next section, we examine more closely the changes in those households that own agricultural land, and the state of agricultural land integration into larger scale management entities, including features related to locality.

3. Has there been an accelerated increase in non-farmer absentee landowners?

In the past, households that stopped farming generally remained in the area, becoming non-farmer landowners. Therefore, the reduction in the number of farmers correlated to the increase in the number of non-farmer landowners, and there was a decrease of 4% in the number of households owning agricultural land.

However, in this most recent time period the rate of decrease suddenly jumped to 8.5%. We plotted each area block to find the supplementary rate (residual ratio) of non-farmer landowners (see notes on the figure) on the vertical axis and the rate of decrease in the number of households who own farmland on the horizontal axis (Figure 1).

This figure shows the negative correlation between the two as well as a significant decrease in both rates in all area blocks over the past five years. It also seems that the regional difference in the supplementary rate (residual ratio) of non-farmer landowners has widened compared to the previous analysis. In Hokkaido, the situation differs slightly as there is a high rate of land being removed from farming due to the sale of agricultural land, but generally, the changes in other prefectures in this census are thought perhaps to be due to the accelerated move toward non-farmer absentee landowners.

4. Is there a slowdown in the pace of agricultural land integration to large-scale management entities?

In prefectures excluding Hokkaido, the integration rate of cultivated acreage of five hectares (ha) or more, managed by agricultural management entities, increased from 32% to 40%. In the Tohoku and Hokuriku regions, there was an approximately 8 point increase, to more than 50%. However, the pace of integration has slowed compared to before.

When comparing (Figure 2) the integration of agricultural land into large-scale management entities (5ha or larger) by regional blocks, according to integration standards (integration area ratio) and speed of integration (number of points increase in the integrated area ratio over five years), a significant slowdown of integration pace is found in the North Kyushu, Tohoku and Hokuriku areas, where there was development of community farming and pronounced structural changes in the previous census. On the other hand, in the South Kanto and Kinki regions, where integration rate was previously low, integration pace has now increased and differing trends have emerged according to region.

5. Conclusion

Structural variations in the 2015 agricultural census differ somewhat from the previous census. This is also apparent from the fact

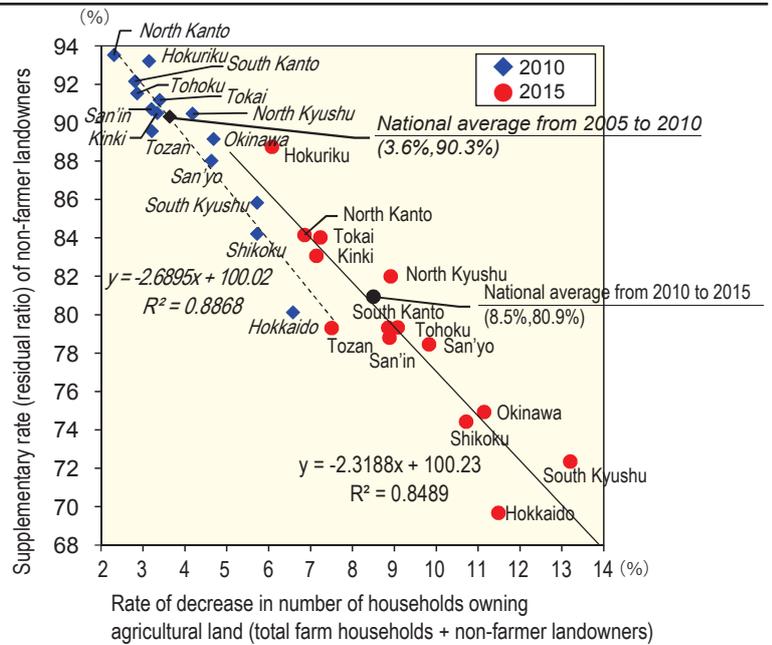


Figure 1. Relation of Decrease in Number of Households Owning Agricultural Land and Supplementary Rate (residual ratio) of Non-farmer Landowners

Materials: Agricultural Census(2005,2010,2015)

Note: The supplementary rate (residual ratio) of non-farmer landowners = end-of-term number of non-farmer landowners / (beginning-of-term number of non-farmer landowners + 5 year total decrease in number of farm households) × 100.

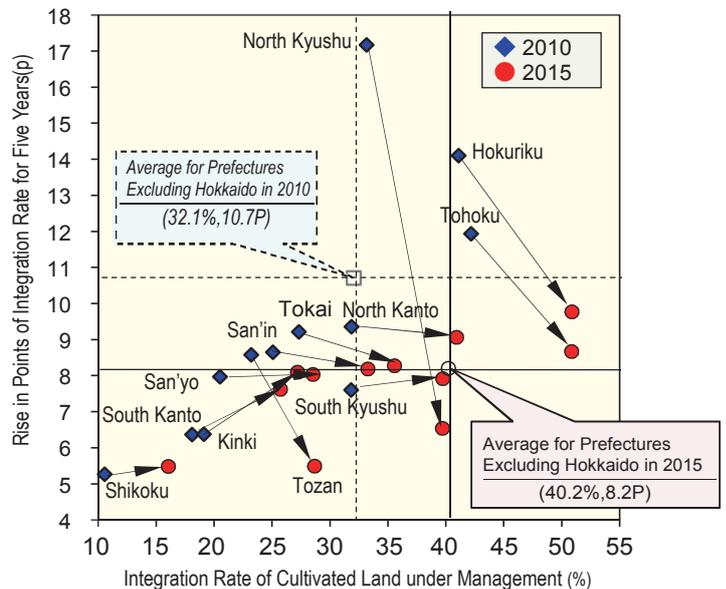


Figure 2. Trend of Agricultural Management Entities Integrating Agricultural Land of 5 ha or Larger (Prefectures Excluding Hokkaido: 2010 to 2015)

Materials: Agricultural Census(2010,2015)

that the strong influence on regional agricultural structure that accompanies the development of community farming, although clearly present in the previous census, was not verifiable in correlation analysis using results from the most recent census (Table 2).

However, considering the possibility that structural changes in regional agriculture are being affected by the fact that community farming have taken on the actual features of management entities, there is a need for further analysis using the final aggregated results of the 2015 census when they are published.

Table 2. Relation between Development of Community Farming and Agricultural Structure Variation
(Results of simple correlation analysis with a rise in points of integrated acreage rate of community farming)

n=47

Indicators of Agricultural Structure Variation	2005-2010	2010-2015
Fluctuation Rate of Total Number of Farm Households	-0.528 [**]	-0.262 []
Fluctuation Rate of Number of Commercial Farm Households	-0.582 [**]	-0.226 []
Fluctuation Rate of Number of Noncommercial Farm Households	0.283 []	-0.141 []
Fluctuation Rate of Non-farmer Landowners	0.571 [**]	0.222 []
Fluctuation Rate of Number of Organized Farm	0.407 [**]	0.109 []
Fluctuation Rate of Population Mainly Engaged in Farming	-0.222 []	0.022 []
Rise in Points of Aging Rate of Population Mainly Engaged in Farming	-0.325 [*]	-0.227 []
Fluctuation Rate of Cultivated Land under Management	0.140 []	0.138 []
Fluctuation Rate of Cultivated Land Rented from Other	0.882 [**]	0.186 []
Rise in Points of Cultivated Land Rented from Other	0.780 [**]	0.284 []
Fluctuation Rate of Abandoned Cultivated Land	0.295 [*]	0.187 []
Rise in Points of Abandoned Cultivated Land Rate	0.070 []	-0.007 []

Materials: Agricultural Census(2005,2010,2015),Report and Survey on Community Farming(2005,2010,2015).

Note: Results using data for each prefecture with [**] and [*] denoting a 1% and a 5% significance level, respectively.