

Census analysis series No.3

From analysis of farmland

Census analysis team of the project on the structure of the agricultural industry and rural regions

1. Farmland concentration growing in upper tiers, but growth rate mainly of organized farms has slowed

In 2015, cultivated land under management of agricultural enterprises 10 ha or larger in each prefecture of Japan increased 131,000 ha compared to five years prior, reaching 649,000 ha, or 27% of the total amount (2.4 million ha).

However, this 131,000 ha increase was half of the 229,000 ha from the previous census (2005 to 2010). This was attributed to the increase in land area of individual farms declined slightly from 70,000 ha to 55,000 ha (-15%), while the increase in organized farms dropped dramatically from 159,000 ha to 76,000 ha (-83%). This is assumed to be because farmland concentration on organized farms reached an appropriate level (Table 1).

2. Growing concentration of corporate farms and community co-op farms

In 2015, cultivated land under management of corporate farms totaled 232,000 ha, accounting for two-thirds of the 359,000 ha of organized farms. The total area of farms 10 ha or larger was 649,000 ha, and of these, corporate farms accounted for 208,000 ha, or 32%.

In addition, cultivated land under management of community co-op farms is estimated to be 225,000 ha. While part of it overlaps with corporate farms, this figure is roughly the same amount as that of corporate farms (Table 1).

3. Concentration of paddy fields centers mainly on individually managed farms in Eastern Japan and organized farms in Western Japan

Figure 1 shows annual changes in the farmland share of organized farms 5 ha or larger and retail farms. The horizontal axis is the share of retail farms and the vertical axis is the share of organized farms.

The following can be said given that trends from 2010 to 2015 indicate all regions are moving in the rightward direction:

- (1) The farmland share of both retail farms and organized farms 5 ha or larger is increasing in general; and
- (2) This share is around 20% in Shikoku, but in all other regions it is 30% or greater.

There are areas in Tohoku and Hokuriku where it exceeds 50%. Furthermore, movements in the Tohoku, North Kanto and South Kyushu regions have been large in the horizontal direction, while movements in the Kinki, Sanyo and Sanin regions have been large in the vertical direction. As a result, this indicates:

- (3) Concentration by retail farms has been active in the Tohoku, North Kanto and South Kyushu regions; while
- (4) Concentration by organized farms has been active in the Kinki, Sanyo and Sanin regions.

Table 1. Trends in cultivated land under management (prefectures: agricultural enterprises)

		(Unit : 1,000 ha, %)		
		total	5 ha or larger	10 ha or larger
2005	Agricultural enterprises	2,621 (100.0)	561 (100.0)	290 (100.0)
	Organized farms	108 (4.1)	100 (17.9)	89.9 (31.0)
2010	Agricultural enterprises	2,563 (100.0)	822 (100.0)	518 (100.0)
	Organized farms	275 (10.7)	264 (32.1)	248 (47.9)
2015	Agricultural enterprises	2,401 (100.0)	966 (100.0)	649 (100.0)
	Organized farms	359 (14.9)	344 (35.7)	324 (49.9)
	Corporate managed	232 (9.7)	222 (23.0)	208 (32.0)
	Community co-op managed	225 (9.4)	221 (22.9)	213 (32.7)
	(Among these) Corporate	108 (4.5)	108 (11.1)	104 (16.0)
Change in farmland area and rate of change from 2005 to 2010	Agricultural enterprises	▲ 57 ▲2%	262 47%	229 79%
	Organized farms	166 154%	164 163%	159 176%
Change in farmland area and rate of change from 2010 to 2015	Agricultural enterprises	▲ 162 ▲6%	144 17%	131 25%
	Organized farms	84 30%	80 30%	76 30%

Source: Agricultural Census (2005, 2010, 2015)

Notes: (1) Organized farms: enterprises managed for the purpose of retail sales of crops.

(2) Community co-op farms: estimate based on sample aggregation of individual community co-op survey data and matches. In addition, "(Among these) Corporate" overlaps with the area found in "Corporate managed" above.

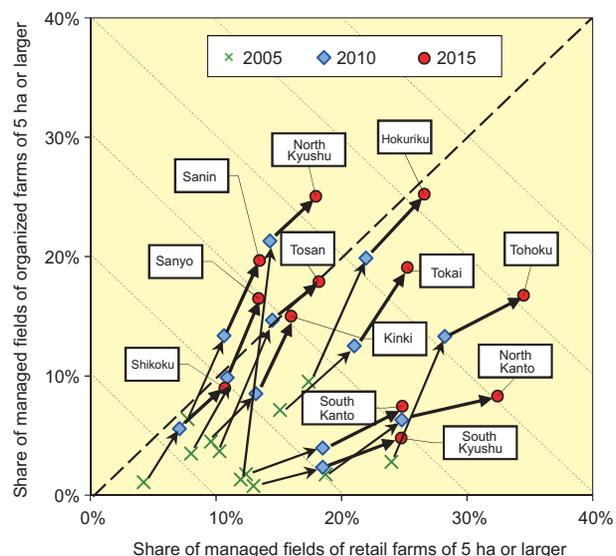


Figure 1. Trends in Share of managed fields of agricultural enterprises of 5 ha or larger (by prefecture)

Source: Agricultural Census (2005, 2010, 2015)

(Analysis by Wakaba MAGAKI)

4. Loss of farmland owners

In this Agricultural Census, the rate of decline in retail farms rose and noncommercial farm households, which had been on the rise, declined; consequently, the rate of decline in overall farms was at the highest level on record. Nevertheless, the rate of increase in the number of nonfarm households with land fell significantly, and the rate of decline in farm households (total of farms and nonfarm households with land) sharply increased from 5% in the previous census to 9%.

Figure 2 shows the relationship between the decline in the total number of farm households and the change in the number of nonfarm households with land over a five-year period by prefecture. This figure indicates that compared to the previous census, the correlation between these two has become much weaker. In addition, prefectures where both the total number of farms and nonfarm households with land are declining grew to 17, compared to just Nagasaki Prefecture in the previous census. Excluding Hokkaido where there is a relatively large number of households leaving farming due to the sale of their farmland, this is believed to be attributed to the sharp increase in the loss of farmland owner households in communities mainly with nonfarm households with land (for example, due to the death or move of an elderly householder living alone on farmland, there is no longer an owner of farmland in the community even though farmland still remains [including abandoned cultivated land]).

5. Decline in total cultivated land under management

The results of this census suggest that the decline in cultivated land under management may once again accelerate. The total amount of cultivated land under management nationwide has dropped from 3.86 million ha in 2005 to 3.82 million ha in 2010 and to 3.62 million ha in 2015. Although the decline was 40,000 ha in the previous census, it was around 200,000 ha (Table 2) in 2015.

Looking at the rate of decline by agricultural area type, mountainous farming area fell 7.8%, the highest of all area types, followed by urban area, and hilly farming area, while even flat farming area declined by 3.6%. In addition, in mountainous farming area, the decline was 1.6% in the previous census, but 7.8% this time, and similarly, hilly farming area declined 6.0% compared to 1.5% in the previous census.

This signals a growing tendency for a decline in total farmland centered on areas with poor conditions such as hilly and mountainous farming area, including urban area.

However, the increase of abandoned cultivated land in hilly and mountainous farm area is minute compared to the decline in cultivated land under management. This clearly does not align with the trend thus far where farmland declined due to abandoning cultivated land, instead of changing farmland to nonfarm use as seen in flatland area.

This is not unrelated to the sharp increase in the loss of nonfarm households with land which own around half of the abandoned cultivated land nationwide as discussed above. In other words, this means it has become extremely difficult for the Agricultural Census, catch accounting for fishing unit, to account for the total amount of abandoned cultivated land.

(Analysis by Kumiko TAKESHIMA)

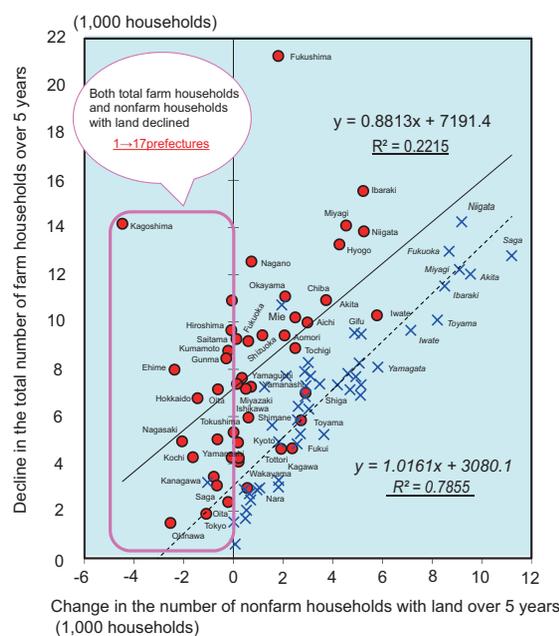


Figure 2. Relationship between the decline in the total number of farm households and the change in the number of nonfarm households with land
Source: Agricultural Census (2010, 2015)
Note: ● represents the 2010-15 period, while × represents the 2005-10 period.

Table 2. Trends in total farmland by type of agricultural area
(Unit: 1,000 ha, %)

		Total cultivated land under management	Area declined over 5-year period (rate of decline)		Area increased over 5-year period (rate of increase)	
			Area declined over 5-year period (rate of decline)	Total area of abandoned cultivated land	Area increased over 5-year period (rate of increase)	
Nationwide	2005	3,856	34 (0.9)	391	9 (2.4)	
	2010	3,822		401		
	2015	3,622	200 (5.2)	428	27 (6.8)	
Urban area	2005	577	10 (1.8)	82	0 (▲0.2)	
	2010	567		82		
	2015	527	40 (7.1)	88	6 (7.4)	
Flat farming area	2005	1,805	0 (0.0)	99	2 (1.8)	
	2010	1,805		101		
	2015	1,739	66 (3.6)	113	12 (11.5)	
Hilly farming area	2005	1,078	17 (1.5)	149	6 (4.0)	
	2010	1,061		155		
	2015	997	64 (6.0)	163	8 (5.2)	
Mountainous farming area	2005	396	6 (1.6)	62	2 (2.8)	
	2010	390		64		
	2015	359	31 (7.8)	65	1 (2.3)	

Source: Agricultural Census (2005, 2010, 2015)
Notes: (1) Categories of agricultural area types are the same as the revisions made in June 2008.
(2) Total farmland includes the combined total for agricultural enterprises, noncommercial farm households, and nonfarm households with land.