## Census analysis series No. 4

## Analysis of Female Participation in Agriculture

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

## Significant decrease in female participation in farm management and female agricultural labor force

In family farms, there is a continuing decline in the number of female household members and female agricultural labor force. Looking at the new category from this census, termed as "individual management entities," we can see that the number of female household members in these entities has decreased by $30 \%$, from 2.46 million in 2015 to 1.72 million in 2020. Concurrently, the number of female household engaged in own farming and female full-time farmers has also seen a decline from 1.54 million to 1.09 million (a $29 \%$ decrease) and from 750,000 to 540,000 (a $28 \%$ decrease), respectively. Because of these changes, this census marks the first time when the number of women per household has fallen below that of men, with a ratio of 1.70 men to 1.66 women per household.

If we look at the trend of female participation in farm management, which has become trackable starting with this year's census, the count in 2020 stands at 420,000 , marking a decrease of 290,000 from 2015. This decline includes a drop in the number of farm operators from 90,000 to 60,000 (a $33 \%$ decrease) and a reduction in the number of individuals participating in management decision-making from 610,000 to 360,000 (a $42 \%$ decrease).

The figure illustrates the percentage change over the past five years in female household members, female agricultural labor force, and female participation in management, segmented by age group. As per the figure, the percentage decrease in the number of female participation in management surpasses that of female household members and female agricultural labor force (household engaged in own farming and core person mainly engaged in farming) across all age groups, barring those aged over 80. Significant percentage decreases, surpassing $50 \%$, are particularly notable among women under the age of 29 and those in their 50s.


Figure. Percentage Changes in Female Household Members, Female Agricultural Labor Force, and Female Participation in Farm Management by Age (2015-2020)

Source: The table was created from the reorganized tabulations of the individual data from the Census of Agriculture and Forestry $(2015,2020)$

The percentage decrease in the number of female household members belonging to this age group surpasses that of household engaged in own farming for the age group of 75 and above, whereas the percentage decrease is higher in the number of household engaged in own farming for those aged 74 and below. However, when we focus on female core person mainly engaged in farming, their percentage decrease is higher than that of persons engaged in own farming for those aged between 55 and 74 , while the percentage decrease in core persons mainly engaged in farming remains lower than that of female household members for each age group below 54 .

These findings suggest that the drastic decrease in female participation in management is likely influenced by generational shifts in farm involvement. Specifically, older generations are retiring from farming and showing a decreased engagement in agricultural activities.

Thus, the decline in female participation in farm management over the past five years is noteworthy. To investigate the impact of this trend on individual agricultural management entities, we analyzed individual census data from 2015 and 2020. We classified the entities into four categories: "Ongoing" for those with women in farm management in both years, "Started" for those in which female participation began only in 2020, "Discontinued" for those in which women were involved in management solely in 2015, and "Non-participating" for those in which women were not involved in management in either year. We then analyzed the characteristics of the entities within each category.

## The impact of female continuous participation in farm management on the scale and diversification of agricultural entities

The table presents the average values of various indicators related to business scale, diversification, and agricultural labor force, sorted by the categories of female participation in farm management. The table shows that the "Ongoing" and "Started" entities have a larger business scale (particularly in terms of sales revenue) and more diversified operations compared to the "Non-participating" entities. Furthermore, these entities tend to have larger household sizes, a higher proportion of households with successors, a greater percentage of female household members, and a higher percentage of female agricultural labor force.

Conversely, the 'Discontinued' entities, where women ceased to participate in farm management, are characterized by a smaller agricultural business scale, a lower percentage of female agricultural labor force and lower female participation in farm work, and less active efforts towards business diversification.
(Analysis by SATO Mayumi)

Table. Characteristics of agricultural entities by category of female participation in farm management (2020)

|  | Ongoing | Started | Discontinued | Non-participating |
| :---: | :---: | :---: | :---: | :---: |
| Area of cultivated land under management (ha/agricultural entity) | 3.2 | 2.5 | 2.5 | 1.8 |
| Percentage change in cultivated land under management (15-20 years) | 2.1\% | 2.7\% | 0.0\% | $\triangle 0.2 \%$ |
| Sales value of agricultural product (in 10,000 yen per agricultural entity) | 706 | 486 | 581 | 322 |
| Percentage change in sales of agricultural products (15-20 years) | 14.9\% | 17.3\% | 13.9\% | 14.4\% |
| Percentage of entities engaged in business related to agricultural production | 27.1\% | 22.6\% | 20.1\% | 17.1\% |
| Changes in the percentage of entities engaged in business related to agricultural production (15-20 years) | 1.2 | 3.2 | $\triangle 0.6$ | 0.7 |
| Number of female household members (persons/agricultural entity) | 1.93 | 1.88 | 1.70 | 1.43 |
| Percentage change in female household members (15-20 years) | $\triangle 9.0 \%$ | $\triangle 6.5 \%$ | $\triangle 15.0 \%$ | $\triangle 15.4 \%$ |
| Number of female household engaged in own farming (persons/agricultural entity) | 1.42 | 1.32 | 1.12 | 0.80 |
| Percentage change in female household engaged in own farming (15-20 years) | $\triangle 3.6 \%$ | 3.3\% | $\triangle 16.9 \%$ | $\triangle 14.0 \%$ |
| Percentage of female household engaged in own farming among female household members | 86.2\% | 83.2\% | 77.0\% | 64.4\% |
| Number of female full-time farmers (persons/agricultural entity) | 0.68 | 0.48 | 0.40 | 0.17 |
| Percentage change in female full-time farmers (15-20 years) | $\triangle 31.9 \%$ | $\triangle 35.8 \%$ | $\triangle 51.6 \%$ | $\triangle 59.9 \%$ |
| Percentage of female full-time farmers among female household engaged in own farming | 51.5\% | 38.2\% | 37.1\% | 22.0\% |
| Percentage of agricultural entities with female full-time farmers under 65 years of age | 25.1\% | 16.0\% | 12.8\% | 4.9\% |
| Percentage of farm operations with successors | 28.8\% | 26.9\% | 24.0\% | 20.7\% |

Source: The table was created from the reorganized tabulations of the individual data from the Census of Agriculture and Forestry $(2015,2020)$

