

Restoration of Paddy Farms Affected by the Great East Japan Earthquake's Tsunami: Statistical Analysis Using the 2015 Census of Agriculture and Forestry

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Summary

The objective of this paper is to study the structural changes in paddy farms during the restoration of the Great East Japan Earthquake's tsunami-hit areas, using statistical analysis. The following results were obtained.

First, while the restart of agricultural management is initially quick, the progress gradually slows down. The primary reason for this is that although agricultural land recovers, machinery and facilities can't be rebuilt.

Second, there is a severe decline in the number of farmers due to the loss of machinery and facilities, and the farmers' loss of homes. A reduction in the acreage of managed land as per the 2015 agricultural census occurred when agricultural land was given up by farmers. Therefore, it is speculated that as the restoration of agricultural land progresses, the acreage of managed land on the agricultural census will increase.

Third, structural changes in paddy fields between 2010 and 2015 were revealed. Farmlands smaller than 5 ha have drastically declined while organized agricultural management entities accumulate the farmers' paddy fields.

Fourth, the degree of agricultural land accumulation of large-scale farmers (large-scale family farmers and organized agricultural management entities) has not reached the optimum potential of farmlands due to a decrease in the number of farmers. However, in response to the recovery of agricultural land damaged by the tsunami, agricultural land accumulation among large-scale farmers will progress in the future.

Keywords: Great East Japan Earthquake, Paddy field agriculture, Agricultural structural change, Statistical analysis