

## **Change of agricultural structure and future trend prediction in the Hokkaido core paddy field zone**

**—It is Aimed at Kamikawa Area and Sorachi Area.—**

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### **Summary**

The following things were clarified in this paper, using agricultural census data.

1. Since it is based on historical progress of the management scale expansion trend in the Hokkaido core paddy field zone, the agricultural structural change on and regional difference have been examined after the second half of the 1980s.

Although it was a special feature that the Hokkaido core paddy field zone consists of farmhouse groups of the same quality which consist of thick full-time farmers, it is changing under an agricultural structural change. The opportunities of a structural change are the increase in the advanced age farmhouse of a successor absence, and extensive generating of the giving up farming which lends the farmland. Instead of dealing also as a farmland flow form, lease is increasing specific gravity. If it sees from farmhouse group composition, while farmland loan persons will increase in number, at the farmhouse which attains large-scale-ization, leased land is increasing weight. That is, farmhouse group composition has turned specialization and heterogeneous.

Change has arisen simultaneously also in the composition of the conventional zone composition theory in the smallness and middle-scale in the old development area, and a newly developed area of being large-scale. In Kamikawa area Toma-cho which is the old development area, farmland lease is progressing under aging and the increase in a part-time farm household.

And leased-land scale expansion by a small number of full-time farmer is realized under two-poles specialization of farmhouse class composition.

Consequently, if it sees on a larger-scale class, the area market share occupied in an area has exceeded South Sorachi Kita-mura who is a newly developed area. On the other hand, there are many large-scale special occupation-farmhouses at South Sorachi area Kita-mura. And a farmland flow by dealing is dominant. Then, the giving-up-farming former site is also absorbed by the thick special occupation-farmhouse, and scale expansion is advancing in towards 10 – 15ha layer being formed thickly.

2. Based on the Markov transition probability procession (transition probability procession of 1995 – the 2000 period), future trend prediction of the agricultural structure by 2020 was performed to the 2nd.

It was shown that the agricultural structural change seen late in the 1980s accelerates as future trend prediction in the Kamikawa area and the Sorachi area. From now on, the rate of the number reduction of farmhouses of the level of 2 figures was predicted every five years, and, 20 years after, it was also predicted that the number of farmhouses is halved. In both areas, as a scale expansion trend, main classes decrease in number sharply. And the increase in a large-scale farmhouse layer becomes remarkable. If it sees from farmhouse class composition, pyramid type composition collapses and is in the flat-ized tendency. Also in the large-scale farmhouse class which increases simultaneously, it was predicted that the increase in a 30ha or more layer is remarkable. In this way, the composition of rural society which consisted of farmhouse layers of the same quality turns specialization and heterogeneous, and it is urged to formation of a larger-scale farmhouse

group which exceeds 30ha. Though accompanied by regional difference in the future, it means that sorting progresses to the special occupation-farmhouse group which advances scale expansion more, and the other class and giving up farming.

The future trend prediction in Kamikawa area Toma-cho and South Sorachi area Kita-mura was shown as follows. In Toma-cho, a remarkable class composition change of two-poles specialization was predicted. In the future, it is predicted by many persons giving up farming, a small-scale class, and a small number of large-scale farmhouse group that farmhouse class composition changes by two poles. In South Sorachi area Kitamura, the scale expansion by the still thick special occupation-farmhouse group progresses. But, the pyramid form class composition centering on main classes collapsed, and formation of the class composition in which a still larger-scale class projects was predicted.

As mentioned above, in the Hokkaido core paddy field zone, it was predicted that management scale expansion also progresses with the further number reduction of farmhouses. And formation of the large-scale class according to decomposition of main classes also as a trend of the scale expansion will be shown as

a trend in the future. That is, a route called giving-up-farming generating and scale expansion is inherited with increase in vigor. Simultaneously, the state of rural village society also cannot but change. So far, rural society was formed considering the farmhouse group of the same quality as a constituent, and rural society has supported deployment of such a farmhouse group in the back. But, while seeing in the future, halving a constituent and farmhouse group composition of the same quality also collapsing, it becomes a subject what rural society is built. In a future paddy field zone, it is necessary to draw up a policy to local agriculture, a large-scale farmhouse group, and rural society, being based on the above point.

3. Finally it is necessary to point out a important matter. First, this prediction is as a result of [ on condition of the trend of the 1995 - 2000 period ] calculation. Therefore, it is that the result of trend prediction may change under the influence of policy change. Second, It is a problem in the case of performing future trend prediction of an agricultural structural change on a concrete community level. It is required to grasp the farmland supply-and-demand structure in a farmhouse group, while taking the method of a survey about this.