On the other hand, we find only a few core people who are eager to preserve farmland, whether they are newcomers or not. People in HMA are mostly willing to preserve farmland for the legislated period, even if not considering their activities bring multifunctionality.

Conclusively, the direct payment system for HMA is, at the present moment, not enough to achieve the governmental task of long-term preservation of multifunctionality.

Although the system is intended to make the multifunctionality of HMA more explicit and therefore to contribute to the whole nation's welfare, it is not assumed that the people benefiting could participate in the community activities. In the future it might be more difficult to continue farming and preserve farmland. For that purpose, to assist core-people in preserving multifunctionality in HMA communities is indispensable.

Necessary Conditions for Continuation of Rural Communities in Hilly and Mountainous Areas

Noboru HASHIZUME

1. Objective and Method

The purpose of this research is to approach the realities of communities in which farm households have disappeared (communities where farm household did not exist after 1990) and to clarify the conditions necessary for continuing rural communities in hilly and mountainous areas, which play a key role in regional resource management.

The analysis uses the following two methods. One is the analysis of data using a brief table of communities in which farm households have disappeared based on information gathering. The other one is a discriminant analysis of communities in which farm households have disappeared, and rural communities which continue under the same production conditions.

2. Outline of the Results

(1) The number of 4,959 rural communities has decreased compared with ten years ago, because a lot of rural communities disappeared in urban areas and hilly and mountainous areas. However, a few farm households are scattered among non-farm households in 70% of these communities. On the other hand, communities in which farms have disappeared was estimated at about 1,500, and the number of farm households in 1990 was 4 or less in many of them (Fig. 1).

(2) Fig. 2 shows the main reason why farm households were lost: "Abandoning farming by urbanization" accounts for 46% and "Progress of depopulation and aging" leads to the collapse of the community most is 16% around the hilly and mountainous areas.

The number of these communities becomes about 40 by the period average and it is not very many. However, we should take note of a rapid increase after 1998.

(3) The contributory factors of communities in which farm households have disappeared in hilly and mountainous areas were clarified using discriminant analysis. The main factors were scale of a petty communities, rapid decrease in the number of farm households, and poor access to public facilities such as public offices and elementary schools (Table 1).

(4) Measures for the large area reorganization are important for continuing rural communities in hilly and mountainous areas. The reason is that about 5 or more farm households per community are necessary.
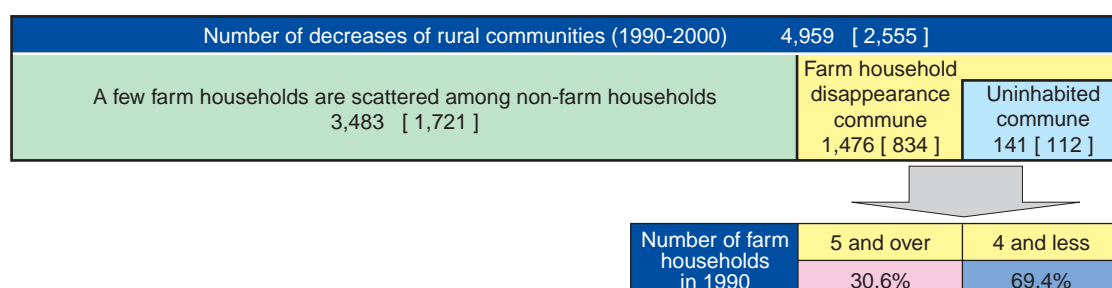
Number of decreases of rural communities (1990-2000)		4,959 [2,555]	
A few farm households are scattered among non-farm households 3,483 [1,721]		Farm household disappearance commune 1,476 [834]	Uninhabited commune 141 [112]
	Number of farm households in 1990	5 and over	4 and less
		30.6%	69.4%

Fig. 1. Current State of Disappearing Rural Communities (Estimate Results)

Note: 1. [ ] is hilly and mountainous areas.
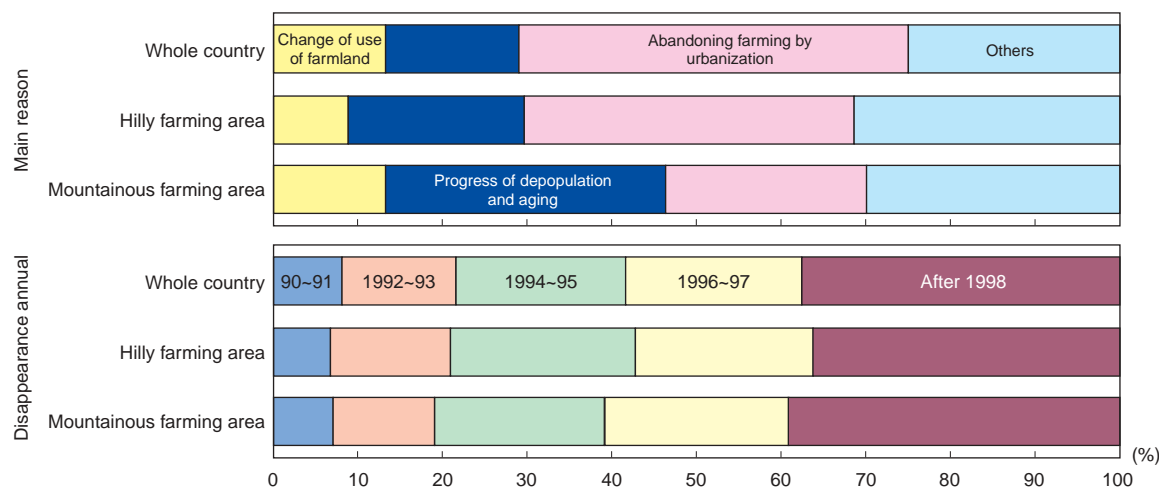2. The number of rural communities in 2000 is 135,163.

Fig. 2. Main Reason and Annual when Farm Household Disappeared

Table 1. Contributory Factors of Farm Disappearance in Non-urbanization Region (Result of Discriminant Aanalysis)

n=162

Variable	Discriminant coefficient	T-statistic	P-statistic	Test
Number of total farm households (1990)	-0.0656	15.2692	0.0001	[∗∗]
Distance to public office (1980)	0.1561	14.0693	0.0003	[∗∗]
Utilization of cultivated land (1990)	-0.0428	9.6871	0.0022	[∗∗]
Increase/decrease rate of number of farm households (1980-90)	-0.0372	8.4666	0.0042	[∗∗]
Amount of snowfall at common year (1980)	0.9962	8.0612	0.0051	[∗]
Average number of family members per farm household (1990)	-0.7045	5.7851	0.0174	[∗]
Distance to elementary school (1980)	0.2587	5.3908	0.0216	[∗]
Ratio of commercial farm households (1990)	-0.0264	5.0102	0.0267	[ ]
Ratio of abandoned farmland (1990)	0.0253	2.7984	0.0964	[ ]
Constant	4.5463			
Correctly classified (%)	91.4			
Error count estimates (%)	9.8			
Correlation ratio	0.6290			

Note: 1. The method for selecting variables = STEPWISE (Fin: 2.0, Fout: 2.0)
2. [∗∗] : 1% level of significance   [∗] : 5% level of significance

Case Studies for Entry of Nonagricultural Business Organizations into Farming

Tomoaki ONO

1. Objective

Due to the small number of core farmers who support agriculture, there has been an increase in areas with a notable increase of abandoned cultivated land. Attention has been focused on the establishment of new farming entities through nonagricultural business organizations as a way of revitalizing this land for agricultural purposes, and a special agricultural zone system recognizes agricultural management by the nonagricultural business organizations themselves. This study clarifies measures required to promote the use of agricultural land, deregulation and other issues using examples of the entry of nonagricultural business organizations into agriculture.

2. Methods

I proceed by clarifying (1) issues relating to current systems based on examples of the agricultural revitalization of abandoned cultivated land and (2) issues relating to the promotion of agricultural land use and deregulation based on cases of special agricultural zones where entry into agriculture is being realized.

3. Outline of the Results

(1) Due to the reduction in construction projects brought about by cuts in the public works budget, regional construction companies are gradually moving into new fields, and agriculture is expected to be one of those fields. In a number of surveys conducted in 2003, about 10% of