



The overview of rice production control policies in Korea

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INTRODUCTION

Korea's rice industry has been suffering from oversupply since 2000. For this reason, various policies such as set-aside and support project for switching to other crops instead of rice is being implemented to reduce rice production. Those rice production control policies had obvious effects of reducing the rice planting areas, but the effects were not sustained. In order to raise the effects these policies, the government needs to pay attention to not only supporting the income gap between the other crops and rice income, but also the efforts to raise the income stability of other crops and ensure mid- to long-term support for switched crops.

POLICY BACKGROUND

Since 2000, Korea's rice industry has been experiencing an oversupply structure of around 300,000 tons per year, as consumption decreases more than production declines. Rice consumption in Korea has been decreasing at a very rapid rate, and has declined at an annual average of 2.4% in recent decades (2007-2016 grain year). On the other hand, rice cultivation area is decreasing, but decreases by 2.0% per year, which is less than the decrease in consumption.

As a result, rice stock reached 1.5 million tons at the end of 2010 grain year and increased to 1,888,000 tons at the end of 2017 grain year. This is considerably above the proper stock level of rice, which is around 800,000 tons. In response to the structural oversupply of rice, the Korean government implemented three production adjustment policies in the 2000s.

RICE PRODUCTION CONTROL POLICY AND ITS RESULT

In order to solve the problem of excessive rice stock, a set-aside policy was implemented during 2003-2005. In the case of set-aside, subsidies of US\$ 3,000 were paid per ha (it is assumed that one US dollar is 1,000 won.) However, because of the depletion of paddy fields due to no cropping, non-commercial green manure crops and feed crops were allowed to be cultivated. The goal was to reduce the annual average rice fields of about 27,500 ha, but as a result, 24,805 ha of rice fields were reduced. This corresponds to about 2.5% of the rice fields. This policy had the effect of significantly reducing the rice cultivation area. However, most of the farmlands which participated in the project were low-productive lands. Of the total participating farms, only 22% of outstanding farmlands were produced, and the yield per unit area of participating farmlands was 3.8% lower than that of non-participating farmlands.

Table1. Goals and result in set-aside policy.

year	Unit: ha		
	2003	2004	2005
Goal	27,500	27,500	27,500
Participated	26,337	24,648	23,429

Sources: KREI (2013), Grain policy in Korea

Rice prices dropped sharply due to overproduction. To prevent this, "Income diversification project in paddy farming" was introduced in 2011-2013. If other crops were grown instead of rice, a farmer was to be paid US\$3,000 per ha. The characteristic of this policy is that it aimed at converting to other crops rather than just let their lands lie fallow, compared to the previous set-aside policy (2003 - 2005). The aim was to reduce the production of rice and increase the self-sufficiency by increasing the production of other food crops. To this end, it was to be paid US\$3,000 per ha to the farmlands for converting to other crops.

From 2011 to 2013, the plan was to reduce the annual rice planting area by 40,000 ha, resulting in an annual reduction of 17,517 ha, which is equivalent to 2.1% of the rice planting area. Participation was high in 2011, the first year of policy implementation, and the harvest price of rice increased by 20.3% compared to previous year. However, in 2012, concerns have been raised that rice supply may be short due to the decrease in production per unit area by 9.5% (532kg/10a → 482kg/10a) in 2011. As a result, the goal of participation area has been greatly reduced from 40,000 ha to around 10,000 ha.

Table2. Result in 'Income diversification project in paddy farming' policy.

year	sum	Unit: ha			
		Pulse crops	Forage crops	Rice for processing	Etc.
2011	37,197	12,893 (34.7)	4,916 (13.2)	859 (2.3)	18,529 (49.8)
2012	7,465	3,592 (48.1)	1,177 (15.8)	2,698 (36.1)	0 (0.0)
2013	7,890	3,420 (43.3)	1,013 (12.8)	3,458 (43.8)	0 (0.0)

Sources: Kim, J.I., et al (2017), Study on introduction of rice production control policy in Korea

Since rice production increased in 2016, rice prices fell 13.9% every year since then. As the price of rice dropped sharply, variable direct payments of rice exceeded the payment limit of US\$1.49 billion. For this reason, the policy of switching to other crops instead of rice was introduced again during the 2018-2019 period.

Similar to the "Income diversification project in paddy farming", subsidies are provided for conversion to other crops. From 2019, subsidies have also been paid for the fallow land in order to increase participation rates. The subsidies were set differently according to the types of crops. For example, in 2018, the subsidy for forage crops was set at US\$4,000 \ per ha, and US\$2,800 for pulse crops, and US\$3,400 for other crops other than forage crops and pulse crops. In 2019, in order to further promote the transition to pulse crops and forages, the subsidy for pulse crop was raised by US\$450 to US\$3,250 per ha, and the subsidy for forage was raised by US\$300 to US\$4,300 dollars.

The target area was 50,000 ha in 2018, but as a result, 26,650 ha were participated in by farmers. According to a survey of farmers, the most common reason why the participation rate was lower than expected because it was difficult to grow other crops in paddy fields because of moisture with 33.2% of responses (Agriculture Outlook 2019 in Korea, "Supply and Demand Trends and Forecasts in food crop). The second reason is that other crop's income is lower than rice income (29.2%), and the third reason is aging of farmers and labor shortage in the rural areas (24.0%).

Table 3. Result in 'Support project for cultivating other crops in paddy field'

Unit: ha

year	Sum			
	Pulse crops	Forage crops	Etc.	
2011	26,550	7,175	9,141	10,234

Sources: A news release of MAFRA (Ministry of Agriculture, Food and Rural Affairs)

POLICY IMPLICATION

Korea's past rice control policy such as the set-aside policy and "Income diversification project in paddy farming," had obvious effects of reducing the rice planting areas, but the effects were not sustained.

In particular, in the case of "Income diversification project in paddy farming," a large number of farmers returned to rice cultivation after the project ended, resulting in inefficient use of resources.

In order to fundamentally prevent farmers who switched to other crops from returning to rice cultivation, not only supporting the gap between the other crops and rice income should be closed, but also the efforts to raise the income stability of other crops to a similar level to those of rice. Even if the income of a certain year of other crops is increased due to the subsidy, if the price instability is high and a certain level of income cannot be maintained, so the farmer is likely to return to rice cultivation again. Farmers often hesitate to switch to other crops because of the concern that government support for the conversion of the crops will be ceased in a short time. Therefore, it is necessary to provide support for the conversion of other crops in the medium to long term.

If the government ensures mid- to long-term support for the cultivation of switched crops, farmers will be more likely to increase their investments in laying the foundation, including agricultural machines for other crops, because of less uncertainty about management. According to a survey which was done in 2017, by the Korea Rural Economic Institute, 71% of all paddy field farmers answered that more than four years is appropriate as a support period for converting other crops.

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