

“Environment-friendly rice production and consumption in Korea and future challenges”

Jongin Kim

KREI(Korea Rural Economic Institute)

Goals for Sustainable Green Agriculture

- The Korean government enacted the Eco-Friendly Agriculture Promotion Act (2001) centering on the eco-friendly agricultural products certification system to solve the problem of agricultural environment deterioration caused by high-input farming methods.
- The Korean government recently launched the 5th Eco-Friendly Agriculture Promotion Plan (2021-2025) to achieve sustainable eco-friendly agriculture in terms of consumption, production, and agricultural environment.
 - ✓ Expansion of eco-friendly agricultural food consumption base centering on food service market
 - ✓ Enhance competitiveness by paying eco-friendly agricultural direct payments and fostering eco-friendly agricultural clusters.
 - ✓ Activation of resource recycling agriculture through expansion of agricultural environment preservation program,

Eco-Friendly Agricultural Direct Payment

- Pay direct payments for organic and pesticide-free agricultural products.
 - ✓ Direct payment is provided to compensate for low income compared to conventional farming in eco-friendly cultivation.
 - ✓ Eco-friendly farming yields 73-97% lower income and 19-87% lower net

profit compared to conventional farming.

- ✓ The maximum area for payment is 5ha. 5 years of organic farming (3 years of pesticide-free + 2 years of organic farming), 3 years of pesticide-free organic farming, and no payment deadline is set for organic sustainable.
- ✓ In other words, farmers can receive pesticide-free direct payments while practicing pesticide-free farming methods for 3 years, and since they have practiced pesticide-free farming for 3 years and can receive organic certification, they can receive organic direct payments from the 4th to 5th years. From the 6th year onwards, farmers can continuously receive an amount equivalent to half of the unit price of the organic direct payment without an expiration date.

< Korea's eco-friendly agricultural product certification system >

Unit: thousand won

		organic	pesticide-free	organic sustainable
Paddy field		700/ha	500/ha	350/ha
Dry field	Fruit tree	1,400/ha	1,200/ha	700/ha
	Etc	1,300/ha	1,100/ha	650/ha

Source: MAFRA(Ministry of Agriculture, Food and Rural Affairs) Business Implementation Guidelines

Production Status of Eco-Friendly Agricultural Products

- The area of eco-friendly agricultural products certified pesticide-free certification continues to decrease, and the trend is gradually decreasing.
- On the other hand, the certified organic area has increased significantly by 12.6% per year on average over the past five years (2018-2022).

- Around 60% of the certified organic area is occupied by rice, and about 70% of the certified organic rice area is occupied by Jeollanam-do.

< Trends in certified area for eco-friendly agricultural products in Korea >

Unit: ha

	2018	2019	2020	2021	2022
Eco-friendly agricultural product certified area	78,544	81,717	81,827	75,435	70,127
Organic	24,666	29,711	38,540	40,663	39,624
Rice organic	13,239	17,234	24,658	26,390	24,748

Source: National Agricultural Products Quality Management Service eco-friendly certification statistical information

Jeollanam-do's Organic Agriculture Promotion Policy

- Additional support for the unit payment of fixed-term continuous direct payment and treated at the same level as fixed-term direct payment.
- Even in the case of non-pesticides, the central government pays for a maximum of 3 years, but Jeollanam-do continues to pay without a payment period (however, the unit payment for non-pesticides is 1/2 of the existing unit payment for non-pesticides)
- 100% support for disaster insurance subscription costs for farms engaged in organic farming.
- For example, if a farm that has been practicing pesticide-free farming for 4 years fails to progress to organic certification, direct payment will be stopped under the central government's direct payment system, but in Jeollanam-do, farmers will be paid 1/2 of the existing unit payment

(250,000 won for rice paddies and 600,000 won for fruit trees). , and other field crops will receive 550,000 won). In Jeollanam-do, farms that practice pesticide-free farming can continue to receive direct payments even after the fourth year.

Eco-Friendly Agricultural Products Market Size

- The market size of eco-friendly agricultural products in Korea has repeatedly increased and decreased, but it is trending upward and is expected to exceed 2 trillion won by 2025.
- ✓ The Korea Rural Economic Institute forecasts that the market for eco-friendly agricultural products will grow by about 5.8% every year since 2006, reaching KRW 2.136 trillion by 2025.
- ✓ Due to the effects of the climate crisis, consumer interest in health and impacts is heightened, and preference for eco-friendly agricultural products is increasing.
- ✓ The market size of pesticide-free agricultural products will continue to decrease, but organic agricultural products will gradually increase.

< Trends in Korea's Eco-Friendly Agricultural Products Market >

Unit: 100 million won

	2016년	2017년	2018년	2019년	2020년
Eco-Friendly Agricultural Products Market	14,665	13,608	12,868	14,506	15,153
- cereals	5,217	4,627	5,289	5,633	5,755

Note: The market size of grains in 2020 is estimated based on the share of grains in the previous three years (2017-2019).

Source: Korea Rural Economic Institute

Eco-Friendly Agricultural Product Consumption Status

- Additional support for the unit price of fixed-term continuous direct payment and treated at the same level as fixed-term direct payment.
- In 2020, KRW 495.9 billion, or about 33% of the eco-friendly agricultural products market (KRW 1.5153 trillion), was consumed through school lunches.
- The fact that school lunches account for a high percentage of sales of eco-friendly agricultural products is an advantage as a source of stable demand.
- In the other hand, as the opening of schools was delayed in 2020 due to the outbreak of COVID-19, and consumption of eco-friendly agricultural products for school meals decreased, the price of eco-friendly agricultural products plummeted.
- Therefore, in order to respond to the sharp drop in demand for school meals, it is judged that it is necessary to take measures such as adjusting cropping or long-term storage.

Tasks to expand eco-friendly rice production

- Korea's organic agricultural products market is centered on raw materials, and the organic processed food market is limited to small businesses.
 - ✓ As of 2019, the organic processed food market size is only KRW 172.4 billion.
 - ✓ Since the organic agricultural products market is centered on raw materials, price volatility is high and there are difficulties in expanding the consumption base.
 - ※ Consumers who have a low understanding of the eco-friendly agricultural product certification system still have a limit in their reluctance to purchase eco-friendly agricultural products, so the certification system needs to be improved.
 - ※ Consumers who did not purchase eco-friendly agricultural products avoided

purchasing eco-friendly agricultural products for reasons such as high price (55.9%), small quality difference (13.2%), and unreliable stability (11.4%).

- In order to expand the consumption of eco-friendly agricultural products including rice, it is necessary to develop new markets such as institutional and corporate lunches in addition to the existing school lunches.