

No. 112 (September 23, 2015)

Evaluation of FTA Supplementary Measures for Domestic Market in 2014 and Future Challenges

Park Joonkee, Han Sukho, Nam Kyungsoo, Jeong Hoyeon

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KREI

Supervisor: Research Director, Kim Hongsang 061-820-2236 hskim@krei.re.kr
Contents enquiries: Senior Research Fellow, Han Sukho 061-820-2279 shohan@krei.re.kr
Data enquiries: Seong Jinseok 061-820-2212 jssaint@krei.re.kr

- “KREI Agricultural Policy Focus” relates to analysis and description of the trend of and policy for agriculture and rural areas.
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◇ Abstract ◇

- As the Korea-US and Korea-EU FTAs came into effect, the Korean government established FTA supplementary measures, which are classified into 5 sectors and 18 project categories according to the purpose of a policy and the contents of a project. For the last 7 years from 2008 to 2014, the government allocated KRW 17.4777 trillion of investment and loans for the measures and spent KRW 14.8849 trillion.
 - To be specific, KRW 6.209 trillion (40.4%) of investment and loans were spent for improving the competitiveness of the livestock industry; KRW 1.3538 trillion (9.1%) for improving the competitiveness of the horticultural industry; KRW 4.6852 trillion (31.5%) for implementing tailored agricultural policies; KRW 2.5125 trillion (16.9%) for creating new growth engines; and KRW 312.5 billion (2.1%) for providing short-term compensation for income loss.
 - In 2014 alone, the government spent KRW 3.329 trillion, 82% of the total investment and loans allocated for the year (KRW 4.588 trillion).
- In the livestock and fruit-growing sectors, the supplementary measures have contributed to reducing costs and labor force in the short term, and continued efforts will be made for long-term growth.
 - Thanks to the implementation of the modernization project for livestock and fruit-growing facilities, productivity has improved while production cost has been reduced, and beneficiaries have remained highly satisfied with the project.
 - Supports for the mid- and long-term growth of these sectors will be continued by promoting eco-friendly agricultural and livestock products and improving livestock breeds and seeds.
 - However, there are several stumbling blocks, including complicated rules and procedures of the application for such supports and burdens of interest rates and collateral of loans and interest make-up schemes.
- The supplementary measures have contributed to stabilizing the management of farms by implementing tailored agricultural policies, and laid the groundwork for future growth engines by establishing infrastructure for environment-friendly farming and facilitating the export of agricultural products.
 - Projects such as the Farmland Purchase and Reserve Project, the Direct Payment for Transfer of Management, and the Farmland Pension have improved the efficiency of the use of farmland and stabilized the management of farms and life of aged farmers.
 - Although the low-pesticide certification system is about to be abolished and the total area of farmlands with eco-friendly certification has reduced, efforts for establishing the infrastructure for environmentally friendly farming have been continuously made by designating 4 new Metropolitan Eco-friendly Farming Complexes and 29 new Eco-friendly Farming Zones.
 - The policy of promoting the export of agricultural products has contributed to pioneering new markets for agri-food and creating the infrastructure for exporting agricultural products.
- For improving the effectiveness of the FTA supplementary measures and the satisfaction level of farmers, it is crucial to alleviate the burden of collateral on farmers, set realistic interest rates, integrate similar projects, and adjust the amount of support.
 - Considering that most investment projects for facilities are implemented by providing loans or interest make-up, it is needed to ease the burden of collateral and apply variable interest rates.
 - It is also necessary to adjust the amount of support for upland farming to provide realistic direct payment by comparing it with the fixed direct payment for rice farming.

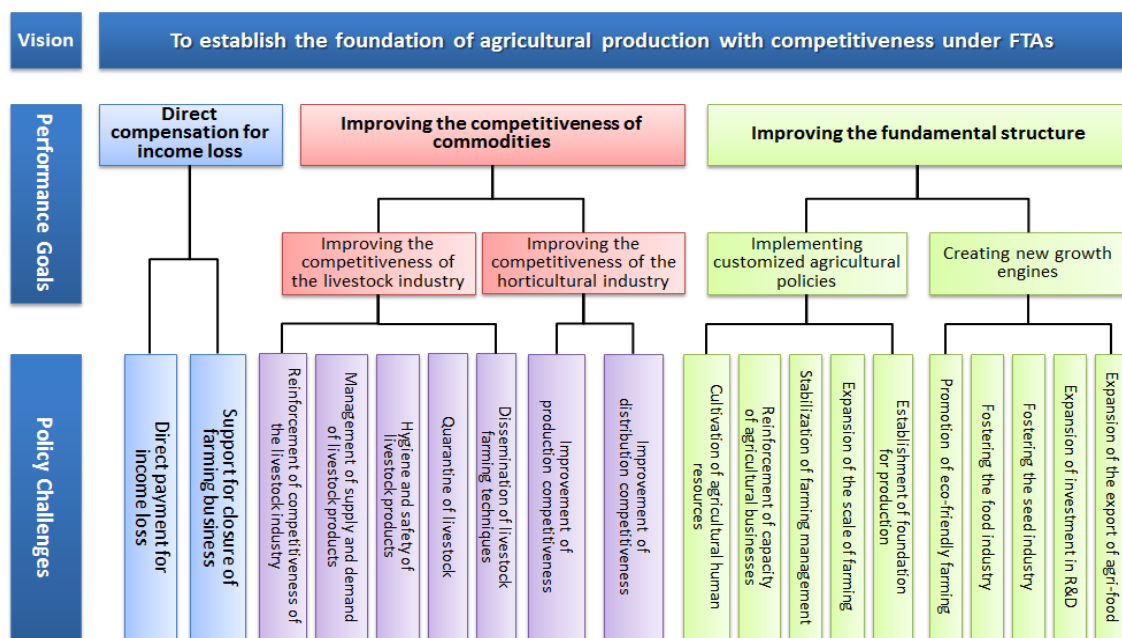
1. Establishment and Implementation of FTA Supplementary Measures for Domestic Market

□ As the Korea-US and Korea-EU FTAs took effect, the government came up with supplementary measures to compensate income loss of farmers and improve the structure and competitiveness of the agricultural industry.

○ In 2014, the government systematized the FTA supplementary measures for the domestic market by classifying the measures into 5 sectors,* 18 project categories and 75 projects according to the purpose of a policy and the contents of a project.

* Improving the competitiveness of the livestock industry; improving the competitiveness of the horticultural industry; implementing tailored agricultural policies; creating new growth engines; and providing short-term compensation for income loss

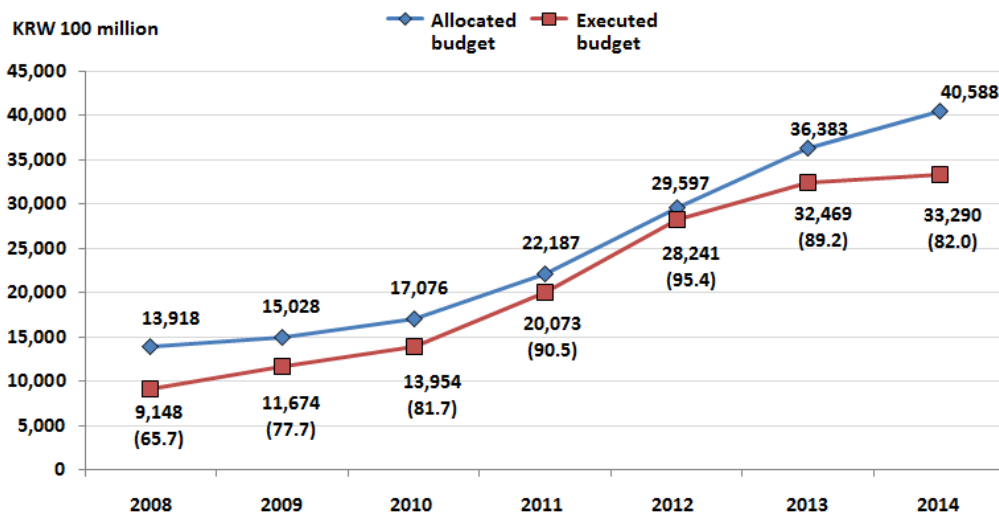
Figure 1. Performance Goals and Policy Challenges of FTA Supplementary Measures for Domestic Market



○ From 2008 to 2014, a total of KRW 17.4777 trillion was allocated to the investment and loans for the FTA supplementary measures for the domestic agricultural sector, and KRW 14.8849 trillion was spent as of 2014.

- Due to various issues in several projects, including the shortage of subsidies, high policy interest rates, and the failure to designate beneficiaries, the budget execution rate in 2014 was 82%, which is lower than 91.7%, the average rate in the previous three years (2011-2013).

Figure 2. Budget Plan and Result of FTA Supplementary Measures for Domestic Agricultural Market

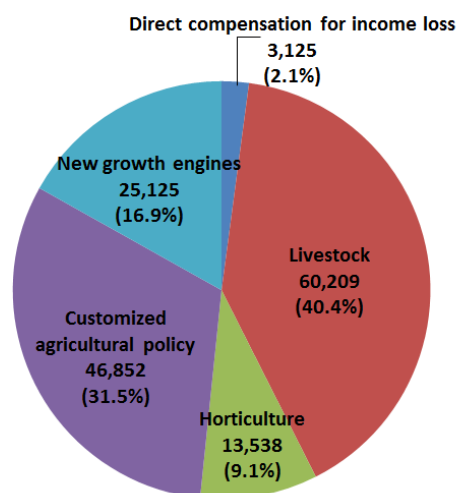


Note: The budgets for supplementary measures in response to the Korea-EU FTA are included in the data of the period from 2011 onwards. Figures in brackets indicate the budget execution rate of each year.

Source: Ministry of Agriculture, Food and Rural Affairs (MAFRA).

- **In the budget execution result of the last seven years, the sectors of improving the competitiveness of the livestock industry and that of improving the competitiveness of the horticultural industry account for 40.4% (KRW 6.209 trillion) and 31.5% (KRW 4.6852 trillion), respectively.**
- KRW 6.209 trillion (40.4%) of investment and loans were spent for improving the competitiveness of the livestock industry, and KRW 1.3538 trillion (9.1%) for strengthening the competitiveness of the horticultural and food industries.
 - KRW 4.6852 trillion (31.5%) of investment and loans were utilized for implementing tailored agricultural policies, and KRW 2.5125 trillion (16.9%) for creating new growth engines.
 - KRW 312.5 billion (2.1%) of investment and loans were spent for providing direct compensation for income loss: KRW 59.7 billion for providing direct payment to compensate income loss and KRW 252.8 billion for supporting the closure of farming businesses.

Figure 3. Budget Execution Result of FTA Supplementary Measures for Domestic Market by Sector (Sum of 2008-2014, KRW 100 million)



Source: MAFRA.

□ **In 2014 alone, the government allocated KRW 4.588 trillion of budget to implement the FTA supplementary measures, and actually spent KRW 3.329 trillion, 82% of the total investment and loans for the year.**

- The budget execution rates in relation to supporting the closure of farming businesses and improving the competitiveness of the horticultural industry were as high as 94.3% and 95.9%, respectively, while those related to providing direct payment to compensate income loss and creating new growth engines were as low as 66.6% and 67.7%, respectively.
- The budget allocated in 2014 to improve the competitiveness of the livestock industry was KRW 1.9 trillion, a 19.2% increase from the previous year, but the budget execution rate dropped by 3.5%p.
 - As the implementation rate of the interest make-up scheme decreased due to the burden of collateral and low interest rates, the budget execution rates of several project categories, such as the improvement of the competitiveness of the livestock industry (84.9% → 78.8%) and the support for eco-friendly livestock farming (90.1% → 85.0%), were low, while those of other categories increased.
- In terms of improving the competitiveness of the horticultural industry, KRW 142.6 billion was allocated as the budget to the sector in 2014, and KRW 136.7 billion (95.9%) was actually spent.
 - The budget to the sector of improving the competitiveness of the horticultural industry in 2014 was lower than that of the previous year by 34.5%, so the budget execution rate jumped.
 - Although the implementation rates of several projects fell, the overall execution rates were higher than 95%.

- The budget allocated for implementing tailored agricultural policies in 2014 was KRW 1.1994 trillion, a 9.5% increase from the previous year, but the budget execution rate decreased by 6.0%p.
 - The implementation rate of the agricultural disaster reinsurance project remained as low as 13% because the insurance subscription rate decreased and there were no huge disasters throughout the year.
 - In addition, the government allocated twice the budget for the direct payment for upland farming to provide direct payment for double cropping of food crops. As the actual total area of farmland applied was smaller than expected, however, the implementation rate ended up at 61.2% (a 16.6%p increase from the previous year).

- The budget allocated to create new growth engines in 2014 was KRW 659.6 billion, the similar level to that of the previous year, but the budget execution rate of the sector was 67.7%, a 21.4%p decrease from the previous year.
 - The low budget execution rate of the year was attributed to the failure to implement several large-scale projects, including the National Food Industry Cluster Project and the Private Breeding Complex Construction Project, and low performance of the Advanced Greenhouse Construction Support Project.

Table 1. Budget and Outcome of FTA Supplementary Measures in the Agricultural Sector in 2014

Unit: KRW 100 million

Policy Category	Classification	2008	2009	2010	2011	2012	2013	2014	2014/2013 (%)
Improving the competitiveness of the livestock industry	Budget	3,455	4,471	4,532	10,299	13,977	15,555	18,540	19.2
	Outcome	2,263	3,927	4,277	9,495	11,479	13,426	15,342	14.3
	Execution rate (%)	65.5	87.8	94.4	92.2	82.1	86.3	82.8	-3.5p
Improving the competitiveness of the horticultural industry	Budget	2,446	2,204	2,455	1,848	1,930	2,176	1,426	-34.5
	Outcome	2,047	2,010	2,135	1,858	2,109	2,012	1,367	-32.1
	Execution rate (%)	83.7	91.2	87.0	100.5	109.3	92.5	95.9	3.4p

Policy Category	Classification	2008	2009	2010	2011	2012	2013	2014	2014/2013 (%)
Implementing tailored agricultural policies	Budget	3,600	4,768	5,756	6,145	8,444	10,956	11,994	9.5
	Outcome	2,813	3,358	4,541	5,146	10,496	10,129	10,369	2.4
	Execution rate (%)	78.1	70.4	78.9	83.7	124.3	92.5	86.5	-6.0p
Creating new growth engines	Budget	2,417	2,685	3,783	3,345	4,346	6,616	6,596	-0.3
	Outcome	1,658	2,379	3,001	3,574	4,157	5,892	4,464	-24.2
	Execution rate (%)	68.6	88.6	79.3	106.8	95.7	89.1	67.7	-21.4p

Source: MAFRA.

2. Evaluation of FTA Supplementary Measures for Domestic Market¹⁾

- **The supplementary measures in the livestock sector have contributed to improving the working environment of livestock farms and enhancing the productivity and quality of livestock products by modernizing facilities. It is needed to make efforts continuously for mid- and long-term growth by promoting environmentally friendly livestock farming and improving breeding stocks.**
- By carrying out the Livestock Facility Modernization Project, the productivity indicator of farms benefiting from the policy became higher than the average of the total livestock farms around the country.

Table 2. Outcome Indicators of Livestock Facility Modernization Project

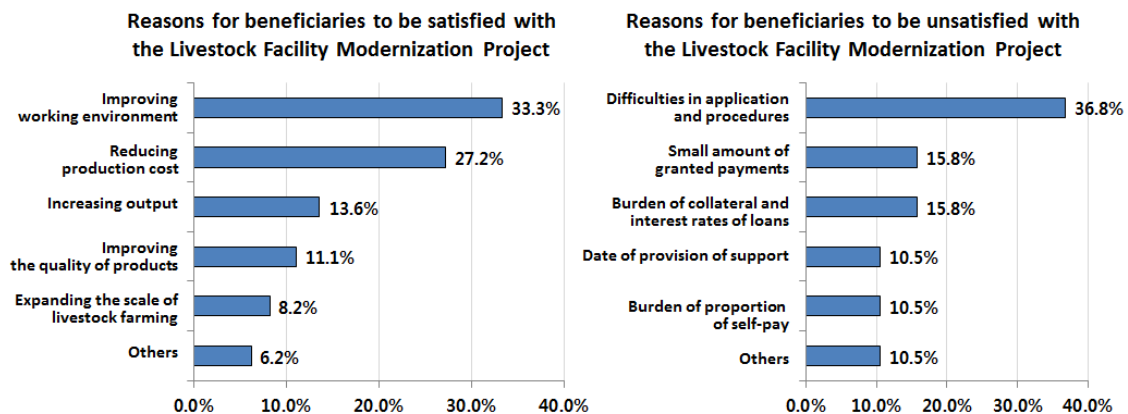
Indicator	Outcome in 2013	Goals in 2014	Outcome in 2014	Achievement rate (%)
Marketed pigs per sow per year of benefited farms (head)	16.7	17.8	17.9	100.6
Egg production rate of layer chickens of benefited farms (%)	60.9	74.7	75.5	101.1
Milk production per day of benefited farms (liter)	948.0	983.0	1,018.8	103.6

- The Livestock Facility Modernization Project is recognized as contributing to increasing productivity, as 81% of respondents are satisfied with the effects of the project, including the improvement of the working environment and the reduction in production costs.
 - Very satisfied 45%, satisfied 36%, unsatisfied 13%, very unsatisfied 6%

1) A summary of and an extract from *The Analysis Report of Outcome of Support for Farmers with FTA Supplementary Measures for Domestic Market in 2014*, published by the Farmer Service Center for FTA Implementation at KREI.

- However, some farmers complain about strict requirements and complicated procedures of application for the project and the burden of collateral and the interest rates of loans.

Figure 4. Result of Satisfaction Survey of the Livestock Facility Modernization Project



Note: The data is from the result of the survey of 100 out of 152 farms benefitting from the Livestock Facility Modernization Project, which was conducted in April 2015.

- Meanwhile, the Interest Make-up Project for Livestock Facility Modernization has been implemented from 2012 by providing a loan at a low interest rate without subsidies, but the budget execution rate is as low as 57.8% due to the current low interest rate and the burden of collateral.
- The result of the comparison between beneficiaries and non-beneficiaries of the Brand Business Support Project shows that the number of marketing promotion cases of beneficiaries was much higher than that of non-beneficiaries, and the promotion cost per case was about 1/20 of that of non-beneficiaries, implying that businesses benefited from the project carried out efficient marketing promotion.

Table 3. Comparison between Beneficiaries and Non-beneficiaries of the Brand Business Support Project in 2014

Category	Beneficiaries	Non-beneficiaries
Sales (KRW 1 million)	33,754.1	25,983.5
Participating farms (household)	184.0	366.8
Breeding rate (%)	81.3	81.7
Average age of livestock at slaughter (month)	24.1	30.6
No. of brand meat stores (store)	15.1	7.3
No. of marketing and promotion cases in 2014 (case)	633	16
Cost of marketing and promotion cases in 2014 (KRW 1 million)	222.3	99.4
Cost per marketing/promotion case in 2014 (KRW 1 million)	0.35	6.2

Note: The data is from the result of the study on businesses that registered their own brand of livestock products in 2014.

- The Livestock Check-off Fund Project appears to have contributed to some degree to protecting rights and interests of livestock farms, stabilizing supply and demand, increasing consumption, and providing information.
 - According to the survey of the satisfaction level of producers about the Livestock Check-off Fund Project, the satisfaction level in 2014 is 69.1%, a 0.5%p increase from the previous year, and the budget execution rate is 91.7%.
 - The result of the interview survey of the Check-off Fund Committee of each type of livestock shows that producers are very satisfied with the provision of subsidies within 100% of contribution fund paid by farmers.
 - However, individual farms complain about the transparency and efficiency of the operation of contribution fund and the lack of promotion for the quality of products.
- The Stabilization Project for Supply and Demand of Raw Milk and the Raw Milk Support Project for Processed Milk have partially contributed to supporting the trade margin generated by the seasonal

unbalance between supply and demand of raw milk and vitalizing the consumption of domestic dairy products.

- The School Milk Support Project, a sub-project of the Stabilization Project for Supply and Demand of Raw Milk, has contributed to caring and enhancing the physical development and health conditions of growing children and stabilizing the growth of the dairy industry by expanding the foundation of milk consumption.
 - Still, there is a limit to expand the consumption of dairy products on a steady basis with the current type of support due to its low price competitiveness compared to imported products.
- The Livestock Traceability System Project has secured the transparency of distribution channels and building the trust of consumers for domestic livestock products.
- The number of information checks by consumers for beef products has soared from 1,679 cases in 2009 to 7,751 in 2011, 13,917 in 2013 and 21,267 in 2014.
 - The violation rate of the object identification number system was as low as 1.2%, and the discordance rate of DNA test also decreased from 18.2% in 2013 to 14.8% in 2014.
- According to an expert evaluation (using AHP) of the Forage Production Foundation Expansion Project, the overall satisfaction level for the project was high.
- The project for nurturing the foundation of forage production is recognized as one of the most important sub-projects, but it needs supplementary plans, considering the low satisfaction level.
 - The average significance level of the project for nurturing the foundation of forage production is 0.488; that of the project for supporting the distribution of forage is 0.268; and that of the project for supporting the direct production of forage is 0.244. (The sum of the significance levels of the three sub-projects is 1.)

- The average satisfaction level of the project for supporting the distribution of forage is 0.682; that of the project for supporting the direct production of forage is 0.664; and that of the project for nurturing the foundation of forage production is 0.621. (The higher the level is, the more satisfactory the project is.)
- In a survey of the future direction of supportive projects for the livestock industry, the improvement of hygiene and safety of livestock products and the reinforcement of quarantine were included in the top priority challenges according to the responses of three groups of respondents.

Table 4. Necessity Level for Future Challenges of Supportive Projects for the Livestock Industry

Priority	Government		Industry		Academia	
	Project	Score	Project	Score	Project	Score
1	Quality competitiveness	0.874	Hygiene and safety	0.877	Livestock quarantine	0.873
2	Price competitiveness	0.861	Livestock quarantine	0.871	Hygiene and safety	0.859
3	Production competitiveness	0.861	Cultivation of professional workforce	0.868	Alleviation of pollution	0.845
4	Livestock quarantine	0.86	Price competitiveness	0.86	Improvement of efficiency of slaughter and distribution	0.827
5	Hygiene and safety	0.858	Management of supply and demand	0.858	Processing competitiveness	0.814
6	Cultivation of professional workforce	0.835	Quality competitiveness	0.853	Production competitiveness	0.796
7	Alleviation of pollution	0.834	Production competitiveness	0.852	Cultivation of professional workforce	0.792
8	Expansion of connection with 6 th industry	0.815	Increase of the share in the domestic market	0.846	Price competitiveness	0.788

Priority	Government		Industry		Academia	
	Project	Score	Project	Score	Project	Score
9	Management of supply and demand	0.814	Processing competitiveness	0.842	Quality competitiveness	0.779
10	Processing competitiveness	0.814	Improvement of efficiency of slaughter and distribution	0.829	Management of supply and demand	0.736

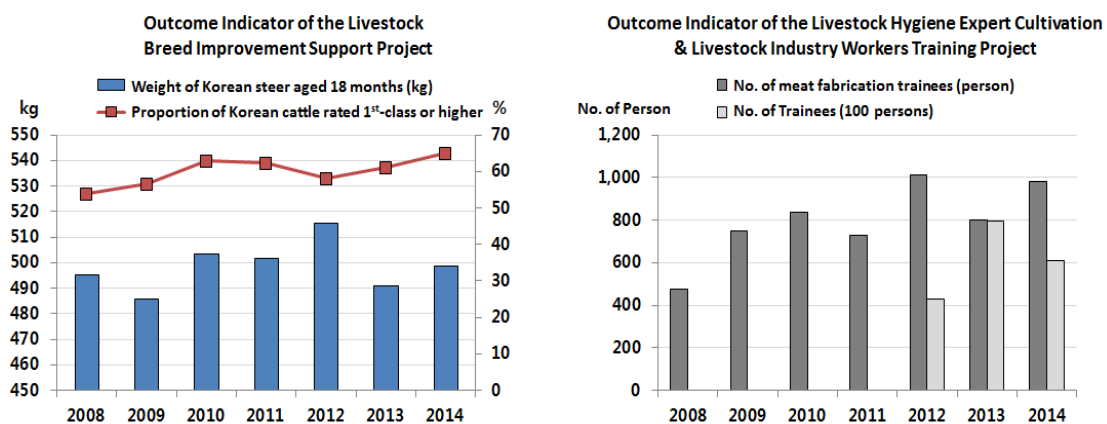
Note 1) The necessity level is presented as a figure based on the result of an AHP analysis. Absolutely necessary (0.9), very necessary (0.875), necessary (0.833), somewhat necessary (0.75), moderate (0.5), somewhat unnecessary (0.25), unnecessary (0.167), very unnecessary (0.125), absolutely unnecessary (0.1).

Note 2) The data cover the responses of 26 respondents working for forage-producing companies and farms, 21 experts from colleges and research institutes, and 20 officials from the central and local governments.

- The Natural Circulation Farming Invigoration Project and the Livestock Manure Management Facility Support Project have contributed to promoting natural circulation farming by increasing the use of liquid compost and the rate of using livestock manure as resources.
 - According to an in-depth interview study about the Livestock Manure Management Facility Support Project, individual farms were highly satisfied with the project as they could enhance the capability of storing liquid compost and operating systematic equipment. On the other hand, joint manure recycling facilities were faced with hardships due to environmental regulations and the unbalance between supply and demand of livestock manure.
 - Several areas were struggling with side effects of the project as civil complaints emerged in relation to bad smell coming from compost sprayed by consigned workers from the liquid compost distribution center.

- The Livestock Breed Improvement Support Project has enhanced productivity as an increasing number of cattle were rated first-class or higher and the milk yields were also on the rise.
 - In 2014, the proportion of cattle rated first-class or higher increased by 3.7%p from 65% in the previous year.
 - The annual milk yields per dairy cow increased from 8,553 kg in 2008 to 8,723 kg in 2013 and 8,959 kg in 2014.
 - The Korean cattle breed improvement project has been carried out focusing on enhancing meatiness, and the proportion of cattle rated first-class or higher was on the steady rise (with improved quality).
 - Still, the weight of Korean steers aged 18 months (the indicator of the amount of meat) has not sufficiently improved, and it is needed to increase the amount of meat in addition to meatiness.

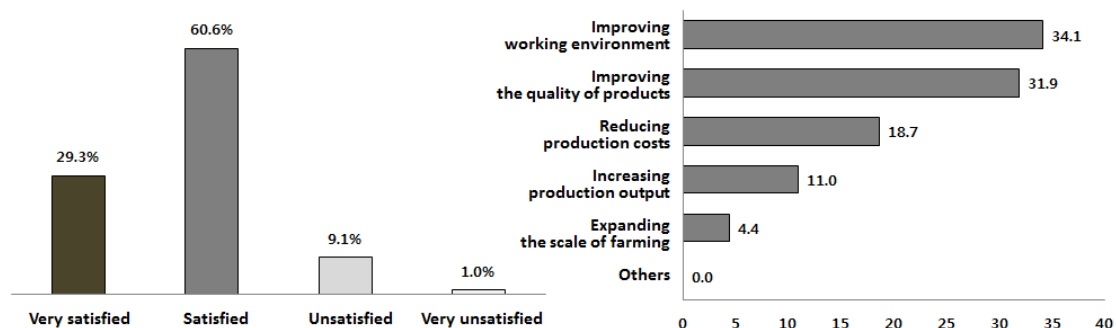
Figure 5. Major Outcome Indicators of the Project Category of Livestock Technique Dissemination



- **Supplementary measures in the horticultural sector have not only increased productivity but also stabilized the production of horticultural products and improved the structure of post-harvest management, processing and distribution.**

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- In terms of the High-quality Fruit Production Facility Modernization Project, 89.9% of respondents were satisfied with the project because it improved the working environment and quality and reduced production costs. The project established the production system for high-quality products and enhanced productivity.
 - According to a survey of beneficiaries of this project, 29.3% of the respondents said they were “very satisfied” with the project as it improved the working environment and increased the quality of products, and 60.6% were “satisfied” with the project.
 - Moreover, benefited farms suggested implementing projects focusing on actual farming conditions, calling for adjusting the proportion of support for business expenses, simplifying administrative procedures, and expanding supportive projects.
 - An expert evaluation of the High-quality Fruit Production Facility Modernization Project (focusing on the production of apples, pears and grapes) shows that beneficiaries produced more fruits than non-beneficiaries and that the sugar content of products and the proportion of high-quality products grown by beneficiaries were high. This implies that the facility modernization project contributed to increasing agricultural income.
 - ※ The difference in farming management performance of beneficiaries of the facility modernization project and non-beneficiaries
 - Apple: The agricultural income increased by KRW 1.96 million, and the average sugar content improved by 0.54 brix.
 - Pear: The agricultural income increased by KRW 1.94 million, and the output per unit improved by about 643 kg.
 - Grape: The agricultural income increased by KRW 1.76 million, and the proportion of high-quality products increased by 8%.

Figure 6. Result of Satisfaction Survey of the High-quality Fruit Production Facility Modernization Project



Note: The data is from the result of the survey of 99 out of 173 farms benefitting from the High-quality Fruit Production Facility Modernization Project, which was conducted in April 2015.

- The Orchard Expansion Project has contributed to nurturing large-scale specialized farming businesses by increasing the proportion of full-time fruit-growing farms with 1.5 ha or wider farmland and expanding the average farming scale of beneficiaries.
 - According to an expert evaluation, the Orchard Expansion Project has contributed to expanding the area of orchard per farm by 7.7-11.9 m² each year and 76.05 m² in total from 2005 to 2013, compared to the case where the project has not been implemented.

- Thanks to the implementation of the policy for strengthening the distribution competitiveness of the horticultural industry, leading local brands have been nurtured and expanded, increasing the efficiency of the distribution structure.
 - The Fruit Brand Promotion Support Project has helped to increase the joint account rate in major producing areas and the distribution rate of high-quality fruit brand products, thereby contributing to the settlement of domestic brands and the improvement of the distribution structure.

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- The joint account rate in major producing areas: 38.3% (2012) → 49.1% (2013) → 56.7% (2014)
 - The distribution rate of high-quality fruit brand products: 8.6% (2012) → 12.5% (2013) → 15.0% (2014)
 - The Major Grain Industry Promotion Project has supported to foster systematized businesses and construct distribution facilities for drying, selecting and storing products, thereby accelerating the systematization of local businesses of upland crop farming.
 - The output of upland crop brand businesses is on the rise, and their share in the total output is 31.6%, almost reaching the target level (34.2%).

□ The farming scale expansion policies have increased the efficiency of farmland use of farming successors and supported to stabilize the life of aged or retired farmers.

- The Farmland Purchase and Reserve Project promoted the expansion of farming scale focusing on next-generation farmers and enhanced the efficiency of farmland use.
 - The result of a survey of beneficiaries of this project (tenant farmers) shows that 85% of the respondents are satisfied with the project as it has alleviated the burden of purchasing farmland and reduced rent, but some complain about the lack of options for choosing farmland.
 - In the survey, 9.0% of respondents said “very satisfied,” and 76% responded “satisfied.”
 - According to the result of a survey of the other group of beneficiaries of this project (sellers), 83% of respondents are satisfied with the project because of stabilized income and proper prices, but some of them complain about strict requirements for buyers.
 - In the survey, 16.0% of respondents said “very satisfied,” and 67% responded “satisfied.”

- The Direct Payment for Transfer of Management has contributed to stabilizing the retired life of farmers and facilitating the expansion of farming scale of next-generation farms.
 - In a survey of beneficiaries of the project, 62.1% of respondents were satisfied with the project as it stabilized retired life and simplified administrative procedures.
 - Some complaints include the insufficient amount of payment and the short period of direct payment (up to 75 year olds, 10 years).

- **The farming management stabilization policies have partially contributed to reducing agricultural production costs, addressing unstable factors in farming management, and stabilizing retired life of aged farmers.**

- The Agricultural Disaster Reinsurance Project and the Disaster Reinsurance Project for Agriculture and Fisheries are recognized as supporting damaged farms to overcome crises and stabilize the management of business.
 - Still, it is requested to improve the system regarding insufficient payment of insurance compared to the loss of farms and the inaccuracy of damage assessment methods.
 - The subscription rate of the disaster insurance for crops in 2014²⁾:
 - Crops (%): 13.5 (2011) → 13.6 (2012) → 19.1 (2013) → 16.2 (2014)
 - Livestock (%): 55.2 (2011) → 71.4 (2012) → 77.3 (2013) → 89.1 (2014)

2) The insurance subscription rate, the outcome indicator of the Agricultural Disaster Insurance, is not a stable indicator because it can fluctuate depending on the choice of farm households and the success level of harvest in the previous year. Accordingly, the insurance purchase amount, rather than the subscription rate, appears to be a more realistic indicator.

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- Newly added items for disaster insurance in 2014: Chinese cabbage grown inside facilities, eggplant, green onion (No. of commodities: 40 → 43)
 - In a survey of the beneficiaries of the Agricultural Disaster Reinsurance Project, a total of 55% of the respondents were not satisfied with the project: 20% were very unsatisfied and 35% were unsatisfied.
 - In a satisfaction level survey of fruit-growing farms (accounting for 67% of the respondents) and rice-growing farms (20%), these farms responded that they were not satisfied with the low payment compared to their loss.
 - Furthermore, fruit-growing farms complained about inaccurate and unfair damage assessment methods, while rice-growing farms pointed out that only a few types of disasters (typhoon, hail and frost) could be covered by the insurance.
- The budget allocated to the Direct Payment for Upland Farming was significantly expanded as the system started to be applied to double cropping of food crops in addition to rice from 2014. However, the budget execution rate was low as not many farmers applied for direct payment because farmland lease is limited in accordance with the Farmland Act and owners of farmland tend to avoid drawing up contracts.
- According to an expert evaluation of the Direct Payment for Upland Farming (utilizing the data of farm household economy), the average direct payment for upland farming per farm household is KRW 365,000, which is 2.53% of agricultural income and 0.91% of farm household income.
- The direct payment had more effect on full-time farms in a large scale with low non-farm income (those focusing on upland farming).
 - However, the effect of direct payment on increasing income is lower for upland farming than for rice farming due to the direct payment structure concentrated in rice farming and the low execution rate of the direct payment for upland farming.

Table 5. The Effect of Direct Payment for Upland Farming on Income Increase

Agricultural Income (KRW 1,000)			Non-farm Income (KRW 1,000)	Farm Household Income (KRW 1,000)		
Subsidy included (A)	Subsidy excluded (B)	① Contribution rate (%)		Subsidy included (C)	Subsidy excluded (D)	② Contribution rate (%)
14,787	14,423	2.53	15,059	40,296	39,931	0.91

Note: The direct payment for upland farming is estimated by utilizing the data of farm household economy and applying the proportion of the cultivation area of targeted crops in the total cultivation area of all crops and the payment per farm household in 2013. (The upper limit of payment is set as KRW 1.6 million for 4 ha.)

○ The Farmland Pension is recognized as contributing to stabilizing retired life of aged farmers by increasing the number of subscribers and the payment for beneficiaries.

- According to a survey of beneficiaries of this project, 84% of respondents were satisfied with the project as it alleviated the burden of their children, supported them to continue farming, and enabled them to lead relaxed retired life. But some complained about the burden of debt and low payments.
- The number of new subscribers of the Farmland Pension in 2014 was 1,036, a 43% increase from the previous year.
 - No. of subscribers (accumulated): 2,202 (2012) → 2,927 (2013) → 3,963 (2014)
 - Average monthly payment per new subscriber (KRW 1,000): 694 (2012) → 831 (2013) → 959 (2014)
- In a survey of beneficiaries of the Farmland Pension, 55% of respondents were very satisfied with the pension, and 29% were somewhat satisfied.

□ **The foundation for creating new growth engines has been established by building the infrastructure for eco-friendly farming, strengthening the competitiveness of the food industry, fostering the seed industry, and invigorating the export of agricultural products.**

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- The policies for nurturing eco-friendly farming have contributed to establishing the infrastructure for environmentally friendly farming, increasing the awareness of consumers of eco-friendly agricultural products, and stabilizing the income of eco-friendly farms.
 - The total area of farmland with eco-friendly certification reduced due to the improvement of the system, such as the abolishment of new low-pesticide certification and the tightened special investigation for preventing inadequate certification of eco-friendly agricultural products. Still, the policies have contributed to establishing the infrastructure for environment-friendly farming by designating 4 new Metropolitan Eco-friendly Farming Complexes and 29 new Eco-friendly Farming Zones in 2014.
 - No. of Metropolitan Eco-friendly Farming Complexes (accumulated): 1,076 (2012) → 1,112 (2013) → 1,141 (2014)
 - No. of Eco-friendly Farming Zones (accumulated): 42 (2012) → 44 (2013) → 48 (2014)
 - It is needed to identify how eco-friendly farming is carried out to prevent inadequate certification and improve the trust of consumers in eco-friendly agricultural products. It is also necessary to seek measures to provide eco-friendly education and consulting services, thereby expanding the total area of farmland with certification.
 - In addition, the authorities should come up with plans to invigorate eco-friendly farming by differentiating the payment for each commodity and adjusting the payment period, thereby expanding the total areas of farmland with eco-friendly certification.
 - In 2014, part of the budget allocated to the National Food Industry Cluster Project was not spent due to the lack of tax revenues from the Special Tax for Rural Development and the delay in construction projects. But it is estimated that the project would secure future growth engines for the agri-food industry in the long term by accommodating 150 food-related companies and 10 research institutes by 2020 and

achieving KRW 15 trillion of sales and USD 3 billion of exports each year (KIET, 2008).

- The project has concluded MOUs for investment with 108 domestic and foreign companies, and 5 foreign companies have registered for foreign investment (as of April 2015³⁾).
- The policies for fostering the seed industry have contributed to easing the burden of royalty for farmers for using imported seeds and establishing the system for development, production and research of high-quality seeds.
 - By implementing the Foundation Establishment Project for the Seed Industry, 57 relevant facilities have been constructed and 42 professional human resources have been trained to contribute to building infrastructure for high-quality seed development from 2009 to 2014.
 - Dissemination rate of domestic seeds: Strawberry 86.1%, mushroom 48.0%, rose 29.0%
 - The Foundation Seed and Original Seed Production Project has been carried out to establish a stable foundation for producing major certificated seeds of food crops.
 - Output of foundation seeds and original seeds (tons): 1,497 (2012) → 1,476 (2013) → 1,512 (2014)
 - Supported Areas for producing foundation seeds and original seeds (ha): 271 (2012) → 272 (2013) → 271 (2014)
- The policies for boosting the export of agri-food have helped to pioneer new markets, promote agri-food, and establish the infrastructure for expanding the export of agricultural products.

3) Companies that signed an MOU for the project: (Domestic) CJ CheilJedang, Dongwon F&B, Harim, Hansung Enterprise Co., LTD., etc.; (Overseas) NIZO Food Research (Netherlands), Clever Mama (福建省晋江巧媽媽, China), Hampton Grains Inc. (US), etc. Foreign investment registration: Wellspring, Hampton Grains Inc. (US), Weihei Ziguang, Clever Mama (China), and Goldrock International (Kenya)

- The Overseas Market Pioneering Project for Agricultural Products and the Global K-Food Project have contributed to attracting local demands and expanding the export of agricultural products based on intensive marketing strategies by promoting agri-food brands, participating in global food fairs and holding the K-Food Fair.
 - According to an expert evaluation of the Overseas Market Pioneering Project for Agricultural Products and the Global K-Food Project, these projects have a meaningful influence on the actual performance of exporters.
 - In particular, exporters have been mainly affected by the Fee-based Information Support Project (0.173) and the Support Fund for High-quality Agri-food (0.152).
 - Moreover, it is assumed that the Overseas Promotion Event Support Project has affected the export performance for the last three years.
- In terms of the direct payment for income loss due to the implementation of FTAs, KRW 80 million, KRW 15.9 billion, KRW 5 million and KRW 16.4 billion were provided to farms growing sorghum, potatoes, sweet potatoes and Korean calves, respectively.
- Potato-growing farms have seen income increase by 12.9%, and farms growing breeding cattle by 6.4%.
 - * Farms growing sweet potatoes have not seen a huge effect of income increase because they received relatively small amount of support compared to their loss. Sorghum-growing farms were excluded from the measurement of indicators because there was no data of income and production.

Table 6. Income Increase Effect for Farms of Each Commodity

Unit: KRW 1,000, head

Classification	Income per ha (head) (a)	Farming (breeding) scale per farm (b)	Income per farm household (c=a×b)	Direct payment per ha (head) (d)	Direct payment per farm household (e=b×d)	Income increase effect (f=e/c)
Potato	9,843	0.121	1,191	1,271	154	12.9%
Sweet potato	14,107	0.078	1,100	9	0.7	0.06%

Classification	Income per ha (head) (a)	Farming (breeding) scale per farm (b)	Income per farm household (c=a×b)	Direct payment per ha (head) (d)	Direct payment per farm household (e=b×d)	Income increase effect (f=e/c)
Korean calf	732	23.5	17,202	47	1,105	6.4%

Note 1) The income per ha of potato- and sweet-potato-growing farms is an average figure of the three years between 2009 and 2013 with the highest and lowest figures excluded. Potatoes here indicate those produced in spring.

Note 2) The income per head of calf-growing farms (breeding cattle) is an average figure of the five years between 2004 and 2013 with negative income figures (2011-2013) and the highest and lowest figures excluded.

Source: Statistics Korea (the Agricultural Income Survey, the Livestock Survey Report, and the Acreage and Production Survey).

- In 2014, the expansion of the scale of farms growing breeding cattle progressed thanks to the support for the closure of businesses: the number of breeding cattle per farm households increased from 9.5 to 11.4.
 - In 2014, 3,010 farms applied for support for business closure with 23,000 cattle in total.
 - A large number of farms (estimated to be 12,421 farm households) that had applied for support for business closure in 2013 could not conclude the procedure due to the lack of budget in that year and finally closed the business in 2014.
 - The number of cattle per farm household growing breeding cattle increased from 9.5 before the closure support project to 11.4 after the implementation of the project. And the project appears to have contributed to increasing income of farms growing Korean cattle.

**Table 7. Effect of Expansion of the Scale of Breeding Cattle Farms
Based on Support for Closure of Business**

Unit: head, household

Classification		No. of cattle of farms to be benefited from the project (a)	No. of cattle of farms that applied for closure (b)	Decreased No. of breeding cattle (c)	Total No. of farms growing cattle			No. of cattle per farm household		
					Before the support for closure (d)	No. of farms that applied for closure (e)	After the support for closure (f)	Before the support for closure (f=a/d)	After the support for closure (g=(a-c)/e)	Increase rate (%)
Year of application	2013	653,000	118,000	42,000	69,075	12,421	53,644	9.5	11.4	20.0
	2014		23,000			3,010				

Note 1) A large number of farm households that had applied for support for business closure in 2013 actually closed their businesses in 2014 due to the shortage of budget in 2013. Also, only 37.5% (KRW 81.9 billion) of the requested support for the total closure cases in 2013 (KRW 218.3 billion) was actually executed, and the rest could be executed as included in the budget for 2014.

Note 2) Assuming that all farms that had applied for support for business closure received subsidies and that the number of cattle of applied farms is proportional to the actual amount of subsidies, it is possible to estimate the number of cattle of farms whose application for support in 2013 was carried forward to 2014 (189,000 head of cattle \times 62.5% = 118,000 head of cattle).

Note 3) It was assumed that part of breeding cattle were slaughtered due to the closure of business, and indeed, the total number of breeding cattle as of the end of 2014 (late December) was 1,458,000, decreased by 42,000 head from the previous year (as of December 2013).

Note 4) Based on the number of cattle per farm household before the closure support project, it is possible to estimate the number of farm households whose application for support in 2013 was carried forward to 2014 (118,000 head of cattle \div 9.5 head/farm = 12,421 farm households).

Source: Statistics Korea (the Livestock Survey Report).

3. Implications and Direction for Improvement

- **The FTA supplementary measures for the domestic agricultural market provide direct and indirect benefits to farms by partially compensating the loss of the agricultural sector, improving the structure of the industry, and strengthening competitiveness. Still, it is needed to improve and supplement the measures.**

- The measures can be classified into various categories according to the purpose, sector and commodities of a project, but regarding the expansion of farm household income, the measures can be classified into the categories of production, demand and other issues.
 - The production category can be divided into the sub-category of productivity improvement (increase of production units, quality improvement) and that of production cost reduction (scale expansion, equipment support).
 - The demand category can be divided into the sub-category of domestic demand generation (consumption promotion, brand development) and that of demand for export (export support, new overseas market pioneering).
 - The category of other issues can be divided into the sub-categories of the long-term development of agriculture and foundation establishment, R&D, education, management of supply and demand, etc.

- The detailed projects of the current FTA supplementary measures affect multiple sectors and trigger the increase in output and income of benefited farms.
 - The measures contribute to increasing agricultural output and reducing production costs by improving productivity and expanding farming scale, and to raising the prices of products by attracting

demand, encouraging consumption and enhancing the distribution structure.

- The measures also contribute to stabilizing farming management by expanding the scale of full-time farms, supporting retired life of aged farmers, and providing various direct payment systems.
 - Moreover, the measures partially compensate the short-term income loss of farms by implementing the direct payment system for income loss, and continue to invest in long-term growth of agriculture by supporting R&D, fostering the seed industry, and nurturing agricultural human resources.
- Still, it is crucial to improve the efficiency of the projects by enhancing and supplementing several projects and to increase the satisfaction level of beneficiaries.

□ In order to improve the budget execution rate, it is necessary to set realistic policy interest rates for the loan project and the interest make-up scheme and find measures to resolve collateral issues.

- As the methods of a growing number of projects are shifted to the form of interest make-up and loans, the issues related to collateral as well as interest rates have been magnified.
- The Advanced Greenhouse Construction Support Project was designed for those returning to farming at the request of local governments, but the project could not be implemented because it was hard to attract beneficiaries due to collateral issues.
 - Demand for the Distribution Invigoration Project for Eco-friendly Agricultural Products is on the decline due to the lack of collateral of businesses and the loss of advantage from its policy interest rate set in 2014 when the project was first implemented, so efforts should be made to vitalize the project.

- Most projects related to facility investment that directly affects farmers are operated in the form of interest make-up or loans, and the proportion of such projects is expected to rise. Accordingly, the role of the credit guarantee fund for farmers and fishermen will become more important.
- Moreover, it is predicted that the benefits from the policy interest rate will increase thanks to the policy implemented by MAFRA from August 1, 2015 to decrease the interest rate for loans to be used as policy funds and introduce the adjustable interest rate system targeting 36 funds.
- **It will be desirable to integrate projects in low demand with similar projects to increase the flexibility of policy adjustment and provide benefits to more farmers.**
 - The efficiency of policy implementation is on the decline because several projects with similar purposes are operated by different supportive methods.
 - The Breeding Stock Farm Specialization Support Project was similar to the Livestock Facility Modernization Project in that both were aimed at supporting facilities, but the requirements for application were more strict. Therefore, two projects were integrated from 2014.
 - The Overseas Market Pioneering Project for Agricultural Products and the Global K-Food Project were similar to each other in terms of the contents and purpose, so two projects were integrated as the Export Infrastructure Reinforcement Project from 2015.
 - Efforts have been made to improve the budget execution rate of the FTA Supplementary Measures for the Domestic Market by putting an end to projects without demand.

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- Projects abolished in 2014: The Calf Auction Facility Modernization Project, the Livestock and Egg Transportation Vehicle Support Project

□ It is essential to maintain the foundation of farming in response to an increasing amount of imported agricultural and livestock products, and enhance the effectiveness of projects aimed at stabilizing farming management to nurture pluralistic functions.

- The Agricultural Disaster Insurance is attracting subscribers by increasing items to cover, but there should be plans for reinforcing the insurance by providing various products for realistic compensation.
 - It is needed to expand the range of coverage in addition to natural disasters and develop tailored insurance products (with various options for the proportion of self-pay) with consideration for the characteristics of each commodity, including an insurance in connection with agricultural facilities.
- From 2015, the Direct Payment for Upland Farming provides KRW 250,000/ha for ordinary upland crops and KRW 400,000/ha for commodities that have long been subject to the upland farming direct payment system. But the budget execution rate of this project is also low because farmland lease is limited under the Farmland Act and owners of farmland tend to avoid drawing up contracts.
 - Compared to KRW 1 million of support per ha in the fixed direct payment system for rice farming, the amount of support for upland farming is too low, raising complaints of farmers. Accordingly, it is crucial to provide direct payments fairly in the two systems.

□ It is important to lay the groundwork for new growth engines for industrialization of agriculture for future growth.

- By implementing the Quality Improvement Project for Horticultural Farming Under Structure, it is needed to find measures to create demand for projects concerning ICT integration and convergence, the field which is not sufficiently advanced yet.
 - It will be desirable to build an efficient foundation for production by increasing outputs, improving the quality of products, and reducing workforce through the systematization of the smart farm system.
- It is expected to expand the infrastructure for exporting agri-food by pioneering new markets and carrying out promotions through the Overseas Market Pioneering Project for Agricultural Products and the Global K-Food Project.
 - Still, some complain about the shortage of budget and the lack of opportunities for small- and medium-sized companies.
 - Considering that a large number of companies that cannot participate in overseas fairs find opportunities to meet buyers and consumers in various events, it is necessary to expand and continue relevant projects, providing more companies with opportunities for growth.
 - Furthermore, it is crucial to diversify host countries of global fairs to increase the number of partner countries for export.

KREI Agricultural Policy Focus No. 112

Evaluation of FTA Supplementary Measures for
Domestic Market in 2014 and Future Challenges

Registration No. 6-0007 (May 25, 1979)

Printed September 23, 2015

Published September 23, 2015

Publisher Choi Sei-kyun

Operation committee Kim Hong-sang, Kim Byung-ryul,
Park Joon-kee, Seong Joo-in,
Woo Byung-joon, Moon Han-pil

Publishing institution KREI

601, Bitgaram-ro, Naju-si, Jeollanam-do,
58217, Korea

1833-5500 <http://www.krei.re.kr>

Printed by The Disabled's Products Sales Support
Association

+82-2-2269-5523 dec5523@hanmail.net

ISBN: 978-89-6013-778-3 93520

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