

Plan for Applying Information & Communication Technology (ICT) into Agro-food industry

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The Ministry of Agriculture, Food and Rural Affairs(MAFRA) has established the 'Plan for Promotion of Agro-food and ICT Convergence - Integration' in order to apply ICT technologies to the production, distribution, and consumption of agricultural products for scientific farming. It is for the creation of new added-value through convergence and integration between ICT and the agro-food production, distribution, and consumption value-chain.

This plan has significant meaning in that it seeks to establish a foothold for agro-food industry growth as a growing future business area and ecosystem construction for ICT convergence – integration, as other major industries create new added-values and improve their competitiveness using ICT.

This plan comprises three major projects: ① Promotion of ICT Convergence - Integration, ② ICT industry ecosystem development and ③ Basic Infrastructure Expansion, centered on sectors with high-ripple effects and developing technologies.

① (Promotion of ICT Convergence - Integration): Successful models will be promoted centered on the facility horticulture, fruit growing and livestock industry that can be easily technically developed and industrialized and a wide range of models such as direct agricultural product e-commerce transactions and provision of agriculture and livestock product history information will be developed and distributed for consumption.

- (Facility horticulture) Supplying a 'Smart Greenhouse' system that supports monitoring and control of plant growing environments via smart phone or PC by providing high-tech sensing, monitoring, and controlling equipment to farms

- (Fruit growing) Reducing production costs and producing quality fruit by supporting ICT convergence - integration equipment such as high-tech disease and insect pest sensing and monitoring

- (Livestock facilities) Feeding and management with environmental control, risk management, and automatic feeding system using temperature and humidity sensors, fire sensors, internet CCTV, and more.

- (Distribution, consumption, etc.) Connecting to rural tourism by improving distribution and storage efficiency for direct local food transactions and school lunches and comprehensively managing local resources

* 7,000 farms (5,000 facility horticulture farms, 1,500 fruit orchards and 500 livestock farms), 100 distribution corporations and 50 'sixth-industry' communities will be developed by 2017.

② (ICT industry ecosystem development): Focusing on establishing an industrial ecosystem for a wide range of ICT technologies to be applied to the agricultural business

- The government provides starting points for initial market development by distributing outstanding models.

- A (tentatively named) ICT Convergence - Integration Support Center will be established and operated to develop a technical cooperation network between IT enterprises and demanding organizations.

- The initial domestic market will be promoted and a required system built for further penetration into overseas markets by establishing international standards for hardware and software such as controllers, sensors, administrative management programs, etc.

③ (Basic Infrastructure Expansion) establishing an on-site support system for farm education

- Reinforcing education and promotion of successful cases by establishing a practical ICT training farm

- Systematically promoting agri-food and ICT convergence - integration by enacting the 'Act on Promotion of Informatization of Agricultural and Rural Villages

- Construct an on-site support system in cooperation with agricultural technology centers all over the country

In order to develop and practically apply agro-food and ICT convergence - integration, MAFRA will make efforts to establish systemic virtuous circulation from the R&D stage to the model development and promotion stage. MAFRA will invest KRW(~~₩~~) 224.9 billion on the development and promotion of agri-food and ICT convergence integration models by 2017, using existing R&D and information budgets. Budgets required for application to agriculture and rural sites will be implemented in conjunction with the facility modernization project (horticulture, livestock, etc.). The Korean government expects that this plan will contribute to facilitate an increase in productivity, product quality, and rural household income and establish a foothold for job creation and overseas market penetration by developing an agro-food and ICT industry ecosystem.

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