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Korea Government Supports Agricultural Research Centers for Developing Core Technology and Nurturing Experts in University

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On February 12, 2015, the Ministry of Agriculture, Food and Rural Affairs (MAFRA) announced that it has pushed forward a project to support Agricultural Research Centers (ARC) in major universities since 2010 with two objectives: to develop advanced core technologies to jumpstart the new growth engine of agricultural industry; and to nurture R&D experts with advanced degrees which the industry needs to attract.

Currently MAFRA has supported five Agricultural Research Centers(ARC): Vegetable Breeding Research Center, Center for Food Safety and Toxicology, Center for Intelligent Agro-Food Packaging, Center for Automation, Processing of Agricultural Production, and Center for Natural Products and Medicine Research. The centers have resulted in the development of cutting-edge core technologies in the agricultural industry and nurturing research experts.

This is a specialized project, differentiating itself from general R&D projects. The project features a model that sharpens the competitive edge of the academia and industry. For the long period of a decade, universities focus on developing cutting-edge technologies and producing R&D manpower while the agricultural industry cooperates in technology development and recruits experts from relevant universities.

Agricultural research manpower in Korea accounts for 2.5% of total R&D manpower in the country as of 2013. As such, the industry experiences difficulties in supplying experts who are essential to develop technologies. Therefore, MAFRA selected fields that urgently require R&D experts in the agricultural industry. In 2010, it started by supporting three research centers: Vegetable Breeding Research Center; Center for Food Safety and Toxicology; Center for Intelligent Agro-Food Packaging. In 2014, it added two more centers: Center for Automation, Processing of Agricultural Production and Center for Natural Products and Medicine Research. So MAFRA is now supporting a total of five research centers.

Although a short period of time, for the last four years, the three research centers that have received support since 2010 are producing remarkable research outcomes in developing advanced core technology and nurturing talents: Vegetable Breeding Research Center (Head:

Kang Byeong-Cheol, Seoul National University (SNU)), Center for Food Safety and Toxicology (Head: Choi Sang-ho, SNU), Center for Intelligent Agro-Food Packaging (Head: Lee Seung-joo, Dongguk University). In terms of developing core technologies, the project published 11 times more SCI-related theses and registered 13 times more patents than the average of the nation's R&D performance. Experts with advanced degrees have shown 4.4 times higher achievements than that of the national average as well as in nurturing talent.

Based on these achievements, MAFRA will continue to promote the project, nurturing agricultural R&D experts by 2018 for closer ties and greater convergence of the industry and academia. The Ministry plans to add a Dairy Foods Safety Center to the ARC this year, and aims to increase the total to 15 centers by designating 9 more centers by 2018. In designating new centers, a) policy importance, b) demands for experts from the agro-food industry, and c) level of technology in the relevant area will be taken into account. The funding amounting KRW 1 billion per year will be provided until 10 years per research center in a balanced manner in terms of regions and universities.

It is believed that advanced technologies and research experts are the key to foster agriculture as a future growth engine. This project is expected to be new exemplary models of industry-academia cooperation and will contribute the development of core technologies and qualified experts that are essential for securing new drive engines for the industry.

Date submitted: April 15, 2015
Reviewed, edited and uploaded: April 15, 2015