

Points of the New Basic Plan for Agriculture, Forestry and Fisheries Research

- Key R&D targets for the next 10 years and policies for realizing them -

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Agriculture, Forestry and Fisheries Research Council, MAFF

Basic concept

<p>【Background】</p> <ul style="list-style-type: none"> ➢ Increasingly unstable international food supply/demand due to global population increase and climate change. ➢ To continue stably supplying quality food while improving our food self-sufficiency ratio, we need to make agriculture, forestry and fisheries, which have experienced a weakening of their production base (e.g., aging of and a decrease in workers), more attractive to young people so these industries can give them hope. 	<p>【Aims】</p> <ul style="list-style-type: none"> ➢ Give priority to “R&D for promptly solving problems faced by the producers,” thereby facilitating joint R&D with extension services, farmers, and other stakeholders. ➢ Establish a new system of industry-academia-government collaboration that links seeds for cutting-edge technologies, such as ICT and robot technologies, to the value chain of domestic agricultural, forestry and fishery products. ➢ Steadily promote R&D on the challenges that should be addressed with medium- to long-term perspectives such as global warming and the falling birth rate/aging population, by setting a basic direction for the future.
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1. Basic policies for promoting research on agriculture, forestry and fisheries

1. Reform of R&D management (strategic development of R&D directly linked to needs)

- Development of R&D strategies that involve stakeholders in industry, academia and government
 - Progress management using a road map
 - Strengthening collection of information on seeds of technologies from other fields
- Concentration/prioritization of budgets
 - “Selection of and concentration” on truly necessary research themes
- Effective operation of evaluation system
 - Reviewing the operation of evaluation system for budget concentration and prioritization

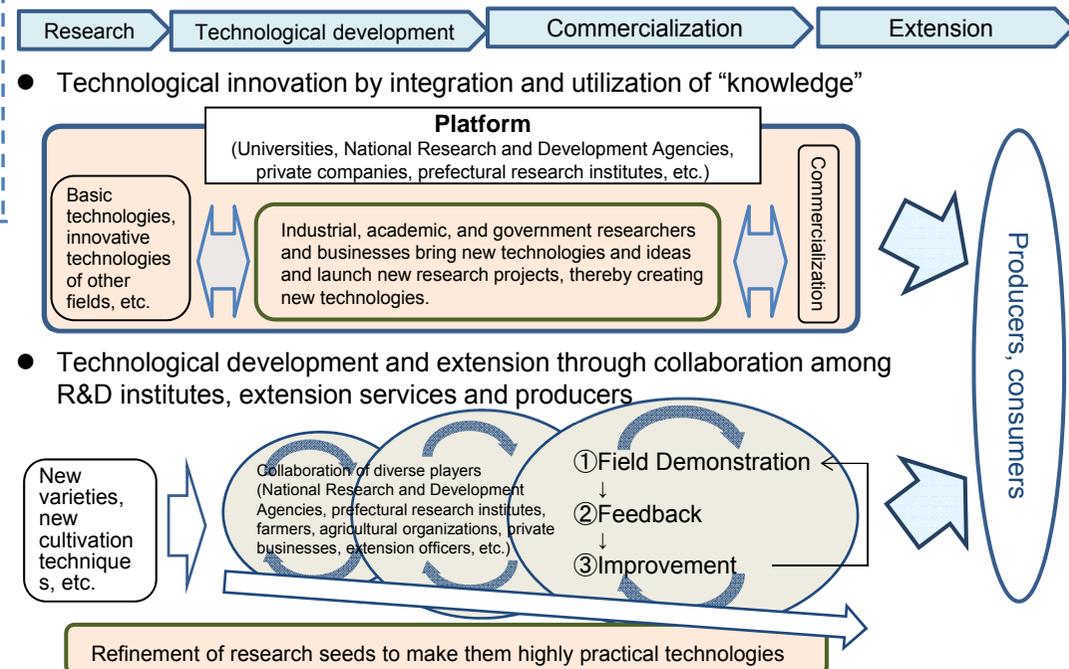


- Do**
- Collaboration with other government ministries, adoption of technologies from other fields
 - Research promotion system involving relevant government ministries
 - Strengthening the function as a “bridge” (see figure on right)
 - Technological innovation through integration and utilization of “knowledge”
 - Strengthening collaboration among R&D, extension, and producers
 - Promotion of strategic intellectual property management
 - Intellectual property management with concealment and exclusive licensing as options
 - Improvement of regulatory science, etc.
 - Acceleration of research in response to regulation
 - Promotion of public understanding
 - Improvement of bidirectional communication with public

3. Environmental arrangement for creating diverse “knowledge”

- Reform of National Research and Development Agencies
 - Development of system for maximizing the effect of the scheduled reorganization of agencies in April 2016
- Improvement of R&D base
 - Effective operation of research funding system
 - Collection, analysis of R&D information
 - Human resource development
- Promotion of international collaboration
 - Active participation in international research networks

2. Acceleration of technology transfer



- Technological innovation by integration and utilization of “knowledge”
- Technological development and extension through collaboration among R&D institutes, extension services and producers

2. Key targets of agriculture, forestry and fisheries research

1. R&D for promptly solving problems faced by producers with the aim of increasing income in agriculture, forestry, fisheries and rural communities

- Set 21 key targets for realizing models of efficient and stable farming in the areas identified in “Prospect of farming” and for promptly solving production and distribution problems in different fields/items.
- Develop and achieve the practical use of new technologies in the next five years or so, then promptly introducing them to production.

Paddy farming

- Establishment of a highly profitable paddy farming system for different local conditions

Paddy fields in mountainous areas

- Establishment of a sustainable paddy farming system in hilly and mountainous areas using local strengths

Upland farming in Hokkaido

- Establishment of upland farming system for Hokkaido region that allows scale expansion and highly productive farming

Upland farming in Southern Kyushu and Okinawa

- Establishment of a highly profitable upland farming system in Southern Kyushu and Okinawa

Tea

- Increase in tea demands through joint product development with tea companies, and establishment of efficient farming system

Vegetables

- Establishment of a low-cost production and distribution system for vegetables to meet demands for processing uses and food businesses

Greenhouse horticulture

- Development of models of next generation greenhouse horticulture, realizing energy and labor-saving technologies and high yield

Fruit trees

- Development of labor-saving and fast orchard establishment techniques for high-quality fruits that support orchard scale expansion

Flowers

- Development of techniques to breed various flower varieties and to preserve quality during transportation

Dairy cows

- Establishment of dairy farming system, allowing labor-saving and precision livestock farming

Beef cattle

- Establishment of efficient breeding and fattening system for beef cattle based on self-supplying forage

Swine and poultry

- Establishment of swine and poultry farming models to make the maximum use of domestic feed ingredients

Sustainable agriculture

- Development of techniques that strike a balance between production efficiency and environmental conservation, and visualization of their benefits

Forests and forestry

- Advancement of technologies for forestry utilization and development of new demands for forestry products

Fisheries

- Technological development for realizing attractive fisheries and aquaculture

AFFrinnovation*

- Technological development for AFFrinnovation contributing to local employment and income growth

Promotion of export

- Development of export-related technologies for supporting the realization of country-by-country and item-by-item export strategy for agriculture, forestry and fishery products

Food safety, pests and disease control in animals and plants

- Development of techniques to improve food safety and to control pests and diseases in animals and plants

Agricultural and rural infrastructures

- Development of efficient farm water management technologies, effective technologies for maintenance and management of agricultural and rural infrastructure, and information system for natural disasters prevention and reduction for rural areas

Prevention of damage due to wildlife

- Establishment of effective and efficient damage control techniques according to wildlife characteristics

The Great East Japan Earthquake

- Solutions to technical problems hampering the resumption of farming and forestry work of the affected farming or forestry households and fishery operation of the affected fishery households

* AFFrinnovation: Agrinnovation, Forestrinnovation, and Fisherinnovation. Adding value to agricultural, forestry, and fishery products in innovative ways, by making new combinations, and creating a value chain.

2. R&D to be steadily promoted under medium- to long-term strategy

- Set 11 priority targets under the six basic directions for agriculture, forestry and fisheries research for problems that require medium- to long-term perspectives; e.g., global warming and changes in consumption trends associated with the falling birth rate/aging population.
- R&D strategy for key R&D themes to be developed with a consultation of relevant parties and outside experts.

Stably supplying safe and reliable food, thereby contributing to the health and longevity of people.

- Thorough safety management from production to table, and development of techniques to protect animals and plants from the introduction and spread of pests and diseases
- Technological development for supplying nutritional and functional agriculture, forestry and fishery products that support healthy and long-living society

Innovating a production and distribution system in agriculture, forestry and fisheries, thereby drastically cutting costs.

- Technological development for innovating agriculture, forestry and fishery production/distribution

Creating new industries and employment in rural areas.

- Technological development for creating new industries using local resources

Improving yield/quality of agriculture, forestry and fishery products, building on existing strengths.

- Development of world-class agriculture, forestry and fishery products

Promoting sustainability and stability of agriculture, forestry and fisheries.

- Development of agriculture, forestry and fishery adaptive techniques in response to climate change
- Improvement of prevention techniques for plant pests and infectious diseases of livestock
- Establishment of a recycling-oriented sustainable agriculture, forestry and fishery system
- Development of technologies for sustainably maintaining, utilizing and managing rural infrastructure and forests by maximizing the multifunctional roles of rural areas
- Development of marine ecosystem-friendly fishery technologies that support sustainable use of marine resources

Addressing global food and environmental challenges, thereby contributing to the international society.

- International research in response to global challenges such as climate change and stable food production in developing countries