

## Part 3

# Reform of the production/supply systems

Basic Plan p. 45-47

- The government will promote the development of production/supply systems that are compatible with substantial changes in the demand structure and the like and expansion of exports.
- The government will also steadily promote rice policy reform and the expansion of production of rice for feed and other strategic crops.
- The government will work on enhancing the competitiveness of the livestock industry by such means as establishing and developing "livestock clusters" and enhancing the supply capability of items including horticulture products, organic farm products and medicinal plants according to user needs or other demand.

## Steady promotion of rice policy reform and expansion of production of rice for feed and other strategic crops

Figure 23-1

### Initiatives toward expanding the production of major strategic crops

#### Rice for feed [1.1 million t]



- Promotion of initiatives toward resolving various issues, such as connecting rice production areas with livestock producers
- Promotion of development/introduction of high-yielding varieties and demonstration of new cultivation technology
- Promotion of reorganization/restructuring of facilities, streamlining of distribution, development of a framework for supplying products through compound feed factories and a framework for using products at livestock farms, for reducing production/distribution costs

#### Rice for flour [100,000 t]



- Promotion of initiatives including reduction of processing costs through improvement, development and diffusion of processing technology in response to diverse uses, development of new rice flour products

#### Wheat and barley, soybeans

[wheat: 950,000 t;  
barley/naked barley: 220,000 t;  
soybeans: 320,000 t]



- Development and introduction of new varieties with growth characteristics suitable for local conditions or with high processability and high yielding property
- Promotion of development and introduction of cultivation technology, such as a crop rotation system, that contributes to drainage measures or to maintenance of soil fertility

The government will promote demand-based production that does not rely on the target volume of rice production allotted by administration.

For strategic crops, the government will improve productivity and promote expansion of their production through support by direct payment for the utilization of paddy fields and the initiatives listed on the left.

Toward secure achievement of the production effort target for each item, the government will ensure the expansion of production while constantly conducting inspections.

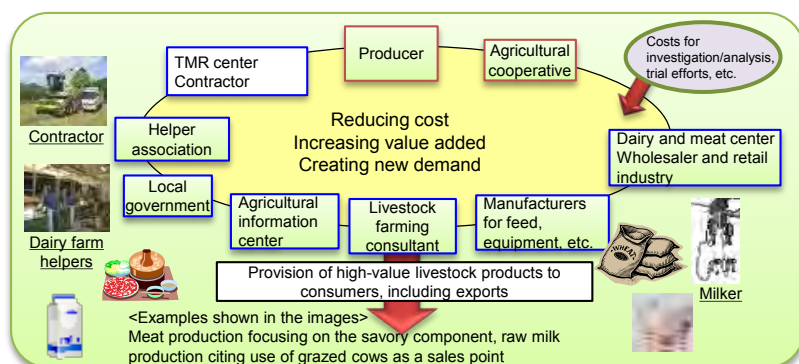
Source: Compiled by MAFF. Note: Figures in square brackets denote production effort targets.

## Enhancement of the competitiveness of the livestock industry by establishing and developing "livestock clusters"

Figure 23-2

### Construction of a highly profitable livestock production system

- The government will support the trial efforts of new initiatives (livestock clusters) for improving profitability on a regional basis through the cooperation/gathering of relevant business operators, and nationwide development of such initiatives, etc.
- It will promote the establishment and development of "livestock clusters" and improvement of profitability on a regional basis.



- In light of the recent decrease in the number of farm households and livestock animals raised, the government will promote initiatives including the following:
- enhancement of competitiveness and the production base through promotion of "livestock clusters";
  - reduction of work load through the use of milking robots, external support organizations, and so on;
  - securing of high-quality cattle through the use of sexed embryos and semen; and
  - promotion of use of domestic feed through use of rice for feed, eco-feed, and promoting grazing.

Source: Compiled by MAFF.

## Enhancement of the supply capability of items including horticulture products, organic farm products and medicinal plants

Figure 23-3

### Introduction of new varieties and technology required for vegetables for processing/industrial use

Introduction of new technology/  
integrated mechanization system



Cabbage harvester <mechanization>

Introduction of new varieties  
for processing/industrial use



An oblong variety with high processing yield

In order to respond to needs for vegetables for processing/industrial use which are facing growing demand, the government will promote initiatives including the following:

- development and introduction of varieties dedicated to processing/industrial use;
- establishment of integrated mechanization systems; and
- improvement of distribution efficiency.

For organic farm products, the government will promote the expansion of production by establishing/disseminating cultivation technology systems and promoting matching between users and producers.

With regard to medicinal plants, it will promote the efforts of contract culture, and promote such activities as the establishment of cultivation technology.

## Part 3

### Promotion of technological innovation on production/distribution

Basic Plan p. 47–49

- The government will promote the establishment of a new R&D system for promptly solving problems faced by the producers and distributors.
- In order to realize expansion of the scale of activities, labor saving, and cost reduction for business farmers, the government will promote initiatives including smart agriculture using robots and ICT and next-generation greenhouse horticulture.
- The government will also push forward more effective farming safety measures for preventing farming accidents.

### Strategic R&D and acceleration of technology transfer

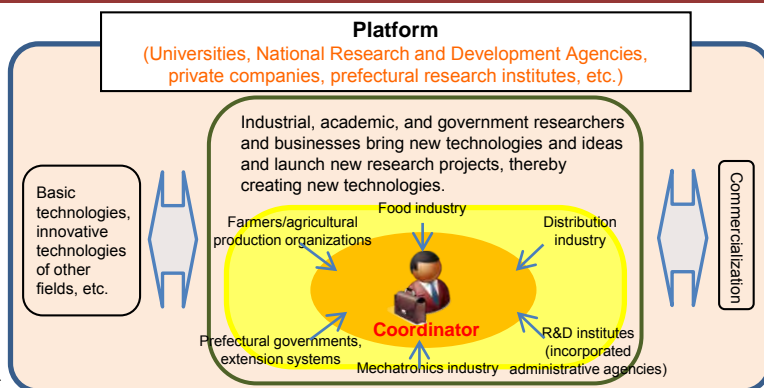
In order to promote R&D for promptly solving problems faced by the producers and distributors, the government will strategically promote R&D that directly links to the needs of farmers and other related people through efforts including the following:

- participation of such entities as farmers, food industry business operators, and extension systems in the R&D phase; and
- application of most advanced technology such as robot technology, ICT and genomic technology to agriculture.

The government will also connect universities and research institutes that have innovative technology or other valuable assets with private companies and financial institutions, and promote the creation of platforms for accelerating joint research and commercialization.

Source: Compiled by MAFF.

Figure 24-1 Platform



### Innovation of production/distribution systems through such means as use of advanced technology

In order to realize expansion of the scale of activities, labor saving, and cost reduction for business farmers amid the progression of aging and labor shortage, the government will promote initiatives including the following:

- initiatives for realizing smart agriculture and next-generation greenhouse horticulture centers;
- development and introduction of labor-saving cultivation technology suitable for large-scale farm management; and
- development of an environment that facilitates the outsourcing of farm work.

At the same time, the government will promote the introduction of technology for advancing demand-based production and addition of high value to products and establishment of technology for mitigating risks such as abnormal weather.

Figure 24-2 Introduction of robot technology that uses advanced technology



Lessening of the burden of heavy labor that is difficult to mechanize, such as transporting agricultural products on a slope, by using a power assist suit

Source: Compiled by MAFF.



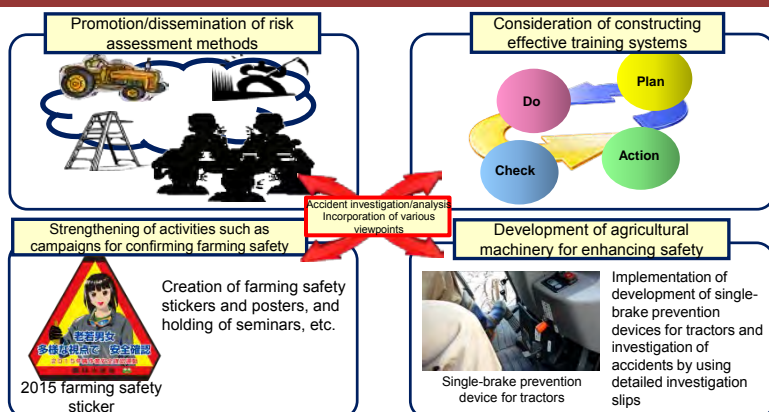
Expansion of the scale of work that can be done during the limited cropping season by operating multiple tractors under a human-robot collaboration system

### Promotion of effective farming safety measures

For preventing farming accidents, the government will push forward the following initiatives:

- introduction of risk assessment methods;
- review of training frameworks and the like; and
- development/dissemination of high-safety agricultural machinery.

Figure 24-3 Promotion of effective farming safety measures



Source: Compiled by MAFF.

## Part 3

# Promotion of environmental policy

Basic Plan p. 49–50

- Since agriculture, forestry and fisheries are considerably affected by climate change, the government will formulate an adaptation plan for the agriculture, forestry and fisheries sector, coupled with the formulation of an adaptation plan for the whole government.
- The government will also promote the conservation and sustainable use of biodiversity through agricultural production activities.
- The government will maintain and enhance the natural cyclical function of agriculture and establish sustainable agriculture.

## Promotion of mitigation/adaptation measures for climate change

Figure 25-1 Effects of global warming on agriculture and development of adaptation technology



[Poor coloring of grapes due to high temperature]



[Addressing poor coloring by using the girdling technique]



[Normal]

Source: Compiled by MAFF.

The government will promote efforts including the following to reduce the emission of greenhouse gases:

- energy-saving measures for greenhouse horticulture and agricultural machinery;
- optimization of fertilization; and
- promotion of use of livestock excrement.

The government will formulate a climate change adaptation plan for the agriculture, forestry and fisheries sector and promote such activities as impact assessment and development of adaptation technology.

## Conservation and sustainable use of biodiversity

Figure 25-2 Case examples of “Ikimono Marks”

	Mark title: <i>Kōnotori no Mai</i> (flying stork) Region: Toyooka City	Outline: The mark has been certified for agricultural products such as rice which have been cultivated by an environmentally friendly method in order to restore a rich natural environment where storks can live.
	Mark title: <i>Fuyumizu Tambo Mai</i> (rice grown on winter-flooded paddy fields) Rice Region: Osaka City	Outline: Rice cultivated in paddy fields that are flooded in winter to provide resting sites for waterfowl such as white-fronted geese that fly over in a large number to areas around Kabukuri wetlands is sold as <i>Fuyumizu Tambo Mai</i> .
	Mark title: <i>Toki to Kurasu Sato Zukuri</i> (development of countryside where toki and people can live together) Region: Sado City	Outline: The mark has been certified for rice cultivated in paddy fields where special cultivation and agricultural methods for fostering living creatures are implemented to secure feeding sites for <i>toki</i> (Japanese crested ibis) that were released in 2008.

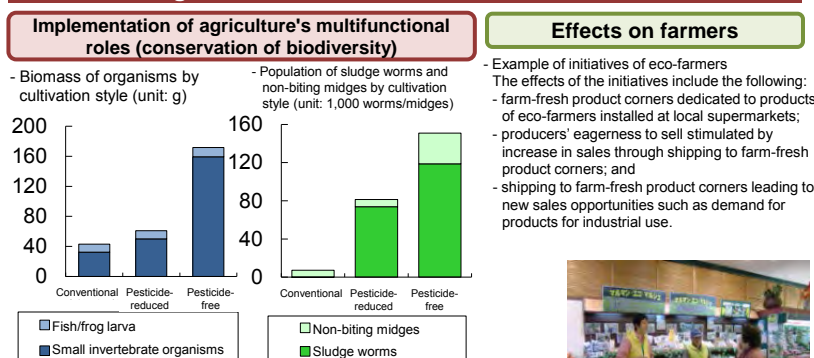
Source: Compiled by MAFF.

The government will send out information on the verification results of the effects of “Ikimono Marks” (such as labeling on a biodiversity-friendly agricultural product) and case examples of progressive efforts being made, and promote exchanges between urban areas and rural areas, such as green tourism, initiatives toward increasing systems that are selected as Globally Important Agricultural Heritage Systems (GIAHS), and biodiversity conservation initiatives in collaboration with corporate activities.

The government will also promote the conservation and use of genetic resources based on international frameworks.

## Maintenance and enhancement of the natural cyclical function of agriculture and its communication

Figure 25-3 Effects of initiatives of environmentally friendly agriculture



Source: Paddy field organism monitoring report of the project to support the creation of paddy fields that coexist with storks.



The government will establish sustainable agriculture by maintaining and enhancing the natural cyclical function of agriculture through promoting agricultural production in harmony with the environment in various regions by way of making cyclic use of resources, such as livestock excrement and rice straw, and appropriate use of pesticides and fertilizers.

The government will verify the effects of agriculture on the environment and promote communication between people concerned.

## Part 3

### Steady promotion of the multifunctional payment system and performance of local community functions

Basic Plan p. 51–53

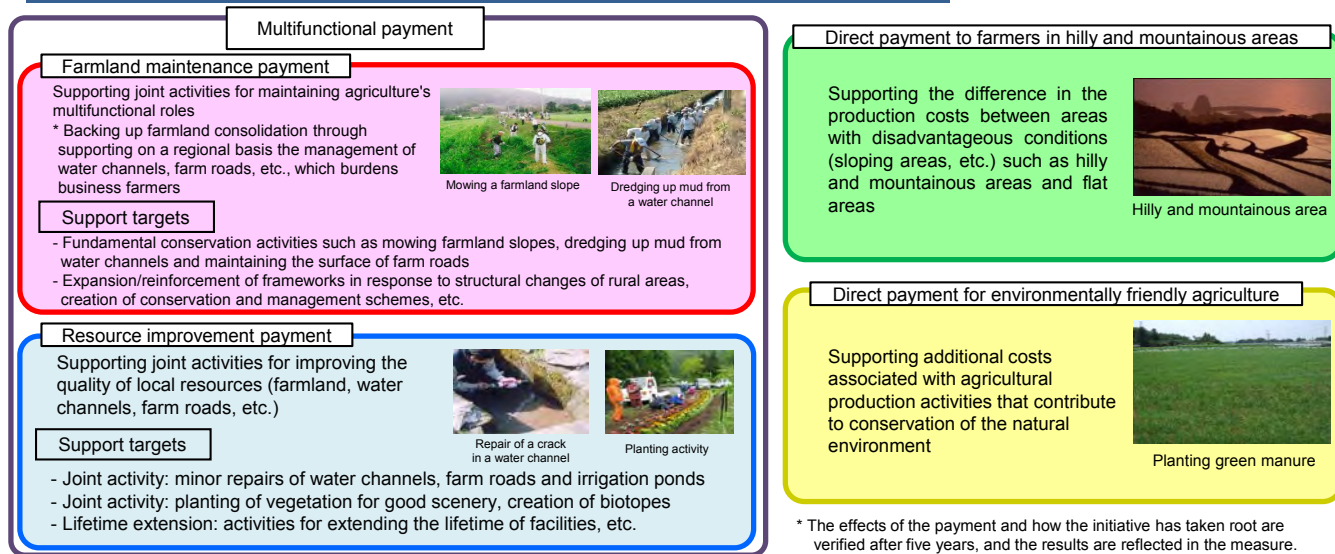
- The government will promote the maintenance and management of local resources through joint activities by the whole area, including family management entities, corporation management entities, and local residents.
- The government will also support the continuance of farming in hilly and mountainous areas, etc. with disadvantageous production conditions.
- The government will promote the networking of neighboring communities through the development of “small hubs” and traffic networks.

### Initiatives for promoting the implementation of agriculture's multifunctional roles

In order to ensure the maintenance/implementation of agriculture's multifunctional roles into the future and back up structural reform including consolidation of farmland to business farmers, the government will support fundamental conservation activities (farmland maintenance payment) and qualitative improvement activities (quality improvement payment) of resources such as farmland, irrigation systems and farm roads by local communities. (Multifunctional payment system) By continuing to implement the direct payment system to farmers in hilly and mountainous areas for offsetting disadvantageous agricultural production conditions in hilly and mountainous areas, the government will maintain agricultural production activities in areas under disadvantageous conditions, and thereby secure agriculture's multifunctional roles. (Direct payment system to farmers in hilly and mountainous areas)

Figure 26-1

#### Outline of the Japanese agricultural direct payment system



Source: Compiled by MAFF.

### Maintenance of community functions through “integration and networking”

The government will promote the creation of a future vision for the region under the initiative of local residents.

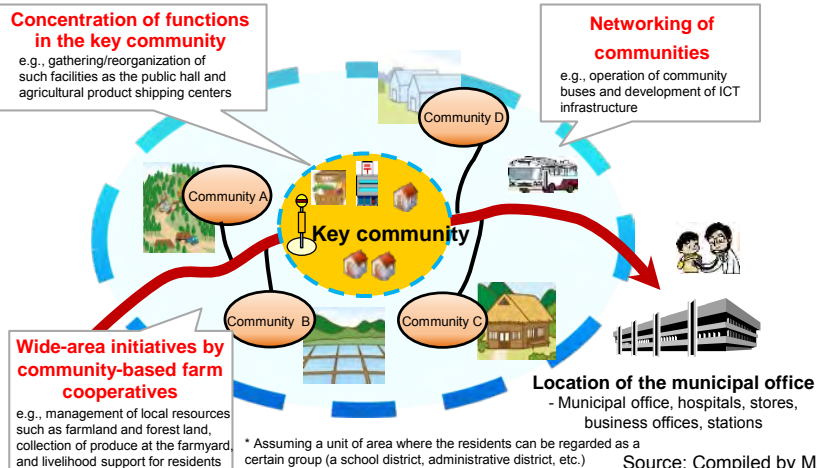
It will enhance the support framework for such efforts, and promote the conservation of farmland, reorganization/development of facilities related to agriculture and daily life and the development of an environment for realizing well-planned land use.

Further, the government will consider the desirable form of role-sharing between diverse people concerned, among other aspects, in the maintenance and management of farmland and agricultural facilities.

The government will further accelerate initiatives for supporting local livelihood, and promote the launching of organizations and development of business that can flexibly respond to region-specific needs.

Figure 26-2

#### Networking of communities



## Part 3

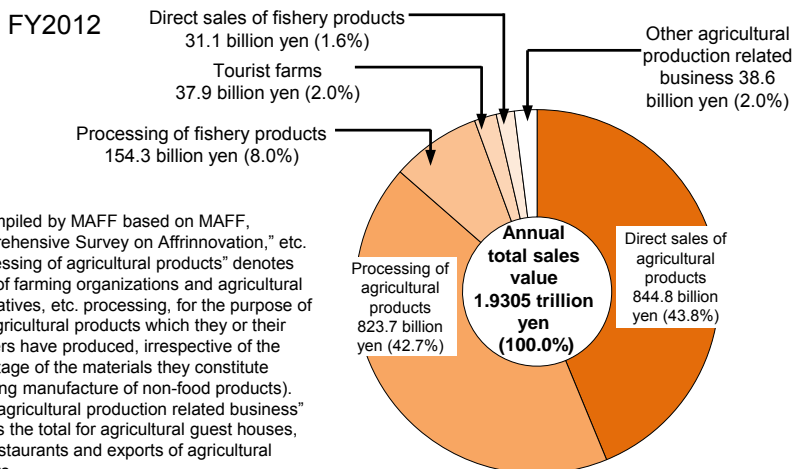
### Creation of employment and income through active utilization of various local resources

Basic Plan p. 53–54

- The government will accelerate the securing of employment and increase of income in the entire rural area through the creation of new value by fully using the abundant local resources of the rural area and introduction of agriculture-related industries.
- While enhancing economic circulation within the region whereby economic value that had flowed out of the rural area in the past is circulated within the area, the government will aim to strengthen economic networks between regions and develop the regions into wide-area economic zones in the future.

#### Creation of new value by using local agricultural products and other assets

Figure 27-1 Breakdown of the annual total sales value of agricultural production related business, etc.

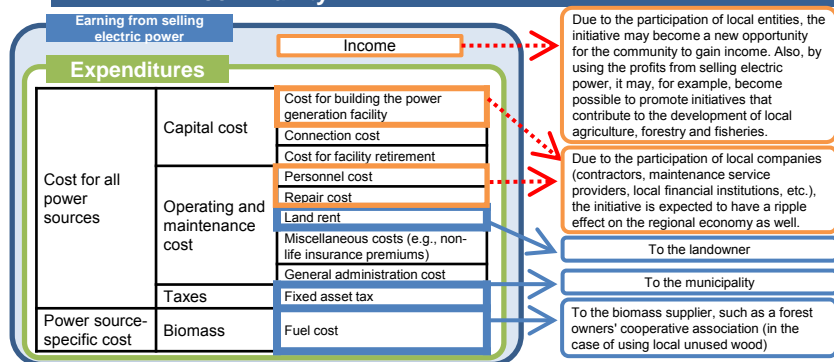


Source: Compiled by MAFF based on MAFF, "Comprehensive Survey on Affrinnovation," etc.  
 Note: "Processing of agricultural products" denotes an act of farming organizations and agricultural cooperatives, etc. processing, for the purpose of sale, agricultural products which they or their members have produced, irrespective of the percentage of the materials they constitute (including manufacture of non-food products). "Other agricultural production related business" denotes the total for agricultural guest houses, farm restaurants and exports of agricultural products.

The government will promote Affrinnovation whereby local farmers create new value based on agriculture by fully using local resources, such as not merely shipping their agricultural products as they are, but adding high value to such products as well as their by-products through processing or direct sales in response to consumer and user needs, and developing business integrated with diverse initiatives such as tourist farms, farm restaurants and agricultural guest houses, according to the regional characteristics.  
 In promoting such initiatives, the government will invigorate rural communities by accelerating not only initiatives led by farmers, but also community-based initiatives implemented in collaboration with various people concerned, and spreading the synergy effect to the entire community.

#### Production/use of renewable energy led by communities in rural areas

Figure 27-2 Return of profits made by renewable energy to the community



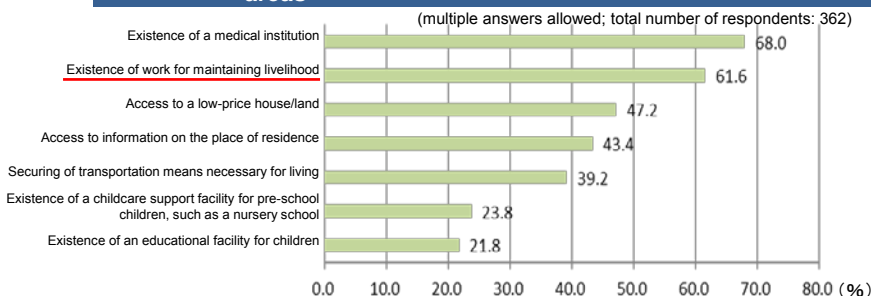
Rural areas have abundant resources such as biomass, water and land. By using these resources as renewable energy sources in biomass power generation and small hydropower generation, etc., and expanding the initiatives of local entities such as farmers, the government will promote the improvement of farm management and return of profits to the community and vitalize rural areas.

\* Typical expenditures are shown as examples.

Source: Compiled by MAFF.

#### Creation of employment and income through the introduction of agriculture-related industries to rural areas and other means

Figure 27-3 Elements required for realizing hopes to settle in rural areas



Source: Cabinet Office, "FY2014 Poll on Rural Areas."

The government will develop an environment for accelerating the creation of employment and income in rural areas through the introduction of agriculture-related industries, such as the food manufacturing industry, to rural areas and other means.  
 The government will also consider the desirable form of comprehensive measures for expanding employment opportunities by such means as attracting agriculture-related industries to rural areas under cooperation among relevant ministries.

## Part 3

### Promotion of exchanges between urban and rural areas and migration/settlement to rural areas

Basic Plan p. 54–56

- In light of such trends as the growing public interest in agriculture and rural areas, the government will deepen collaboration among various sectors, such as tourism, education and welfare, with agriculture at the core, and strategically promote exchanges between urban and rural areas.
- The government will promote initiatives for drawing the increased number of visitors to rural areas to migrate/settle to these areas.
- The government will also push forward initiatives for achieving sustainable promotion of urban agriculture.

### Exchanges between urban and rural areas in collaboration with tourism, education, welfare, and other sectors

The government will work to explore new tourist demand by combining green tourism with wide-area tourist excursion routes, and the like.

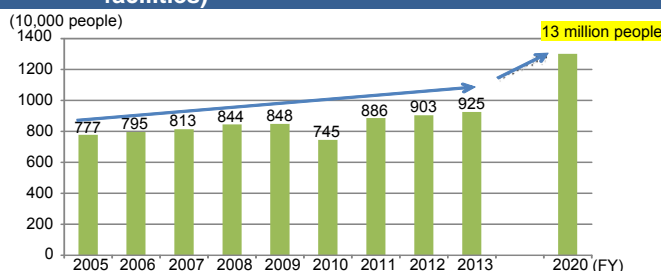
The government will construct a framework for accepting tourists from abroad and carry out promotional activities.

It will advance the development of facilities for accommodation and hands-on experience, a framework for accepting tourists, and human resources who will support the experience activities, among other activities.

The government will promote initiatives for expanding welfare farms, which are for health improvement and the development of life motivation for elderly people and self-reliance support for people with disabilities and people struggling financially, and having such farms become firmly established.

Figure 28-1

### Number of visitors from urban areas to rural areas (the total annual number of lodgers at green tourism facilities)



Source: Surveys by Rural Development Bureau, MAFF.

Note: The figure for FY2010 excludes the figures for the three prefectures affected by the Great East Japan Earthquake (Iwate, Miyagi and Fukushima).

### Migration/settlement of various human resources from urban areas to rural areas

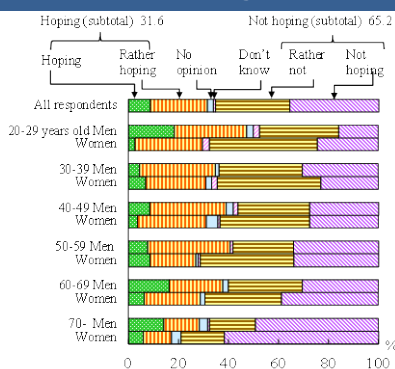
The government will promote initiatives for enhancing information provision and consultation support that will be required for migration/settlement to such places as rural areas.

It will work on creating a framework that allows people to live in rural areas on a trial basis, promoting the style of having a residence in an urban area as well as one in a rural area, and developing a framework for providing detailed consultation service before and after migration. At the same time, it will promote initiatives including the development of training facilities for people who want to engage in farming by using such a building as an empty house or a closed school and formulation of a comprehensive support plan packaging "farming" and "residing" in a rural area.

The government will drive forward collaborative activities among local governments, agricultural organizations, educational institutions, companies, and other entities.

Figure 28-2

### Are urban residents hoping to settle in rural areas?



Source: Cabinet Office, "Poll on Rural Areas" (released in August 2014)

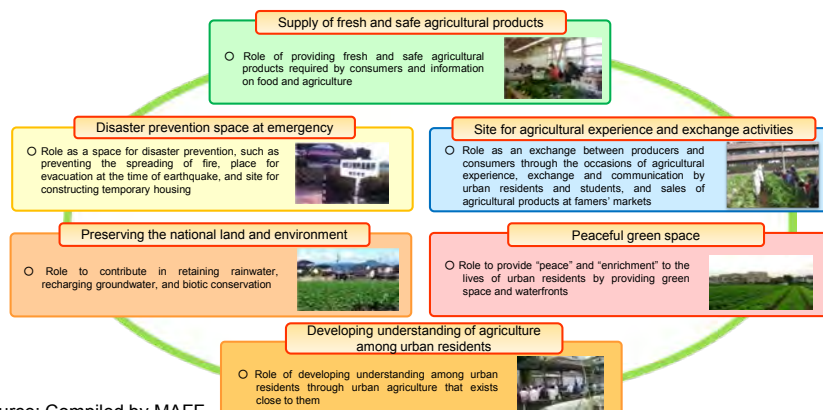
### Promotion of urban agriculture playing multifunctional roles

The government will work to promote urban residents' understanding of the functions of urban agriculture, and, through appropriate sharing of roles with local governments, it will further initiatives for maintaining and developing farm management, promoting local consumption of agricultural products, encouraging farming experiences and interchange activities at such places as allotment gardens and experience farms, and enhancement of the disaster prevention function of urban farmland.

The government will consider reviewing systems relating to the promotion of urban agriculture and conservation of urban farmland, while making effort to increase the people's understanding to a sufficient level.

Figure 28-3

### Multifunctional roles of urban agriculture



Source: Compiled by MAFF.

## Part 3

### Restoration/reconstruction from the Great East Japan Earthquake

Basic Plan p. 56–57

- The government will continue to promote steady restoration of farmland and agricultural facilities, etc. toward early resumption of farm management by affected farmers.
- The government will respond to the Fukushima Daiichi Nuclear Power Plant accident and promote initiatives to ensure food safety and remove harmful rumors.

#### Restoration/reconstruction from the earthquake/tsunami disaster

Toward early resumption of farm management by farmers affected by the Great East Japan Earthquake, the government will continue to promote the steady restoration of farmland, agricultural facilities, and the like in such areas as where damage was enormous. The government will promote the improvement of productivity through such measures as the expansion of farmland partitions, and, by conducting large-scale empirical research using advanced technology, push forward analysis of the effects of technology introduction and dissemination of the technology to affected areas.

Figure 29-1 Areas of tsunami-affected farmland that are available for resuming farming

Item	Damage details	Progress in restoration (%)						Remarks
		0	20	40	60	80	100	
<b>Farmland</b> (as of the end of Jan. 2015)	Tsunami-affected farmland in six prefectures (Aomori, Iwate, Miyagi, Fukushima, Ibaraki and Chiba) →21,480 ha	<b>70%</b> (About 15,060 ha available for resuming farming)						Under the Basic Guideline for Reconstruction of Agriculture and Rural Communities after the Great East Japan Earthquake, farmland restoration and salt removal are under way in tsunami-affected farmland toward resuming farming there. The government will aim to make an additional farmland area of about 820 ha (4%) available for resuming farming within FY2015.
<b>Farms</b> (as of Feb. 1, 2014)	Tsunami-damaged farms (six prefectures in Tohoku and Kanto regions) →10,100 farms	<b>55%</b> (About 5,610 farms resumed farming*)						The approximately 5,610 farms that have resumed farming include those that have resumed part or all of the target agricultural production processes or preparations for them. (As of Feb. 1, 2014; six prefectures in the Tohoku and Kanto regions)

\* The farms' resumption status was estimated based on the results of MAFF officials' interviews with people concerned about the extent (proportion) of damage and restoration and on the number of farms as indicated in the 2010 Census of Agriculture and Forestry, for each affected rural community or municipality.

#### Restoration/reconstruction from the nuclear accident

Figure 29-2 Key points of "Principles for strengthening countermeasures against harmful rumors"  
(compiled by the Reconstruction Agency on June 23, 2014)

##### Principle 1. Remove the source of harmful rumors

- (1) Implementation of radioactive substances inspection for the products of affected areas
- (2) Understanding and announcement of the radiation dosage within the environment

##### Principle 2. Provide accurate and plain information to prevent rumors

Providing information on radioactivity and reinforcement of communication with the public

##### Principle 3. Support industries that suffered from harmful rumors

- (1) Expansion of the sales channel of products of affected areas, development of new products, etc.
- (2) Promotion of inviting visitors to affected areas from other parts of Japan and from abroad

Figure 29-3 Monitoring results in FY2014 (as of March 30, 2015)

Category	Number of samples	Number of samples above the maximum levels	Percentage of samples above the maximum levels
Rice	109.8 million	0	0%
Wheat and barley	383	0	0%
Pulse	2,579	2	0.1%
Vegetables	16,712	0	0%
Fruits	3,302	0	0%
Tea	206	0	0%
Raw milk	1,846	0	0%
Meat and eggs (excluding wild meat)	188,304	0	0%
Mushrooms and wild edible plants	8,557	103	1.2%
Fishery products	20,910	100	0.5%

Toward the resumption of farming in the evacuation areas and other affected areas, the government will continue to provide support for the conservation, maintenance of decontaminated farmland, and farming demonstrations according to the progress of farmland decontamination and the return of farmers.

The government will maintain its efforts to provide consumers, on the basis of scientific evidence, with accurate and plain information on monitoring results and farm-level measures for reduction of radioactive substances in agricultural products.

The entire government will also continue to provide scientific data to countries and areas that impose import restrictions, and negotiate to resume import.

Source (Figure 29-2): Prepared by MAFF based on materials from the Reconstruction Agency.

Source (Figure 29-3): Compiled based on data released by MHLW and local governments. Data are those of the 17 prefectures targeted by "Concepts of Inspection Planning and the Establishment and Cancellation of Items and Areas to which Restriction of Distribution and/or Consumption of Foods concerned Applies" (Nuclear Emergency Response Headquarters). However, data for fishery products are those for the whole of Japan.

## Part 3

# Reorganization/ restructuring of relevant bodies

Basic Plan p. 57–58

- The government will carry out reform to allow local agricultural cooperatives to focus on the improvement of farmers' income by actively engaging in such activities as profit-boosting sales of agricultural products in concert with farmers through original and creative efforts.
- The government will also carry out reform concerning agricultural committees so that farmland uses in the region will be optimized from the viewpoint of farmers, particularly business farmers.

## Hierarchical organization of agricultural cooperatives, hierarchical organization of agricultural committees

Figure 30-1 Outline of the Bill for Partial Amendment of the Agricultural Cooperatives Act

### Purpose

In order to make agriculture a growth sector, it is necessary to develop an environment where economic entities that utilize the policies for Affrinnovation, overseas exports and farmland consolidation, etc. can conduct vigorous activities. Therefore, agricultural cooperatives, agricultural committees and agricultural production corporations will be integrally revised.

### Outline of the amendment

#### Amendment of the Agricultural Cooperatives Act

- ◎ Local agricultural cooperatives will be allowed to freely conduct economic operations and focus on the improvement of farmers' income.  
[Clarification of the management objective]
  - ✦ Stipulating that the cooperatives should realize high profitability through appropriate business activities and endeavor to distribute the surplus in accordance with the amount of use of businesses to farmers, among other matters, while giving the maximum consideration for increasing agricultural income
- [Thorough effort to become a cooperative chosen by farmers]
  - ✦ Providing that cooperatives must not force farmers to use their business
- [Responsible business management framework]
  - ✦ Providing that a majority of directors should be composed of certified farmers and people who have practical skills to sell, etc. agricultural products, in principle.
- [Provision of services to local residents]
  - ✦ Providing that a local agricultural cooperative may choose to partially reorganize a part of its organization into a stock company or co-op, etc.
- ◎ Federations and the central union will appropriately support the free economic activities of local agricultural cooperatives.  
[National federation of agricultural cooperative associations]
  - ✦ Providing that the national federation of agricultural cooperative associations may choose to reorganize into a stock company
- [Prefectural central unions]
  - ✦ Shifting prefectural central unions to agricultural cooperative federations that will carry out management consultation, audits, representation of opinions and comprehensive adjustments
- [National central union]
  - ✦ Shifting the national central union to a general incorporated association that will carry out representation of opinions of cooperatives and comprehensive adjustments; abolishing the obligation on agricultural cooperatives to receive audits by the national central union, and instead requiring them to receive audits by certified public accountants

#### Amendment of the Act on Agricultural Committees, etc.

Amendment will be made to promote the optimization of farmland use (consolidation to business farmers, prevention of cultivated land abandonment and promotion of new entry to the agricultural sector).

- ✦ Changing the selection method of committee members from the public election to appointment by the head of the municipality
- ✦ Newly establishing a Farmland Utilization Optimization Promotion Commissioner
- ✦ Appointing the agricultural committee network organizations at the prefectural and national levels to support agricultural committees

#### Amendment of the Agricultural Land Act

- ✦ Reviewing the requirements for agricultural production corporations (requirements for board members and voting rights) in order to promote management development through Affrinnovation

### Effects

- Local agricultural cooperatives will be able to actively engage in profit-boosting sales, etc. of agricultural products in concert with farmers through original and creative efforts.
- Agricultural committees will be able to better achieve the optimization of farmland use.
- The amendment will contribute to the management development of agricultural production corporations, which are business farmers.

Source: Compiled by MAFF.

## Agricultural mutual relief organizations, land improvement district

Due to the aging of farmers, it has become difficult for farmers themselves to operate the agricultural disaster compensation system. The system also has problematic differences in the service levels between the agricultural mutual relief associations.



The government will consider the desirable form of agricultural mutual relief organizations in the process of considering the desirable form of the agricultural disaster compensation system as well as the introduction of income insurance.

It is expected that the organizational operation of land improvement districts will become affected by changes in the agricultural structure and rural areas.



The government will continue to further the strengthening of the organizational operation base of the districts. At the same time, it will also consider the desirable form of land improvement districts in the process of verifying and considering the desirable form of the land improvement system, after identifying and analyzing the current status of land improvement districts, in the future.

## Agriculture structure outlook

Drafted along with the Basic Plan

- The outlook describes business farmers and clarifies the desired form of agricultural structure as a future vision for comprehensively promoting development/securing of business farmers, consolidation of farmland to business farmers, and other activities under the Food, Agriculture and Rural Areas Basic Act.
- The government also presents prospects for the agriculture labor force since it is important to achieve an agricultural employment structure with a good generation balance in order to realize sustainable, robust agriculture.  
(For a description of business farmers, see Figure 18-1 on p. 18.)

### Desired Agricultural Structure and prospects of agriculture labor force

The ratio of farmland used by business farmers has risen from 30% to 50% in the past decade.

The government pursues an agriculture structure in which the ratio will rise to 80% in the next decade.

Figure 31-1

Ratio of farmland used by business farmers

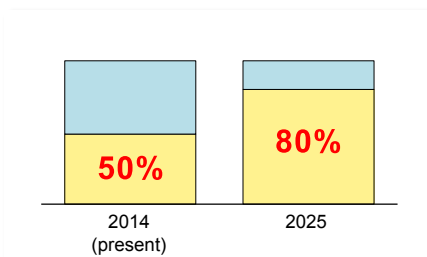
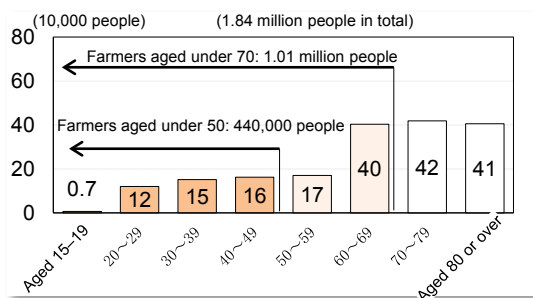


Figure 31-2

Estimation of the number of farmers 2025 (outlook)



(Note for the left figure) Surveys by Management Improvement Bureau, MAFF.

(Notes for the right figure) 1. Compiled based on MAFF "Census of Agriculture and Forestry" (aggregate calculation after reclassification) and MIC "Population Census" (data were aggregated by MAFF based on survey slips).

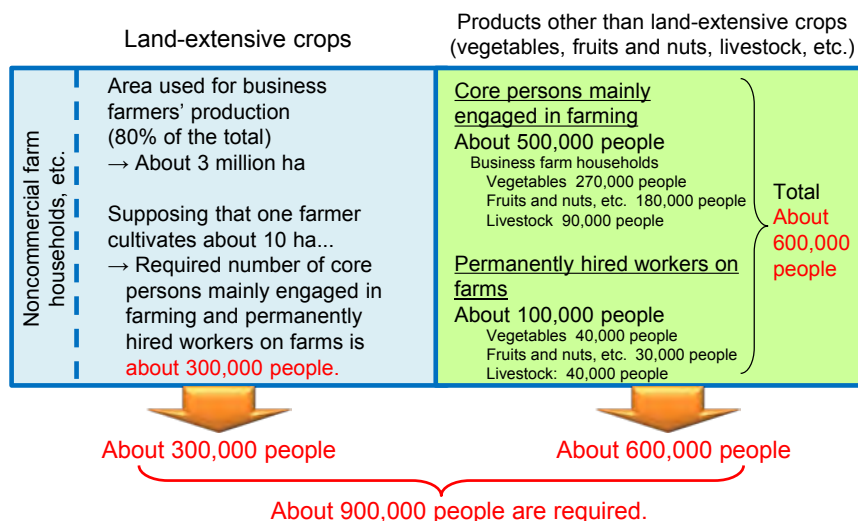
2. Premises for the estimation are as below:

Outlook: Supposing that the increase or decrease of each age group (and the number of people who will join the youngest age group [aged 15-19]) during the five year period from 2005 to 2010 will continue to apply in the future, but only that the number of increase of farmers aged under 50 will double

### (Reference) Required number of farmers

Figure 31-3

Required number of farmers



At present, the number of core persons mainly engaged in farming and permanently hired workers on farm producing products other than land-extensive crops (such as vegetables, fruits and nuts, and livestock) is about 600,000 people. About the same number of people will be required in order to maintain the same level of production in the future.

For land-extensive crops, on the other hand, supposing that farmland consolidation has shown progress and one farmer can cultivate about 10 ha, the number of such farmers required is estimated to be about 300,000 people.

Combining them together, at least about 900,000 farmers will be required.

## Farm management outlook

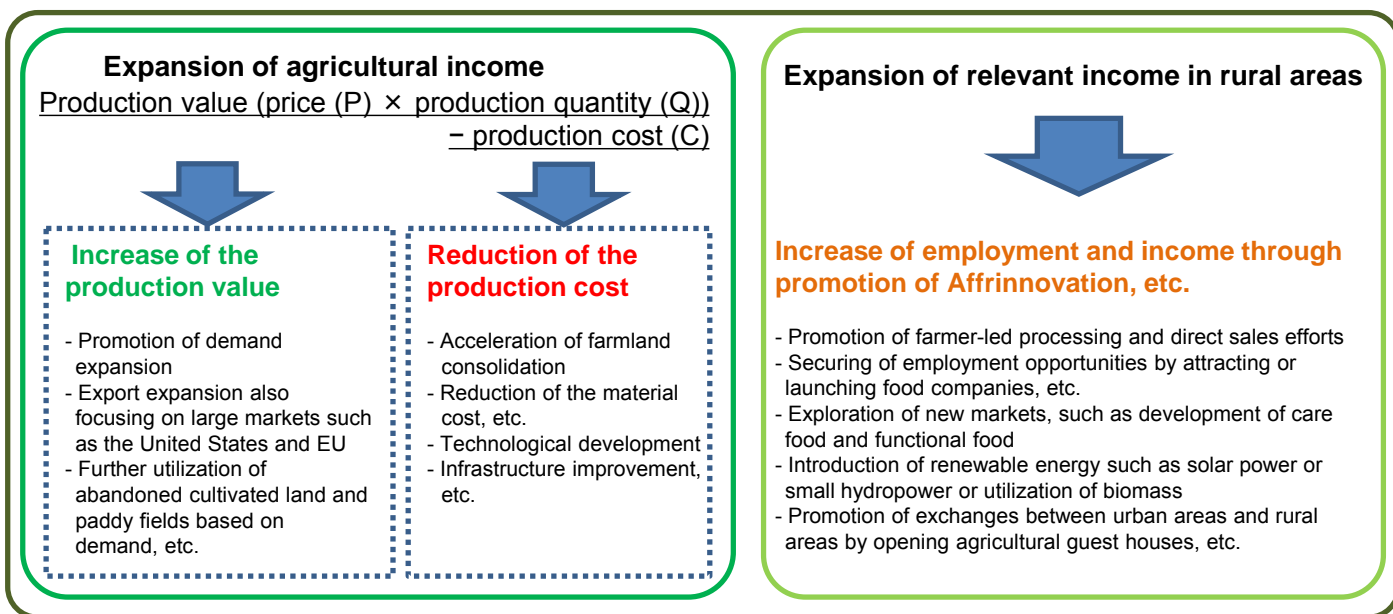
Drafted along with the Basic Plan

- Toward expanding agricultural income and relevant income in rural areas, the outlook indicates macro paths for such incomes.
- The government also indicates micro paths to enable people at agricultural production sites to more specifically envisage what kinds of efforts they should make according to regional conditions and crops.

### Paths for expanding agricultural income and relevant income in rural areas (macro paths)

Toward expanding agricultural income and relevant income in rural areas, the outlook presents the following as macro paths: with regard to agricultural income, the direction of efforts for increasing the production value and reducing the production cost for each item; with regard to relevant income in rural areas, the direction of efforts for increasing employment and income for seven fields that are expected to grow in the future, such as processing/direct sales, export, and exchanges between urban areas and rural areas.

Figure 32-1 Expansion of agricultural income and relevant income in rural areas




Source: Compiled by MAFF.

## Exemplification of farm management models (micro paths)

The farm management outlook exemplifies descriptions of “effective and stable farm management” and their paths of management development and income increase for major farming management types and regions. The examples are presented in a manner that will serve as useful reference according to the actual conditions of each region when creating or reviewing basic indicators, etc. of farm management which are created by prefectural or municipal governments.

Figure 33-1 Farm management model types and an example of a model

Below is an example of paddy farming management. Examples of other farm management types can be viewed at the following URL (Japanese version only). ([http://www.maff.go.jp/j/keikaku/k\\_aratana/pdf/8\\_keiei.pdf](http://www.maff.go.jp/j/keikaku/k_aratana/pdf/8_keiei.pdf))

Farm management type	Farming system (number of models)	Farm management type	Paddy farming	Target region	Hokkaido/Northern Tohoku
Paddy farming	Land-extensive crops (3) Land-extensive crops/vegetables (4)	<b>Model's key point</b>	Family farm management in a cold region aiming to expand the scale by saving labor for paddy farming and achieving a stable, high level of yield for wheat and barley, soybean and rice for feed		
Upland farming	Hokkaido upland crop rotation system (1) Sweet potato/composite vegetable cultivation (1) Sugar cane cultivation (1) Tea cultivation (2)	<b>Outline of techniques/actions</b>	<p>&gt;For paddy rice, they succeeded in expanding their management scale by making thorough labor-saving efforts including shortening of the time required for raising seedlings by introducing the cultivation method of direct seeding on a well-drained field (working hours shortened by about 50%), and reduction of spring work by tilling and preparing soil in the autumn of the previous year.</p> <p>&gt;For wheat, barley and soybean, they corrected the amount of fertilizers applied by introducing a crop rotation system combined with rice for feed and silage corn. By improving drainage through the introduction of an underground water level control system and improving soil through injecting organic matter, etc., they also succeeded in achieving stable and improved yield and quality (yield: a 40% increase for wheat and barley, and a 50% increase for soybeans. In addition, they increased their revenue by introducing outstanding varieties through collaboration with a processor in the production area. They further realized a soybean-wheat relay intercropping system to avoid conflict of the cropping seasons.</p> <p>&gt;For silage corn, they expanded their management scale through reduction of their workload at peak time by outsourcing the harvesting work. They achieved stable supply of silage corn and rice for feed in cooperation with the local TMR center, etc.</p> <p>&gt;They succeeded in reducing the management cost by consolidating farmland, making more efficient use of machinery through expansion of farmland partitions, and making general-purpose use of machinery for multiple items.</p>		
Vegetable farming	Outdoor vegetable farming (4) Indoor vegetable farming (2)	<b>Description of management development</b>	<p>[Type of management] Family management (two people; one person temporarily hired)</p> <p>[Management scale/cropping pattern] Cultivated land under management 30 ha Table rice (for household consumption) 5 ha (transplantation) Table rice (for industrial use) 5 ha (direct seeding) Rice for feed 5 ha (direct seeding) Soybeans 5 ha Wheat 5 ha Silage corn 5 ha</p> <p>[Estimated result] Gross income 32.2 million yen Operating cost 21.3 million yen Of which, employment/labor cost 200,000 yen Agricultural income 10.9 million yen Income of primary workers (per person) 6.8 million yen Working hours of primary workers (per person) 1,390 hr</p>		
Fruit farming	Citrus fruits (1) Apple (1) Pear (1) Composite fruit production/grape (1)	(Reference) Description of an average business farm household	<p>[Type of management] Family management (two people)</p> <p>[Management scale/cropping pattern] Cultivated land under management 13.1 ha Table rice 8.4 ha (transplantation) Wheat and barley 1.3 ha Soybean 1.2 ha Others 2.2 ha</p>		
Flower farming	Cut flowers (2) Potted plants (1)	<b>Production technique topic</b>	 <p>- By introducing the cultivation method of direct seeding on a well-drained field, the cost and working hours required for raising seedlings were reduced, and the drainage improved through drying of the paddy field.</p> <p>- Productivity of each item improved by the crop rotation system appropriate with the cultivation conditions of the region.</p>		
Dairy farming	Breeding (2)				
Beef cattle farming	Integrated breeding and fattening				
Hog farming					
Organic farming					

Source: Compiled by MAFF.

## Exemplification of regional strategies (micro paths)

The farm management outlook exemplifies regional strategies for enabling people to envisage increasing of the total of agricultural income and relevant income in the region as a result of creation of employment and income through development of regional agriculture as well as such business development as Affrinnovation in collaboration with related industries.

It is expected to serve as a useful reference for each region in considering future actions for increasing income. For example, it is assumed to be used as a reference when local governments and production areas formulate a plan or strategy for agricultural promotion.

Figure 33-2 Exemplification of regional strategies and an example of a strategy

Below is an example of a livestock cluster. Examples of other cases can be viewed at the following URL (Japanese version only). ([http://www.maff.go.jp/j/keikaku/k\\_aratana/pdf/8\\_keiei.pdf](http://www.maff.go.jp/j/keikaku/k_aratana/pdf/8_keiei.pdf))

Demonstrating/creating regional agriculture strengths	Regional strategy	(1) Improving profitability through livestock cluster
(1) Improving profitability through forming livestock clusters	Basic strategy	Improving profitability in the whole of the local area through collaboration of local livestock farms with external support organizations and food-related industries
(2) Developing greenhouse horticulture areas with a focus on next-generation greenhouses	Outline of actions	<p><b>1. Management development of dairy farms and beef cattle farms through use of a new breeding technique</b></p> <ul style="list-style-type: none"> <li>Improving profitability by efficiently securing high-quality successor cattle through use of sexed semen, and increasing income from by-products through production of wagyu calves by using an embryo transplanting technique</li> <li>Increasing profitability as a result of beef cattle fattening farms carrying out integrated management from rearing to fattening by using wagyu calves produced by local dairy farms</li> </ul> <p><b>2. TMR center's support for management development of dairy farms</b></p> <ul style="list-style-type: none"> <li>As a result of dairy farms using a newly established TMR center:               <ul style="list-style-type: none"> <li>(1) saving labor of feed production and preparation, and expanding the management scale; and</li> <li>(2) increasing the milk yield per cow and increasing the shipping quantity of raw milk and income through focus on feeding and management work and supply of high-quality TMR.</li> </ul> </li> <li>Also creating employment for operation of the center</li> </ul> <p><b>3. Increase of the value added to livestock products in collaboration with other industries</b></p> <ul style="list-style-type: none"> <li>Opening gelato plants and shops at roadside stations, and selling gelato by processing raw milk produced by local dairy farms and increasing the added value</li> <li>Also selling beef and processed products of fattened cattle produced by local beef cattle farms at restaurants, etc. in roadside stations</li> <li>These efforts contributing to increasing income, creating employment, increasing tourists, etc.</li> </ul>
(3) Utilizing outstanding new varieties and technologies for cooperation with users	Description of regional actions	<p>Example of an assumed region: Municipality in a livestock production area where dairy farms and beef cattle farms exist (related farms: 25 livestock farms)</p> <p><b>Before the actions</b></p> <p>[Management scale] Dairy farms: 25 farms, 773 cows Beef cattle fattening farms: 5 farms, 548 cattle Employment: 8 people</p> <p>[Agricultural income] 193 million yen (1) [Agricultural income] 10 million yen (2)</p> <p><b>After the actions</b></p> <p><b>Dairy farms</b> [Agricultural income] 200 million yen (3) [Employment] 20 people [Agricultural income] 20 million yen (4) [Employment] 2 people</p> <p><b>Beef cattle fattening farms</b> [Agricultural income] 10 million yen (5) [Employment] 2 people</p> <p><b>TMR center</b> [Agricultural income] 7.9 million yen (6) [Employment] 3 people</p> <p><b>Food-related industries</b> [Agricultural income] 26 million yen (7) [Employment] 2 people</p>
(4) Utilizing advantages of production areas for attracting food companies	Estimated result of the region's relevant income	Agricultural income + relevant income: 190 million yen ((1) + (2)) → 370 million yen (a 180 million yen increase) ((3) + (4) + (5) + (6)) Employment: Increase of 7 people
(5) Launching businesses by Affrinnovation (adding value to agriculture, forestry and fisheries products in an innovative way)		
(6) Utilizing local agriculture, forestry and fisheries products for cooperation with food companies		
(7) Providing vegetables for processing and other food industries		
(8) Developing production areas for exports		
(9) Exporting high-quality agricultural products under an intellectual property right strategy		
(10) Developing medicinal plant production areas		
(11) Developing organic farming areas		
(12) Developing processing at community-based farm cooperatives		
(13) Utilizing special local products for unique processed goods with higher value added		
(14) Developing farm products utilizing regional characteristics		
(15) Establishing distribution systems including farm stands for local consumption of local produce		
(16) Utilizing farm stands for farming experiences and rural restaurants		
(17) Utilizing tourist farms and other facilities for exchanges between urban and rural residents		
(18) Implementing farming experience farms and other projects meeting urban resident needs		
(19) Utilizing exchanges for promoting regional agriculture		
(20) Taking advantage of renewable energy for promoting agriculture		

Source: Compiled by MAFF.

