# I. Overview of the 2020 Census of Agriculture and Forestry

# 1. History of Census of Agriculture and Forestry

The Census of Agriculture and Forestry in Japan was first conducted in 1950 in accordance with the World Programme for Census of Agriculture 1950, advocated by the Food and Agriculture Organization (FAO). The Forestry Census has been conducted since 1960. Thereafter, Japan has conducted the World Census of Agriculture and Forestry every ten years in line with the International Convention relating to economic statistics. Japan has also conducted the interim Agricultural Census between each World Censuses from the viewpoint of our original national perspective. Since 2005, the Forestry Census has been conducted every five years in conjunction with the Agricultural Census as the Census of Agriculture and Forestry to grasp the management of agriculture and forestry in an integrated manner.

The 2020 Census of Agriculture and Forestry is the fifteenth round for agriculture and the ninth round for forestry (refer to Appendix for details).

## 2. Basic Role of Census of Agriculture and Forestry

# (1) To grasp the basic structure and its changes of the agriculture, forestry and rural communities

The Census aims to clarify the actual situation on the basic structure and its changes of the agriculture, forestry and rural communities, such as structures of production, employment in agriculture and the current state of rural areas in Japan in order to provide statistics to be the basis for planning, formulation, and promotion of agricultural and forestry policies.

## (2) Compile small area statistics and promote local agriculture/forestry policy

Provide statistics of small areas by former municipality and rural community in addition to by national agricultural region, prefecture and municipality, in order to contribute to the promotion of agriculture and forestry policies nationwide and in prefectures and municipalities.

# (3) Acquire population information for efficient implementation of sampling surveys

The Census enables preparation and provision of population information with the information needed for efficiently conducting various statistical surveys that are necessary to promote agriculture/forestry policy.

#### (4) Prepare internationally comparable statistics

The Census enables the preparation and provision of statistics needed for

international comparisons of agriculture and forestry.

## 3. Main Changes in the 2020 Census of Agriculture and Forestry

[Survey on Agriculture and Forestry Management Entities]

## (1) Change of attribute classification of survey subjects

The concept of an agriculture management entity was introduced in the 2005 Census of Agriculture and Forestry. It was classified into a family-owned farm management entity and organized management entity up to the 2015 Survey. In the 2020 Survey, based on the idea of grasping incorporate management integrally, incorporated family-owned farm management entities, incorporated organized management entities and unincorporated organized management entities were integrated as group management entities, while unincorporated family-owned farm management entities were designated to individual management entities.

## (2) Review of survey items

- a. Newly created survey items
  - (a) Filing of blue tax return, distinction of regular bookkeeping or simplified bookkeeping
  - (b) Status of organic farming
  - (c) Status of data utilization in agricultural management
- b. Deleted survey items
  - (a) Comparison of the number of days engaged in own farming and other works (it was used in the previous classification of population mainly engaged in farming)
  - (b) Presence/absence of household members engaged in works other than own farming in the past year (it was used in the previous classification based on the distinction of full-time or part-time households)
  - (c) Abandoned cultivated land area of paddy fields, upland fields and land under permanent crops
  - (d) Number of owned agricultural machinery units
  - (e) Entrustment status of agricultural labor
  - (f) Presence/absence of capital fund and investment provided from other than agricultural sectors
  - (g) Status of operation of entrusted business of livestock by pasture cultivation, etc.

[Survey on Rural Areas]

Based on Article 28 of the "Act on Forest Environment Tax and Forest Environment Transfer Tax" (Act No. 3 of 2019), it was decided to use the area of private planted forests as the criteria of forest environment transfer tax to municipalities. In this regard, in the Questionnaire for Survey on Municipalities, the area of planted forests was newly added as a breakdown of the forest area subject to the forest plan.

On the other hand, the survey item on the forest land area by former municipality was abolished.

## 4. Legal Basis

This survey was conducted based on the Statistics Act (Act No. 53 of 2007), the Cabinet Order for Enforcement of the Statistics Act (Cabinet Order No. 334 of 2008), the Ordinance on the Census of Agriculture and Forestry (Ordinance of the Ministry of Agriculture, Forestry and Fisheries No. 39 of 1969) and the Ministry of Agriculture, Forestry and Fisheries Notice No. 1071 of May 20, 2004 (subjects stipulating the Agriculture and Forestry Management Entities determined by the Minister of Agriculture, Forestry and Fisheries pursuant to Article 5, paragraph 1 of the Ordinance on the Census of Agriculture and Forestry).

# 5. Survey System

## (1) Types of survey

Surveys are broadly classified into two types of surveys, namely the Survey on Agriculture and Forestry Management Entities which aims to grasp the agriculture and forestry management targeting individuals, organizations and corporations and the Survey on Rural Areas which aims to grasp the current state of rural areas targeting municipalities and rural communities nationwide. The survey system is as follows.

All the planning and design of surveys were carried out by the Statistics Department, Minister's Secretariat, Ministry of Agriculture, Forestry and Fisheries.

- a. Survey on Agriculture and Forestry Management Entities
   Ministry of Agriculture, Forestry and Fisheries Prefectures Municipalities —
   Enumerators Survey subjects (agriculture and forestry management entities)
- b. Survey on Rural Areas
  - (a) Survey on Municipalities

    Ministry of Agriculture, Forestry and Fisheries Survey subjects

    (municipalities)
  - (b) Survey on Rural Communities

Ministry of Agriculture, Forestry and Fisheries (private businesses or officers of Regional Agricultural Administration Offices, etc.) — Survey subjects (persons in the know of rural communities)

<Part not collected by private business operators>

Ministry of Agriculture, Forestry and Fisheries — Enumerators or officers of Regional Agricultural Administration Offices, etc. — Survey subjects (person in the know of rural communities)

## (2) Survey date

The surveys were conducted as of 1 February 2020.

# (3) Scope of regions subject to survey

- a. The scope of regions subject to survey was set to nationwide.
- b. In the Survey on Agriculture and Forestry Management Entities, the result does not include Okuma Town and Futaba Town in Fukushima Prefecture, which are entirely included in the Zones under Evacuation Orders after the accident at the Tokyo Electric Power Company's Fukushima Daiichi Nuclear Power Station (as of February 1, 2019; hereinafter referred to as the "Zones under Evacuation Orders"), because the survey could not be conducted there.
- c. In the Survey on Rural Areas, the result does not included the Zones under Evacuation Orders (75 communities).

#### (4) Survey method

a. Survey on Agriculture and Forestry Management Entities

The Survey was conducted by the self-enumeration method in which enumerators distributed and collected the questionnaires to and from survey subjects (the surveyed persons filled out the questionnaires by themselves). In the survey, if survey subjects request an interview survey, enumerators directly interviewed survey subjects.

Furthermore, the method of online questionnaire collecting was also applied if the cooperation of survey subjects could be obtained.

In cases where it was difficult for enumerators to visit survey subjects due to the outbreak of animal diseases, etc., the method of distributing and collecting the questionnaires via postal mail was also applied.

#### b. Survey on Rural Areas

The Survey on Municipalities was conducted by the self-enumeration survey

method in which the questionnaires were distributed and collected online (via e-mail) or via round-trip postal mail.

The Survey on Rural Communities was conducted by the self-enumeration survey method in which private businesses entrusted by the Ministry of Agriculture, Forestry and Fisheries distributed the questionnaires via postal mail and collected them either online or via postal mail. In addition, in cases where there were special circumstances that prevent the private businesses from distributing the questionnaires, officers of Regional Agricultural Administration Offices, etc., distributed and collected them.

However, for rural communities where responses could not be obtained by private businesses, the method of self-enumeration survey in which enumerators distributed and collected the questionnaires or the interview survey by enumerators was used. In cases where it was difficult for enumerators to visit survey subjects due to the outbreak or spread of infectious diseases, etc., the method in which enumerators or officers of Regional Agricultural Administration Offices, etc., conducted interviews via telephone was also applied.

In addition, for the "required time to reach the closest Densely Inhabited District (DID) and facilities related to daily life" and the general conditions of rural communities, administrative information and private sector's data were utilized.

# 6. Budget

The following table provides a breakdown of expenses in conducting the 2020 Census of Agriculture and Forestry for each fiscal year (April to March of the following year).

## Operational budget for the 2020 Census of Agriculture and Forestry

Unit: 1,000 yen

| Item  | Total     | FY 2017 | FY 2018 | FY 2019   | FY 2020 | FY 2021 |
|---|-----------|---------|---------|-----------|---------|---------|
| Trial survey  | 12,975    | 12,975  |         |           |         |         |
| Survey on agriculture and forestry management entities        | 6,321,863 |         |         | 5,512,557 | 725,321 | 83,985  |
| Survey on rural areas   | 322,501   |         |         | 271,200   | 49,802  | 1,499   |
| Preparations for data calculations                            | 91,281    |         | 48,710  | 42,571    |         |         |
| Census study meetings   | 6,171     | 6,171   |         |           |         |         |
| PR & advertising  | 26,778    |         |         | 26,778    |         |         |
| Honorariums   | 10,313    |         |         |           | 10,313  |         |
| Common expense  | 11,156    | 4,472   | 6,684   |           |         |         |
| Survey preparation  | 44,580    | 6,279   | 38,301  |           |         |         |
| Preparations for establishing range of agricultural community | 99,780    |         | 99,780  |           |         |         |
| Common expense (discretionary expense)                        | 21,039    | 4,491   | 4,536   |           | 5,359   | 6,653   |
| Survey on rural areas (discretionary expense)                 | 52,769    |         |         |           | 52,769  |         |
| Total   | 7,021,206 | 34,388  | 198,011 | 5,853,106 | 843,564 | 92,137  |

Note: Of these, all expenses incurred by the prefectures and municipalities were covered by MAFF in the form of commission fees. The breakdown of that is as follows.

Total of consignment fee for prefectures: 5,138,152,000 yen

Of the above, honorariums for supervisors: 254,538,000 yen

Honorariums for enumerators: 4,189,488,000 yen

Expenses related to publishing reports: 10,318,000 yen

# 7. Publications of Survey Results

The approximate value was disseminated on 27 November 2020 and the definitive value was disseminated on 27 April 2021. Details were released through the sequential publications listed below.

- Volume 1 Statistics by Prefecture (total of 47 volumes)
- Volume 2 Report on the Survey on Agriculture and Forestry Management Entities

   Overview
- Volume 3 Report on the Survey on Agriculture and Forestry Management Entities
  - Classification of Agriculture and Forestry Management Entities
- Volume 4 Report on the Survey on Agriculture and Forestry Management Entities
  - Agricultural Management Category
- Volume 5 Report on the Survey on Agriculture and Forestry Management Entities
  - Sample Results
- Volume 6 Report on the Survey on Agriculture and Forestry Management Entities
  - Structural Dynamics
- Volume 7 Report on Survey on Rural Areas
- Volume 8 Report on Statistics by Type of Rural Communities

### 8. Definitions

## [Survey on Agriculture and Forestry Management Entities]

(1) Agriculture and Forestry Management Entities

Agriculture and forestry management entity

Those who produce agriculture or forestry products or those who are engaged in agriculture or forestry operations under consignment agreements with the land area/number of heads/birds of livestock for their production/operations that conform to one of the following stipulations.

- (1) Farming in which the cultivated land under management is at least 30 a.
- (2) Farms where the planted or cultivated area for agricultural products, the number of feeding livestock or shipped poultry, as well as the size of other operations meet at least the following overall standards for agriculture and forestry management entities:
  - 1. Planted area for open-field vegetables: 15 a
  - 2. Cultivated area for greenhouse grown vegetables: 350 m<sup>2</sup>
  - 3. Cultivated area for fruit trees: 10 a
  - 4. Cultivated area for open-field flowers: 10 a
  - 5. Cultivated area for greenhouse grown flowers: 250 m<sup>2</sup>
  - 6. Number of Milking cows: 1 head
  - 7. Number of Fattening cattle: 1 head
  - 8. Number of Pigs: 15 heads
  - 9. Number of Hens: 150 birds
  - 10. Number of Broiler chickens shipped each year: 1,000 birds
  - 11. Others: Total sales of farm products equivalent to 500,000 yen or more during the one-year period prior to the survey date.
- (3) Forestry with at least 3 ha operation area of forest land where forestation or deforestation (excluding acquisition for the sole purpose of deforesting standing trees and bamboo) can be carried out based on titles (hereinafter referred to as "owned forest") (the use of the term is limited to a management entity, which formulates a "forest management plan" or that has carried out forestation or deforestation while continually operating forestry during the five-year period prior to the survey date)
- (4) Farming operating under a consignment agreement
- (5) Consigned forestation or raw materials production or raw materials productions through the purchase of standing trees (however, for the raw materials production, the use of the term is limited to those who produced at least 200 m<sup>3</sup> of material during the one-year period prior to the survey date)

Agriculture management entity

The entity which corresponds to either of the above definitions "Agriculture and forestry management entity" of (1), (2), or (4).

Forestry

The entity which corresponds to either of the above definitions "Agriculture and management entity forestry management entity" of (3) or (5).

Individual management entity

The management entity which conducts operation by individual (household). An incorporated entity is not included.

Group

The management entity other than individual management entity.

management entity

# (2) Type of Organization

Incorporation (Cooperated management entity) The cooperated entity of agriculture and forest management entity.

Agricultural producers' cooperative corporation

The corporation established in accordance with the Agricultural Cooperatives Act (Act No. 132 of 1947) for the purpose of "increasing common interests of partners through cooperating in their agricultural production".

Company

The entity which correspond to the following.

Incorporated company

The entity using an incorporated company organizational structure in accordance with the Companies Act (Act No. 86 of 2005). Includes special limited liability companies in accordance with Act on Arrangement of Relevant Acts Incidental to Enforcement of the Companies Act (Act No. 87 of 2005).

General/limited partnership company

The entity using a general or limited partnership organizational structure in accordance with the Companies Act.

Limited liability company

The entity using a limited liability company organizational structure in accordance with the Companies Act.

Mutual company

The organization that is intermediate corporations, which only insurance companies are allowed to become based on the Insurance Business Act (Act No. 105 of 1995), and operate mutual insurance business for their members as subscribers themselves become members.

Various organizations

The entities which correspond to the following.

Agricultural cooperative

The organization formed in accordance with the Agricultural Cooperatives Act. It corresponds to agricultural cooperative or agricultural cooperative association (Economic Federation of Agricultural Cooperative Association etc.).

Forestry cooperative

The organization formed in accordance with the Forestry Cooperatives Act (Act No. 36 of 1978). It corresponds to forestry cooperative, production forestry cooperative and federation of forestry cooperative.

Other

The agricultural mutual relief association and agriculture-related organization

organizations

formed in accordance with the Agricultural Insurance Act (Act No. 185 of 1947), associations other than forestry cooperatives and others. Forestry public corporations (third sector) are also included here.

Other corporations

The corporations other than agricultural producers' cooperative corporation, company and the various organizations. This term corresponds to public interest corporations, religious corporations, medical corporations, incorporated nonprofit organizations etc.

Local government/
property ward

The local government means prefecture and municipality.

The property ward is special local government that owns properties in part of the municipality or establishes public facilities to have functions to manage, dispose and abolish the properties etc., in accordance with the Local Autonomy Act (Act No. 67 of 1947).

## (3) Workforce etc.

Owner

The central figure in agricultural (forestry) management and operation, and directs overall management such as making decisions on production items, agricultural (forestry) labor to be entrusted with, concrete timing and system of labor, inputs of capital and workforce and financing.

Household member The person who basically shares the same residence and livelihood. Household member includes those who are not present as of the survey date because of migrant works, but does not include those who live away from the household for educational and occupational reasons.

This category also excludes hired live-in workers.

Official/member

The official who organizes management entities such as companies.

The member is a piece of community farming organizations and cooperation management entities.

However, person only attending official meetings is not included.

Employee

The total of "Permanently employed worker" and "Temporarily employed worker" (including mutual help among farm households (labor exchange) and voluntary help (labor accepted for free)) employed for agricultural (forestry) management.

In the case of agricultural management, the employee includes employed person for the purpose of agriculture and/or agricultural production related business.

Permanently employed worker The worker employed mainly for agricultural (forestry) management with a contract (including oral contract) period of at least 7 months per year (including those employed without specifying a contract period).

Foreign technical interns employed with a contract period of at least 7 months are also included.

In the case of agricultural management, employee includes employed person for

Temporarily employed worker

the purpose of agriculture and/or agricultural production related business.

The day worker and seasonal worker temporarily employed for agricultural (forestry) management other than permanently employed worker, including mutual help among farm households (labor exchange) and voluntary help (labor accepted for free).

However, workforce of agricultural (forestry) labor that is entrusted to others is not included.

In addition, it includes a worker who is employed mainly for business other than agricultural (forestry) management work but temporarily engaged in agricultural (forestry) management, as well as person who is employed as "permanently employed worker" with a contract period of at least 7 months but resigned before reaching that period.

In the case of agricultural management, employee includes employed person for the purpose of agriculture and business related to agricultural production.

# (4) Agriculture Management Entities

#### a. Land

Cultivated land under management

The cultivated land (paddy fields inclusive of dike, land under permanent crops and upland fields) that is managed by agriculture and forestry management entities as of the survey date, which consists of the sum of self-cultivated land with an ownership (owned land) and land rented from others (rented cultivated land). The actual land area is determined as the area by land category regardless of land category and area of the land ledger.

#### Treatment of cultivated land under management

- (1) The cultivated land that is rented from others regardless of whether it is notified or not, or with a verbal lease agreement is defined as cultivated land under management of the renter (rented cultivated land).
- (2) In the case where a form of rent is considered same as the rent in general even if the operation is considered as entrusted cultivation or consigned cultivation, the cultivated land under management (rented cultivated land) is defined as that of the cultivator who rents and cultivates the cultivated land.
- (3) In the case where a unit of farm operation, including plowing or rice reaping. is entrusted to the person who undertakes the entrusted work, the cultivated land under management is defined as that of the consigner.
- (4) In the case where a consignor entrusts the whole operation of crop cultivation to someone and pays a certain amount of a predetermined cultivation fee to a cultivator under the agreement that all harvest are given to a consignor, the cultivated land under management is defined as that of the consignor.
- (5) In the case where a land cultivated only once during the one-year period

- prior to the survey date and rent to someone for the period of that one cultivation, the land is defined as rented cultivated land (the cultivated land under management belonged to the renter) and not the cultivated land of the lender. Furthermore, the cultivated land that is "managed under subleased tenant farming" is also defined as cultivated land under management (rented cultivated land) of the "farmer operating subleased tenant farming".
- (6) In the case where households divided a communal cultivated land and implement cultivation or cultivate a land of riverbed or public land, the land is defined as cultivated land under management (rented cultivated land).
- (7) The cultivated land managed in cooperation is defined as cultivated land under management of a cooperative management entity, not as the cultivated land under management of an individual even if the land is owned by the individual.
- (8) In the case where a cultivated land existed in other municipalities/ prefectures and a farmer (agriculture and forestry management entity) goes there to cultivate (cultivation trip), the cultivated land is defined as the cultivated land of that agriculture and forestry management entity. Therefore, it should be noted that the census is a so-called individual statistic, and the area of the cultivated land under management is allocated to a prefecture/municipality where the agriculture and forestry management entity resides, not allocated to a prefecture/municipality where the cultivated land exists.

Paddy field

The cultivated land that has dikes for the purpose to fill water.

The term "to fill the field with water" includes not only an artificial irrigation but a natural irrigation. Therefore, rain-fed paddy field and spring water paddy field are also defined as a paddy field.

- (1) Dry field (which used to be an upland field, but is currently a field growing paddy rice with filling water by preparation of dikes or putting up a plastic sheet) is also defined as a paddy field.
- (2) However, even if the land used to be a paddy field and dikes are still remaining, the cultivated land where perennial woody plants, including fruit trees, mulberry trees and/or tea plants, is planted is defined as a land under permanent crops, not as a paddy field. Moreover, similarly, if the sugar cane is planted, the cultivated land is defined as an ordinary upland field. In addition, a field without dikes is defined as an upland field even if the field is irrigated to grow rice.

Upland field

The cultivated land other than paddy fields and land under permanent crop. In addition, the unstable land, including a burnt field and a shifting field (a field to grow crops by burning without removing the roots in the forest and grazing land and a field utilized by shifting between a field and a forest land), is defined as an upland field.

Land under permanent crops

The land where perennial woody plants, including fruit trees, tea plants, and mulberry trees, are planted systematically or continually (planted contiguous to each other in all directions with a fixed ridge width and planting distance) in an area of 1 a or larger with manure management.

Land where flowering trees are grown at least 5 years is also included in this category.

In addition, in case where an intercropping is carried out in the land under permanent crops, the land area is divided by percentage of an ordinary upland field and land under permanent crops depending on these usable areas.

## b. Agricultural Product Sales

Agricultural product sales amount

The sales amount (inclusive of the consumption tax) before subtracting the overhead expenses such as the expenses for fertilizers, pesticides and livestock feed.

## c. Type of Farm Management Organization

Single farming entity

The entity whose main agricultural product sales amount is 80% or more of income among all agriculture product sales.

Multiple farming entity

The entity other than single farming entity. Its main agricultural product sales amount is less than 80% of income among all agriculture product sales (excluding the management entities without any sales).

# d. Agricultural Production

#### (a) Crops for Sale

Crop for sale

The crop planted and cultivated for the purpose of sales. Not including a crop planted and cultivated solely to be consumed by the household.

However, it includes some part of crops planted/cultivated for the purpose of sales but consumed by the household as it happens.

Planted area

The area planted with non-perennial crops, which are harvested within roughly one year after seeding or planting and cannot be harvested over multiple years.

Growing area

The area planted with perennial crops, which can be harvested over multiple years once seeding or planting.

### (b) Livestock for Sale

Dairy cow

The current milking dairy cows including cattle in non-lactating period, cows bred to become dairy cows, stud bulls including candidate stud bulls and non-milking cows being temporarily fattened before slaughter.

This category does not include virgin heifers and bulls being fattened as beef cattle and cows to be sold soon after birth (about one week) as beef cattle. Such

cows are included in the "Beef cattle" category.

Beef cattle The cattle bred for the purpose of selling beef other than dairy cow.

The classifications of "Dairy cow" and "Beef cattle" are not based on species, but on the utilization. Beef cattle includes not only the male dairy breed, but also

female breeding cows and virgin heifers for the purpose of fatting.

Cross bred cattle between Japanese cattle and dairy cattle

The cattle produced by crossing female dairy cattle and male beef cattle, so-called

F1.

F1 cross cattle produced by crossing female F1 cattle and male beef cattle are also

included.

Pig The pig fattened by an entity for the purpose of selling meat and the female pig

aged six months or older raised for the purpose of breeding.

Hen The chicken raised for the purpose of selling eggs including chicks.

This category does not include breeding chickens, broiler chickens, pet breeds

such as Totenko, long-tailed fowl and bantams.

For the sake of convenience, culled chicken was also included if it was still being

raised as of the survey date.

Broiler The chicken bred initially for the purpose of meat. In principle, the chicken is

shipped within three months from hatching.

This category includes chickens raised both for meat and eggs.

## e. Farm Management Activities

Agricultural production related business

The business related to agricultural production such as "Farm product processing", "Retail", "Tourist farm", "Rental farm/hands-on farms", "Farm inn", "Farm restaurant", "Overseas export" and "Renewable energy generation".

Farm product processing

The business to process farm products produced by own farm for the purpose of sales regardless of the proportion of using own products.

Retail

The business to sell own agricultural products and processed agricultural products to consumers (including the cases of selling without having shops, e.g., on the Internet or through peddling), or direct delivery to consumers etc. with a sales agreement.

It does not include a direct sales store in which agriculture management entities do not participate in the management.

Tourist farm

The business in which persons engaged in farming obtain a usage fee by allowing tourists etc. to admire the farm or experience some farming operations such as harvesting agricultural products.

Rental farm/ hands-on farm The business in which persons engaged in farming obtain a usage fee by letting non-farmers use farmland which is owned or rented from others through methods

of utilizing the farmland without involving third parties.

It does not include a case in which owned cultivated land is lent for a fee to public gardens managed by local governments or agricultural cooperatives.

Farm inn

The business in which persons engaged in farming obtain an accommodation fee by providing lodging and meals for tourist etc. regardless of the proportion of using products grown on the farm and/or regional ingredients by obtaining approval of the prefectural governor in accordance with the Hotel Business Act (No. 138 of 1948).

Farm restaurant

The business in which persons engaged in farming obtain a food bill by providing meals for unspecified customers such as tourists regardless of the proportion of using products grown on the farm and/or regional ingredients by obtaining approval of the prefectural governor in accordance with the Food Sanitation Act (No. 233 of 1947).

Overseas export

The case in which persons engaged in farming export harvested agricultural products etc. to overseas either directly or through trading companies/ organizations (for entrusting procedures or sales representative services) or the case in which persons engaged in farming produce agricultural products for export purposes.

Renewable energy generation

The business of generating power from renewable resources (biomass, solar light, hydropower, etc.) in the farmland or forest land, etc.

Organic farming

The farming without using chemical fertilizers, agricultural chemicals and genetic recombination technology. It does not include cultivation with reduced chemical fertilizers/agricultural chemicals.

In addition, even if certification for JAS standards for organic vegetables has not been obtained, if the case includes natural farming or farming without using chemical fertilizers, agricultural chemicals and genetic recombination technology, it falls under organic farming.

## (5) Individual Management Entities

#### a. Farm Business Status

Business management entity

The individual management entity whose main income is from farming (at least 50% of the household income is agricultural income) with one or more household member younger than 65 who were engaged in farming operated by the household for at least 60 days during the one-year period prior to the survey date.

Semi-business management entity

The individual management entity whose main income is from non-farming sources (less than 50% of the household income is agricultural income) with one or more household member younger than 65 who were engaged in farming operated by the household for at least 60 days during the one-year period prior to

the survey date.

Side business management entity

The individual management entity with no household members younger than 65 who were engaged in farming operated by the household for at least 60 days during the one-year period prior to the survey date.

### b. Persons Engaged in Farming, etc.

Household member Those who basically live together both of livelihood and housing. Persons who are away from the households as migrant workers are included, but persons live away from the household for educational and occupational reasons are not included.

This category also excludes hired live-in workers.

Core person engaged in farming

The household member aged 15 or older who are usually mainly engaged in farming operated by the household as a job.

# (6) Forestry Management Entities

Owned forest land

The forest land that can be used (has been used) for forestry management by the

owner.

Material

Material means logs, and it is also called raw wood.

production amount

It represents the volume of logs and the unit of cubic meter (m³) is used in

general.

Furthermore, it includes the material production amount by standing tree

purchase.

Material

production by standing tree purchase The operation of purchasing the standing tree and producing material by felling it.

## [Survey on Rural Areas]

## (1) Forest and Grass Area

Total land area The area of all prefectures.

In principle, it is based on the total land area of the "National Land Area Survey by Municipality" conducted by the Geospatial Information Authority of Japan.

Forest and grass

area

The total area of current forest land area and the grass land area other than forest, which is equivalent to the total area of the forest land and uncultivated land in the

land category specified in Article 99 of the Ordinance on Real Property Registration (Ordinance of the Ministry of Justice No. 18 of 2005).

Forest area

The area of forest specified by Article 2 of the Forest Act and specifically, the forest that corresponds to the following standard.

- (1) The area where the trees are growing collectively, trees and bamboos on top of the aforementioned land and the land to be provided for the collective growth of standing trees and bamboos.
- (2) Area of a restriction on forest operation such as protection forest and area equipped with disaster protection facilities, etc., are also included in forest.
- (3) The area other than the forest land of national forests, of which the area that does not belong to any categories such as denuded land, rocky land, grass land, alpine zone, etc., attached land such as seedbed, forest road bed, strip road bed, recreational facility bed, etc. and leased land such as roadway, site for electricity business, grazing land are excluded.

Current forest area

The forest area as of the survey date, which is calculated based on the forest plan at the time of the establishment of the Regional Forest Plan and the forest plan of national forest classified by region, adjusting the movement of the forest area after the establishment of the plans and adding the forest area other than the forest plans.

Grass area other than forest

The area other than forest where wild grass and shrubs are growing.

- (1) Riverbed, dike, embankment, roadway and golf course are excluded even if they are grassed.
- (2) "Forestry Agency" includes a leased grazing land.
- (3) "Government agencies other than Forestry Agency" include undeveloped land under the jurisdiction of the Ministry of Finance and the training grounds of the Self-Defense Force under the jurisdiction of the Ministry of Defense.
- (4) Non-national forest includes the land of which the current condition is wild grassland including perennial pastureland, degenerated pastureland and areas abandoned after cultivation then becoming wild).

Forest and grass area rate

The rate of forest and grass area against the total land area.

When calculations are made by the nation, by agricultural region and by prefecture, the land area of Northern Territories and Takeshima Island are excluded from the total land area.

National (forest)

The land under the jurisdiction of the Forestry Agency or another government agency.

Forestry Agency

The national forest under the jurisdiction of the Forestry Agency and afforested land by government sharing agreement

Government institutions other than Forestry Agency The forest under the jurisdiction of national administrative institution other than the Forestry Agency.

Non-national (forest)

The forest other than the national forest. Its ownership can be classified into "incorporated administrative agency", "communal" (prefecture, forest management corporation, municipality, and property ward) and "private owned". The forest, for which the management right is established by a municipality in accordance with the Forest Management Act (Act No. 35 of 2018), is classified into the previous category of the establishment of the right.

Incorporated administrative agency, etc.

The forest owned by incorporated administrative agency, national university, and special corporation.

Furthermore, the shared forest under the jurisdiction of the Forest Management Center, Forest Research and Management Organization is also included.

Communal (forest)

The forest including rented land under the jurisdiction of prefectures, forest management corporations, municipalities and property wards.

Prefecture The forest under the jurisdiction of prefectures.

It refers to the forest under the jurisdiction of the waterworks bureau, board of education, public development enterprise bureau, etc. in addition to the forest under the jurisdiction of the department in charge of forestry, including the school forest of prefectural high schools, the land under the jurisdiction of local incorporated administrative agencies established by prefectures, etc. and the shared forest of which prefectures take the main part in afforestation or silviculture, but excluding the shared forest of which entities other than prefectures take the main part in afforestation or silviculture.

Forest management corporation

The forest under the jurisdiction of forest development corporations specified in Article 10, item (ii) of the Act on Special Measures concerning Shared Forest (Act No. 57 of 1958).

Forestry/afforestation public corporations fall under forest management corporations.

Municipality

The forest under the jurisdiction of municipalities.

The forest under the jurisdiction of municipalities' associations established by two or more municipalities in order to operate for instance the clerical work related to the municipalities' forest (hereinafter referred as "town/village unions") specified in Article 284, paragraph 1 of the Local Autonomy Act (Act No. 67 of 1947) and local incorporated administrative agencies established by municipalities or town/village unions are included.

In addition, the shared forest of which municipalities take the main part in afforestation or silviculture is included, but the shared forest of which entities other than municipalities take the main part in afforestation or silviculture is excluded.

Property ward

The property ward is specified in Article 294, paragraph 1 of the Local Autonomy Act. It is formulated by communities and former municipalities based on their own forest during the municipal mergers, and used and profited by residents.

Furthermore, if the property ward has turned into a production forest owner's cooperative, the property ward is defined as "private owned (forest)".

# Private owned (forest)

The non-national forest excluding those of incorporated administrative agencies etc. and communal forests.

# (2) Rural Community

Rural community

The rural society formulated within the municipal area based on agriculture. The rural community is a fundamental unit of social life that formed various groups and social relationships, which was a spontaneously established local community with ties in territorial and blood relationships.

DID (Densely Inhabited District)

The regional statistical unit to clarify the characteristic of urban area in the national population census. It is an area with a population of 5,000 or more in total adjoining several basic units of the national population census with population density of 4,000 persons or more per 1 km<sup>2</sup>.

Closest DID

The DID closest to the center of the rural community. A facility with the closest linear distance from the center of the DID is intended among all facilities in the DID.

Means of transportation The means of transportation for traveling from one place to another.

By foot

The case of traveling by foot without using vehicles.

By automobile

The case of traveling using automobile.

By public transportation The case of traveling using bus, train or ship.

Required time

The time required to travel to the facility in the center of the DID closest to the rural community from the center of the rural community.

Unmeasurable

The cases where the required time could not be identified for the following reasons (1) to (5).

- (1) There is no facility in the center of DID within a linear distance of 100 km from the center of the rural community.
- (2) The rural community is located in a remote island, and there is no target facility in the island or no public transportation such as a ferryboat available.
- (3) The closest bus stop or station from the center of the rural community is further away than the target facility.
- (4) The closest bus stop or station from the center of the rural community and

the closest bus stop or station from the target facility is same.

(5) It is not possible to search routes using public transportation due to the function of the route guide software.

#### Local activity

The activities of maintaining and managing local resources such as farmland and forest land, the complementary function in agricultural production such as cooperative work in harvest season and the function that maintains and enhances living conditions while the local residents are mutually helping each other in ceremonial occasions such as the marriage, funeral and so on.

In this survey, it was determined to be a "rural community with local activities" if it falls under any of the followings.

- Holding a meeting.
- Preserving the local resources.
- Having an agricultural producer's union.

#### Producer's union

The group consisting of farm households and that takes a role of communication, coordination and activity with respect to agricultural production, etc.

Specifically, it is called by various names such as production union, agricultural producer's union, farmer's union and agricultural cooperative branch. Regardless of the name, it refers to groups of agricultural producers with comprehensive functions.

However, groups that cover only one category of agriculture such as shipping union, dairy union and pest control union are excluded.

In addition, if a community farming organization is determined to be a group with comprehensive functions of agricultural production activities in the rural community, it is deemed to be a producer's union.

# Community meeting

The meeting to be held by members of the rural community and discus matters concerning the regional society or agriculture production.

Furthermore, even though the meeting does not cover all households/farm households in the rural community, the meeting is defined as the "Community meeting" if decisions are made on matters related to the regional society and agricultural production by delegates and officials in each group of the rural community.

However, activities of women's associations, children's associations, young men's associations, Four-H clubs, etc., are excluded.

Matters related to agricultural production

The matters related to agricultural production such as production adjustment/crop conversion, pest control/shipment carried out jointly, bird or animal damage prevention, adjustment of agricultural labor force.

Maintenance of farm roads, agricultural

The matters related to the maintenance of farm roads, agricultural irrigation/drainage canal, reservoir, grass cutting, mud removal and cleaning.

| irrigation/drainage canals/reservoirs                                     |   |
|---|---|
| Maintenance of common assets and facilities of the community              | The matters related to the maintenance of common assets such as farming equipment, facilities and jointly owned forests and common living facilities in the rural community.  |
| Environmental protection/ nature conservation                             | The matters related to environmental protection such as cleaning, collecting empty cans, grass cutting and flower planting in the rural community and the conservation of natural resources, etc.   |
| Implementation of events in the rural community (festivals, events, etc.) | Refers to matters related to holding events in the rural community such as festivals in temples and shrines (festivals, grand festivals, annual festivals, etc.), athletics festivals, and various types of events, etc.  |
| Welfare in the rural community  | The services for the elderly and children in the rural community (nursing, children's associations), trash disposal, recycling and joint pest control, etc.   |
| Promotion of settlement   | The matters related to the efforts to support persons who are willing to live in local communities to settle in the local community.  Specifically, it corresponds to the advertisement for persons to settle in the rural community, maintenance of vacant houses and closed schools for the preparation of acceptance, etc.   |
| Green tourism   | The matters related to leisure activities to experience and enjoy the nature, culture and interaction with people in the rural area.  Specifically, it corresponds to an effort to accept a leisure activity regardless of the duration of stay, which utilizes farmers' markets, tourist farms and farm-inns and the tourism on agricultural experience and a volunteer activity, etc.   |
| Effort for Sixth<br>Industrialization                                     | The matters related to the efforts to increase incomes by the integral activities for processing and sales using the agricultural, forest and fishery products and their by-product (biomass, etc.) produced in the rural community and the activities for creating employment utilizing local resources.  Specifically, it corresponds to diversified and composite management such as direct sales, processing, export of local agricultural products, supply of local agricultural products in cooperation with second and third industries, facility of food services that supply foods to schools and hospitals, cooperative activity among medicine, welfare, food and agriculture that supplies raw material for functional food and care food and ICT utilization such as online sales and logistic cooperation, etc. |
| Effort for renewable energy   | The matters related to the efforts to develop renewable energy (solar power generation, small hydropower generation, wind power generation, geothermal  |

power generation, biomass power generation, etc.) utilizing the local resources. Specifically, it corresponds to the efforts to place solar power generation panels in the diverted land of agriculture/forest land and place power generation facilities in agricultural irrigation/drainage canals.

Local resources

In this survey, it refers to agricultural land, agricultural irrigation/drainage canal, forest, river/canal, and reservoir/lake in the rural community.

Local resources preservation

The activities to preserve, maintain and improve local resources as local shared resources mainly by local residents, etc.

The activity to preserve resources jointly by the several households among the local residents is included, but the activity to maintain resources only for the purpose of an individual's own agricultural production is excluded.

Farmland

The land used for the purpose of cultivation that is specified in Article 2 of the Agricultural Land Act (Act No. 229 of 1952).

The presence/absence of the farmland is determined by verifying consistency with the latest "Fude Polygon" (\*) information published as of the survey date.

\* "Fude Polygon" refers to the farmland lot information created by tracing the shape for each parcel (Fude) based on satellite images, etc., to be used as population information for the survey on cultivated land area, etc. conducted by the Ministry of Agriculture, Forestry and Fisheries. The version published in June 2019 is used.

Agricultural irrigation/drainage canal

The facility of irrigation or drainage for the purpose of agriculture located around the farmland in the rural community. It includes irrigation/drainage canals used in combination with the daily life.

The irrigation/drainage facility maintained mainly by public institution (prefecture, municipality and land improvement district, etc.) is excluded.

Forest

The "forest" specified in Article 2, paragraph 1 of the Forest Act (Act No. 249 of 1951). It is the land in which trees and bamboos grow collectively and the land used for the collective growth of trees and bamboos.

River/ watercourse The class A and class B river, watercourse, canals and small river.

The irrigation/drainage canal for agriculture and daily use is excluded.

Reservoir/ lake

It refers to any of the following conditions.

- (1) Artificial or natural reservoir to store irrigation water
- (2) Dammed river and valley created by various factors
- (3) Water-filled depression created by the land sinking like a pot-shape.
- (4) Place filled with water in craters and crater basin
- (5) Place that used to be a sea and became a lake
- (6) Other than the above, depressions filled with water surrounded by land on all directions

## [Classification of National Agricultural Region]

The classification of national agricultural region used in statistical tables is as follows: "Prefectures other than Hokkaido" refers to all regions of Japan excluding Hokkaido.

| Name of national agricultural | Name of the affiliated prefecture                 |  |  |
|-------------------------------|---|--|--|
| region                        |   |  |  |
| Hokkaido                      | Hokkaido  |  |  |
| Tohoku                        | Aomori, Iwate, Miyagi, Akita, Yamagata, Fukushima |  |  |
| Hokuriku                      | Niigata, Toyama, Ishikawa, Fukui                  |  |  |
| Kanto / Tosan                 | (Northern Kanto, Southern Kanto, Tosan)           |  |  |
| Northern Kanto                | Ibaraki, Tochigi, Gunma                           |  |  |
| Southern Kanto                | Saitama, Chiba, Tokyo, Kanagawa                   |  |  |
| Tosan                         | Yamanashi, Nagano                                 |  |  |
| Tokai                         | Gifu, Shizuoka, Aichi, Mie                        |  |  |
| Kinki                         | Shiga, Kyoto, Osaka, Hyogo, Nara, Wakayama        |  |  |
| Chugoku                       | (Sanin, Sanyo)                                    |  |  |
| Sanin                         | Tottori, Shimane                                  |  |  |
| Sanyo                         | Okayama, Hiroshima, Yamaguchi                     |  |  |
| Shikoku                       | Tokushima, Kagawa, Ehime, Kochi                   |  |  |
| Kyushu                        | (Northern Kyushu, Southern Kyushu)                |  |  |
| Northern Kyushu               | Fukuoka, Saga, Nagasaki, Kumamoto, Oita           |  |  |
| Southern Kyushu               | Miyazaki, Kagoshima                               |  |  |
| Okinawa                       | Okinawa   |  |  |

# 9. Method to Grasp the Required Time to Reach the Closest DID

## (1) Data used

For bus stops, the bus stop data by Jorudan Co., Ltd. (as of January 1, 2020) is used, and for other facilities, the data based on house map survey by Zenrin Co., Ltd. (December 2019) is used.

#### (2) Setting facility in the center of DID

Among the facilities (\*) within the area of DID (Densely Inhabited District) that is closest from the center of the rural community, the facility that is closest linear distance from the center of gravity in DID (Densely Inhabited District) is set. However, regarding facilities that are located within 1 km from the center of gravity, a central facility was set according to the priority of facility classification.

Furthermore, facilities that are located outside of the 100 km linear distance from the center of the rural community are excluded.

(\*) Refers to facilities shown in the following table "Classification of the facilities in the center of DID (Densely Inhabited District)".

Table: Classification of the facilities in the center of DID (Densely Inhabited District)

| Facility classification   | Priority (highest: A to lowest: D) |
|---|------------------------------------|
| Station, airport, public office (same municipality)   | A                                  |
| Roadside station, police headquarters, police station, fire department headquarters, fire station, university   | В                                  |
| Zoo, botanical garden, aquarium, department store, museum, art gallery, library, hall, assembly hall, junior college, technical college, senior high school       | С                                  |
| central post office, ordinary post office, special post office, simple post office, junior high school (same municipality), elementary school (same municipality) | D                                  |

### (3) Route search conditions

#### a. By foot

Roads with the width of 5.5 m or more were given priority in the route conditions, and the walking speed was set to 4 km/h.

However, toll roads are excluded from the route conditions in principle.

## b. By automobile

Roads with a width of 5.5 m or more were given priority in the route conditions, and the automobile speed was set to the 12-hour average traveling speed provided in the "FY 2015 Road Traffic Census" published by the Ministry of Land, Infrastructure, Transport and Tourism on the Internet.

## c. By public transportation

The route search was conducted in accordance with route networks contained in "Ekispert (R) (Val Laboratory Corporation)" (January 2020 version)

### (4) Calculation of required time

The required time was calculated as follow:

a) Selecting a maximum of three same type of facilities that are close to the center of rural community meeting with above conditions, b) Searching route to all selected facilities by foot, automobile and public transport, c) Then, the results of route search to the facility with the shortest journey time by means of transport were used.

Furthermore, the required time using public transportation included the walking time from the center of the rural community to the nearest bus stop or station and the walking time from the bus stop or station to the target facility.

In addition, the waiting time for public transportation was assumed to be 0 minutes for the first access, and the average transit time was assumed for subsequent connections.

# (Appendix) History of Census of Agriculture and Forestry

