Agricultural Statistical System in Japan

Makoto Shimizu
Director for Statistical Planning
Statistics Department
Minister’s Secretariat
Ministry of Agriculture, Forestry and Fisheries
Japan

15 June 2015
History Related to Official Statistics in Japan

* The first modern product statistics by prefecture were compiled in 1870.
* The first Population Census was conducted in 1920.
* The National Income was estimated for the first time by the government for 1925.
* The initial survey leading to the Agricultural census was conducted in 1929.
* The International Statistical Institute was held for the first time in Tokyo in 1930.
* The Statistics Act was promulgated and came into effect in April 1947.
* The New Statistics Act was promulgated in May 2007 and came into effect in April 2009.
Characteristics of Decentralized Statistical System

Advantages
- Accuracy
- Usability
- Meticulousness
- Flexibility

Disadvantages
- Impartiality
- Transparency
- Accessibility
- Comparability
### Development of Statistical System in Japan

<table>
<thead>
<tr>
<th>Vertical system</th>
<th>Horizontal approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taking advantage of decentralized system</td>
<td>Compensating for disadvantage of decentralization by coordination</td>
</tr>
</tbody>
</table>
Methodologies of Agricultural Surveys

**Telecommunications**
- Survey on Vegetables and Fruits Wholesale Markets
- Survey on Livestock Products Marketing

**Postal Services**
- Survey on Rural Communities Operating
- Statistics on livestock

**Survey Companies**
- Statistics on milk and dairy products
- Statistical Survey on Prices in Agriculture

**Local Governments**
- Census of agriculture and forestry

**Senior Enumerators**
- Survey on farm management and economy
- Statistics on crops

**General Enumerators**
- Survey on movement of agricultural structure
- Survey on stocked rice of commercial farm households

- Farmers
- Communities
- Crops
- Livestock
- Farmland
Role of Agricultural Statistics in Policymaking

Agricultural statistics are information infrastructure underpinning agricultural administration as evidence-based picture of situations and tendencies of farm area as well as production, flow, procession and consumptions concerning agriculture.

* Setting policy objective and basis for evaluation
  * Basic Plan for Food, Agriculture and Rural Areas
  * Forecast for supply and demand of rice
  * Food self-sufficiency ratio

* Providing criteria for implementing policy measures
  * National Disaster Financial Act
  * Stabilization system for production and shipment of vegetables and fruits

* Providing calculation base for government expenditure
  * Subsidy rates - e.g. farming income stabilization measures
Methodologies to Promote Usability

* Flexible revision of statistics according to changes of administrative needs
* Close collaboration and communication between administrative and statistical staff
* Setting up study group to examine design of questionnaires
* Timely following-up administrative performances by statistics
Methodologies to Promote Accuracy and Meticulousness

* Local offices continue to play significant roles because agriculture is vulnerable to climate conditions which are different among regions on long-shaped land in Japan.
* Staff have expertise based on administrative experiences on agriculture.
* Staff in local offices can get information timely close to each farm, that is, field of surveys, through frequent communication with local citizens and governments.
* Senior enumerators are eligible to implement surveys, with training seminars and on-the-job training by staff as well as their original capabilities.
Bookkeeping by Farmers Sampled for Survey on Farm Management and Economy

1. Writing down every day

Daily Account Books

2. Senior Enumerators

- Cash balance
- Consumption of agricultural products for housekeeping
- Invested amounts of agricultural materials
- Working hours

3. Staff in Local Offices

Every three month

+++ Entry Example of Daily Account Book +++

<table>
<thead>
<tr>
<th>Cash brought forward from the previous page</th>
<th>58,500 yen</th>
</tr>
</thead>
</table>

1-1 Cash income and outlay

<table>
<thead>
<tr>
<th>Date</th>
<th>Description (excluding housekeeping expenses)</th>
<th>Qty</th>
<th>Income</th>
<th>Outlay</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Agricultural chemical D-D</td>
<td>20 l</td>
<td></td>
<td>7,820</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Calcium Cyanamide</td>
<td>120 Kg</td>
<td></td>
<td>14,052</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Shipment of cabbages</td>
<td>1.2 t</td>
<td>773000</td>
<td></td>
<td>To Cooperative Shipping Association</td>
</tr>
<tr>
<td></td>
<td>Income from cabbages</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>To Agricultural Cooperative Association</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Month) September

58,500 yen (Month) September

1-1 Cash income and outlay

<table>
<thead>
<tr>
<th>Date</th>
<th>Description (excluding housekeeping expenses)</th>
<th>Qty</th>
<th>Income</th>
<th>Outlay</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Agricultural chemical D-D</td>
<td>20 l</td>
<td></td>
<td>7,820</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Calcium Cyanamide</td>
<td>120 Kg</td>
<td></td>
<td>14,052</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Shipment of cabbages</td>
<td>1.2 t</td>
<td>773000</td>
<td></td>
<td>To Cooperative Shipping Association</td>
</tr>
<tr>
<td></td>
<td>Income from cabbages</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>To Agricultural Cooperative Association</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Yield Survey of Rice for Statistics on Crops

Harvesting

1.7 mm or upper stage unpolished rice

Threshing

Estimation of Weights per 10a

Drying

Hulling

Sieving

lower stage waste rice
Principles of Change of Statistics Act

Fundamental Principles of Official Statistics by UN in 1994

Old Act
Statistics for Public Administration
Production

New Act
Statistics for Information Infrastructure for People
Production
Use
Role of Statistics Commission

Statistics Commission

Deliberations from professional and impartial standpoint

Cabinet Office

Standards for compilation of National Account

Consultation

Reply

Economic And Social Research Institute

Director-General for Policy Planning on Statistical Standard Examination

Application for designation, establishment or revision

Approval

Statistics Bureau

Compilation of anonymized data

Consultation

Reply

MIC

Others

MAFF

METI

...
System of the Master Plan Concerning the Development of Official Statistics for Five Years

Compiling Process of the Master Plan

Promotion Process of the Master Plan
Every Year

Role of Organizations

Statistics Commission
Director-General for Policy Planning on Statistical Standard
Ministries

- Statistics Commission
  - Director-General for Policy Planning on Statistical Standard
    - Ministries
      - act
        - follow-up
      - check
        - review
      - compile
        - decide
          - promote
    - Ministries
      - act
        - follow-up
      - check
        - review
      - compile
        - decide
          - promote
Outline of the Second Term Master Plan (FY2014-FY2018)

**Basic perspectives and policies in developing measures**

i) Securing and improving comparability among statistics  
ii) Securing and improving international comparability of statistics  
iii) Adequate responses toward environmental changes in the economy and society  
iv) Promoting accurate and efficient production of statistics  
v) Promoting openness of statistical data and transparency of the statistical production process

**Development of official statistics**

- Aligning the standard of compiling GDP with the 2008SNA  
- Revising the development plan for economic statistics with Economic Census as the axis  
- Considering the change of the definition of unemployment on the basis of the new standard on unemployment of ILO  
- Toward the revision of the classification of workers aiming at more appropriate comprehension of irregular employment

**Matters necessary for the development of official statistics**

- Enhancement of the Business Register as universal information of statistical surveys  
- Promotion of online survey  
- Considering and study on the use of the Social Security and Tax Number System for statistics  
- Review of issues and deciding response policies in preparation for a large-scale disaster  
- Enhancement of the function of the Portal Site of Official Statistics of Japan (e-Stat)  
- Consideration toward easing the use restriction on the use of statistics produced through request from the public  
- Positive international cooperation and international contribution

**The promotion of the second term master Plan**

- Further enforcement of cooperation among ministries  
- Developing measures while securing compatibility with the development of statistics based on various legal plans
Construction and Utilization of the Business Register

- Economic Census
- Other Censuses
- Sample Surveys
- Administrative Records

Business Register

- New Statistics
- Population Information

- Next Economic Census
- Next Other Censuses
- Next Sample Surveys
The e-Stat provides a one-stop online service for obtaining statistical information published by ministries on the Internet, and enables users to view and download official statistics with convenient features such as retrieving data by prefecture and municipality, and drawing statistical maps.

Further Tackling

* Revision of statistics based on changes of needs pertaining to policies and administration including shift of farm structure from households to corporations and closer relationships with food industries

* Taking advantage of other data sources such as administrative records, Economic Census as well as big data captured owing to advanced information technologies, in addition to census and surveys in agriculture

* Facilitating understanding of and distributing statistics to broader range of users including consumers and food industries
### Country Profile of Japan Based on Statistics

<table>
<thead>
<tr>
<th>Items</th>
<th>Statistics</th>
<th>Peak year</th>
<th>Global rank</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Area</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land</td>
<td>38 ten thousand km²</td>
<td></td>
<td>61th</td>
</tr>
<tr>
<td>Sea</td>
<td>447 ten thousand km²</td>
<td></td>
<td>sixth</td>
</tr>
<tr>
<td><strong>Population</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>127 million on October 2014</td>
<td>2010</td>
<td>tenth</td>
</tr>
<tr>
<td></td>
<td>65 years and over</td>
<td>2014</td>
<td>first</td>
</tr>
<tr>
<td><strong>Total Fertility Ratio</strong></td>
<td>1.41 on 2012</td>
<td>1947</td>
<td>low</td>
</tr>
<tr>
<td><strong>Life Long Expectancy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>80.2 on 2013</td>
<td>2013</td>
<td>third</td>
</tr>
<tr>
<td>Female</td>
<td>86.6 on 2013</td>
<td>2013</td>
<td>first</td>
</tr>
<tr>
<td><strong>Nominal GDP</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP change over previous year</td>
<td>1.6% on the FY 2014</td>
<td>1990</td>
<td>low</td>
</tr>
<tr>
<td>GDP per capita</td>
<td>3,796 thousand yen on FY 2013</td>
<td>2013</td>
<td>10th-20th</td>
</tr>
<tr>
<td><strong>Budget Deficit per GDP</strong></td>
<td>2.45 on 2015 (estimation by IMF)</td>
<td>2015</td>
<td>first</td>
</tr>
<tr>
<td><strong>CPI change over previous year</strong></td>
<td>2.7% on 2014</td>
<td>1974</td>
<td>lowest</td>
</tr>
<tr>
<td><strong>Unemployment ratio</strong></td>
<td>3.6% on 2014</td>
<td>2002</td>
<td>low</td>
</tr>
</tbody>
</table>