Workshop on
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Theme 05 - Livestock

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Outline

• Concept and Definition
• Importance of livestock statistics
• Methodology on livestock numbers and characteristics
  • Items: type, reference periods and concepts
• Country experiences
Concept & Definition

- **Livestock** - all animals kept or reared in captivity mainly for agricultural purpose including cattle, sheep, goats, etc.

- **Livestock farming** - an economic activity distinct from crop production (According to the Int’l Standard Industrial Classification -ISIC)

- **Livestock farming** combined with growing of crops is treated as a Group (015), separate from farming livestock alone (Group 014).
Importance of Statistics of Livestock & Livestock Products

- **Importance of livestock & livestock products is increasing.** For example, according to FAO’s Agricultural and Consumers Protection Department, “annual per capita consumption of meat has doubled since 1980 in developing countries”.*

- **Livestock products in the form of meat, milk, and eggs, supply much needed protein** thus contributing to improvement of nutritional status of under-nourished population;

- **Draught animals provide power for cultivation** (in developing countries).

- **Livestock provide manure for enrichment of soil.**

- **It’s a mode of transport.**

- **Contributes cash income, employment and earnings of exchange through export.**

Methodology on livestock numbers and livestock characteristics

- Data on livestock numbers need special techniques due to their nature.

- Livestock census is costly and it is carried out every five years but some countries do yearly.
Items

Theme 5 comprises 13 items:

0506 Number of milking animals according to milk status;
0507 Number of animals born;
0508 Number of animals acquired;
0509 Number of animals slaughtered;
0510 Number of animals disposed of;
0511 Number of animals that have died from natural causes;
0512 Types of feed.

For holdings (2):
0501 Type of livestock system (essential item);
0513 Use of veterinary services.

For each livestock type (11):
0502 Number of animals (essential and frame item);
0503 Number of female breeding animals (essential and new);
0504 Number of animals: age and sex;
0505 Number of animals according to purpose;
Item 0501: Type of livestock system

**Type:** Essential item

**Reference period:** census reference day

**Concept:** The livestock system refers to the general characteristics and practices of raising livestock on the holding.

**Livestock systems:** WCA 2020 distinguishes the following:

**Grazing system**
 (>90% of the dry matter feed animals comes from grazed grass or other herbaceous plants)
  - Nomadic or totally pastoral
  - Semi-nomadic, semi-pastoral or transhumant
  - Sedentary pastoral or ranching

**Mixed system**
 (> 10% of the dry matter fed to animals come from crop or crop by-products or stubble and < 90% of the dry matter feed is off-farm produced)

**Industrial system**
 (at least 90% of the dry matter of the animal feed is off-farm produced, e.g. feedlots or other in-house systems of feeding.)
Item 0502: Number of animals (for each livestock type)

**Type:** Essential and frame item

**Reference period:** census reference day

**Concept:** The number of animals is the animal population on the holding at the reference date regardless of ownership. A holding is raising an animal if it has primary responsibility of looking after it on a long-term basis and making day-to-day decisions about its use.

**Caveat:** A distinction must be made between raising an animal and being employed by an animal owner to look after the animal where the animal owner is decision-maker.
Item 0503: Number of female breeding animals (for each livestock type)

Type: Essential item

Reference period: census reference day

Concept: Breeding animals refers to the number of female animals that are kept mainly for reproduction purposes rather than food production.
Item 0504: Number of animals: age and sex (for each livestock type)

Type: Additional item
Reference period: census reference day
Way of collecting data: Age of livestock data are collected in suitable age groupings, depending on livestock type and sometimes the breed of the animal:

<table>
<thead>
<tr>
<th>Livestock type</th>
<th>Age group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle, buffaloes</td>
<td>calf (&lt; 1 year); young stock (1-2 years) adult (2 years or more);</td>
</tr>
<tr>
<td>Sheep, goats</td>
<td>lamb/kid (&lt;1 year), adult sheep/goat (1 year or more);</td>
</tr>
<tr>
<td>Pigs</td>
<td>piglet (&lt; 3 months); young pig (3-9 months), adult pig (over 9 months);</td>
</tr>
<tr>
<td>Horses, camels, mules,</td>
<td>foal (&lt; 1 year); yearling (1-2 years); young stock (2-4 years); adult</td>
</tr>
<tr>
<td>hinnies, asses</td>
<td>stock (more than 4 years);</td>
</tr>
<tr>
<td>Poultry</td>
<td>young birds (for example, aged less than 3 weeks); adult birds;</td>
</tr>
<tr>
<td>Other animals</td>
<td>according to circumstances.</td>
</tr>
</tbody>
</table>

Notes:
- Often these data are collected only for the major livestock types.
- For poultry, it is often not necessary to distinguish between male and female young birds.
Item 0505: Number of animals according to purpose (for each livestock type)

**Type:** Additional item

**Reference period:** census reference day

**Concept:** Purpose refers to the main reason for the animals to be kept.

**Main purposes:**
- **Cattle, buffaloes:** milk, meat, draught power, breeding;
- **Sheep, goats:** milk, meat, wool, breeding;
- **Pigs:** meat, breeding;
- **Horses, camels, mules/hinnies, asses:** milk, meat, draught power, breeding;
- **Poultry:** meat, eggs, breeding;
- **Other animals:** according to circumstances
Item 0506: Number of milking animals according to milk status (for each livestock type)

**Type:** Additional item

**Reference period:** census reference day

**Concept:** This item relates to the livestock types raised for milking as identified in the previous item. A **milking animal** is defined as an animal present on the reference day that has been milked at some time during the census reference year.

**Milking status:** Milking animals can be:
- In milk
- Dry.
Items: 0507; 0508; 0509; 0510 and 0511
(for each livestock type)

**Items:**
0507: Number of animals born
0508: Number of animals acquired
0509: Number of animals slaughtered
0510: Number of animals disposed of
0511: Number of animals that have died from natural causes

**Type:** Additional items.

**Reference periods:**
- **Large animals** (cattle, buffaloes and other large animals): census reference year;
- **Small animals** (sheep, goats, pigs): 6-months reference period is often used;
- **Poultry:** one-month reference period is often most suitable.

**Concept:** This 5 items provide information on the population dynamics of livestock herds, such as measures of reproductive rates and take-off rates. The five items refer to the number of events (births, deaths, etc.) during the reference period.

**Note:** Countries should decide on the livestock types to be covered.
Items: 0507; 0508; 0509; 0510 and 0511 (contd.).

Concepts:

0507 Number of animals born - the live births during the reference period to animals that were part of the holding at the time of the birth.

0508 Number of animals acquired - purchases and other livestock acquisitions by the holding during the reference period;

0509 Number of animals slaughtered - number of slaughtering's during the reference period of animals that were being raised on the holding.

0510 Number of animals disposed of - sales or other disposals during the reference period of animals being raised on the holding. Two types of disposal are shown:

- Sold or otherwise disposed for slaughter;
- Other disposals

0511 Number of animals that have died for natural causes during the reference period for animals that were being raised on the holding at the time of the death.
Type: Additional item

Reference period: census reference year.

Concept: Type of feed refers to the source of feed for the livestock type. More than one type of feed may be used; for example, animals may graze during the summer but be hand-fed during the winter.

Types of feed:

- **Forages/roughages**: fresh grass or grass-legume mixture grazed or cut and distributed; silage grass or grass-legume mixture; hay; whole plant silage; crop residues; tree leaves.

- **Agro-industrial by-products/concentrate components, including crops**: grain, beans, corn gluten meal and feed; oilseeds; oilseed and cotton seed cakes; brans and middling; by-products from breweries and destiller’s grains; molasses; fishmeal; cassava, banana.

- **Swill/household wastes**: organic household residues;

- **Supplement additives**: vitamins, amino acids, minerals
Item 0513: Use of Veterinary Services (for holding)

Type: Additional item

Reference period: census reference year

Concept: Veterinary services cover all professional veterinary services used to protect animal health for the livestock kept on the holding. It includes services provided by both the public and private sectors.

Data collection - Data on the use of veterinary services may be collected in two ways (suited to country’s needs):

- **for the holding as a whole:** can be useful as an indicator of whether such services are generally available to the holding.
- **for each major livestock type:** can help in assessing the animal health situation of each livestock type.
- **data to collect:**
  1. the number of visits by an extension officer/veterinary;
  2. type of services received (diseases treatment; surgical procedures, artificial insemination, breeding, vaccination, etc.)
Country experiences

USA - Agricultural census 2007
(typically a sedentary pastoral or ranching grazing system).
In the census questionnaire, sections: 13 (Cattle and calves); 14 (Sheep and lambs); 15 (Poultry) and 16 (Hogs and pigs) are devoted to this theme.

- **Existence of each type of livestock** that should be recorded
  
  Sections 13, 15 and 16 the question refers to the existence of animals in the operation during the agricultural year
  
  **Section 14** only sheep/lambs owned are recorded.

- **Number of animals on a specific date**: December 31st, 2007.

- **Animals reported** comprise:
  
  main categories of cattle (beef cows, milk cows; sheep and lambs one year old and over),
  
  main types of poultry (chickens, turkeys, ducks, etc.) and
  
  two categories of hogs and pigs (hogs and pigs used or to be used for breeding and others).

- **Data on number of animals sold or moved** during the reference year are reported for: cattle, poultry and hogs and pigs.
  
  in case of cattle, cattle in feedlots is also reported;
  
  for sheep and lambs, wool produced is informed in Section 14;
  
  number of poultry hatched during the reference year is also reported in Section 15 and
  
  type of operation is recorded in Section 16.
The section on Livestock is starting with the screening question: “Do you keep any livestock?”.

Part 6.1 of the census questionnaire collected information about:

- Number of livestock by age and sex divided in “local” and “improved” for:
  - Cattle;
  - Yak/Nak/Chauri;
  - Buffaloes;
  - Goats;
  - Sheep;
  - Pigs;
  - Horses/mules asses, rabbit and other animals (not differentiate by sex or age).

In the case of poultry, the screening question heading Part 6.2 of the questionnaire is: “Are there any poultry birds kept or reared in captivity for agricultural purposes?” Type of poultry recorded is simply: Chicken (local and improved), duck, pigeons and others.
Thank you.