

# Livestock Sector Statistics (animal population and production)

Metadata

National Bureau of Statistics of the Republic of Moldova (NBS)

## 1. Contact Information

### 1.1. Responsible subdivision within NBS

#### Agriculture and Environment Statistics Division

Agriculture Statistics Section

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## 2. Metadata Update

### 2.1. Last certification of metadata

14.02.2018

### 2.2. Last update of metadata

14.02.2018

## 3. Statistical Presentation

### 3.1. General description

Livestock is an important branch of agriculture, which is focused on breeding, reproduction, improvement of breeds and exploitation of agricultural animals. Growing and improvement of animal breeds is necessary to ensure the population with animal products, of the food industry and light industry – with raw material, of the agriculture – with organic fertilizers and traction force. The livestock patrimony has the following main branches: breeding cattle, pigs, sheep and goats, poultry, horses, and cuniculiculture.

The livestock statistics cover the statistical data on:

1) population of animals and poultry, including:

- livestock of animals by breeds;
- live born;
- animal mortality;

2) animal production, including:

- animal productivity;
- production (sale) of cattle and poultry;
- production (breeding) of cattle and poultry;
- production of milk of all types;
- production of eggs of all types;

- production of eggs for incubation
- production of wool

The statistical surveys in this area cover the agricultural holdings which have at least one animal and produce animal agricultural production:

- agricultural holdings (units or households) with status of legal entity and natural person who have animals and/or poultry on their balance sheet (agricultural enterprises and farms);
- individual auxiliary households (or population households).

The information source for obtaining data on animal livestock and animal production is:

- statistical surveys regarding the animal livestock and production in agricultural holdings with the status of legal entity or natural persons, which have animals and/or poultry on their balance sheet;
- data regarding the animal productivity in households obtained based on sample statistical surveys of small agricultural producers;
- as well as administrative data regarding the population of animals and poultry within individual households, supplied by the mayoralties of the villages (communes), towns and municipalities.

## 3.2. Concepts and definitions

### 3.2.1. Definitions

From statistical survey organization standpoint, there are 3 major categories of holdings (units or households) in the agricultural activity:

- Agricultural holdings (units or households) with status of legal entity or natural person, which have animals and/or poultry on their balance sheet, which, at their turn, include:
  - enterprises producing agricultural production or agricultural enterprises,
  - farms,
- Individual households

Details on agricultural holdings are presented in point 3.2.1. of the metadata on plant production and agricultural land statistics.

**Cattle livestock** – population of cattle and poultry in all the holdings which carry out agricultural activity, regardless of the fact if it is for market sale purpose or for internal consumption of the household (nutrition, etc.).

The main breeds of agricultural animals are the following:

- cattle,
- pigs,
- sheep and goats,
- horses

**Cattle** – all the animals from cattle species, regardless of the sex, age or economic destination.

Cows – females who have calved at least once.

Reproduction bulls – males used effectively as breeders.

Work cattle – males altered at an age of over 2 years.

Calves of over 1 year – number of calf males and females of over 1 year.

**Pigs** – all the animals from pigs' species, regardless of the sex, age, and economic destination.

Sows – females who have calved once and more times.

Pigs of 4 months and over – number of pigs of over 4 months. This group includes the young females and males, without including the number of boars for reproduction.

**Sheep** – all the animals from the sheep species, regardless of the sex, age, and economic destination.

Lambing sheep – females who have lambed once and more times.

Lambs of 1 year and over – lambs, regardless of the fact if they were used as breeders or not.

**Goat** – total number of goats (adults and youth), as well as he-goats.

Kidding goats - number of she-goats who have kidded at least once.

**Horses** – total number of horses, regardless of the sex, age, and economic destination.

**Poultry** – total number of poultry, regardless of the age and sex.

**Rabbits** – total number of rabbits for meat, skin, and angora hair.

**Bee families** – total number of bee families.

Animals' livestock is established according to the record keeping of animals' number as of January 1

**Live born** – number of calves, pigs, lambs, etc. born alive during the reported period, including those which were subsequently sold, slaughtered or dead, starting with the day they were born.

**Number of dead animals** – number of dead or perished animals during the year, including the perished animals from those bought from other producers;

**Productivity:**

- **cattle daily increase in weight** – weight increase per day for cattle, pigs', and other animals' growing and fattening;

- **milk average production per cow** – milk volume per cow, obtained during the reported period;

- **eggs average production per layer** – number of eggs collected per average number of layers during the reported period.

- **average wool production per sheep** – quantity of sheep wool per sheep population at the beginning of year.

**Production (breeding) of cattle and poultry** – volume (weight) of live weight of the live born, increase in mass when growing and fattening minus the mass of perished cattle. The volume of breeding production of animals is calculated by the main types of productive animals.

**Production (sale) of cattle and poultry for slaughtering** in live weight – includes the live mass of animals and poultry of all types for slaughtering. The calculation of the volume of meat production is determined by number of slaughtered cattle and their weight. The number of slaughtered cattle includes the cattle sold to procurement organizations, through other sale for slaughtering, as well as the cattle slaughtered in own households. The other sales for slaughtering include the cattle sold on the market, except for the calves, lambs, sheep up to 6 months, pigs – 2 months, and poultry chicks.

**Milk production** – quantity of cow, sheep, goat milk regardless of the fact if it was sold or part of it was used in the households for lactation of calves and piglets. The milk sucked by the calves is not included in the production and is not calculated when determining the average quantity of milk stropped from a cow.

**Production of eggs** – all the quantity of eggs collected during one year from all the types of home birds, including the eggs which were used for poultry reproduction (incubation).

**Eggs production** - all the eggs collected in one year from all types of poultry.

**Production of eggs** for incubation - all the eggs that were used in one year for incubation.

**Production of wool** includes all the sheep wool, regardless of the fact if it is sold or used in own household. The wool cut from the sheep skin during the industrial processing of the skin is not included in the production. The wool production is indicated in physical weight (the weight of unwashed wool) immediately after clipping the sheep.

### 3.2.2. Unit of measure

Data expressed in absolute values:

-production (breeding and sale) of cattle and poultry in live mass, production of milk, wool – in thousand tonnes and quintals,

- production of eggs – in million pieces,

- daily increase in cattle weight – in grams, average production of milk per cow – in kilograms,

- average production of eggs per layer – in pieces,

- average production of wool per sheep –in kilograms,

- livestock of animals and poultry, number of born alive – in thousand heads,
- animal mortality – in heads,
- number of bee families – in units,

### 3.2.3. Computation formula

Average production of milk per cow	<p>In agricultural enterprises:</p> $P_v = \frac{V}{X_m} \quad \text{where } X_m = \frac{Z_f}{Z_c}$ <p>In individual households:</p> $P_v = \frac{V}{X_m} \quad \text{where } X_m = \frac{X_1 + 2X_2 + \dots + 2X_{n-1} + X_n}{2(n-1)}$ <p>V - volume of milk production;  X<sub>m</sub> - average number of cows;  Z<sub>f</sub> – fed days-heads;  Z<sub>c</sub> - calendar days during the reported period,  X<sub>1</sub>, X<sub>2</sub>, ..., X<sub>n</sub> - number of cows at the beginning of the period (as a rule – quarter);  n - number of periods taken into calculation</p>
Daily increase in cattle weight	$S_z = \frac{S_v * 100000}{Z_f}, \quad \text{where:}$ <p>S<sub>v</sub> – cattle increase in weight  Z<sub>f</sub> – fed days-heads</p>
Average production of eggs per layer	$P_g = \frac{V_o}{X_g} * 100, \quad \text{where:}$ <p>V<sub>o</sub> – volume of eggs' production;  X<sub>g</sub> – average number of layers</p>
Average production of wool per sheep	$P_o = \frac{V_l}{X_o}, \quad \text{where:}$ <p>V<sub>l</sub> - volume of obtained sheep wool;  X<sub>o</sub> - number of sheep of all ages from the beginning of the year</p>

### 3.3. Used classifications

**Classifier of Activities in Moldova Economy** (CAEM - *Clasificatorul Activităților Economice a Moldovei in Romanian*), harmonized with NACE ver.2, approved by NBS decision nr. 20 from December 12, 2009;

**Classifier of Ownership Forms in the Republic of Moldova** (CFP - *Clasificatorul formelor de proprietate din Republica Moldova, in Romanian*): approved via the Decision of the Standards, Metrology, and Technical Supervision Department No. 276-st dated 04.02.1997;

**Classifier of Organizational-Legal Forms** (CFOJ – *Clasificatorul formelor organizatorico-juridice din Republica Moldova in Romanian*), approved via the Moldova-Standard Decision No. 1607-ST dated 09.11.2004, in force since 01.01.2005

**Classifier of Administrative-Territorial Units of the Republic of Moldova** (CUATM - *Clasificatorul unităților administrativ-teritoriale al Republicii Moldova in Romanian*), approved via the Moldova-Standard Decision No. 1398-ST dated 03.09.2003; in force since 03.09.2003.

<b>3.4. Scope</b>
<b>3.4.1. Sector coverage</b>
All the holdings that have livestock and/or poultry at their balance sheet and sell animal agricultural production.
<b>3.4.2. Statistical population</b>
The scope of the statistical survey includes: - agricultural holdings with legal entity status which have on their balance sheet livestock and/or poultry (agricultural enterprises and farms); - individual households which have livestock and poultry;
<b>3.4.3. Geographical coverage</b>
Information is developed and disseminated without the data of the enterprises and organizations from the left part of the River Nistru and Bender municipality.
<b>3.4.4. Time coverage</b>
Time series are available starting with 1993.
<b>3.5. Disaggregation level</b>
<p>Statistical data on livestock sector are developed and presented by:</p> <ul style="list-style-type: none"> <li>- total for the country;</li> <li>- ownership forms;</li> <li>- development regions (Chisinau mun., North, Center, South, ATU Gagauzia);</li> <li>- rayons.</li> </ul> <p>Data on population of animals are broken down by the main age groups and sex:</p> <p><b><i>Population of cattle</i></b>  of which:  cows  calves of over 1 year  of which: heifers of over 18 months  heifers of 2 years old and over  producing bulls  working oxen</p> <p><b><i>Population of pigs</i></b>  of which:  sows  pigs of 4 months and over</p> <p><b><i>Population of sheep and goat</i></b>  of which:  sheep — total  of which lambing sheep and lambs of over one year  goats  of which kidding goats</p> <p><b><i>Population of horses</i></b>  of which:  work horses  of which: mares of 3 years and over</p> <p><b><i>Population of rabbits</i></b>  of which: does</p> <p><b><i>Bee families</i></b></p>

**Population of poultry**  
of which: hens and cocks  
geese  
turkeys  
ducks  
other species

### **3.6. Dissemination frequency**

Quarterly  
Annually

### **3.7. Timeliness**

Quarterly – on the 14<sup>th</sup> day of the reported period;  
Annually – April 3.

### **3.8. Revision**

Disseminated data are preliminary for the reported period (n) and final for the basic period (respective period of the previous year (n-1)).

### **3.9. Period of reference**

The period of reference for the data on:  
- animal production is the cumulative period from the beginning of the year,  
- population of livestock and poultry – on the date of the beginning of the period (of the quarter/year under analysis) or in average for the reported period (only for agricultural enterprises).

## **4. Data Collection and Processing**

### **4.1. Data source**

#### **4.1.1. Statistical surveys**

Statistical survey “Livestock Sector Status” – statistical form 24-agr  
Statistical survey “Number of livestock and poultry in individual households” – statistical form nr. 6

#### **4.1.2. Administrative sources**

Administrative data regarding the population of livestock and poultry in individual households – supplied by the mayoralities of villages (communes), towns, and municipalities on quarterly basis.

#### **4.1.3. Estimations**

Estimations are applied for:  
- developing by NBS of the preliminary quarterly data regarding the animal production in individual households,  
- submitting data regarding the population of livestock and poultry in individual households, supplied by local public authorities

### **4.2. Characteristics of the statistical survey**

#### **4.2.1. Objective and background**

The main objective of the statistical report “Livestock Sector Status” is to determine the main indicators on: production (breeding, sale) of cattle and poultry in live weight; production of milk, eggs, and wool; balance of livestock and poultry population, population of livestock and poultry by species.

Practical organization and implementation of the survey is carried out by the National Bureau of Statistics through agriculture and environment statistics divisions.

The implementation of the statistical survey through the statistical report “Livestock Sector Status”, in the current structure, is necessary for estimating the evolution trends of agricultural activity.

The redesign of the statistical report in current structure was initiated in 2001.
<b>4.2.2. Statistical unit</b>
Agricultural holdings with legal entity or natural person status, which have in the balance sheet livestock and/or poultry (agricultural enterprises and farms); Individual households.
<b>4.2.3. Circle of units covered in the survey</b>
The general collectivity of units which are part of the survey scope is set of exhaustively surveyed units. In 2015, <b>the annual survey</b> on population and production of livestock/poultry within agricultural enterprises covered - 439 units; the quarterly survey – 401 units. In 2016 – quarterly – 401 units.
<b>4.2.4. Survey frequency</b>
Quarterly, annually
<b>4.2.5. Data collection</b>
The data are collected by filling in the statistical form “Livestock Sector Status” (24-agr) and submitting the filled in statistical report to the territorial bodies by the economic units covered in the survey.
<b>4.3. Processing and compilation of data</b>
<b>4.3.1. Data validation</b>
Data are verified and analyzed from their quality point of view, especially in relation to their internal coherence, temporal coherence, as well as coherence with other data.
<b>4.3.2. Compilation/extrapolation of data</b>
Data are compiled based on the centralization of information obtained within the statistical surveys.
<b>4.3.3. Adjustments</b>
Adjustments are made to the population of livestock in individual households.
<b>4.3.4. Quality assurance</b>
The quality of statistical data is assured by observing the fundamental principles of official statistics approved by the UN Economic Commission for Europe in 1992 (and Statistical Commission/UN in 1994), as well as those set forth in the Republic of Moldova Law on Official Statistics.  In its activity of producing statistical information, NBS pays huge importance to ensuring high quality of data. In this respect, a number of measures for quality assurance are carried out at every stage of the statistical process: organization of statistical surveys, collection, processing, and development of statistical information.  Important efforts are undertaken to ensure the plenitude and quality of data presentation by the respondents included in the statistical surveys.  Errors, inconsistencies, and suspicious data are brought to light so as to be verified and corrected.  The primary data are verified and analyzed from internal coherence point of view (within the questionnaire), temporal coherence (with data from previous periods), with data of other similar units, as well as with data available from other statistical surveys and administrative data sources. The missing or inconsistent data are imputed, if needed.  To ensure the quality of the primary data, meetings (seminars) are organized with respondents for explaining the definitions, the correct way to fill in the questionnaires, especially when they are modified or implemented.
<b>4.4. Data accuracy</b>
<b>4.4.1. Non-response rate</b>
SSAP
<b>4.4.2. Sampling errors</b>
The statistical survey “Livestock Sector Status” does not operate with samples.

## 5. Comparability and Coherence

### 5.1. International comparability

The statistical survey on animal production is constantly harmonized with international standards.

### 5.2. Comparability over the time

The indicators on increase/decrease rhythm of animal production volume during the current period as against the respective period of the previous year are comparable with the data series from the previous years.

### 5.3. Coherence with other statistics

The data of the statistical survey “Livestock Sector Status” are not correlated with other statistics.

## 6. Institutional Mandate (normative-legal basis)

The NBS activity is based on respecting the Republic of Moldova Constitution, the Law on Official Statistics No. 93 dated 26.05.2017, other legislative and normative acts, NBS management decisions and orders.

The Law on Official Statistics regulates the organization and operation of the unique system of official statistics, establishing the general principles for collecting, processing, centralizing, diminishing, and stocking statistical information (art.1).

Art. 5 of the Law provides that the production of statistical information is based on respecting the following principles: impartiality, objectiveness, relevance, transparency, confidentiality, cost-efficiency etc.

Being the central statistical body, the National Bureau of Statistics is an administrative authority created under the Government for leading and coordinating the activity in the statistics area.

In line with the Government Decision No. 1034 dated 29.12.11 on approval of the NBS Regulation and the Nominal Composition of the NBS Collegium, the National Bureau of Statistics:

- develops alone or jointly with other central administrative authorities and approves the methodologies for statistical surveys, as well as the methodologies for calculating statistical indicators, in line with the international standards, especially the EU standards, and with the advanced practice of other countries, and taking into account the peculiarities of the social-economic conditions of the Republic of Moldova;
- organizes, in line with the Program of Statistical Work, approved annually by the Government, statistics surveys regarding the economic, social, and demographic situation and development of the country, carrying out collection, processing, centralization, stocking, and dissemination of statistical data;

The legislative and normative acts ruling the activity of the NBS are available on its official page [www.statistica.md](http://www.statistica.md), under About NBS (<http://www.statistica.md/pageview.php?l=en&idc=323&>)

## 7. Confidentiality

### 7.1. Principles

According to art. 19 of the Law on Official Statistics No. 93 dated 26.05.2017, producers of official statistics shall take all regulatory, administrative, technical and organizational measures to protect confidential data and prevent their disclosure.

Chapter VII of the above-mentioned law stipulates that the data collected, processed and stored for the production of statistical information are confidential if they allow the direct or indirect identification of the respondents. ) The following shall not be considered confidential:

- a) data that can be obtained from publicly accessible sources according to the legislation;
- b) individual data on address, telephone, name, type of activity, number of employees of legal entities and individual entrepreneurs;
- c) data referring to public enterprises, institutions and organizations funded from the budget,



submitted at the request of the public administration authorities.

According to the Law on Official Statistics, art. 20, access to confidential information is granted to the persons who, according to their official functions, participate in the production of statistical information shall have access to individual data in so far as individual data are necessary for producing this information.

The same article stipulates that the access to individual data, which do not allow the direct identification of respondents, may be given for scientific survey projects, whose expected results do not refer to identifiable individual units, under the regulation approved by the central statistical authority.

Art. 23 (5) of the Law stipulates that the the statistical information cannot be disseminated to users if it refers to 1-3 statistical units.

## **7.2. Practical assurance of the confidentiality rules**

To ensure the protection of confidential statistical data in compliance with the Law on Official Statistics No. 93 dated 26.05.2017, the National Bureau of Statistics undertakes all the regulatory, administrative, technical, and organizational measures to protect the confidential statistical information and prevent its disclosure.

In compliance with the above-mentioned law, the employees of producers of official statistics, including temporary employees who, according to their official functions, have direct access to individual data shall be obliged to observe the confidentiality of these data during and after termination of employment.

Before being disseminated, the statistical data are verified if they meet the protection requirements set for confidential data. If the statistical data contain confidential information (see p. 7.1), they are not disseminated, but aggregated at the minimum available level which ensures the protection of data confidentiality.

## **8. Access to Information and Dissemination Format**

### **8.1. Access to information**

#### **8.1.1. Calendar of statistical publications**

Annually the Advance release calendar is developed by NBS.

#### **8.1.2. Access to the calendar of statistical publications**

The press release calendar is posted on the NBS official page [www.statistica.md](http://www.statistica.md).

#### **8.1.3. Access to statistical data**

According to the Law on Official Statistics No. 93 dated 26.05.2017, art. 23:

- a) Producers of official statistics shall be obliged to disseminate the statistical information within the deadlines specified in the programme of statistical works and in the press-release calendar.
- b) The dissemination of statistical information laid down in the programme of statistical works to all categories of users shall be made free of charge and under equal access conditions in terms of volume, quality and time of dissemination

The program of statistical work may be accessed on the web page [www.statistica.md](http://www.statistica.md), under About NBS / legislative and normative acts (<http://www.statistica.md/pageview.php?l=en&idc=323&>)

The NBS web page [www.statistica.md](http://www.statistica.md) represents the most important information source for ensuring users' access to different statistical information and transparency about the NBS activity.

All the operative information, informative notes, time series, as well as the statistical publications developed by NBS are placed on its official web page.

### **8.2. Dissemination format**

#### **8.2.1. Operative information / Analytical notes**

The operative information and analytical notes are published on the official page of NBS: <http://www.statistica.md> under Press Releases, according to the Press Release Calendar.

#### **8.2.2. Publications**

Statistical publications: Statistical Yearbook, Territorial statistics; Statistical pocket-book "Moldova in

Figures”, Bulletin by regions, Social-economic Situation of the Republic of Moldova etc. Access to publications: - in electronic format, on NBS official page <a href="http://www.statistica.md">www.statistica.md</a> , under Products and services / Publications <a href="http://www.statistica.md/pageview.php?l=en&amp;idc=350&amp;nod=1&amp;">http://www.statistica.md/pageview.php?l=en&amp;idc=350&amp;nod=1&amp;</a> ) - in hardcopy format – in NBS library (more details at the address <a href="http://www.statistica.md/libview.php?l=en&amp;idc=340&amp;id=2400">http://www.statistica.md/libview.php?l=en&amp;idc=340&amp;id=2400</a> ) or may be procured at the NBS office (more details at the address <a href="http://www.statistica.md">www.statistica.md</a> , under Publications <a href="http://www.statistica.md/pageview.php?l=en&amp;idc=350&amp;id=2219">http://www.statistica.md/pageview.php?l=en&amp;idc=350&amp;id=2219</a> )
<b>8.2.3. Databases/time series</b>
- NBS official page: <a href="http://www.statistica.md">http://www.statistica.md</a> under: Press Release, Statistics by themes / Agriculture / Animal husbandry, Publications; - Statistical databank <a href="http://statbank.statistica.md">http://statbank.statistica.md</a> , under Economic statistics Agriculture / Animal husbandry
<b>8.2.4. Questionnaires/data sent upon request from international organizations</b>
Scheme no. 6.2 “Population of livestock and poultry” and no. 6.3 “Animal production” - CIS (quarterly) as well as FAO international questionnaires.
<b>8.2.5. Requests for additional data</b>
NBS makes available for users additional statistical information beyond the data presented in the statistical publications, informative notes, operative information, as well as the data placed on the official web page in the limits of available information, in line with the Law on Official Statistics.

## 9. Useful References (links)

### 9.1. Accessibility of documentation on methodology

The methodology is available on the official page [www.statistica.md](http://www.statistica.md) , under Metadata (<http://www.statistica.md/pageview.php?l=en&idc=351&nod=1&> ).

### 9.2. Accessibility of documentation on Evaluation Reports

The NBS assessment reports are available on the official page [www.statistica.md](http://www.statistica.md) , under About NBS / Assessments and Opinions on NBS / Assessment Reports (<http://www.statistica.md/pageview.php?l=en&idc=399&id=2739> ).

### 9.3. Accessibility of information on user surveys

User surveys are available on the official page [www.statistica.md](http://www.statistica.md) , under About NBS / Assessments and Opinions on NBS / User Surveys (<http://www.statistica.md/pageview.php?l=en&idc=399&id=2740> ).

### 9.4. Other useful references

EUROSTAT database	<a href="http://ec.europa.eu/eurostat/data/database">http://ec.europa.eu/eurostat/data/database</a>
UNData database	<a href="http://data.un.org/Browse.aspx">http://data.un.org/Browse.aspx</a>
UN Economic Commission for Europe database	<a href="http://w3.unece.org/pxweb/Dialog/">http://w3.unece.org/pxweb/Dialog/</a>
FAO STAT database	<a href="http://faostat.org/">http://faostat.org/</a>