



Food and Agriculture Organization  
of the United Nations

# FAOSTAT

## FOOD AND AGRICULTURAL DATA

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# FAOSTAT

The FAOSTAT is the **largest repository** of *agricultural data* in the world. It is an online database containing over **1 million time-series** records **from 1961** from over **220 countries**, covering statistics on agriculture production, agricultural trade, emissions in agriculture, inputs, emissions in land use, Food Balance Sheets, investment in agriculture, food security, forestry, fisheries, prices for agricultural commodities, agri-environmental indicators, among others.

The FAOSTAT data are grouped into 15 domains of which the three below are pertinent to livestock numbers data:

- Crop & Livestock Production
- Trade of agricultural and food commodities
- Food Balances



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## LIVESTOCK DATA

The livestock annual data are presented in

### 1. Production Domain

*Number of live animals:*

- Animals (cattle, buffalo, horses, assess, mules, camels and camelids, sheep, goats, pigs, rabbits)
- Poultry (chickens, turkeys, gees, ducks)
- Beehives

*Livestock primary:*

- Number of slaughtered animals, meat production
- Number of milking animals, milk production
- Number of laying chickens, hen eggs production
- Natural honey production

*Livestock processed (cheese, butter, tallow, and etc.)*



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## LIVESTOCK DATA

### **2. Trade Domain**

*Trade of live animals*

*Trade of livestock products*

### **3. Food balance domain**

*Balances for the livestock products (milk, meat, eggs, and etc.)*



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## LIVESTOCK DATA

### Live Animals

[DOWNLOAD DATA](#) [VISUALIZE DATA](#) [METADATA](#)

**COUNTRIES**   [REGIONS](#)   [SPECIAL GROUPS](#)

Filter results e.g. afghanistan

- Afghanistan
- Albania
- Algeria
- American Samoa
- Andorra
- Angola

Select All   Clear All

**ELEMENTS**

Filter results e.g. stocks

- Stocks

Select All   Clear All

Stocks ×

**ITEMS**   [ITEMS AGGREGATED](#)

Filter results e.g. animals live nes

- Camels
- Cattle
- Chickens
- Ducks
- Geese and guinea fowls
- Goats

Select All   Clear All

**YEARS**

Filter results e.g. 2017

- 2017
- 2016
- 2015
- 2014
- 2013
- 2012

Select All   Clear All



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## LIVESTOCK DATA COLLECTION

### PRODUCTION DATA

- The main source for the FAOSTAT production data are the **Annual Agricultural Production Questionnaires** which we send to countries.

For the livestock data we request information about number of live animals, number of slaughtered animals, meat production, milking animals, milk production, laying chickens, eggs, honey production, and production of selected livestock derived commodities.

- We also collect the agricultural production data from other different data sources:

Official (NSO websites and publications, EUROSTAT, CountrySTAT);

Unofficial data sources (Oil World)

### TRADE

The trade data sources are original country files, compiled by the national customs offices, which we obtain through the United National Statistics Division (UNSD). These files are by trade flow detail by commodity, with country of origin and destination, with quantities/numbers and respective dollar values of each transaction. We have some 135 official reporters. Mirrored statistics are used for non-reporting countries.



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## ESTIMATION OF MISSING LIVESTOCK DATA

### PRODUCTION DATA

- **Number of Live Animals.** Missing data are imputed automatically by the ensemble approach or estimated manually on the basis of the expert judgment;
- **Slaughtered Animals.** First, we impute missing *off-take rates* by the ensemble approach. Then, the following formula is applied:  
*number of slaughtered animals = number live animal \* off-take ratio.*
- **Meat Production.** The triplet is : *meat production = number of slaughtered animals \* carcass weight.* Two variables of this triplet should be known (official, unofficial, estimated or imputed), then the third one is calculated from the first two. We use again the ensemble approach in order to impute missing of meat production or carcass weight data.
- **Number Milking Animals and Milk Production; Number of Laying chickens and Hen Eggs Production.** Missing data are imputed automatically by the Hierarchical Linear Model or estimated manually on the basis of the expert judgment;

### TRADE DATA

- For cases where trade quantities are missing but dollar values exist, quantities are estimated using the median value of the trade flows of that commodity;
- For non-reporting countries, mirror trade data are used, i.e. extract the corresponding trade data from the partners and inverting the flows.



# FAOSTAT

## IMPROVING DATA QUALITY

- Liaise more frequently with countries to **improve the response rate**, data coverage, and various data quality issues.
- Make use of **innovative data approaches** such as EO data, web-scraping and text mining to validate and inform our imputations and estimations, and fill in data gaps.
- Countries need to have a much higher awareness of FAOSTAT, to review the data there regularly and provide feedback when necessary. Essentially, **FAOSTAT should also be used as a country peer review instrument.**
- Strengthen data exchange **collaboration with international and regional organizations.**



# Thank you!

<http://www.fao.org/faostat/en/#home>