
Dataset Information:

Domain: Fertilizers by Product

Abstract The **FAOSTAT Fertilizers by Product** domain contains information on *agricultural use, trade and production* of chemical and mineral fertilizers, in tonnes of product, over the period from 2002 to the most recent year available. Data are disseminated by country and by year.

Statistics by nutrient are available in FAOSTAT in the [Fertilizers by Nutrient domain](#).

International Standards This **FAOSTAT Fertilizers by Product** domain is compliant with the **System of Environmental-Economic Accounting for Agriculture, Forestry and Fisheries**, SEEA AFF. It provides data on inorganic fertilizers in terms of product weight, useful for the compilation of the SEEA-AFF “*physical flow account for fertilizers*” (FAO & UNSD, 2017, table 4.5). Data used in the physical flow account, however, should be expressed in nutrients; data already converted to nutrients and gap-filled are available in the FAOSTAT *Fertilizers by Nutrient* domain.

The **FAOSTAT Fertilizers by Product** domain also aligns with the **Framework for the Development of Environmental Statistics**, FDES 2013. Statistics on the amount of chemical fertilizers used for crop production are part of the core set of environmental statistics of FDES (item 2.5.3.b.2). Additionally, statistics on chemical fertilizers used in forestry activities are part of FDES topic 2.5.1, ‘timber resources’, and the total amount of chemical fertilizers used to enrich soils are part of FDES topic 3.4.1, ‘release of chemical substances’. Statistics on production, imports and exports of chemical fertilizers are included in FDES under ‘mineral resources’, in topic 2.1.2 (UNSD 2017).

Creation Date 2002

Last Update 2022

Data Type Agricultural input statistics

Category Environment

Time Period 2002-2021

Periodicity Annual

Geographical Coverage World

Spatial Unit Country

Language Multilingual (EN, FR, ES)

Methodology and Quality Information:

Data Collection The main data source for production and agricultural use is the [FAOSTAT Fertilizers questionnaire](#), complemented with national publications when available.

Agricultural use of fertilizers refers to the use for crops, livestock, forestry, fisheries and aquaculture, excluding use for animal feed.

Other plant nutrition uses (such as application to ponds, turf and ornamentals) would be excluded, but limited data availability currently prevents the discrimination of these uses. Therefore, it is assumed that those plant nutrition uses may also be included in the values for agriculture provided in this domain.

Industrial uses, also known as technical uses, are excluded, to the extent allowed by data availability.

Changes in stocks are not considered either, due to lack of information. The impact of stocks in the overall trend of the time series is assumed to be negligible.

Production data represent the tonnes of product manufactured in a country. Production of certain fertilizers may derive from the transformation of other fertilizers, which can be defined as secondary production. A note on the dissemination of secondary production data is included in the 'limitations' section, below.

Trade data (import and export) are obtained from [UN Comtrade](#) (see disclaimer about the coverage and limitations of [UN Comtrade data](#)). The correspondence between the fertilizer product categories in this domain and the Harmonized System (HS) codes used in UN Comtrade are indicated below, in the 'map to HS codes' section.

Gap-filling The goal of this statistical domain is to disseminate official data provided by countries on fertilizers production, trade and agricultural use, by product (flagged A depending if the data were provided via either questionnaire or UN Comtrade, in a national publication).

For production and agricultural use, unfortunately, data availability by product is often more limited than aggregated by nutrient, and the application of imputation techniques to fill data gaps is also more challenging. As a result, data completeness is lower in this domain than in *Fertilizers by Nutrient*. Therefore, this domain provides the available information by product and country, but no regional aggregates, as those would be affected by the missing data.

In the case of trade data, in contrast, totals by nutrient are calculated in most cases based on the information by product provided by UN Comtrade, which is included in aggregated form in this domain. Data reported by each country to Comtrade are considered official (and flagged "A"), whereas data including estimations by UN Comtrade are flagged "X". Missing data may also be gap-filled using "mirror" data, i.e. trade partners' data (and flagged "E").

Additionally, in the process of quality control and imputation, data are discussed with industry experts. This is part of an ongoing collaboration with the International Fertilizer Association (IFA), which provides fertilizer statistics through [IFASTAT](#) within the scope allowed by its confidentiality obligations.

Map to HS codes

The table indicates the correspondence between the fertilizer product categories used in this FAOSTAT domain and the Harmonized System (HS) codes used in UN Comtrade.

Commodity	HS code
STRAIGHT NITROGENOUS FERTILIZERS	
Urea	310210
Ammonium sulphate	310221
Ammonium nitrate	310230
Calcium ammonium nitrate and other mixtures with calcium carbonate	310240
Sodium nitrate	310250
Urea and ammonium nitrate solutions	310280
Ammonia, anhydrous	281410
Other nitrogenous fertilizers, n.e.c.	281420, 310260, 282710, 283410, 310229, 310290, 310270 (HS 92-02)
STRAIGHT PHOSPHATIC FERTILIZERS	
Phosphate rock	2510
Superphosphates above 35%	310310, 310311 (HS 17)
Superphosphates, other	310319 (HS 17)
Other phosphatic fertilizers, n.e.c.	310390, 310320 (HS 92-02)
STRAIGHT POTASSIC FERTILIZERS	
Potassium chloride (muriate of potash)	310420
Potassium sulphate (sulphate of potash)	310430
Other potassic fertilizers, n.e.c.	310490, 310410 (HS 92-02)
COMPOUND FERTILIZERS	
NPK fertilizers	310520
Diammonium phosphate	310530
Monoammonium phosphate	310540
Other NP compounds	310551, 310559
Potassium nitrate	283421
Other NK compounds	-
PK compounds	310560
OTHER FERTILIZERS	
Fertilizers n.e.c.	310510, 310590

Limitations

Data in this FAOSTAT domain refer to calendar years. However, in some cases the data available correspond to fertilizer years. These cases are indicated in country notes in the “related documents” section in FAOSTAT.

Production of certain fertilizers may derive from the transformation of other fertilizer products. This can be considered ‘secondary production’. In the past, data related to secondary production was not reported in this *Fertilizers by Product* domain, to avoid double-counting when calculating the totals in nutrients. Now, however, data considered secondary production are allowed in this domain, to provide more complete data by product. Notwithstanding, the data identified as secondary production are not included in the aggregates of the *Fertilizers by Nutrient* domain, to avoid double-counting. Some risk of double-counting remains as long as there may be cases of secondary production that have not yet been identified as such.

A particular case is that of anhydrous ammonia and phosphate rock. In the *Fertilizers by Nutrient* domain these are considered fertilizer products only if used

for direct application in agriculture; otherwise, they are considered raw materials or intermediate products and are excluded from the calculation of totals in nutrients. Nevertheless, the available data on production and trade of anhydrous ammonia and phosphate rock are provided in this *Fertilizers by Product* domain.

In summary, the sum of the data from this *Fertilizers by Product* domain, converted to nutrients, may differ from the totals provided in the *Fertilizers by Nutrient* domain. This may be because: i) data available by nutrient are often more complete than data available by product, ii) data available by nutrient may have been gap-filled, ii) data for anhydrous ammonia and phosphate rock may be excluded from the totals by nutrient, and iii) in the case of production data, some data by product may be considered secondary production.

Data Collection Method The main data source of the **FAOSTAT Fertilizers by Product** domain is, for production and agricultural use, the [FAO Fertilizers Questionnaire](#).

The trade data source is the [COMTRADE database of the United Nations Statistics Division](#). A disclaimer about the coverage and limitations of UN Comtrade data is available at: <http://comtrade.un.org/db/help/uReadMeFirst.aspx>.

Additional data sources may include: national publications, national websites, publications and yearbooks related to groups of countries, country project reports, studies available in other FAO Divisions, and data discussed with industry experts.

Useful links International Fertilizer Industry Association (IFA) Database
<http://www.fertilizer.org>

United Nations Commodity Trade Statistics Database (COMTRADE)
<http://comtrade.un.org>

FAO & UNSD (2017) System of Environmental-Economic Accounting for Agriculture, Forestry and Fisheries: SEEA AFF. White cover version.
<https://seea.un.org/content/ag-for-fish>

UNSD (2017) Framework for the Development of Environment Statistics (FDES 2013) <https://unstats.un.org/unsd/envstats/fdes.cshtml>

Distribution Information:

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