



	Macedonia, FYR	Europe	World
<b>Agricultural Production and Yields</b>			
Cereals, 1999-2001			
Average production (000 metric tons)	598	393,862	2,075,387
Percent change since 1979-81	X	X	32%
Per capita production (tons per person)	294	542	343
Percent change since 1979-81	X	X	-4%
Average crop yield (kg per ha)	2,711	4,187	3,096
Percent change since 1979-81	X	X	41%
Roots and tubers 1996-1998			
Average production (000 metric tons)	165	150,050	638,438
Average crop yield (kg per ha)	11,794	15,986	12,958
Pulses, 1996-1998			
Average production (000 metric tons)	30	9,780	55,469
Average crop yield (kg per ha)	1,132	1,977	808
Meat, 1999-2001			
Average production (000 metric tons)	34	50,296	233,218
Percent change since 1979-81	X	X	71%
<b>Agricultural Land,</b>			
Total cropland (000 ha), 1999	635	307,286	1,501,452
Hectares of cropland per 1,000 population, 1999	314	422	251
Arable & permanent cropland as a percent of total land area, 1998	24.7%	13.4%	11.3%
Percent of cropland that is irrigated, 1999	8.7%	7.9%	18.3%
<b>Agricultural Inputs</b>			
Average annual fertilizer use, 1999			
Total (thousand metric tons)	44	23,522	141,360
Intensity (kg per hectare cropland)	69	77	94
Pesticide use, 1994-1996 (kg/ha cropland) {c}	X	X	X
Number of tractors, 1997	54,000	11,197,796	26,334,690
Agricultural workers as a percentage of the total labor force, 1990	21.5%	X	X
Percent of GDP generated from agricultural activities, 2000	11.8%	2.7%	5.0%

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## Agriculture and Food-- Macedonia, FYR

	Macedonia, FYR	Europe	World
<b>Food Security</b>			
Variation in domestic cereal production, 1992-2001 (average percent variation from mean)	8.4%	4.0%	3.5%
Net cereal imports and food aid as a percent of total consumption {b}, 1998-2000	19.1%	X	X
Food aid as a percent of total imports, 1998-2000	52.2%	X	X
Average daily per capita calorie supply, 1999 (kilocalories)	2,878	3,230	2,808
Average daily per capita calories from animal products, 1999 (kilocalories)	489	906	460
Percent of children that are underweight, 1995-2000 {c}	6.0%	X	27.0%

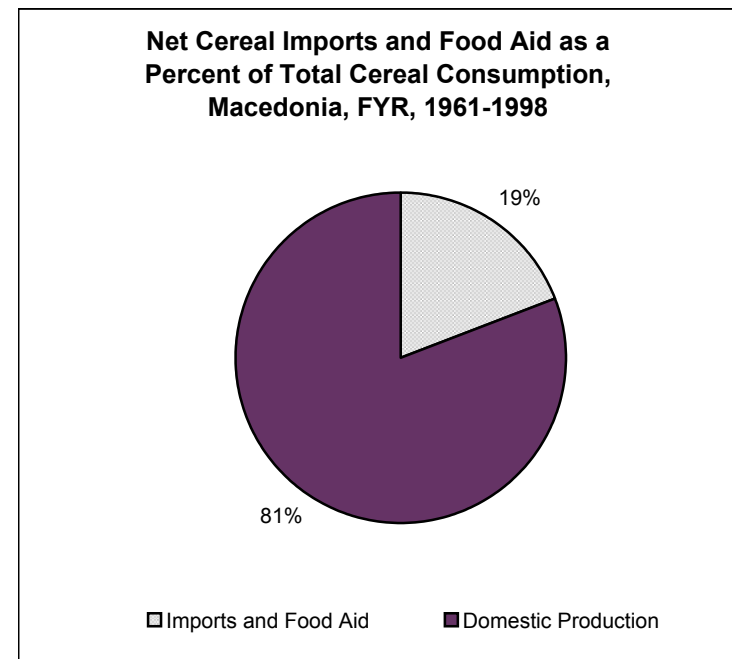
### Other Resources:

Country Profiles of the Food and Agriculture Organization  
of the United Nations, Agriculture Sector:

<http://www.fao.org/countryprofiles/index.asp?subj=4&iso3=ALB>

### Footnotes:

- The index of agricultural production is a ratio of country's net agricultural output in 1996-98 relative to the base period 1989--91. This ratio is then multiplied by 100 to obtain an index number.
- Negative values, indicating a net export of grain, are not shown. Cereal consumption is defined as production plus imports minus exports.
- Data are for the most recent year available within the given time range.



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## Agriculture and Food—Sources and Definitions

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### Agricultural Production and Yields

Production includes the quantities of a commodity sold in the market (marketed production) and the quantities consumed or used by producers (auto-consumption). Harvesting losses, threshing losses, and unharvested portions of the crop are not included. The time reference on crop production is based on the calendar year; data for any particular crop are reported under the calendar year in which the entire harvest or the bulk of it took place. In a number of cases, crops assigned by countries to a particular split year may appear under two different calendar years.

**Average production of cereals** refer to the amount of cereals produced in a given country or region each year. Cereals include wheat, barley, maize, rye, oats, millet, sorghum, rice, buckwheat, alpiste/canary seed, fonio, quinoa, triticale, wheat flour, and the cereal component of blended foods. Data relate to crops harvested for dry grain only. Mixed grains and buckwheat are included, although the following cereals are excluded: crops harvested for hay, crops used for grazing, and crops harvested green for food, feed or silage.

**Per capita production of cereals** is calculated using national population data for the year specified.

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**Average cereal crop yields** refer to the amount of grain produced per unit of harvested area of cereals in a given country or region each year (i.e. average yield=total production/harvested area). For cereal crop yields, area data relate to harvested area. Some countries report sown or cultivated area only; however, in these countries the sown or cultivated area does not differ significantly in normal years from the area actually harvested, either because practically the whole area sown is harvested or because the area surveys are conducted around the harvest period. For most countries, FAO does not directly record yield data but instead divides production data by the area harvested for a particular country and year. In all cases, yields are computed from detailed area and production data expressed in hectares and metric tons.

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**Average production and yield of roots and tubers** covers all root crops grown principally for human consumption, such as cassava, yucca, taro, and yams; root crops grown principally for feed are excluded. See **production of cereals**, **cereal crop yields**, and the introductory paragraph above for more information.

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**Average production and yield of pulses** includes those harvested for dry harvest only, such as lentils, pigeon peas, cowpeas, and vetches, and does not exclude those used for feed. See **production of cereals**, **cereal crop yields**, and the introductory paragraph above for more information.

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**Average annual meat production** refers to the mass of meat in metric tons produced annually in a given country. Total meat production comprises horse meat, poultry meat and meat from all other domestic or wild animals such as camels, rabbits, reindeer and game animals. Both commercial and farm slaughter are included. Meat production for most species is calculated from multiplying the number of animals slaughtered by the average dressed carcass weight. Dressed carcass weights exclude offal and slaughter fats. Data relate to animals slaughtered within national boundaries, irrespective of their origin. Production data were collected mostly through annual FAO surveys to governments. Data have been grouped in 12 month periods ending 30 September of the years stated in the tables. For example, animals enumerated in a given country at any time between 1 October 1999 and 30 September 2000 are shown under the year 2000.

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## Sources

Food and Agriculture Organization of the United Nations (FAO). 2002. *FAOSTAT on-line statistical* service. Rome: FAO. Available on-line at <http://apps.fao.org>.

Population Data (for per capita calculations): Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat. 2002. *World Population Prospects: The 2000 Revision*. New York: United Nations. Data set on CD-ROM.

## Agricultural Land and Inputs

**Total cropland** is comprised of both arable and permanent land in a given country for each year. Arable land is land under temporary crops (double-cropped areas are counted only once), temporary meadows for mowing or pasture, land under market and kitchen gardens, and land fallow for less than five years. The abandoned land resulting from shifting cultivation is not included in this category. Data for "Arable land" are not meant to indicate the amount of land that is potentially cultivable. Permanent Crops is land cultivated with crops that occupy the land for long periods and need not be replanted after each harvest, such as cocoa, coffee and rubber; this category includes land under flowering shrubs, fruit trees, nut trees and vines, but excludes land under trees grown for wood or timber.

**Hectares of cropland per 1,000 population** is calculated using national population data for the year specified.

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**Arable and Permanent Cropland as a Percent of Total Land area** is calculated by dividing total cropland (above) by total land area for a given country. According to FAO, the total area of the country includes the area under inland water bodies. These data are reported to FAO by United Nations Statistical Division. Possible variations in the data may be due to updating and revisions of country data and not necessarily to any change of area.

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**Percentage of cropland that is irrigated** is calculated by dividing irrigated land by total cropland (above) for a given country. Irrigated land refers to the area of land with access to irrigation in a given country each year. These data refer to, in thousands of hectares, the area of land in a given country which is equipped to provide water to crops. These include areas equipped for full and partial control irrigation, spate irrigation areas, and equipped wetland or inland valley bottoms.

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**Average annual fertilizer use** is the use in metric tons of the nutrients nitrogen (N), potash (K<sub>2</sub>O), and phosphate (P<sub>2</sub>O<sub>5</sub>). Data refer to the fertilizer year 1 July - 30 June. For countries that report their fertilizer statistics on a calendar-year basis, data are shown under the fertilizer year that begins in that calendar year; for example, 1991 data are under the fertilizer year starting on 1 July 1991. Data is collected through the FAO fertilizer questionnaire.

**Fertilizer Intensity** is calculated by fertilizer use by total cropland (above) for a given country.

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**Pesticide Use** includes quantities of pesticides used in (or sold to) the agricultural sector. Figures are generally expressed in terms of active ingredients. Pesticides include: insecticides, mineral oils, herbicides, fungicides and bactericides, seed treatment fungicides and insecticides, plant growth regulators, and rodenticides. A strict inter-country comparison on the basis of the database is not feasible because (1) The country coverage and time series are incomplete due to a high rate of non-response, and (2) Although countries have been requested to report data in terms of active ingredients, some countries may have reported in formulation weight (including diluents and adjuvants) without specific indication.

**Number of Tractors** generally refer to wheeled and crawler tractors used in agriculture. Garden tractors are excluded.

**Agricultural workers as a percentage of the total labor force** is the proportion of the total labor force recorded as working in agriculture, hunting, forestry, and fishing. Labor force comprises all people who meet the International Labour Organization's definition of the economically active population. View full technical notes on-line at [http://earthtrends.wri.org/searchable\\_db/variablenotes\\_static.cfm?varid=205&themeid=8](http://earthtrends.wri.org/searchable_db/variablenotes_static.cfm?varid=205&themeid=8)

**Percent of GDP generated from agricultural activities** measures the percent of total output of goods and services which are a result of value added by the agriculture sector. These goods and services are for final use occurring within the domestic territory of a given country, regardless of the allocation to domestic and foreign claims. The industrial origin of value added is determined by the International Standard Industrial Classification (ISIC) revision 3. Agriculture corresponds to ISIC divisions 1-5 and includes forestry and fishing. Agricultural production often must be estimated indirectly, using a combination of methods involving estimates of inputs, yields, and area under cultivation. This approach sometimes leads to crude approximations that can differ from the true values over time and across crops for reasons other than climatic conditions or farming techniques. Similarly, agricultural inputs that cannot easily be allocated to specific outputs are frequently "netted out" using equally crude and ad hoc approximations. View full technical notes on-line at [http://earthtrends.wri.org/searchable\\_db/variablenotes\\_static.cfm?varid=214&themeid=8](http://earthtrends.wri.org/searchable_db/variablenotes_static.cfm?varid=214&themeid=8)

#### **Sources**

Food and Agriculture Organization of the United Nations (FAO). 2002. *FAOSTAT on-line statistical* service. Rome: FAO. Available on-line at <http://apps.fao.org>.

Development Data Group, The World Bank. 2002. *World Development Indicators 2002 online* (see [http://publications.worldbank.org/e-commerce/catalog/product?item\\_id=631625](http://publications.worldbank.org/e-commerce/catalog/product?item_id=631625)). Washington, D.C.: The World Bank.

#### **Food Security**

**Variation in domestic cereal production** is found by taking the average variation (absolute deviation from mean) of cereal production between 1992 and 2001 and dividing this by the mean production. This is an indicator of whether cereal production is stable enough to ensure a predictable food supply. Please refer to the definition above for more information on cereal production.

**Net cereal imports and food aid as a percent of total consumption** indicates whether countries are able to produce sufficient grain for domestic consumption. It is calculated by dividing net imports (imports minus exports) by total cereal consumption (production + imports – exports).

**Food Aid as a Percent of Total Imports** is calculated by dividing total food aid by net cereal imports (imports minus exports).

Import and export data have, for the most part, been supplied to FAO by governments through magnetic tapes, national publications and, most frequently, FAO questionnaires. Official trade data have sometimes been supplemented with data from unofficial sources or trade information supplied by other national or international agencies or organizations. Cereal food aid shipments are included in FAO's import and export calculations. Information on food aid shipments has been provided to FAO by the World Food Program (please see <http://www.wfp.org>). Donors that have provided food aid in very small quantities or at irregular intervals are not listed individually.

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**Average Daily Per Capita Calorie supply** refers to the amount of available food per person, per day, expressed in kilocalories (1 kilocalorie = 1 Calorie = 4.19 kilojoules).

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**Calorie supply from animal products** refers to the amount of available food from animal products per person, per day. Animal products include: all types of meat and fish; animal fats and fish oils; edible offal; milk, butter, cheese and cream; and eggs and egg products.

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FAO compiles statistics on apparent food consumption based on Supply/Utilization Accounts (SUAs) maintained in FAOSTAT. SUAs are time series data dealing with statistics on supply and utilization. For each product, the SUA traces supplies from production, imports and stocks to its utilization in different

forms—addition to stocks, exports, animal feed, seed, processing for food and non-food purposes, waste (or losses), and lastly, as food available to the population, where appropriate. For internal consistency, total supply balances with total utilization. In many cases commodities are not consumed in the primary form in which they are presented, e.g. cereals enter the household mainly in processed form like flour, meal, husked or milled rice. To take this fact into account, the caloric value has been derived by applying the appropriate food composition factors to the quantities of the processed commodities, not by examining primary commodities. Per capita supplies are derived from the total supplies available for human consumption by dividing the quantities of food by the total population actually partaking of the food supplies during the reference period. In almost all cases, the population figures used are the mid-year estimates published by the United Nations Population Division.

**Percent of Children that are Underweight** refers to children under 5 whose weight-for-age is below minus 2 standard deviations (for moderate underweight) or below minus 3 standard deviations (for severe underweight) from the median weight-for-age of a reference population. The above data include both moderately and severely underweight children. Multiple Indicator Cluster Surveys (MICS), developed by UNICEF with partners in 1997, were used by 66 government ministries to collect the data presented. Demographic and Health Surveys (DHS) provided relevant data to UNICEF for more than 35 additional countries. For more information, please consult the website maintained by DHS at <http://www.measuredhs.com>. Official national level government data provide data for the majority of remaining countries. Where no reliable official figures exist, estimates have been made by UNICEF. The various data sources dictate that the data inevitably cover a wide range of quality; where possible, only comprehensive or representative national data have been used.

#### **Sources**

Food and Agriculture Organization of the United Nations (FAO). 2002. *FAOSTAT on-line statistical* service. Rome: FAO. Available on-line at <http://apps.fao.org>.

United Nation's Children's Fund (UNICEF). 2001. *State of the World's Children 2002*. New York: UNICEF. Data available on-line at <http://www.unicef.org/sowc02/>.