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TABLES

This data product is one in a series of data products entitled Agricultural Statistics Database for the People’s Republic of China, 1949-93. The products in the series include:

- 90010 China: Basic Social and Economic Indicators (1992)\*\*
- 90011 China: Grain Statistics (1993)\*\*
- 90012 China: Fiber and Oilseed Statistics (1993)\*\*
- 90013 China: Economic and Other Crop Statistics (1993)\*\*
- 90014 China: Livestock Statistics (1993)\*\*
- 90015 China: Agricultural Input Statistics (1992)\*\*
- 90016 China: Agricultural Prices (1991-2)\*\*
- 90017 China: Costs of Agricultural Production (1990)\*\*
- 90019 China: Agricultural Trade Statistics (1992-3)\*\*
- 90021 China: Consumption and Expenditure Statistics (1992)\*\*

\*\* Each data product has been updated through the year indicated in parenthesis.

Abstract

These data products consists of roughly 300 tables of agricultural statistics for the People’s Republic of China. The statistics cover land use, population, labor force, gross value of agricultural output, agricultural investment, crop production, crop sown area, state procurement, livestock inventory and slaughter, animal product output, input production and use, costs of production, consumption of agricultural commodities, selected retail price indices and mixed average procurement prices for selected agricultural crops, and finally, quantity and value of imports and exports of selected commodities. Data are presented for the national level and, when available, the provincial level as well.

Keywords: China, statistics, population, labor force, gross value of agricultural output, crops, livestock, agricultural inputs, costs of production, consumption, prices, and trade.



# Introduction

This database updates and expands the coverage of the 1992 publication, Agricultural Statistics of the People's Republic of China, 1949-92, SB-844. It compiles much of the important agricultural data that China's State Statistical Bureau (SSB) reported for 1949-93. This report forms a current agricultural database for China using statistics from a wide variety of official, primarily Chinese language, sources from the People's Republic of China (PRC). Because this report is restricted to official Chinese data, it is not necessarily consistent with data used by the U.S. Department of Agriculture (USDA). While USDA has used official data from China for recent years, not all of USDA's historical series have been revised to reflect the newly released historical statistical series, particularly when the data provided by China are incomplete.

This bulletin provides a relatively complete national historical series for 1949-90, along with a provincial series for 1979-90, for China's area and production of most major crops. Other agricultural data available from official sources are also covered in this report, including livestock production and inventory, selected series on production and use of major inputs, land use and population data, procurement prices, consumption statistics, and major agricultural imports and exports by commodity. Other important agricultural data, such as commodity-by-country trade statistics and detailed commodity prices, are either not yet available or beyond the scope of this report.

During the 1950's, the Government of the People's Republic of China published a great deal of statistical data. The economic disasters of the late 1950's and the political and social turmoil of the Cultural Revolution (1966-76), however, led to a 20-year period during which no official statistical data were released. Following the death of Mao Zedong in 1976 and the emergence of economic growth as an important priority of the leadership, China began rebuilding its statistical system.

In June 1979, the SSB released a state plan fulfillment communique describing the successes and failures of the state economic plan, the first in 20 years, and in August 1980, the first official statistical yearbook was published. Since then, a wide range of agricultural, economic, statistical, encyclopedic yearbooks, and other official statistical books, pamphlets, and economic plan communiqués have been published.

Although China has revised some of its earlier figures (primarily on grain production) since data publication resumed in 1979, most remain unchanged from yearbook to yearbook. This suggests that the SSB has carefully scrutinized these statistics and considers them to be the best they can currently produce.

China initially published many of the series included in this report for only a few key years. Each subsequent yearbook has added data not available in earlier years; so gaps in some series have already been filled. China probably will eventually publish more of the important data needed to analyze production, consumption, and trade in the agricultural sector. A wide variety of data is collected by SSB enumerators every year. The SSB directs the surveys, prints the survey forms, and trains the survey personnel. The surveys are used to collect data on rural population, labor force

conditions, crop production, livestock output, household income and expenditures, and commodity prices.

Area and yield estimates are compiled at local levels (county and prefecture) to arrive at provincial and then national production totals. Not all agricultural commodities are reported by the SSB. For data not available from the SSB, we used the annual China Agriculture Yearbook published by China's Ministry of Agriculture (MOA). In most cases, these data correspond closely to SSB data where there are overlaps, so the data from MOA are accepted as a secondary source of official data. MOA production and area data are collected by a somewhat different statistical system. Therefore, there are occasions where there are more significant differences between the data reported by SSB and MOA.

Another source of crop and livestock data is China's Ministry of Commerce (MOC). The MOC publishes the China Commerce Yearbook, the only source for many of the procurement and consumption statistics presented in this bulletin. The MOC is also the only source for provincial-level grain procurement and sales data broken down by fixed and negotiated price. And finally, the MOC is the data source for total national, urban, and rural consumption of certain agricultural commodities. The reader should note that when consumption data are divided by the appropriate population, the resulting per capita consumption figures do not correspond exactly with the official per capita consumption data published by the SSB. As with the MOA, the MOC has its own internal statistical system to collect and process the data published in its yearbook.

Provincial-level cost-of-production data published here come from MOA's China Agriculture Yearbook and should be used with caution.

The sample sizes are extremely small, and it is unknown whether or not the sample selection was random. For example, the rice cost-of-production survey for 1987 surveyed only 426 hectares of the 32.2 million hectares sown. As with any other survey, the accuracy of the survey depends on how representative the sample is and how clearly and consistently definitions, such as standard labor days, are applied. The meaning and consistency of definitions, both within and between crops, are also unknown. It is also unclear how the survey methodology may have changed following the dissolution of the commune system and the introduction of the household responsibility system (HPRS). SSB's China Rural Statistics Yearbook provides national-level cost-of-production data. However, the yields used by SSB do not correspond with the yields used by MOA, making the cost-per-yield data inconsistent. Furthermore, the MOA provides only provincial-level data, whereas the SSB provides only national-level data.

Peasant consumption and expenditure data included in this bulletin come primarily from household consumption, income, and expenditure surveys conducted by the SSB. Over time, the number of households surveyed has increased rapidly. The MOC also reports rural consumption data, but it is unclear where the statistics come from.

Urban resident consumption and expenditure data are reportedly calculated from MOC data (MOC controls the urban state and collective retail store networks) and from SSB surveys of family budget surveys of workers and employees. The surveys originated in the early 1950's by administrative units and industries. The quality of survey data improved in 1956-57, when a nationwide unified survey

system was organized. Families selected for the sample included workers in enterprises owned or managed by the state, and engineers, technicians, teachers, and administrative personnel of government and public organizations. Statistical workers and administrative officials in the various provinces and cities used different sampling techniques. Some used proportional stratified sampling with systematic sampling inside strata. Others used systematic sampling but constructed the sample on the basis of composition of the labor force, degree of wage differentials, and the scale of production within the administrative unit. Others used a model selection process.

And finally, there are two official sources for trade statistics in China: China's Customs Administration (Customs) and the Ministry of Foreign Economic Relations and Trade (MOFERT). All quarterly volume and value statistics are from Customs. Data in the historical series are from MOFERT. In the MOFERT statistics, exports are on a free-on-board (f.o.b.) basis, while imports are on a cost, insurance, and freight (c.i.f.) basis. The data include all types of trade under the Ministry's jurisdiction, whether or not entering China's ports. The value added to goods imported, processed, and re-exported (such as labor costs and processing fees) is also included. But, MOFERT data exclude local trade not under its jurisdiction, trade of some joint ventures, and all individual dealings. MOFERT statistics also include aid commitments not yet delivered to China.

Statistics from Customs became available in 1981. These statistics differ from those of MOFERT because their coverage in some cases is more inclusive, particularly in more recent years as China's trade system has been liberalized. Statistics from the Customs Administration include all trade via China's ports and Customs-cleared aid donations. They also cover a broader range of imports and exports, including trade of local and provincial enterprises not reporting to MOFERT, all joint enterprises, all foreign-owned enterprises, and trade by individuals and firms. The full value of transshipments, principally through Hong Kong, is considered either as originating in, or bound for, that city. This helps to explain some of the large discrepancy that exists between official U.S. and Customs trade statistics. U.S. statistics record imports and exports according to the country of origin and final destination of goods.

During the course of the 1980's, Customs-reported agricultural commodity statistics have gradually grown larger than those reported by MOFERT. Over time, MOFERT statistics have captured less and less of the trade as China has relaxed its centrally controlled trade system, and independent trading companies have taken over an increased volume of trade.

## Definitions

Throughout all tables, "na" indicates that data are not available. Also, "—" indicates a number that is negligible (between 0 and 0.5), but is only used when found in the original source. Any numbers that are so small that they show as zero in the original source are left as zero. Therefore, zeros designate data that are available, but the value of which is zero or a negligible amount (less than 0.5). There are instances, however, where China's publications leave a cell empty rather than using a zero to report no production, and we are almost certain that the figure should in fact be a zero. In most cases, we chose to follow China's reporting because we could not definitively determine whether a particular entry should in fact have been a zero or "na." In these instances, "na" is used. Unless otherwise stated, tons refer to metric tons and years are calendar years and include production of crops harvested within that year.

Most provincial-level tables include a footnote indicating Hainan data are not available until 1988 and data for earlier years are included in the Guangdong Province figure. Until 1988, Hainan Island was only an administrative region (prefecture) within Guangdong Province. Hainan Island was accorded provincial status in 1988, making it necessary to add Hainan to the list of provinces. In a few tables, data are provided for Hainan Province before 1988. The numbers, taken from the Hainan Tongji Nianjian (Hainan Statistical Yearbook), were then subtracted from the Guangdong Province number to balance the total. Hainan numbers were not added to most tables because of large inconsistencies between the reported Hainan province data and the prefecture-level data reported for Hainan in various Guangdong yearbooks (Guangdongsheng Tongji Nianjian). Full historical series for Hainan Province, therefore, await additional data releases from the SSB.

Numbers in parentheses below each table refer to items listed in the References section of this report. Although efforts were made to give complete source listings for each table, space limitations prevented the listing of all sources when data in a given table came from a wide variety of different sources.

USDA's regional categorization in the provincial tables differs from the regional groupings currently used in China's statistical publications. All regional totals, therefore, are sums of provincial data, not published PRC statistics. The sum of total provincial data in some cases does not equal the national total of the SSB. This may be because MOA and SSB have separate statistical systems, or, in the case of small differences, because the national totals used include the latest revisions and revised provincial details for the new SSB totals are not available. Finally, as far as is known, provincial data have been affected by, though not adjusted for, the July 1, 1979, changes in provincial boundaries. Inner Mongolia (Nei Monggol) was substantially enlarged at the expense of Heilongjiang, Jilin, and Liaoning.

Some data (such as provincial per capita consumption of specific goods or crop costs of production) cannot be summed to obtain a regional total because each province has a different population base or sample size. In these cases, provinces have been arranged in their normal regions and national totals or averages have been included, but the separate parts have not been summed to obtain a regional total.

The following definitions are valid unless otherwise indicated by a specific note attached to a table. It was not possible to get complete definitions for all terms used in the tables. China's statistical publications are notorious for the paucity of descriptive information for their statistics. An attempt was made to provide some guidance to the meanings of terms by collecting information and definitions from a wide variety of published and unpublished sources, as well as information gleaned from interviews with officials and researchers in China. Many of the definitions included here are, at least in part, from either a detailed 1979 handbook defining state farm statistics or a more general 1980 handbook defining basic agricultural statistics. We limited the use of state farm definitions to agronomic definitions of crops because these are the most likely to be the same across the various statistical systems (SSB, MOA, state farm, and others).

**Aquatic products.** Aquatic products include freshwater and saltwater fish and products, both naturally cured and artificially cultured, including sea fish, seaweed, shellfish, mollusk, and crustacea. Water plants, such as water chestnuts and lotus roots, are excluded.

**Area.** Agricultural crop area statistics for China are reported on the basis of sown area rather than harvested area. Sown area is land on which crops are planted and from which a harvest is expected. Because land is frequently sown two or more times a year, sown area is substantially larger than cultivated area. Area of crops destroyed prior to the scheduled reporting date is excluded, but area suffering disasters after the scheduled reporting date is included. Seedbed area is excluded unless it is planted with another crop after the seedlings have been transplanted. Area of crops cultivated along roadsides is excluded, but area intercropped in orchards is included. Area of perennial crops is included in the year the crop yields a harvest, regardless of when the crops were planted. Crops regrown from the previous season's stubble are not counted again in the statistics for the second year's sown area.

Readers should be aware that some of China's agriculture officials and scholars believe that China drastically underreports grain area. Interviews with officials in China have found a general consensus that official cultivated area statistics underreport area by around 30 percent. See China Agriculture and Trade Report, Economic Research Service, USDA, July 1991, p. 18, for a brief report on the history and implications of underreporting cultivated grain area in China.

**Bast fibers.** Bast fibers include jute, ramie, flax, Indian hemp (da ma), and an "other bast fiber" category. The "other" category includes sisal (jian ma) and an unknown number of other minor bast fiber crops. Indian hemp is treated separately from ambary hemp (kenaf).

**Cattle.** Cattle statistics include yellow cattle (see definition), water buffalo, yaks (maoniu), and dairy cattle (both local and hybrid breeds).

**Chemical fibers.** Chemical fibers include two types of fibers: synthetic fibers (hecheng xianwei) and viscose fibers (nianjiao xianwei).

**Cigarettes.** Three common units of measurement for cigarettes are cases (tiao), cartons (he), and boxes (xiang). One case contains 250 cartons. Each carton contains 10 boxes of 20 cigarettes (zhi) each, for a total of 50,000 cigarettes or pieces per case.

**Citrus fruit.** Citrus fruit production and area statistics cover all varieties of citrus (orange, tangerine, grapefruit, and other).

**Cloth.** Cloth output, measured in linear meters, includes the total of pure cotton cloth, cotton blends, and pure synthetic fabrics. Output figures in square meters are available for 1978-83 with the average width rising from 0.933 meter in 1979 to 0.989 meter in 1983.

**Corn.** Corn output is reported on a dry kernel (shelled or off the cob) basis. Corn is considered to be on a dry weight basis when water content is between 14 and 18 percent, depending on the province.

**Costs of production.** China began publishing production cost data for major agricultural crops in 1986 (1984 data). The data should be used with caution. The sample size is very small, and it is unknown whether or not the sample selection was random. The meaning and consistency of definitions, both within and between crops, are also unknown.

Cotton. Cotton statistics are on a lint (deseeded) basis and exclude tree cotton (mumian).

Crop classification. China's crop classification separates crop area and production into three broad categories: grain crops, economic crops, and other crops. Economic crops (jingji zuowu) include most nongrain crops: cotton, jute, hemp, other fiber crops, oilseeds, sugarcane, sugarbeets, tobacco, medicinal crops, and a miscellaneous category. Other crops include vegetables, melons, fodder crops, and green manure.

Cultivated land. Cultivated land refers to permanent cropland and includes land left fallow for less than 3 years.

Customs. An abbreviated term for China's Customs Administration. See the definition under "trade."

Disaster. China tabulates cultivated area seriously affected (chengzai) by natural disaster. Disaster includes flood, drought, frost, freeze, wind, and hail damage. Serious damage is defined as normal yields reduced by 30 percent or more. Another category, slightly affected (shouzai) area, only tallies area with yield loss of 29 percent or less.

Draft animals. Draft animals are defined as animals used for field preparation or hauling, including yellow cattle, water buffalo, horses, mules, donkeys, and camels. The data exclude draft animals too old to work or not used for draft work.

Edible oils. Edible oil production data are defined as edible vegetable oil (shiyong zhiwu you), differing substantially from other statistics given as the oil equivalent of total oilseed production or from per capita edible oil consumption data, which include both edible plant and animal oils. The edible oils from soybeans, rice bran, and corn, which would be excluded from the PRC definition of total oilseeds, are included in edible vegetable (plant) oil figures. Part of the cottonseed oil is also included. Edible animal oils would include lard and some other minor oils. See *Zhongguo Nongye Nianjian*, 1983 (China Agriculture Yearbook, 1983), p. 147, for a comparison, by province, of the two different components of edible oil (vegetable and animal).

Eggs. Egg output and consumption statistics include chicken and duck eggs. Other minor eggs may also be included (goose, pigeon, quail, and other).

Farm machinery power. Total farm machinery power includes the total mechanical power of machinery used in farming, forestry, animal husbandry, fishery, and such farm sideline occupations as plowing, irrigating, draining, harvesting, farm product processing, agricultural transporting, plant protection, and stock breeding. It excludes machinery used in township (commune-run) industry, construction, nonagricultural transport, scientific experimentation, and teaching. Prior to 1986, internal combustion engines were counted according to horsepower, and electric motors were counted by converting from kilowatt to horsepower (1 horsepower equals 0.735 kilowatts). Since 1986, data were reported on a kilowatt basis, so pre-1986 data were converted to kilowatts to make the data consistent.

Fertilizer. Fertilizer statistics in China are measured in three different production units: actual, standard, and effective weight. Actual weight is the gross weight of the product. Standard weight is



weight converted into weight of standard fertilizers: ammonium sulfate (20-percent nitrogen), superphosphate (18.7-percent P<sub>2</sub>O<sub>5</sub>), and potassium sulfate (40-percent K<sub>2</sub>O). Effective weight measures the actual nutrient content. Standard fertilizer weights are not available after the early 1980's. Fertilizer application data prior to 1966 are not available. Fertilizer sales volume has been used as a proxy for the application rate.

Fertilizer use. Fertilizer use is measured per unit of cultivated rather than sown area.

Forage area. Forage crop area in China includes area sown to fodder crops or sown and then used to graze livestock. Also, forage area may include lake, pond, or canal area used to grow water plants (water hyacinth and other) for fodder. Forage crop area includes alfalfa and elephant grass (xiangcao). Forage area excludes area used to grow grain to feed livestock (included in grain area statistics), although it includes grain area that is harvested for green silage use (green corn stems and other).

Forestry. Forestry comprises the planting of various kinds of trees (tea plantations, mulberry fields, and orchards are excluded), collection of forestry products, and cutting or felling of bamboo and trees.

Fruit. Fruit statistics do not include area or output from wild orchards or trees, or any fruit-type melons (watermelon, honeydew melon, cantaloupe, and other). Instead, all melons are included in either the melon category (fruit-type melons) or in the vegetable category (vegetable-type melons).

Goat's milk. Goat's milk output numbers are not available. The numbers presented are calculated as the residual from total milk production minus cow milk production.

Grain. Production figures for grain represent rough (unprocessed) weight. Potatoes are converted to grain equivalents on a 5:1 basis. Figures on total grain and potato production prior to 1964 have been adjusted to a consistent 5:1 dry weight grain basis. Official data for those years converted potatoes at a 4:1 rate. Beans are added based on weight after removal from pods and drying. The major grains (rice, wheat, corn, sorghum, and millet) are calculated on a dry, rough (unprocessed, unmilled, or unhusked) weight basis. Corn output is calculated on a shelled (off the cob) basis. See the definition of total grain production for all of the individual grains included. Grain consumption and trade data are reported on a trade weight basis.

Green manure. In China, green manure crop area statistics can include Chinese milk vetch (ziyunying), safflower grass (honghuacao), Chinese trumpet creeper (tiaozi), fragrant thoroughwort (lanhuacao), wild soybean (shanmaodou), and other miscellaneous plants used for green manure. Legume and rapeseed area for crops planted specifically for use as green manure is also included. If the crop was originally intended to be harvested, but the crop fails and the farmer uses it as green manure, then it continues to be counted under bean and rapeseed area.

Gross value of agricultural output (GVAO). GVAO data for China are very difficult to use. There is a variety of definitions, depending on the source of the data, for the activities that are included and those that are excluded in the statistics. Data for 1984-85 show that the statistics do not consistently differentiate between current prices and constant 1980 prices. A close comparison of current price

GVAO and constant 1980 price GVAO data finds a number of provinces reporting identical numbers. Readers should see the specific footnotes below the individual GVAO tables for more information on the discrepancies.

Hemp. See jute and Indian hemp.

Huma. In China, huma is used to produce an edible oil, huma you, almost indistinguishable from sesame oil (zhima you). Huma oil is the primary edible oil in China's northwestern provinces, which grow few other oilseeds for edible oil.

Indian hemp. Indian hemp (da ma) is separate from ambary hemp. It is not clear if meng hemp (also called Indian mallow or China jute) is included in the Indian hemp statistics or in the jute and ambary hemp statistics (see jute and ambary hemp).

Investment. Agricultural investment is generally broken down into two categories: state budgetary expenditures on agriculture and agricultural capital construction investment (which covers construction, expansion, transformation and restoration projects, as well as purchases and installation of equipment). State budgetary expenditures include investment in capital construction, rural production support, and working capital. National agricultural capital construction investment, broken down by sector (crops, livestock, forestry, aquatics, water conservation, meteorology, and services), includes investments by all levels of government. Individual or collective (sometimes referred to as extrabudgetary) investment in agriculture is excluded. The definition for national agricultural capital construction investment was changed in the mid-1980's to exclude agricultural capital construction investment in meteorological facilities.

Irrigated area. Irrigated area is level land that is effectively irrigated or has water sources and complete sets of irrigation equipment to lift and move adequate water to the fields under normal conditions.

Jute and ambary hemp. Jute (huanghong ma) statistics include ambary hemp (kenaf). Jute is separate from Indian hemp (da ma). It is not clear whether meng hemp (also known as Indian mallow or China jute) is included in jute or whether it is included in Indian hemp. Older jute series are reported on an unprocessed basis. More recent series are reported on a processed basis and have adjusted the older data to reflect the change.

Knits. Data on knits or knitted goods include both knitting wool and woolen knitwear.

Livestock. Livestock statistics include all animals, whether used in agriculture or not, but exclude all aquaculture (cultured, freshwater, and saltwater).

Meat. See red meat and poultry meat.

Mixed average price. Mixed average retail or procurement prices are an average of the fixed, negotiated, and open market prices for a commodity, as well as an average of various standards, grades, and qualities.

**MOFERT.** An abbreviated term for China's Ministry of Foreign Economic Relations and Trade. See trade.

**Multiple crop index (MCI).** The multiple crop index (or MCI) is a common measure of the intensity of land use. It is the ratio of sown area to cultivated area, expressed as a percentage.

**Mutton.** Mutton data include both sheep and goat meat. Only inventory statistics separate sheep and goat data.

**Oilseed crops.** Oilseed crops, according to China's official definition, include peanut, rapeseed, sesame seed, sunflower seed, huma, and a number of minor oilseeds. Soybean, cottonseed, and oil-bearing seeds and nuts from trees are excluded. Soybeans, excluded from oilseed crops, are considered a grain crop in China's statistics.

**Other edible oilseeds.** Other edible oilseed data are calculated as a residual. Other edible oilseeds include such miscellaneous crops as castor bean, safflower seed, and perillaseed.

**Other grains.** It is unclear exactly which grains make up the other grain category, although it probably includes barley, oats, buckwheat, proso millet, mung beans, broad beans, ormosia beans, and an unknown number of other minor grains or legumes. Other grain production is measured minus the pod and on a dry weight basis.

**Peanut.** Peanut output statistics are calculated on a shelled, dry weight basis.

**Population.** Population statistics include military personnel, but exclude Taiwan. Rural population refers to persons whose permanent residence is outside the jurisdiction of a city or a town. In 1982, 1984, and 1991, the definitions for rural and urban populations were changed. With the 1991 change, the rural and urban statistics were recalculated back to the year 1982, earlier data (1949-81) remained unchanged.

**Potatoes.** See tubers.

**Poultry meat.** Poultry meat output and consumption statistics include meat from all varieties of poultry (chicken, duck, goose, and other).

**Procurement.** Procurement data are usually on a trade-grain (milled) rather than a raw-grain (unmilled) basis. The most inclusive category of procurement, total social procurement (shehui shougou), includes all procurement by all types of government and nongovernment entities (supply and marketing cooperatives, authorized factories or processing plants, and other). Two other less inclusive categories of procurement that are also frequently encountered in the statistics are state commercial enterprise and supply and marketing cooperative procurement (quanmin suoyou shangye he gongxiao hezuoshe shougou) and total commercial procurement (shehui shangye shougou). It is unclear which of these two lesser categories is more inclusive than the other, though it is likely that total commercial procurement is the smaller of the two.

**Procurement prices.** Procurement prices are the prices paid by the State, industrial enterprises, or

individuals to the peasant for agricultural crops. These prices are generally reported as a mixed average of fixed, negotiated, and free market procurement prices and are based on a variety of standards, varieties, and grades for each commodity.

**Raw grain.** A raw-grain basis means all the grains are unprocessed (unhusked). Generally, production statistics are on a raw-grain basis, while consumption, trade, and procurement statistics are on a trade-grain (processed) basis.

**Red meat.** Red meat output (including beef, pork, and mutton) refers to carcass weight. In general, red meat statistics exclude heads, hooves, and offal, but include bone.

**Rice.** Rice includes water and dryland variety rice. Rice grown in northern China is single crop late rice, also called northern rice. Rice grown in southern China includes early rice, intermediate and single-crop late rice, and double-crop late rice. Output is generally measured on a dry, rough-weight basis.

**Rural labor force.** China's rural labor force refers to the series originally reported by the SSB as rural collective and individual laborers (nongcun jiti he geti laodongzhe). Rural labor is broken down into farm work, rural industry, construction, transportation, commerce, and miscellaneous occupations. Beginning in 1985, new definitions were used to compile rural and urban labor force statistics. These new definitions were used to adjust the old data back to 1978. In 1978, rural industrial labor at and below the village-level was shifted from agriculture to industry.

**Shoes.** Data on shoes include rubber, sports (athletic), and leather shoes.

**Slaughter rate.** The slaughter rate of livestock, a measure of the rate of slaughter of animal inventory, is calculated by dividing slaughter during a given year by the beginning inventory of that year or the ending inventory of the previous year.

**Soybean.** Soybean includes the following varieties: yellow (huang), green (qing), black (hei), and others. Soybean production statistics are on a dry, out-of-pod-weight basis.

**Sugar.** Sugar statistics in China include processed cane sugar and beet sugar. The statistics are presented simply as "sugar" (tang), without further explanation. Officials in China have told USDA officials that sugar production and trade figures are reported on a refined rather than a raw weight basis, but we were unable to confirm that interpretation. They also indicated that roughly 75 percent is white sugar and 25 percent is brown sugar.

**Sugarbeet.** Sugarbeet production figures are on the basis of beet root weight (excluding leaves and stalks). All sugarbeet production is included in output statistics, no matter the ultimate end use (produce sugar, use for livestock feed, or use as a vegetable).

**Sugarcane.** Sugarcane production is computed on a cane stalk weight basis (excludes leaves). Output statistics include both sugarcane (tangzhe) and fruitcane (guozhe). Harvesting of sugarcane begins in the winter of one calendar year and ends in the spring of the following year. All harvested output is reported under the statistics of the first calendar year.

Tea. Tea production statistics include all tea harvested, whether from cultivated area or wild tea plants. Tea production is calculated on a dry weight basis.

Tobacco. Tobacco output is on a dry weight basis. China reports data for total tobacco leaf and the flue-cured portion. The remainder is probably made up of a number of local tobacco varieties. "Other tobacco" is calculated by subtracting flue-cured tobacco from total tobacco.

Total grain. Total grain includes rice, wheat, corn, sorghum, millet, other miscellaneous grains, tubers (potatoes), and soybeans. Minor grains and pulses are included in the "other miscellaneous grains" category.

Total oilseeds. Total oilseeds include sunflowerseed, peanuts, rapeseed, sesameseed, huma, and other such miscellaneous oilseed crops as castor bean, safflowerseed, and perillaseed. Soybeans, cottonseed, and oil-bearing seeds and nuts from trees are not included.

Tractors, large and medium. The current definition for large and medium tractors is 20 horsepower (hp) or more; small tractors have less than 20 hp. Previously, large tractors were 60 hp, medium tractors were 30-59 hp, and small tractors were less than 29 hp. It is not clear when the change was made or if the old statistics were adjusted to reflect this change.

Tractors, small. Small tractors are currently defined as tractors with less than 20 horsepower. Formerly, this category included tractors with less than 29 horsepower.

Trade. Data in the historical trade series are all from China's Ministry of Foreign Economic Relations and Trade (MOFERT). In MOFERT statistics, exports are on a free-on-board (f.o.b.) basis, while imports are on a cost, insurance, and freight (c.i.f.) basis. MOFERT data include all types of trade under the Ministry's direct jurisdiction, whether or not entering China's ports. The value added to goods imported, processed, and then re-exported (such as labor costs and processing fees) is included. MOFERT statistics also include aid commitments that have not yet been delivered to China. However, MOFERT data exclude local trade not under its jurisdiction, some joint venture trade, and all individual dealings.

Statistics from China's Customs Administration became available in 1981. These statistics differ from those of MOFERT. Particularly in the early 1980's, Customs numbers tended to be lower than MOFERT because coverage in some cases was more limited. However, as ever-increasing numbers of independent (non-MOFERT administered) trading enterprises have been established, Custom's statistics have grown to be larger than those provided by MOFERT. Statistics from the Customs Administration include trade only via China's ports and only Customs-cleared aid donations. But, they include the full value of goods imported, processed, and re-exported. They also cover a broader range of imports and exports, including trade of local and provincial enterprises not reporting to MOFERT, all joint enterprises, and trade by individuals and firms.

Trade grain. Statistics on procurement and sales of grain are reported on a trade-grain basis. Trade grain is defined as unhusked rice and millet that have been converted into husked forms, according to standard conversion factors. Other grains (wheat, sorghum, and other) remain in their unprocessed weight. Generally, consumption, trade, and procurement statistics are on a trade-grain basis, while

production statistics are on a raw-grain basis.

**Tubers.** Tubers are considered a grain crop in China and are included in total grain production statistics. Both sweet potatoes and Irish potatoes are included, but, in recent years taro and cassava were excluded. Some Irish potato production is excluded. In some provinces, potatoes grown for use as vegetables are not counted as grain. Tuber statistics are converted to grain equivalents on a 5:1 dry weight grain basis. Tuber data prior to 1965 were converted on a 4:1 basis, so those years were adjusted to the new standard 5:1 equivalent basis.

**Vegetable.** Figures are available for total vegetable area only. China's statistical system does not collect vegetable production data. All areas sown to vegetables and vegetable-type melons (cucumber, squash, pumpkin, winter melon, bitter melon, towel gourd, and others) are included. Area sown to fruit-type melons (watermelon, cantaloupe, muskmelon, and others) is excluded. Instead, fruit-type melon area is included in a separate melon category. Other items included in vegetable area statistics are fennel (aniseed), water-bamboo (jiaobei), taro (yutou), and ginger (shengjiang).

**Winter wheat.** Winter wheat output and area data are not published. However, it was derived by subtracting published spring wheat data from total wheat.

**Wool.** Total wool production data include mohair (shanyangmao) and sheep wool (mianyangmao), but exclude cashmere (shanyangrong). Sheep wool output is separated into fine (60's count grade or higher) and semi-fine (36 to 58's count grade) wool output.

**Yarn.** Yarn is the total of cotton yarn, synthetic yarn, and cotton-synthetic blended yarn. Only national-level data are available for pure cotton yarn output.

**Yellow cattle.** Yellow cattle is a generic term for all of China's native cattle.

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