

## A. Main Findings

### 1. General

#### Output

In 2007, agricultural output increased by 3.5% (following an increase of 0.9% in 2006).

The agricultural output prices rose by 2.9%.

#### Input

The quantity of agricultural input (excluding wages) that was used for producing agricultural output rose by 5.4%, a higher rate than the increase in agricultural output.

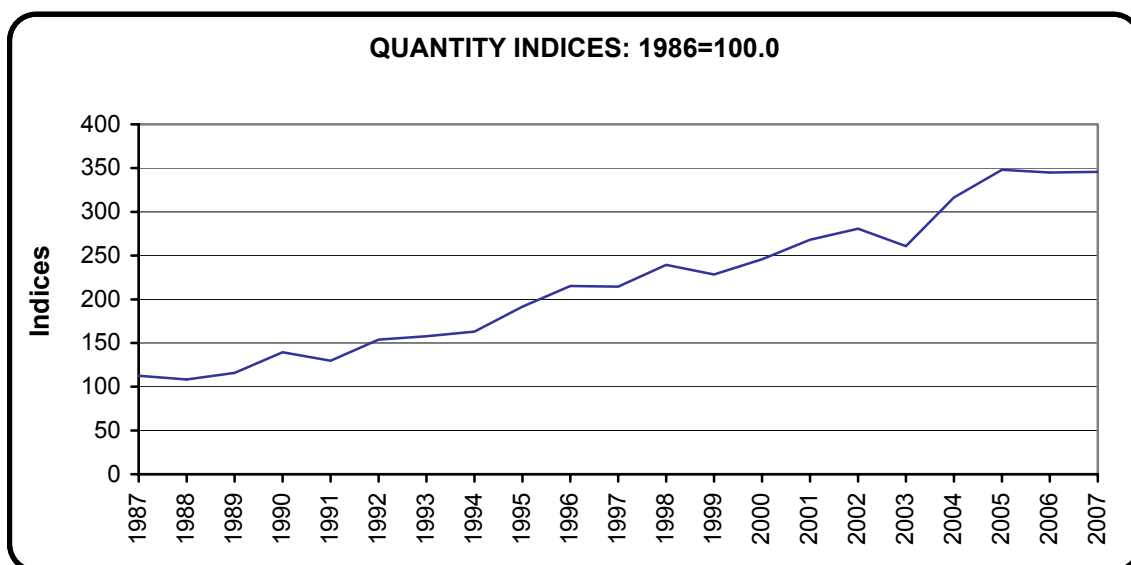
Consequently, the amount of net domestic product in Agriculture rose by 0.2% in 2007, following a decline of 0.9% in 2006.

The prices of agricultural input (excluding wages) rose by 7.6% (continuing a 3.4% rise in 2006). The increase resulted mainly from the rise in the prices of fodder (21.5%), spare parts and repairs (6.3%), fertilizers and manures (5.9%), packing materials (5.4%), and fuel, lubricants and electricity (4.9%). In contrast, there was a decrease in the prices of water (-2.1%) and administration and miscellaneous expenses (-1.2%).

In 2007, the terms of trade in Agriculture worsened (i.e., the prices of input rose at a higher rate than the prices of output). However, there has been no clear trend in changes in the terms of trade in recent years.

In 2007, there was an decrease of 4.5% at current prices in income deriving from Agriculture, compared with 2006.

### 2. Net Domestic Product in Agriculture, 1987–2007



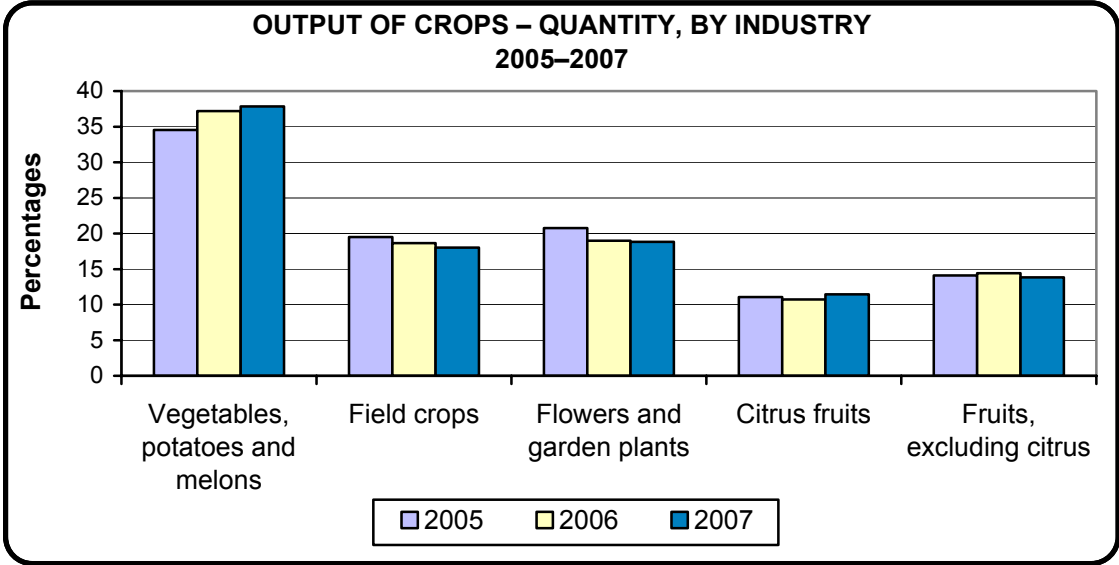
### 3. Agricultural Output, by Industry

The value of the agricultural output in 2007 was NIS 22.7 billion. A 3.5% increase was recorded in the quantity of agricultural output compared with 2006. This trend resulted from a 5.0% increase in the quantities of crops, and from a 1.1% rise in the quantity of livestock and their products. The increase in crops resulted mainly from an increase of 13.4% in vegetables, potatoes and melons (which constituted about 25% of the output value), as well as an increase of 10.9% in citrus fruits (which constituted about 5% of the output); and 1.9% in the flowers and garden plants industry (which constituted about 5% of the output value). In the livestock industries, the increase derived from a 3.1% rise in the poultry industry (which constituted about 17% of the output value), and of 1.3% in the sheep and goats industry (which constituted about 4% of the output value).

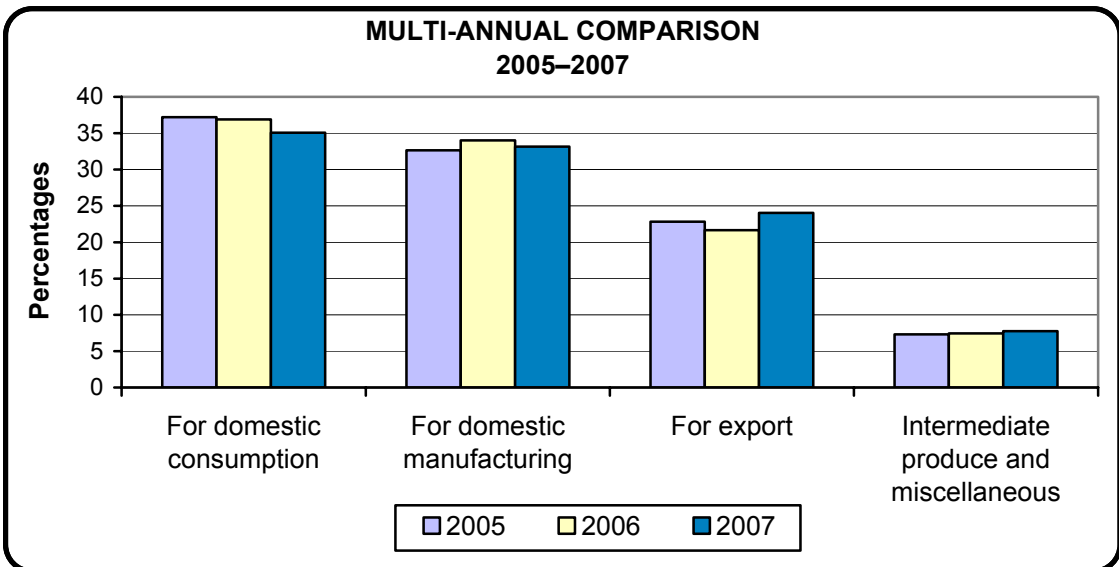
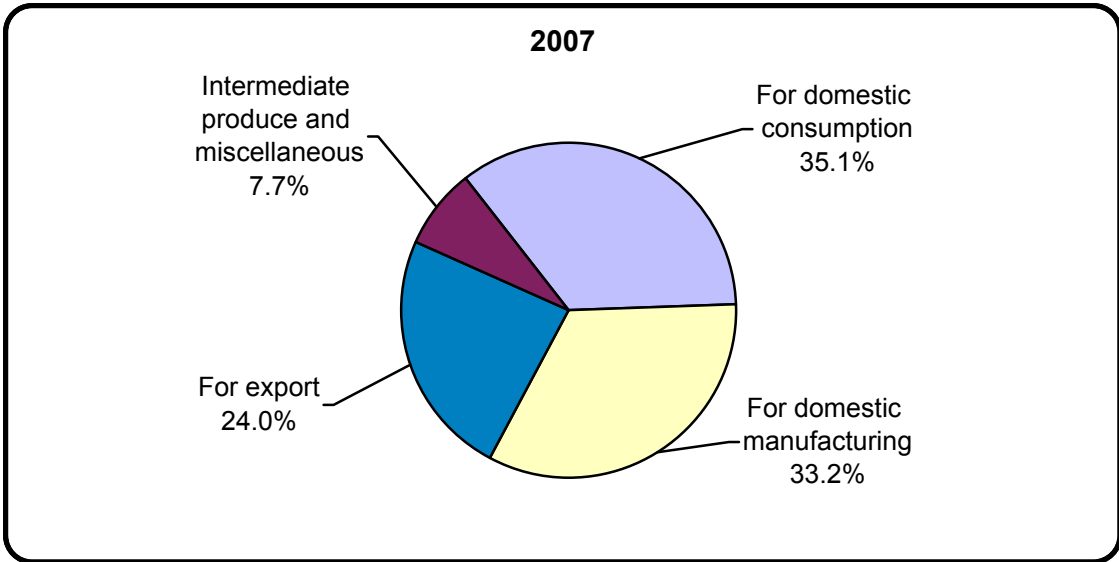
Compared to 2006, an increase of approximately 14% was recorded in the exported quantities of fresh agricultural produce, and a 1% increase – in produce for manufacturing.

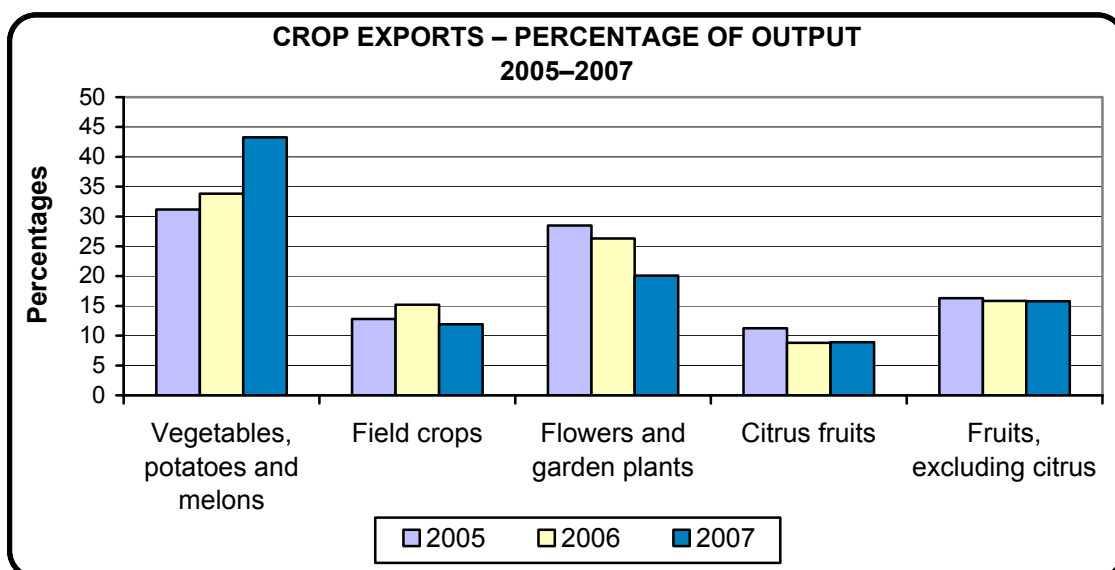
**TABLE A: SELECTED QUANTITATIVE CHANGES IN AGRICULTURAL OUTPUT,  
2007 COMPARED WITH 2006 (Percentages)**

<b>Crops – total</b>	<b>5.0</b>
Thereof: Vegetables, potatoes and melons	13.4
Citrus fruits	10.9
Flowers and garden plants	1.9
Wheat	20.9
Peppers	24.1
Cotton	-12.3
<b>Livestock and their products – total</b>	<b>1.1</b>
Thereof: Pigs	4.4
Poultry	3.1
Sheep and goats	1.3
Cattle	0.5
Fish	-10.7



#### 4. Agricultural Output, by Purpose





## 5. Input in Agriculture, by Type

In 2007, the quantity of input consumed in Agriculture increased by 5.4% compared with 2006, and its value amounted to approximately NIS 14.9 billion. The upward trend in prices of inputs continued, and in 2007 those prices rose by 7.6%.

**TABLE B: SELECTED QUANTITATIVE CHANGES IN AGRICULTURAL INPUT,  
2007 COMPARED WITH 2006 (Percentages)**

<b>Total</b>	<b>5.4</b>
Thereof: Fertilizers and manures	11.6
Fodder	8.7
Pesticides	6.1
Water	5.6
Administration and miscellaneous	5.2
Packing materials	5.1
Chicks, seeds and saplings	5.0

**TABLE C: SELECTED PRICE CHANGES IN AGRICULTURAL INPUT,  
2007 COMPARED WITH 2006 (Percentages)**

<b>Total</b>	<b>7.6</b>
Thereof: Fodder	21.5
Spare parts and repairs	6.3
Fertilizers and manures	5.9
Packing materials	5.4
Fuels, lubricants and electricity	4.9
Hired transportation	3.2
Chicks, seeds and saplings	1.2
Pesticides	1.2
Water	-2.1

## **B. Definitions and Explanations**

### **1. Agricultural Output and its Value**

*Output:* The value of the goods and services manufactured by an economic unit, which became available for use outside of that unit, plus the value of goods and services that were manufactured for own final uses.

*Agricultural output:* Agricultural produce (for the domestic market, export and manufacturing, as well as surplus) that was manufactured during the year (agricultural or calendar), including produce that was marketed after that year. Agricultural output includes: marketed produce, self-consumption on the farm, changes in livestock inventory, intermediate produce, and investment in young plantations and afforestation.

*Period of Reference:* For all crops that are harvested until September 30<sup>th</sup>, (e.g., summer fruits) calendar year data are identical with the data for an agricultural year. Data of vegetables and livestock and their products are summed up for calendar years; whereas data of citrus fruits, avocado, bananas, and flower growing are for agricultural years.

*Domestic consumption:* The produce destined for direct consumption by the population of Israel, including consumption by the farmers and their households ("self-consumption").

*Domestic manufacturing:* The produce supplied for manufacturing, including produce exported after industrial processing.

*Exports:* Fresh agricultural produce actually exported in the surveyed year; excluding sales to Judea, Samaria and Gaza Areas.

*Intermediate produce:* Local agricultural produce that reenters the agricultural production process (e.g., barley used for livestock feeding). Data on this produce include destruction of agricultural produce, changes in livestock inventory, and sales to Judea, Samaria and Gaza Areas.

*Mariculture:* Growing of fish in cages that are located in the water near the seashore.

*Citrus Fruits:* Includes Shamouti, navel, late varieties (Valencia), lemons, grapefruits (white, red – sunrise), tangerines (Sezoma, Michal, Rishon, Santina, Mineola, Mor, Temple, Nectar, Vinola, Topaz, Or) and other citrus varieties (Limequat, Lime, white and red pomelo, kumquat).

## **2. Agriculture Account (Table 1)**

*Input:* Total materials and services of other industries in Israel and of import, bought by farmers (the purchased input), the intermediate produce, and the depreciation, in renewal prices.

*Income deriving from agriculture* is the income of “primary” factors (labour and capital) employed in Agriculture. Income is estimated as the total value of agricultural output and of compensations and other receipts, less the value of the total input.

Estimates of income from Agriculture that appear here differ from those appearing in National Accounts publications where incomes from non-profit institutions serving Agriculture are added.

*Compensations and other receipts:* All transfers to Agriculture (excluding subsidies to production units), including compensation from insurance companies (e.g., for natural damages), compensation for drought, compensation for reduced water quotas, and wages supplements and other receipts (such as pest control, compensation for diseases and fallow year, support following natural damages). These receipts are recorded in the year when they were transferred to the farmers.

*Compensation for employee jobs* (former term: "compensation of employees"): Total expenditure for wages and salaries, as well as supplementary expenditures for wages and salaries. Does not include imputation of wages for the work of farm owners.

*Terms of trade:* The ratio between the change in price of agricultural output and that of the price of the input used to produce it.

### 3. Miscellaneous

*Capital stock:* Includes tangible productive capital as well as intangible productive capital (software). Accordingly, capital stock does not include non-productive capital or financial assets. It also excludes changes in inventories of raw materials, finished goods and work-in-progress.

Capital stock in agricultural farms: The total value of fixed physical assets used for the production of agricultural produce: plantations, livestock, agricultural machinery and equipment, agricultural structures, irrigation networks, greenhouses, fish ponds, and drainage plants. Since 1970 land reclamation for agriculture has also been included. Capital stock does not include the value of assets: land, forests, water plants, residential buildings, roads, electricity networks, etc. Nor are included the value of assets of the fishing industry and of spraying aircraft.

Capital stock is calculated by the “perpetual inventory” method. According to this method, the capital stock for a given year includes the sum of the gross capital formation in assets for which depreciation is still deducted due to their life span.

The price indices that serve as a basis for deducting annual investments, which are used to calculate capital stock, are the specific price indices for each type of asset.

*Gross capital stock:* Gross value of assets, before deduction of cumulative depreciation.

*Net capital stock:* Gross capital stock, less cumulative annual depreciation up to the surveyed year.

*Employed persons:* Includes data from labour force surveys, as well as data of employees from Judea, Samaria and Gaza Areas working in agriculture in Israel. Since 1992 data of foreign workers are also included. As of 1988 data of employees from Judea, Samaria and Gaza Areas were revised according to actual work days during each year in comparison with 1987. As of 1995, the data are based on the *Standard Classification of Economic Activities, 1993*,<sup>1</sup> which replaces the previous classification (for 1970) of economic activities.<sup>2</sup>

*Water:* The data are obtained from the Water Authority, which prepares statistical summaries of monthly reports.

The Dan Region Sewage Reclamation Plant (DSRP) enterprise: The DSRP is the biggest plant in Israel for collecting and treating sewage water, recharging effluents into the aquifers, and returning effluents.

Producer and supplier: the water institutions in Israel are responsible for pumping water (production) as well as for distributing water to the main customers (supply). The difference between the produced quantities and the quantities supplied to the

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<sup>1</sup> Central Bureau of Statistics. Technical Publication No. 63. (2<sup>nd</sup> Ed.). Jerusalem: CBS, 2003.

<sup>2</sup> Central Bureau of Statistics. *Standard Industrial Classification of All Economic Activities, 1970*. (4<sup>th</sup> rev. ed.). Jerusalem: CBS, 1986.

customers derives from the loss of water (depreciation) during the process of distribution.

The classification of localities by type of locality is according to the records of the Water Authority, and is not necessarily compatible with the system for classification of localities used in the CBS. As of January 1989 the water quantity summaries of the Water Authority relate to calendar year (January–December).

## C. Sources and Methods of Processing

### 1. Agricultural Output

Estimates of produce – vegetables, fruits, poultry, cattle, milk, eggs, fish, and most field and garden crops – are based chiefly on monthly reports from wholesalers, production boards and manufacturing establishments on produce received (gathered) from the farms for the domestic market, export and manufacturing. Estimates of private sales, self-consumption and intermediate produce are added to these data. Estimates of some other field crop produce are calculated by multiplying the average yield per dunam by the area sown.

*The financial value of agricultural output* (quantity multiplied by price) is an estimate based on average monthly prices and adjusted to the average general price level of each year. The financial value of each product in the month of marketing is adjusted to the yearly average according to the Consumer Price Index.

*Output value at previous year prices* is obtained by multiplying each item's quantity by its price in the previous year. This value is used in calculating the quantity change in the series (see Chapter D, below).

### 2. Agriculture Account

*Afforestation and young plantations*: Data of investments in afforestation are obtained from the Land Development Authority, while data of investment in young plantations are obtained by a normative computation of cultivation costs, until fruit bearing. Data of new planting are obtained from the Chief Rabbinate of Israel.

*Purchased input* is an inclusive estimate for each of the main input items. The main sources are as follows: import of agricultural inputs (such as fodder); locally produced supply (such as oil cakes and fertilizers); water output, as estimated by the Water Authority; data (e.g. of pesticides) from surveys of marketing and production boards; financial reports of the government and local authorities; analysis of the balance sheets of various organizations.

*Investments*:

Plantations: The source of data on plantations areas – the Chief Rabbinate of Israel. Data on investments in young plantations are obtained by calculation.

Livestock: Constant value data on capital stock are obtained by multiplying the livestock (those whose life span is more than a year) inventory at the beginning of each year by prices suitable for each unit.

Fish ponds: the investment data are obtained from the fishery department in the Ministry of Agriculture.

Greenhouses: Up to 2002 the estimate of investments in greenhouses was calculated according to the change of size of their area. Data on investments in 2003–2005 are based on the percentage of change in the extent of marketing of greenhouse crops. Since 2006 these data are based on areas of greenhouses sold to farmers.

*Depreciation* is estimated at renewal prices by the “straight line” method and is based on the CBS series on investment in agriculture.

*Compensation for employee jobs* (former term: “compensation of employees”): The data are based mainly on wage series as obtained from the summaries of employers' reports to the National Insurance Institute. They include wages of workers paid through the Payments Administration of the Employment Services in addition to the social supplements paid by the employers.

## **D. Percentages of Change in Quantity and Price**

Quantity and price changes of the various components of the agriculture account are computed using an estimate of the value at previous year's prices (the ratio between this component and the previous year's value). It should be pointed out that the differences between the price indices that are derived from the Agriculture account and the price index of agricultural output as given in Table 2 are due mainly to differences in definition. While the price indices here relate to the entire agricultural production, those in Table 2 relate to the traded produce only.

Moreover, the weights of the indices here are current, whereas those in Table 2 are constant. It is the same with the index of input prices in agriculture, which is derived from the Agriculture account.

## **E. Limitations of the Data**

- (1) Data of private sales of agricultural produce, self-consumption and intermediate produce are based on estimates.
- (2) Some of the input data are indicators based on partial records (such as of agencies of spare parts for agricultural equipment). Moreover, some of the input items are measured according to quantity and price changes chained to the base year 2000 (such as transport and packing data).
- (3) Inconsecutive series – in 2000 the output data series was broken due to a change in the method of calculation.
- (4) Until 2005, data on the quantity of crop produce for the domestic market were

received from the Plants Board.

Data for 2006: In January 2006, the Board stopped providing data on quantities of fruits, and in June it stopped providing data on quantities of vegetables. Therefore, missing data were computed by estimates. These estimates were calculated mainly through averages of previous years.

Data for 2007: Data on quantities of vegetables for the domestic market were obtained from the Plants Board. Data on quantities of fruits for the domestic market are based on estimates of the Plants Board.

- (5) In processing the data for 2005 the system of calculating the prices of fruits for the domestic market was changed. Until 2004 the prices were calculated by estimates. Since 2005 the prices have been taken from the daily wholesale markets survey conducted by the Ministry of Agriculture. Therefore, the series was broken and these data are not comparable with data of previous years.
- (6) The account for the industry relates to Category A – Agriculture, and to the following divisions in that category:
  - 01 – Growing of Crops
  - 02 – Afforestation and Gardening
  - 03 – Farming of Animals

The account does not include Division 09 – Mixed and Unclassified Farming, nor does it include services for Divisions 01-03 such as packing, sorting, spraying services, etc.

**Additional information on agriculture can be obtained in the following publications:**

- (1) *Agricultural Statistics Quarterly*
- (2) *Statistical Abstract of Israel*, Chapters: 12 – "Labour and Wages"; 13 – "Prices"; 14 – "National Accounts"; 16 – "Foreign Trade"; 19 – "Agriculture"
- (3) *Monthly Bulletin of Statistics*, Chapters: F – "National Accounts"; H – "Foreign Trade"; J – "Prices"; K – "Labour and Wages"; L – "Agriculture"
- (4) *Price Statistics Monthly*
- (5) *Agriculture Statistics Pamphlet*.