

STATEWISE ESTIMATES OF VALUE OF OUTPUT FROM AGRICULTURE AND LIVESTOCK, 1990-91 to 2002-03

Introduction

The role of agriculture in the Indian Economy needs no emphasis. Important developments in Indian agriculture have taken place over the years, particularly since the sixties due to the introduction of new technology in different states. In this context, information of value of output, state-wise assumes considerable importance. With this in view, a brochure containing state-wise and crop-wise information on value of output from Agricultural crops for the years 1960-61 to 1980-81 both at current and constant (1970-71) prices, was first published in December 1985. The second such brochure covering the years 1980-81 to 1990-91, both at current and constant (1980-81) prices, was published in August 1996. The third brochure, contained estimates of value of output state-wise estimates of value of output of agricultural crops and Livestock products for the period 1990-91 to 2001-02, both at current and constant (1993-94) prices, was published in September, 2004. The present brochure, fourth in the series contain the state wise estimates of value of output of Agricultural crops and Livestock products for the period 1990-91 to 2002-03, both at current and constant (1993-94) prices.

(A) Valuation of Output of Agricultural Crops

Valuation of crop production is done by multiplying the quantities of production by the corresponding producer's prices. The source of data used in the preparation of the value of output is as under:

- (i) The estimates of outturn for principal crops are based on the results of the crop estimation surveys conducted by the State Government Agencies. These are compiled and published by the Directorate of Economics and Statistics, Ministry of Agriculture (DESAg) in their annual publication captioned 'Estimation of Area and Production of Principal crops in India'. For valuing these crops, the producers' prices corresponding to average wholesale prices prevailing in the primary markets during the peak marketing periods, furnished by the State Directorates of Economics and Statistics (DESSs) to Central Statistical Organisation (CSO) are used. For estimating the annual average prices of each crop, the following procedures are adopted:
 - (a) Arithmetic averaging of the prices at various centers within a district is done to get the weekly district prices.
 - (b) Average price for a district is estimated as the arithmetic average over the 'peak marketing period' of weekly prices obtained at (a) above.

- (c) State average price is obtained as a weighted average of the district wise prices derived at (b) above, weights being the district-wise production of the corresponding crops.
- (ii) In respect of coffee, rubber and opium, the statistics of production and prices are obtained from the Coffee Board, Rubber Board and Central Bureau of Narcotics, respectively. In the case of tea, the estimates of output available from Tea Board relate to production of processed tea, instead of raw tea leaves. The production of tea leaves is estimated as 4.44 times the processed tea, the source of which is the Tea Board.
- (iii) In respect of unspecified and miscellaneous crop and crop groups viz. (a) other cereals, (b) other oil seeds, (c) other sugars, (d) other fibers, (e) dyes and tanning material, (f) other drugs and narcotics, (g) other condiments and spices, (h) other fruits and vegetables and (i) miscellaneous crops (fodder, grass, misc. food and non food crops), the out turn estimates are not directly available for all these crops. To the extent possible, data on related crops are utilized. The value of output in respect of these crops or crop groups is estimated by utilising the area estimates under these categories or crop groups as available from the annual publication, 'Land Utilisation Statistics (LUS)' of DESAg. By applying an appropriate value of yield per hectare to the total estimated area under each of these groups/crop groups, the estimates of value of output are obtained.
- (iv) For estimating the value of by-products, viz. straw and stalks of various crops, annual data on value of yield per hectare as available from the cost of cultivation studies coordinated by the Ministry of Agriculture, have been adopted.
- (v) In respect of fruits and vegetables crops, a complete data base, state-wise, is published annually in the publication "Indian Horticulture Data Base" of National Horticulture Board (NHB), Ministry of Agriculture. It is being used since 1993-94 for estimating the value of output of fruits and vegetables crops and their prices.
- (vi) Floriculture activity has been taken into account separately for the first time in 1993-94 series of NAD using the data provided by the NHB.
- (vii) In the earlier series of national accounts, production of crops in foreyard/backyard of houses was not included in the value of output of agriculture sector. This production has been taken into account for the first time in the National Accounts in 1993-94 series. The information available in the report "Operational Land Holdings in India, 1991-92, Salient Features" March 1997 and "Livestock Holdings Survey, 1991-92", NSS (48th Round) has been used to estimate the total area under the kitchen garden.

(B) Valuation of Output of Livestock Products

The Livestock sector for the purpose of estimation of value of output has been divided into 7 broad groups. The groups are:

1. Milk
2. Meat
3. Egg
4. Wool
5. Dung
6. Silk Worm cocoons and Honey
7. Increment in stock

Valuation of Livestock products is done by multiplying the quantities of production by the corresponding producers' prices. The sources of data used in the preparation of the value of output are as under: -

- (i) The Department of Animal Husbandry, Dairying and Fisheries of the Ministry of Agriculture compiles the estimates of milk, egg and wool on the basis of the results of Integrated Sample Survey (ISS). These production estimates are used for estimating value of output from these products.
- (ii) Meat group comprises of meat (beef, mutton, pork including edible offal's and glands and poultry meat), meat products (fats, heads, legs) and by-products comprising hides (cattle and buffalos hides), skins (goat & sheep skin) and other products (guts, blood, bones, horns, hoofs, tail stump, useless meat and oesaphugus). The annual meat production estimates are directly compiled by the CSO from the data relating to prices and production received from the Animal Husbandry Departments and Directorate of Economics and Statistics of various States. The Animal Husbandry Departments furnish data on number of slaughtered animals and production of meat. The latest Indian Livestock Census results are used to generate annual population of various categories of Livestock.

The estimates of other meat products and by-products are based on number of slaughtered animals and fallen animals wherever applicable and the corresponding yield rates. The outturn for each category of animals is estimated by applying the state-wise average yields rates on the estimated annual number of slaughtered animals. Hides and skins are obtained from a) animals slaughtered for production of meat and b) animals fallen due to natural death. The estimates of poultry meat are prepared using the information on utilization of eggs and chicken survived. These data are collected through ISS in some of the states. Indian Agricultural Statistics Research Institute (IASRI) and some of the State Animal Husbandry departments have also conducted poultry surveys and collected

these data. Poultry meat is estimated in terms of number of adult fowls & chickens slaughtered.

- (iii) The estimates of goat hair and pig bristles are prepared on the basis of information on yield per animal given in the relevant marketing reports. As regards camel hair, unpublished information furnished by the DMI is used. The benchmark estimates of hair and bristles are carried forward using relevant category of population.
- (iv) The estimates of production of dung are prepared on the basis of information available through ISS. Dung is used as manure as well as fuel. The utilization rates of dung for a) dung used as manure and b) dung used as fuel have been supplied by Ministry of Agriculture.
- (v) The annual outturn of estimates of silkworm cocoons by types (viz. mulberry, tasar, ericot and muga) are obtained from Central Silk Board and Khadi and Village Industries Commission (KVIC) respectively on regular basis.
- (vi) The annual net increase in the livestock population in each state is estimated respectively for each category of livestock on the basis of Livestock Census results.
- (vii) The prices of livestock products are obtained from State DESs, who estimate these by averaging all available price observations.

The users may refer for further details on the methodology of estimation, to the CSO publication entitled “National Accounts Statistics, Sources and Methods”, 1989 and “New Series on National Accounts Statistics (Base Year 1993-94)”. The value of output in respect of 61 crops or crop groups and 7 Livestock groups has been presented in this brochure. For each crop/crop groups/livestock group, information is given in the form of two statements. The first statement contains information on state-wise value of output of crop/crop group/livestock group at current prices for the period 1990-91 to 2002-03. This is followed by a statement providing information on state-wise value of output of crop/crop group/livestock group at constant prices (1993-94) for the period 1990-91 to 2002-03.