CSO-MAPM-2010

MANUAL ON AGRICULTURAL PRICES AND MARKETING

October, 2010

Government of India
Ministry of Statistics and Programme Implementation
Central Statistics Office
Sansad Marg, New Delhi
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PREFACE

1. One of the mandates of the Central Statistical Organization (CSO) is that of laying down norms and standards and evolving concepts, definitions, methodology and classification in relation to Official Statistics. Even though the CSO has been performing this mandate in many fields of statistics, the absence of proper documentation in this regard had, some time back, led to a decision to prepare, to start with, statistical manuals in respect of 24 selected/identified subjects dealing inter alia with concepts, definitions, classification procedures, compilation of data, estimation procedures, dissemination and other relevant explanatory notes, including methodological framework in respect of the statistical indicators to make these manuals comprehensive and useful reference books comparable to the manuals produced by the UNSD from time to time.

2. A Steering Committee for preparation of Manuals on various Statistical Indicators/Statistics has been set up under the chairmanship of the Director General, formerly Central Statistical Organisation and presently known as the Central Statistics Office (CSO) for directing, guiding, monitoring and reviewing the work of the preparation of Manuals. The Draft of this Manual viz. that on Agricultural Prices and Marketing was deliberated upon in detail and accorded the requisite approval by the Steering Committee at its tenth meeting held on October 15, 2010.

3. Agricultural prices and marketing have enormous economic and political implications. These not only bring a balance between demand and supply but also affect the inter-sectoral distribution of income and the rate of capital formation in the farm sector. In developing countries like India, where agriculture continues to provide employment and incomes for about two-thirds of the work force and where considerable proportion of the people is poor, agricultural prices and marketing have profound effect on the levels of living on the one hand and on the tempo of technology adoption for increasing the production of farm products on the other. It is the concern with both the level of agricultural product prices and wide fluctuations in them which led the governments in many countries to evolve agricultural price policies and to intervene in agricultural produce markets. However, the choice of objectives and instruments of price policy varied across countries and changed over time, depending on the place of agriculture in the national economy and the stage of economic development. In India, major initiatives have been taken to liberalise the trade and industries and link Indian economy with the global market. In this context, the policies relating to the

agricultural sector, particularly those relating to the pricing and trade are receiving the utmost attention of planners, economists, farmers and trade organizations.

4. In view of the importance of the sector, it has become imperative to have proper planning for monitoring activities relating to agricultural prices and marketing. One of the requirements for proper planning is the collection of reliable and authentic data through sound statistical procedures. With this in view, the Central Statistical Organization, Ministry of Statistics and Programme Implementation, New Delhi had decided some time back to seek the expert assistance of the Indian Agricultural Statistics Research Institute (IASRI), New Delhi, for preparation of a Manual on "**Agricultural Prices and Marketing**", which can serve as a ready reckoner on these subjects for the benefit of all concerned.

5. The basic purpose of this manual, like those of all other in the series, is to provide the users of data/information on **Agricultural Prices and Marketing** with a ready-to-use reference guide on methodological aspects of **Agricultural Prices and Marketing** (metadata) that facilitate international comparison and help in aggregation of statistics needed to derive meaningful conclusions. Another purpose of this manual is to provide the statistical offices, both at the national and state levels, with guidelines regarding the subjects covered by this manual.

6. The manual is primarily meant for the easy understanding and operational use by the relevant staff/Statistical functionaries working with the various Ministries/Departments/Organisations at the National, State and Sub-State Levels. At the same time, the manual is also meant to serve as a comprehensive reference material, in the form of metadata, for the understanding and use of researchers, academicians and students of Academic Institutions, besides Industry and Trade Associations/Chambers etc.

7. The materials included in this manual are expected to bring about inter-alia harmonization in concepts, definitions and methodology of compilation of Data/Information on **Agricultural Prices and Marketing**. The adoption of the methodologies suggested in this manual, it is expected, can go a long way in facilitating data aggregation and data comparison both at intra-regional and inter-regional levels, besides international comparisons.

8. The draft of this manual was earlier prepared by the IASRI, under the overall directions and guidance of the Steering Committee for Preparation of Manuals on Statistical Indicators/Statistics functioning under Chairmanship of the Director General, CSO. I take this opportunity to place on record the invaluable support extended to this endeavour by Dr. S.D.Sharma, the former

Director and by Dr. V.K.Bhatia, the present Director and IASRI. Besides them, I would like to heartily thank the concerned Senior Officers of the IASRI, especially, Dr.K.K.Tyagi, Dr.H.V.L.Bathla, Dr.S.P.Bhardwaj, Dr.V.K.Gupta and Shri S.C.Agarwal, who have made significant contributions to this manual. Our special thanks are also due to Dr.S.S.Acharya, renowned Agricultural Economist for the Invaluable Professional Guidance and Support that he had extended recently to this endeavour. The extensive and wide-ranging expert comments/suggestions received from him have been taken cognizance of, to the extent possible, under the tight time schedules that were needed to be adhered to in the process of formulation and release of this Manual. It is clearly recognized that there is a definite need and scope for incorporating further necessary updations and improvements to this manual, which can be undertaken subsequently. I take this opportunity to place on record my deep and heartfelt appreciation to the team of Officers of the Social Statistics Division of the CSO commendably led by Ms. S.Jeyalakshmi, Additional Director General and ably supported by Shri T.V. Raman and Shri Inderjeet Singh, Deputy Directors General, Dr. Niyati Joshi and Shri M.P.Diwakar, Assistant Directors and Shri M.C. Sharma, Personal Assistant.

9. I hope that this manual will serve as a useful reference document on the subject. Any comments/suggestions towards improving the scope, contents, lay out etc. of this manual from the readers/users of this manual would be welcome and deeply appreciated.

(S.K. Das)

New Delhi **Director General**

Dated: 22.10.2010 **Central Statistics Office**

CONTENTS

CHAPTER-I

INTRODUCTION

Agricultural development has been considered to be an indicator of the quality of life at the grassroots level making it what may be called peoples sector. In regard to the importance of agriculture in a broader socio-economic sense, all the three basic objectives of economic development of the country, namely, output growth, price stability and poverty alleviation are best served by growth of agriculture sector. If public investment and market infrastructure in agriculture continue to be inadequate, there could be a serious problem of competitiveness and adequate supply response.

No doubt, India is a large producer of several agricultural products. In terms of quantity of production, India is the top producer in the world in milk, and second largest in wheat and rice. We should, therefore, be concerned about improving quality while maintaining the lead in quantity. In a modern economy, it is inconceivable that the role of middlemen can be eliminated. This underscores the need to regulate the middlemen in order to make them more efficient, competitive and accountable. It is necessary to move to a situation where an efficient system of market intermediaries is created in agriculture sector. The current regime of subsidies does not tackle the major problem of agriculture viz. uncertainty. Uncertainty of weather may be alleviated by insurance-mechanisms but unfortunately the experience so far, with what has essentially been insurance of credit to agriculture, has not been encouraging. Commercialization of agriculture can progress only when institutional arrangements such as insurance penetrate deep within the agriculture sector. To benefit the farming community from the new global market access opportunities, the internal agricultural marketing system in the country also needs to be integrated and strengthened. In particular the market system has to be revitalized to i) provide incentives to farmer to produce more; ii) convey the changing needs of the consumers to the producers to enable production planning; iii) foster true competition among the market players and iv) to enhance the share of farmers in the ultimate price of his agricultural produce.

1.1 AGRICULTURAL PRICES

Agricultural prices cover prices of agricultural products (output prices) and prices of requisites for agricultural production (input prices) at various stages of marketing. In India, the main objective of the Government's price policy for agricultural produce, aims at ensuring remunerative prices to the growers for

their produce with a view to encourage higher investment and production. Towards the end, minimum support prices for major agricultural products are announced each year which are fixed after taking into account, the recommendations of the Commission for Agricultural Costs and Prices (CACP).

1.2 AGRICULTURAL MARKETING

Agricultural marketing is defined as the study of entire gamut activities that direct the flow of goods and services from the primary producer to ultimate consumer. Agriculture is a production activity Involving conversion of solar energy into palatable/usable form in harmony with nature. In traditional varieties cultivation, seeds are used from previous year production. Land is ploughed with farm animals. Family labour does weeding, harvest and cleans the grains. Usually the input used in production is mostly from own sources, purchased inputs are very minimum. In the case of high yielding varieties cultivation input use is intensive. The demand for farm inputs is derived demand. That is to produce a crop (primary demand) many inputs are required. Agricultural marketing is the study of all the activities, agencies and policies involved in the procurement of farm inputs by the farmer and the movement of agricultural products from the farmer to the consumers. It includes organization of agricultural raw materials supply to processing industries, the assessment of demand for farm inputs and raw materials. Agricultural marketing plays an important role not only in stimulating production and consumption but in accelerating the pace of economic development.

1.3 NEED FOR STATISTICAL STANDARDS

ISO stands for International Organization for Standardisation. Since their introduction in 1987, the ISO 9000 series of standards have become the most widely used standards ever published by the ISO. The publication of these standards coincided with an intensive, worldwide focus on total quality management as a means of preparing companies for the rapidly expanding globalization of international markets.

During this time, the use of statistical methods in companies also grew dramatically. New national and international statistical standards are needed, but the creation of these standards has not kept up with demand. Even those that have been published are relatively unknown and almost totally unused in industry.

1.4 DEVELOPMENT OF STATISTICAL SYSTEM OF THE SECTOR

Agricultural prices are basic economic indicator which play a vital role in economic planning for development. Till 1948, the official data were collected by

the then Central Department of Agricultural Marketing, Department of Commercial Intelligence and Department of Food; but the coverage was limited to a few important markets. In 1948, this work was transferred to the Directorate of Economics & Statistics in the Ministry of Agriculture (DESMOA). In 1954, a Committee of Agricultural Prices Enquiry was set up under the Chairmanship of Adviser, Planning Commission to make recommendations for setting up of efficient machinery for the collection of prices of agricultural commodities. The present system of collection of wholesale prices in India has been evolved on the basis of the recommendations of this Agricultural Prices Enquiry Committee.

On the recommendation of the Committee, DESMOA set up 14 Market Intelligence Units (MIU) in the capitals of Andhra Pradesh, Assam, Bihar, Delhi, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Tamil Nadu, Uttar Pradesh, and West Bengal. The market intelligence units are intended to help the DESMOA in the formulation, implementation and review of the agricultural price policy relating to procurement, marketing, storage, transportation, import, export and credit, etc. These units furnish regular reports on market arrivals, off-takes, stocks, crop prospects, and outlook of market prices. They are also required to give their appraisal of production of various kharif and rabi crops at regular intervals to help preparation of crop forecasts.

In the marketing system, the government intervention depends on the objectives of the government and the extent of defects and malpractices prevailing in the system. Government intervention may be direct or indirect, and it may take any one or a combination of the following forms e.g. i) framing of rules and regulations for the protection of the interest of some sections of the population. This may include restriction on activities of traders, licensing and market regulation; ii) promotional activities such as storage and warehousing, transportation and communication facilities, credit facility, grading and standardization, and encouragement of co-operative marketing; iii) administration of prices at different levels of marketing guaranteeing minimum support prices to producers, providing commodities at fair prices to consumers, and fixing the rates of commission charged by commission agents; and iv) influencing supply and demand by import, export, internal procurement and distribution.

1.5 PURPOSE OF THE MANUAL

The broader objective here is to prepare a Manual on Agricultural Prices and Marketing highlighting the importance of the sector, significance and measurement needs, performance indicators, statistical standards adopted at the National and International level and examining the deviations, if any, survey methodologies and data sources, sampling consideration.

The Central Statistical Organization, Ministry of Statistics and Programme Implementation, Government of India, conscious of the basic importance of agricultural price statistics, has, over the years, been active in promoting meetings and seminars to discuss the utility of these statistics and to review the current status of agricultural price collection and marketing system in India. In pursuance of the suggestions made at various levels, the CSO decided to get a manual on agricultural prices and marketing prepared by IASRI, New Delhi, for the benefit of the officials placed in different ministries of GOI, research scholars, international organizations etc. for planning and policy formulation relating to agricultural prices and marketing.

1.6 CONTENTS AND ORGANIZATION

As per the format laid down by the CSO, there are five Chapters in this Manual. Chapter-I on Introduction; Chapter-II on Measurement Needs of the Sector, Chapter-III on Concepts, Definitions and Classifications; Chapter-IV on Sources and Systems, and Chapter-V on Ensuring Quality Standards. In the end, different types of information relating to agricultural prices and marketing has been appended.

CHAPTER-II

MEASUREMENT NEEDS OF THE SECTOR

2.1 AGRICULTURAL PRICES

The price fixation is undertaken by the government such that the productive resources are channeled into production of required food commodities and also generates enough income to farmers for decent living and provide for capital formation in agriculture for future production. For the consumers, especially people living below poverty line, it should be at affordable prices. Agricultural Prices Commission gives advice to the government to fix minimum support prices and procurement prices. The DESMOA is responsible for the collection, compilation and dissemination of the price data of agricultural commodities.

2.1.1 The price data are collected in terms of (i) weekly and daily wholesales prices, (ii) retail prices of essential commodities, and (iii) farm harvest prices. Weekly wholesale prices cover 140 agricultural commodities from 620 markets. The data are collected by price reporters appointed by the State Governments or Agricultural Marketing Committees and forwarded to the State Directorates of Economics and Statistics (DESs). Daily wholesale prices cover 12 commodities (rice, paddy, wheat, jowar, bajra, ragi, maize, barley, gram, sugar, gur and khandsari) from 617 market centres. On receipt of the prices from various State agencies, the Directorate of Economics and Statistics, Ministry of Agriculture (DESMOA) forwards the same to the Economic Adviser, Ministry of Commerce and Industry for monitoring wholesale prices. Wholesale prices of certain important cereals, gram and sugar are also sent to the Cabinet Secretary on alternate days for direct monitoring. Retail prices of essential commodities are collected on a weekly basis from 83 market centres in respect of 88 commodities (49 foods and 39 non-foods) by the staff of the State Market Intelligence Units, State Directorates of Economics and Statistics (DESs) and State Department of Food and Civil Supplies. Flow of data from these agencies is not considered satisfactory. Farm Harvest Prices are collected by the field staff of the State revenue departments for 31 commodities at the end of each crop season and published by the DESMOA. It brings out a periodical publication entitled “Farm Harvest Prices of Principal Crops in India”.

2.2 AGRICULTURAL MARKETING - GENERAL FEATURES

Agricultural marketing system can be analyzed by looking at the farmers’ marketing practices, marketing channels and the structure of markets. The

marketing system and farmers' marketing practices have undergone considerable changes during the last 50 years owing to the expansion of the size of the market, increased availability of infrastructure and changes in the pattern of demand and consequently introduction of new methods of processing, packaging, storage and transportation. Farmers' marketing practices and evolution of marketing system are guided by the shelf-life of the commodity. All agricultural products do not have the same shelf-life. Some products are perishable, some are less and some are even durable. Cotton and jute versus fruits, vegetables and milk are contrasting examples of agricultural products having long and short shelf-life. In between these two extremes are other agricultural commodities. Owing to the increase in marketed surplus and need to make these available in the off-season and at Places other than production points, functions of storage, processing, transportation, packaging and grading are required to be performed either by the farmers or by market functionaries.

2.2.1 MAIN CHARACTERISTICS OF MARKETING

Optimization of input use and output produced: Agricultural marketing leads to the optimization of resource use and output management. An efficient marketing system can contribute to an increase in the marketable surplus by scaling down the losses arising out of the Agricultural Marketing inefficient processing, Storage and transportation. A well-designed system of marketing can effectively distribute the available stock of modern inputs and thereby sustain a faster rate of growth in the agricultural sector.

Increase in farm income: An efficient Marketing system guarantees to the farmers better prices for farm products and induce them to invest their surpluses in the purchase of modern inputs so that productivity may increase. This again results in increase in the marketed surplus and income of the farmers.

Widening of markets: A well known marketing system widens market for products by taking them to remote corners of the country to areas far away from the production point e.g. paddy produced in Punjab and Haryana are sold in remote tribal areas. Another example is potato. The widening of the market helps in increasing the demand on a continuous basis and thereby guarantees a higher income to the producer.

Growth of agro-based industries: The agricultural marketing system helps in the growth of agro-based industries and stimulates the over all development process of the economy. Many industries depend on agriculture for the supply of raw materials e.g. sugar industry, cotton industry, and silk industry.

Price movements: An efficient marketing helps the farmers in planning their production in accordance with the need of the economy. This work is carried out through the price signals.

Adoption and spread of new technology: The marketing system helps the farmers in the adoption of new scientific and technical knowledge.

Employment: The marketing system provides employment to millions of persons engaged in various activities such as packaging, transportation, storage and processing.

Addition to National income: Marketing activities add to the Nation's Gross National Product.

Better living: Any plan of economic development that aims at diminishing the poverty of agricultural population, reducing consumer food prices, earning more foreign exchange or eliminating economic waste has to pay special attention to the development of an efficient marketing for food and agricultural products.

Creation of Utility: Marketing creates the following four types of utilities of the product:

Form Utility: The processing function adds form utility by changing the raw material into finished products e.g. paddy- rice; Wheat- bread, biscuit, cake; Milk- ghee, cream, cheese, skimmed milk, butter.

Place Utility: The transportation function adds place utility to products by shifting them to a place of need from the place of plenty e.g. potatoes in plain, milk at urban places.

Time Utility: The storage function adds time utility to the products by making them available at the time when they are needed e.g. tamarind, rice in off-season.

Possession Utility: The marketing functions buying and selling helps in the transfer of ownership of goods from one person to another in the marketing system. The points of view of producer, middlemen, and consumers are different, but each is individualistic and concerned with his profit. From the producer point of view, it is important to know whether the prices prevailing in the market enable him to continue to produce or not, and what he should produce and where and at what time he should sell it. Large-scale production requires skill to sell it at remunerative price. A consumer looks at marketing from the point of view of good and the prices at which they are offered. Middlemen try to increase his profit margin by discharging various marketing functions. Marketing has greater importance and significance for the society as a whole than for any of the individual beneficiaries of the marketing process.

2.2.2 BENEFITS OF EFFICIENT MARKETING

1. **Any increase in the efficiency** of the marketing process, which results in lower costs of distribution and lower prices to consumers, really brings about an increase in the National Income.
2. **A reduction in the cost** of marketing is a direct benefit to the society.
3. **Marketing process brings new varieties**, quality and beneficial goods to consumers. It provides connecting link between production and consumption. **Approximately one third of all persons gainfully employed** in the country are engaged in the field of marketing and about one forth of National Income is earned by marketing profession.
4. **Scientific marketing has a stabilizing** effect on the price level. If producers produce what consumers want and consumers have a wide choice of products there are no frequent ups and downs in price.
5. **Marketing is a catalyst** for the transmutation of latent resources in to actual resources, of desires into accomplishments and development of responsible economic leaders and informed economic citizens.
6. **Marketing brings to the farmers useful** implements, tools and fertilizers etc. and the benefits of the use of machines and free after-sales service, and make them modem farmers. Scientific marketing also remedies the imbalance in the supply of making available the surpluses to the deficit areas. If the functions of marketing are not performed properly, the economic system may get out of balance resulting in piling up of goods with retailers, wholesalers and manufacturers, which lead to closure of factories and retrenchment of workers. Thus it plays an important role in economic stability of a country.

2.3 ISSUES AND PERFORMANCE INDICATORS

Agricultural prices are important economic variables in a market economy. Price relationships have a significant influence on decisions relating to the type and volume or agricultural production activity. They provide a measure for reaching judgment on policy formulation and administrative and executive action. Being crucial for purposes of decision-making in the sphere of economic activities, price data acquire considerable importance. Their collection and compilation, therefore, deserve attention no less than that given to obtaining information on other socio-economic characteristics. The systems to be adopted in the compilation of price statistics must, therefore, be meaningfully determined in relation to their end uses.

2.3.1 AGRICULTURAL PRICE POLICY

Agricultural price policy is basically aimed at intervention in the agricultural produce markets with a view to influencing the level of fluctuations in prices and price-spread from farm-gate to the retail level. The instruments of agricultural price policy comprised mainly the controls/restrictions of various forms, imports of food grains and distribution of imported grains at below the market prices. The broad framework of the policy was specified in the terms of reference of the Agricultural Price Commission (APC), which was set up in 1965, to advise the government on a regular basis, for evolving a balanced and integrated price structure. While formulating the price policy, the Commission was required to keep in view not only the need to provide incentives to the farmers for adopting the new technology and maximising production but also the likely effect of the price policy on cost of living, levels of wages and industrial cost structure. The thrust of the policy had been to achieve the twin objectives of assuring remunerative prices to the farmers and providing food grains to the consumers at reasonable prices. The framework of the policy was modified in 1980 when the balance between demand and supply was in sight (Ministry of Agriculture, 1980). The emphasis of the policy, as reflected in the revised terms of reference of APC (later renamed as Commission for Agricultural Costs and Prices—CACP), shifted from maximising the production to developing a production pattern consistent with the overall needs of the economy. Further, the Commission was also asked to monitor the movements in the terms of trade for the agricultural sector, which reflected the emerging concern for fair sharing of gains of use of technology and public investment between farmers and consumers. The policy was reviewed in 1986 when a long term perspective for agricultural price policy was presented to the Parliament (Ministry of Agriculture, 1986). It was emphasized that the policy should seek to build into the system the major factors which in the long run influence the prices of agricultural commodities for making the farm sector more vibrant, productive and cost effective. The agricultural price policy was again subjected to a rigorous review after a Programme of economic reforms was launched in 1991 and India became a signatory to the new world trade agreement, which for the first time included agriculture also (Acharya, 1997a and 1997d). Several policy instruments and complimentary policies were used to achieve the objectives of agricultural price policy (Acharya, 1997d). The important policy instruments currently in vogue include:

i) Assurance of minimum support prices for 24 crop products;

ii) Selective market intervention scheme (MIS) for other crops;

iii) Products which are not covered under minimum support price scheme;

iv) Imposition of levy on rice millers and sugar factories for procurement of a specified quantity of rice and sugar;

v) Implementation of statutory minimum support prices in case of sugarcane as the buyer for this is only sugar factories;

vi) Maintenance of buffer stocks of wheat and rice;

vii) Distribution of food grains and sugar under PDS in limited quantities at subsidised prices;

viii) Open market purchases of some commodities by public agencies at market prices during the peak arrival period and also their open market sales at fixed prices;

ix) Encouragement to producers cooperatives to undertake marketing on behalf of the farmers;

x) Regulation of the activities of traders and processors; and

xi) Creation of marketing infrastructures for facilitating marketing of agricultural commodities.

2.3.2 ADMINISTERED PRICES

1. The administered price regime currently in vogue includes:
2. Minimum support prices (MSP) for 24 commodities including seven cereals (paddy, wheat, barley, jowar, bajra, maize and ragi); five pulses (gram, arhar/tur, moong, urad and lentil); eight oilseeds (groundnut, rapeseed/mustard, toria, soyabean, sunflower seed, sesamum, safflower seed and nigerseed); copra, raw cotton, raw jute and virginia flu cured (VFC) tobacco;
3. Statutory minimum prices for sugarcane;
4. Levy prices for rice and sugar; and
5. Central issue prices for rice, wheat and coarse cereals for sale under public distribution system (PDS).

2.3.3 PRICE SUPPORT POLICY

The Minimum Price Support Policy (MSP) linked to procurement has served the country well in the past three decades. However, in recent years it has started encountering problems mainly because of surpluses of several agricultural commodities and excessive built up of stocks with FCI. Even deficit states like Bihar, Assam, Eastern U.P. have started generating surpluses of certain cereals. Also, as a result of operation of the pricing Policy, private trade has not been able

to play its role particularly in respect of two major cereals, namely wheat and rice that account for over 70 per cent of total food grain production in the country. Under the MSP scheme, prices of major agricultural commodities are not only exogenously determined but these prices are defended through nodal procurement agencies like FCI. The adverse effects lay hidden as long as the country operated in a situation of shortages in a relatively closed economy. Bringing equilibrium in the market, a function that is normally performed by private trade, was successfully performed by the public sector nodal procurement agencies. In the process the private trade has been marginalized. In the changing environment, it is essential to think of an alternative policy, particularly if the private trade is to be restored its rightful role in the market place.

2.3.4 IMPACT ASSESSMENT

The assessment of impact of agricultural price policies pursued in India can be approached from several angles *viz.* achievement of national objectives, incentives or disincentives created for farmers, and distortions, if any, created in the marketing system. The impact of agricultural price policies can be summarized as follows (Acharya, 2001):

i) The policy has been instrumental in creating a fairly stable price environment for farmers to induce them to adopt new production technology and thereby increase the output of foodgrains. The improvement in the level of food security in India during the last three decades has been widely acknowledged the world over.

ii) Geographically dispersed growth of cereal production during the last two decades coupled with public distribution system of cereals helped in increasing the physical access to food.

iii) Supply of subsidized inputs to farmers and subsidized distribution of foodgrains, which enabled to keep the real prices of cereals declining vis-a-vis the per capita income, helped in improving the economic access to staple food grains.

iv) While the farmers were provided some degree of price insurance through a policy of minimum support prices, the policy tried to achieve a fair sharing of gains of technological progress and public investment between farmers and consumers.

v) Apart from the increase in physical and economic access to food and an assurance of a reasonable return to growers of staple food, the incentive framework created by the price policy helped in diversification of cropping and production pattern in agriculture. While such shifts in cropping and production

patterns occurred at the margin, these helped in increasing the production of oilseeds, fruits, vegetables and livestock products, thus improving the nutrition security to a great extent.

vi) Owing to the decline in the real prices of basic staple food, the industry and the organised sector could keep their wage bills low, as rice and wheat have a considerable weightage in the consumer price index. The benefits of price policy and input/food subsidies have, thus, been shared by all sections of society i.e., surplus-producing farmers, other farmers who are net purchasers of cereals, landless labourers, urban consumers and industry.

vii) The kind of policy and programmes followed in the country resulted in some distortions in the normal functioning of the open market. For example, in the case of cereals, while the spread between wholesale and retail prices was not found to be excessive, the inter-year price rise has been considerable lower and, in several situations, was even lower than the storage cost, which did not encourage the participation of private trade in storage and related trading activities in food grains.

viii) As regards the spatial integration, there is ample evidence to show that in the case of rice and wheat, the markets have demonstrated high degree of integration and the integration has further increased during the nineties. In contrast, the markets for coarse cereals like jowar did not demonstrate high degree of integration (Wilson, 2001). There is, thus, evidence to believe that market intervention, through price policies, has been cautious and selective and market imperfections observed are due to infrastructure bottlenecks, stringently market regulations, lack of market information flows and such other factors and not necessarily due to pricing policies pursued in the country. By and large, the policies benefited farmers as well as the consumers but by their very nature and objectives affected the participation of private sector in the marketing of commodities covered by these policies. The situation in recent years has considerably changed. In several commodities, the volume of commodities entering the markets has considerably gone up. The participation of private sector is becoming more important. It is in this context that there is a need for a relook at the policies and reformulate them to attract private sector participation in agricultural marketing at a large scale. In the emerging circumstances, a road map has to be laid for an agricultural pricing policy with twin emphasis on economic viability and generation of enough incentives to the farmers for making further investment in agriculture and more particularly in its diversification. The policy should attempt to balance forces of demand and supply rather than placing greater emphasis in increasing supply alone.

CHAPTER-III

CONCEPT, DEFINITIONS AND CLASSIFICATIONS

3.1. AGRICULTURAL PRICES

After an agricultural product leaves the farm-gate, it may pass through anyone of a number of different marketing and distribution channels before reaching the ultimate consumer. It may move directly to the consumer (if the producer himself sells at the farm-gate, at the roadside or in a local village market); it may be sold by the producer directly to a retailer, to an exporter, or to a manufacturer particularly production under contract); or the producer may sell directly to a government controlled official marketing board which will pay fixed prices that may have been determined well in advance of harvesting, for example. Alternatively, the producer may sell to a wholesaler who will then resell to any of the buyers mentioned above either directly or through other wholesalers or middlemen. All combinations are possible. In the same way, a farmer buying the requisites of agricultural production may deal directly with retailers, wholesalers, manufacturers or importers. Thus agricultural prices derive their meaning and significance from the stage of marketing to which they relate. They may, therefore, in accordance with the above, be prices received by farmers, wholesale prices, retail prices, or export prices (for produce sold); and import prices, wholesale prices, retail prices or prices actually paid by farmers (for the purchased means of production). It is because of the wide range of marketing methods which may operate in individual countries, and the consequent wide variety of price quotations available, that it has been found most appropriate to use the principle of farm-gate prices (actual or national) for the purposes of agricultural price statistics. This principle is dealt with in detail in the remainder of this chapter. It should be borne in mind, however, that if, in any country, the vast majority of sales of agricultural commodities, or purchases of requisites of production, are made through one single marketing system, then it may be more expedient to record prices at that marketing point and not attempt to work back to notional farm-gate prices by making estimated deductions or additions in respect of transport, etc., costs. Such a situation, however, is not likely to occur in many countries.

3.1.1 PRICES RECEIVED BY FARMERS (PRODUCER PRICES)

In line with the Handbook of Economic Accounts for Agriculture (provisional) and the deliberations at the regional seminars and conferences convened by the FAO at which the subject of agricultural producer prices has been discussed, prices received by farmers for their produce are, in principle, the prices realized by them

for that produce at the farm-gate. Thus, the costs of transporting agricultural produce from the farm to the market or to the first point of sale off-farm, and of selling it there (whether these activities are performed by the farmer himself or by specialized agents) are not, by definition, to be included in the farm-gate price. The cost of such activities, if included in the price realized at the market or the first point of sale must, therefore, be deducted from that price to arrive at the estimate of the farm-gate price. It can be argued that activities such as transportation and sale of farm produce are an integral part of the agricultural production activity and that the price quoted at the first point of sale off-farm should, therefore, be taken as the price received by the farmer. Against this view, it should be noted that the first point of sale may even be the retail market, as often happens in the case of perishables, particularly where cold storage facilities are either inadequate or non-existent. Inaccuracies will result if, in evaluating the total agricultural output, a part of it is valued at the farm-gate price, a part at the wholesale market price, a part at the retail market price and a part even at the export price. To avoid this, a single, uniform concept of price received by farmer must be defined and adhered to. The concept normally used is that of the price actually or notionally received at the farm-gate. For agricultural products for which actual farm-gate prices are not available, notional farm-gate prices must be estimated by deducting transportation charges, marketing expenses and taxes, etc., paid by the farmer per unit quantity from the appropriate wholesale or retail price.

3.1.2. WHOLESALE PRICES

After an agricultural product leaves the farm-gate, it may pass through one or even two wholesale markets and a chain of other ”middlemen” before reaching the retailer from whom the ultimate consumer buys it. Where two wholesale markets are involved, the first may be only an assembling market and may be called a primary wholesale market; and the second may be a distributing market, called a secondary market. Sometimes, one comes across a third category of wholesale market, viz., a terminal wholesale market, from where there is no further resale, as for example, a market from where the product is exported. It is not necessary that the functions of assembly, distribution and export should necessarily be performed by three separate wholesale markets; a single wholesale market may perform one, two or all three of these functions. An assembling wholesale market, as its name implies, is one where, by and large, the producer-sellers or their agents assemble their products and offer them for sale in bulk or large quantities. The wholesalers buy in this primary wholesale market for further sale to local or nearby retailers, to exporters or to another set of wholesalers who would carry the products to other places or markets for resale

to retailers there. A secondary or distributing wholesale market is one where the products are brought for sale largely by the wholesalers from the assembling markets. Small quantities are brought by the producer-sellers too. The agencies buying from the secondary wholesale market are the retailers, and also the exporters or bulk consumers. A wholesale market may thus be defined as a market situated somewhere between farm-gate and retail market, usually handling a large quantity of sales for a further stage of distribution of the commodity. **Wholesale price accordingly is the rate at which a relatively large transaction, generally for further sale, is effected.** Depending upon the extent to which the transportation charges and other expenses incidental to marketing are borne by the sellers and buyers in the wholesale market, and remembering also that the wholesalers include their profit margin in their price quotations, a wholesale price may take any of the following forms:

a) In a primary wholesale market, the wholesale price of a product may refer to the price at which the wholesale buyer makes purchases from the producer-seller or his agents. This price would differ from the price the producer-seller gets, depending upon whether the buyer or the seller bears the incidental charges; and

b) In a primary wholesale market, the wholesale price of a product may also refer to the price at which the wholesaler offers it for sale to the retailers, etc. This price should exceed the price in (a) above by the wholesaler's margin of profit.

c) In a secondary wholesale market, the wholesale price of a product may refer to the price at which the wholesaler sells it to the retailers, etc. This price should exceed the price in (b) above by transportation charges, incidental expenses and margin of profit.

3.1.2.1 HOW WHOLESALE PRICES ARE COLLECTED

Wholesale prices of selected crops are collected daily as well as on Fridays on a regular basis from the selected markets/centers spread all over the country by the Directorate of Economics and Statistics, Ministry of Agriculture, Government of India as well as by the respective state government under the Market Intelligence Scheme.

The Directorate of Marketing and Inspection (DMI) also collects wholesale prices of some commodities and publishes these in their reports from time to time. The selected markets or centres represent important urban and rural markets in the producing and consuming areas, as well as from surplus, deficit and self-supporting regions of the country. The variety and the quality of the products are also specified for the market for collection of price information. Modal price,

which means the price at which most transactions take place during peak marketing period, is collected and compiled. The Directorate of Economics and Statistics obtains (a) Daily wholesale prices of food grains from 140 primary, secondary and terminal Markets; and (b) Weekly wholesale prices (Friday of the week) in respect of 130 agricultural commodities from 530 markets.

3.1.3 RETAIL PRICES

Retail prices are established in transactions in which quantities dealt with are relatively smaller than in wholesale transactions and in which the final consumers of the agricultural product participate as buyers. Retail prices of agricultural commodities are collected in most countries. Unlike farm-gate prices, they are available throughout the year. Retail prices are used in constructing consumer price indices, in undertaking studies into cost of living and levels of living, and in determining cost of living allowances for wage earners. If an agricultural producer sells his product in the retail market directly to consumers, the notional farm-gate price received by the producer is estimated by deducting transportation and marketing charges from the retail price. If, however, the product is brought for sale from a wholesale market, then deductions from the retail price must be made for transportation and marketing charges, and for margins of profit, at both wholesale and retail stages, to arrive at the notional price received by the farmer at the farm-gate.

3.1.3.1 HOW RETAIL PRICES ARE COLLECTED

The Labour Bureau, Ministry of Labour, Government of India has been entrusted with the task of collecting retail prices at the national level. The retail prices of few commodities are collected through the National Sample Survey Organization (NSSO) from a set of 422 villages for building up the consumer price index numbers. These index numbers for industrial workers and agricultural labourers are compiled and published for 15 States as well as on All-India basis. The Directorate of Economics and Statistics also collects daily retail prices of vegetables, fresh fruits, fish, livestock products and food grains from 90 centres and weekly retail prices of agricultural commodities from 215 centres. The commodities included for collection of retail prices are ‘food articles’ like cereals, pulses, vegetables, edible oils, milk, ghee, sugar, salt, tea, coffee, gur, spices, meat and fish; ‘fuel and light’ like kerosene, match boxes and dung cake; and ‘others’ like clothing, footwear, tobacco, supari, pan, bidies, country liquor, soap, tailoring and barber charges. Data on all the three types of prices are available in raw form and are processed as per the need with the help of various statistical techniques.

3.1.3.2 CURRENT STATUS

The DESMOA is responsible for the collection, compilation and dissemination of the price data of agricultural commodities. The price data are collected in terms of (a) weekly and daily wholesales prices, (b) retail prices of essential commodities, and (c) farm harvest prices.

Weekly wholesale prices cover 140 agricultural commodities from 620 markets. The data are collected by price reporters appointed by the State Governments or Agricultural Marketing Committees and forwarded to the State Directorates of Economics and Statistics (DESs). Daily wholesale prices cover 12 commodities (rice, paddy, wheat, jowar, bajra, ragi, maize, barley, gram, sugar, gur and khandsari) from 617 market centres. On receipt of the prices from various State agencies, the DESMOA forwards the same to the Economic Adviser, Ministry of Commerce and Industry for monitoring wholesale prices. Wholesale prices of certain important cereals, gram and sugar are also sent to the Cabinet Secretary on alternate days for direct monitoring.

The detail instructions for collection and reporting of daily and weekly Wholesale and Retail prices of Agricultural Commodities in the prescribed proformae are given in the Appendix.

Retail prices of essential commodities are collected on a weekly basis from 83 market centres in respect of 88 commodities (49 food and 39 non-food) by the staff of the State Market Intelligence Units, State Directorates of Economics and Statistics (DESs) and State Department of Food and Civil Supplies. Flow of data from these agencies is not considered satisfactory.

Farm Harvest Prices are collected by the field staff of the State revenue departments for 31 commodities at the end of each crop season and published by the DESMOA. It brings out a periodical publication entitled “Farm Harvest Prices of Principal Crops in India”.

3.1.3.3 DEFICIENCIES

Wholesale prices data are received in the DESMOA mostly through postal mail, which entails delay. Data on retail prices of the essential commodities are received with a time lag of about five to six weeks and the response rate is only of the order of 60 per cent. Supply of data through post is stated to be the reason for delay. The State Governments generally use part time reporters who are not fully conversant with the connotations of the different terms used in price data collection and they do not pay adequate attention to the reporting work. The main deficiency in the collection of price data arises due to large non-response.

There is no coordination among the State agencies concerned nor an adequate supervisory check over price collection.

3.1.4 EXPORT PRICES

Export prices are determined in export markets for products intended for delivery outside the customs boundary of the country. Export markets are also described as terminal wholesale markets, where the valuation of the product is made as free-on-rail, or free-alongside-ship or free-on-board, lf the producer-seller sells his product in such markets, the notional farm-gate price is worked backwards by deducting from the export price the transportation charges and all other incidental expenses incurred by him.

3.1.5 PRICES PAID BY FARMERS

The concept of prices paid by a farmer is the counterpart of prices received by a farmer and covers all prices paid by him as he participates in the transaction of goods and services in his capacity as a buyer of the means of agricultural production. Just as the price received by a farmer for his produce is the price realized by him for that produce at his farm-gate, so the price paid by a farmer for an agricultural production requisite is, in principle, the price paid by him for that item at his farm-gate or village site. If a requisite of agricultural production is bought off-farm, say, from a factory or a government store, the expenses incurred in transporting it to the farm must be added to arrive at the estimate of the price at the farm-gate. If, however, it is purchased from a local blacksmith or tradesman in the village, then the purchase price can be taken as the farm-gate price paid by the farmer.

3.1.6 CONCEPTUAL DISTINCTION BETWEEN PRICES RECEIVED AND PRICES PAID BY FARMERS

Both prices received by farmers and prices paid by farmers have the same common locational reference, that is, the farm-gate, but there is an important distinction as to the stage of marketing to which the two sets of prices relate when first collected. In most instances, the farmer sells wholesale but buys retail. Therefore, farm-gate prices received by farmers are usually derived from the average wholesale price at which they dispose of their produce; while farm-gate prices paid by farmers are, in general, calculated from the average retail price at which they make purchases.

3.2 AGRICULTURAL MARKETING

Agricultural marketing is the study of all the activities, agencies and policies involved in the procurement of farm inputs by the farmers and the movement of

agricultural products from the farmers to the consumers. It includes organization of agricultural raw materials supply to processing industries, the assessment of demand for farm inputs and raw materials. From the producer point of view, it is important to know whether the prices prevailing in the market enable him to continue to produce or not, and what he should produce and where and at what time he should sell it. Large-scale production requires skill to sell it at remunerative price. A consumer looks at marketing from the point of view of goods and the prices at which they are offered. Middlemen try to increase his profit margin by discharging various marketing functions. Agricultural marketing system can be analyzed by looking at the farmers' marketing practices, marketing channels and the structure of markets. The marketing system and farmers' marketing practices have undergone considerable changes during the last 50 years owing to the expansion of the size of the market, increased availability of infrastructure and changes in the pattern of demand and consequently, introduction of new methods of processing, packaging, storage and transportation.

Farmers' marketing practices and evolution of marketing system are guided by the shelf-life of the commodity. All agricultural products do not have the same shelf-life. Some products are perishable, some are less and some are even durable. Cotton and jute versus fruits, vegetables and milk are contrasting examples of agricultural products having long and short shelf-life. In between these two extremes are other agricultural commodities. Owing to the increase in marketed surplus and need to make these available in the off-season and at places other than production points, functions of storage, processing, transportation, packaging and grading are required to be performed either by the farmers or by market functionaries.

3.3. AGRICULTURAL MARKET INTELLIGENCE

3.3.1 CURRENT STATUS

On the recommendation of the Agricultural Prices Enquiry Committee (1954), the Directorate of Economics and Statistics, Ministry of Agriculture (DESMOA) set up 14 Market Intelligence Units (MIU) in the capitals of Andhra Pradesh, Assam, Bihar, Delhi, Gujarat, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Tamil Nadu, Uttar Pradesh, and West Bengal. The market intelligence units are intended to help the DESMOA in the formulation, implementation and review of the agricultural price policy relating to procurement, marketing, storage, transportation, import, export and credit, etc. The units furnish regular reports on market arrivals, off-takes, stocks, crop prospects, and outlook of market prices. They are also required to give their appraisal of production of various kharif and

rabi crops at regular intervals to help preparation of crop forecasts. Though the data to be supplied by the market intelligence units are of great utility, the units have ceased to be effective in discharging their functions mainly due to a lack of proper direction and control of their activities. Over the years, the staff strength of the units has been considerably reduced resulting in even worse performance.

3.4 MARKETABLE SURPLUS AND POST-HARVEST LOSSES

3.4.1 CURRENT STATUS

The Directorate of Marketing and Inspection (DMI), Ministry of Agriculture has been conducting surveys on marketable surplus and post-harvest losses of food grains. The surveys provide information on marketable surplus ratios as well as on a variety of other important items like farm retention for family consumption, for seed, feed and wastage, etc. The present surveys collect information on these parameters using the methodology approved by a Technical Committee constituted for the purpose under the Chairmanship of the Agricultural Marketing Adviser to the Government of India. The surveys cover the following crops: Paddy, Wheat, Jowar, Bajra, Maize, Ragi, Barley, Red Gram, Gram, Green Gram, Black Gram and Lentil. The sampling methodology used is that of stratified multistage random sampling and consists in selecting 20 per cent of the districts in a State, 15 villages in each selected district and 10 cultivator households from each selected village with a maximum of 100 districts, 1,500 villages and 15,000 households.

The fieldwork of the surveys is conducted by designated State Agencies through field investigators employed by them under the overall supervision of the Directorate of Marketing and Inspection. The data so collected are analysed with the support of IASRI and published. The information collected through these surveys is used in the National Accounts Statistics, and Ministry of Commerce and Industry in fixing the weights for certain agricultural commodities while compiling the all-India Index Number of Wholesale Prices in addition to its uses in planning and procurement operations and market development programmes.

3.4.2 MARKETABLE SURPLUS

The marketable surplus is that quantity of the produce, which can be made available to the non-farm population of the country. The marketable surplus is the residual left with the farmers after meeting his family consumption, farm requirements, social and religions payments. This may be expressed as:

$$MS = P - C$$

where,

MS = Marketable Surplus;

P = Total Production; and

C = Total requirement of farm family.

The marketable surplus differs from region to region and within the same region, from crop to crop. It also varies from farm to farm. On a particular farm, the quantity of marketable surplus depends on the following factors.

1) Size of holding
2) Production of Commodity
3) Price of the Commodity
4) Size of family and
5) Requirements of seeds and feed

3.4.3 MARKETED SURPLUS

Marketed surplus is that quantity of the produce, which the farmer actually sells in the market, irrespective of his requirements for family consumption, farm requirements, social and religious payments. The marketed surplus may be more, less or equal to the marketable surplus. Marketed surplus is more than the marketable surplus when the farmer retains a smaller quantity of crop than his actual family and farm requirements. This is true especially of small and marginal farmers whose need for cash is immediate. The situation of selling more than marketable surplus is termed as distress or forced sale. Such farmers generally buy the produce from the market in a later period to meet their requirements. The marketed surplus is less than the marketable surplus when the farmer retains some of the surplus produce. This situation holds well under:

a) Large farmers generally sell less than the marketable surplus because of their better retention capacity. They retain extra produce in the hope that they would get a higher price in the later period. Sometimes farmers retain the produce even up to the next production season

b) Farmer may substitute one crop for another crop either for family consumption purpose or other farm requirements because of the variation in prices. With the fall in the price of the crop relative to a competing crop, farmer may consume more of the first and less of the second crop. The marketed surplus may be equal to the marketable surplus when the farmer neither retains more nor less than his requirement. This holds true for perishable commodities and agricultural raw materials like cotton, jute etc.

Given the average size of farms and consequently lower farm output, the farmers marketing practices are determined by the surplus available with the individual farmer. The market structure and conduct on the other hand determine the incentives for the farmers to sell their surpluses. Also, the market structure and conduct depend on the quantity of surpluses available to be handled by the system. In this context, the estimates of marketed surplus assume critical importance both for the farmers as well as for the marketing system. Volume of marketed surplus also affects the supplies of food for the non-farm population and fibre and raw material for the agro-industry and for exports. Naturally, the estimation of marketed surplus has attracted the attention of researches as well as the policy-makers.

The marketed surplus and marketable surplus in the context of small farm agriculture are not the same. While the marketable surplus is the difference between farm output and family and farm needs, the marketed surplus is the actual quantity marketed by the farmers. The marketed surplus may be even higher than the marketable surplus. This is what is called distress sale, which is particularly true in food grains and other food items on marginal and some small farms.

CHAPTER-IV

SOURCES AND SYSTEMS

4.1 INTRODUCTION

Price data available in India can broadly be classified into two categories viz. prices relating to bulk transactions, and prices in respect of small transactions. Prices relating to bulk transactions include wholesale prices, farm harvest prices, export and import prices, etc. In contrast, retail (consumer) prices are essentially the prices paid by customers in respect of various commodities and services. The retail prices are customarily collected for those items which are contained in the consumer basket of goods and services of different segments of population such as Industrial Workers, Urban Non-manual Employees, Agricultural Labourers and Rural Labourers. Often, certain other categories of prices are also identified, which are that of controlled / administered prices, and spot prices of precious metals namely gold and silver.

4.2 PRICE REPORTING SYSTEM IN INDIA

Price is basic economic indicator. It plays a vital role in economic planning for development. The earliest series of wholesale prices data available in India relate to 1897, and were published in the **'Prices and Wages'**, a publication of the Department of Commercial Intelligence & Statistics, Govt. of India up to 1922. Till 1948, the official data were collected by the then Central Department of Agricultural Marketing, Department of Commercial Intelligence and Department of Food; but the coverage was limited to a few important markets. In 1948, this work was transferred to the Directorate of Economics & Statistics in the Ministry of Agriculture. In 1954, a Committee of Enquiry was set up under the Chairmanship of Adviser, Planning Commission to make recommendations for setting up of efficient machinery for the collection of prices of agricultural commodities. The present system of collection of wholesale prices in India has been evolved on the basis of the recommendations of this Agricultural Prices Enquiry Committee.

4.2.1 REPORTING AGENCIES

Under the Scheme for Improvement of Market Intelligence (since the Second Five-year Plan), the State Governments and Union Territories have appointed Technical Reporting Agencies in important assembling/consuming markets. At present, different State Agencies, e.g. Bureau of Economics & Statistics, Revenue Department, Marketing Department, Registrars of Cooperative Societies, Department of Civil Supplies, Market Produce Committees etc, report

wholesale/retail prices to the Directorate of Economics & Statistics. The wholesale/retail prices data thus collected from different markets are published every week in the "**Bulletin of Agricultural Prices**", a priced publication, the monthly journal "**Agricultural Situation in India**" and the Annual publication, "**Agricultural Prices in India**".

4.2.2 FARM HARVEST PRICES

Farm prices have been defined as the average wholesale price at which the commodity is disposed of by the producer at the village site during the specified harvesting period. The price data is collected every week from a certain number of representative villages in each district on purposive basis during the specified harvesting period (generally six to eight weeks during tile peak period of marketing after the commencement of harvest). In such selected village, the prices at which commodity is sold by the producer is recorded on every Friday during tile peak period of marketing. If no sales take place on that day, the price at which the commodity was sold last during the week is recorded. The weekly prices of the selected villages are averaged for tehsils & districts by taking their simple mean. The method of striking the average price for the State as whole is worked out with the district production figures for the current year as weights. Farm harvest prices are collected for 25 commodities in this Directorate from 19 States & Union Territories. These are reported by different State agencies viz. Bureau of Economics & Statistics, Directorate of Agricultural Statistics, Directorate of Land Records. At present, the Farm (Harvest) Prices are published in "**Farm (Harvest) Prices of Principal Crops in India**".

4.2.2.1 HOW FARM HARVEST PRICES (FHP) ARE COLLECTED

Farm harvest prices (FHP) are collected in respect of different crops viz. paddy, jowar, bajra, maize, ragi, wheat, barley, gram, tur (Arhar), groundnut, rapeseed and mustard, sesamum, linseed, castor seed, toria, cotton, jute, sannhemp, pepper, ginger, chilly, turmeric, mesta, sugar-raw, potato and tobacco, soyabean, banana etc. by the Directorate of Economics and Statistics, Ministry of Agriculture, Government of India on a continuous basis. For quoting farm harvest prices, first of all a particular variety of the crop, which is most extensively cultivated in the district is selected. The harvest period for each crop is fixed by the state government to facilitate proper recording. Harvest period is usually of 6 to 8 week's duration after the commencement of harvesting. FHP is reported at the district and state levels. Presently most of the States and Union Territories using a common methodology collect farm harvest prices. The data in some States are collected only from a few selected centres and thus are not fully representative of prices prevailing in rural areas. Price data during the harvest

period are reported every Friday. The simple arithmetic average is taken to represent the harvest season price of that crop at the village level. The simple arithmetic average of the village price gives the tehsil level prices and the average at the district level is the simple arithmetic average of tehsil prices. The average farm harvest prices for each crop for the state as a whole are worked out at the state headquarters by DES, which is the weighted average of the district prices using the quantity of the base period average production of the crop in the district as weight. The State Bank of India also collects and compiles harvest prices of important agricultural commodities and publishes them in their journal 'State Bank of India Monthly Review'.

4.2.3 WHOLESALE PRICES

Wholesale prices have different connotations in so far as they are being used by different departments. The Ministry of Agriculture defines wholesale prices as the rate at which a relatively large transaction of purchases, usually for further sale, is effected. However, according to the Office of the Economic Adviser, Ministry of Industry which compiles the WPI, the whole sale prices represent transaction at the primary stage which broadly corresponds to producers' prices.

The Office of the Economic Adviser to the Government of India undertook to publish for the first time, an index number of wholesale prices, with base week ended August 19, 1939 = 100, from the week commencing January 10, 1942. The index was calculated as the geometric mean of the price relatives of 23 commodities.

The base period of the index was subsequently shifted to the year ending August 1939. Since 1947, this Office started publishing, regularly every week, a series of weighted index number of wholesale prices with the year ended August 1939 as the base period. This series included as many as 78 commodities, covering 215 individual quotations, the series lasted till March 1956.

The pre-Independence period WPI indices naturally represented undivided India making it necessary to revise the index soon after Independence. In accordance with the recommendations of the Standing Committee of the Departmental Statisticians, the Economic Adviser's Office issued a revised series of index, with 1952-53 as price base and 1948-49 as weight base, consisting of 112 commodities, and 555 individual quotations. This series was issued regularly every week from April, 1956 to September, 1969. While the 1952-53 series was revised on the basis of the recommendations made by the Committee of Departmental Statistician, a new series of index numbers of wholesale prices with base 1961-62 = 100 was issued from July 1969. This series lasted till December 1976.

While introducing the series with base 1961-62, it was decided to constitute a working group to go into the methodological aspects of the index relating to the revised series, with a more recent year as the base. Accordingly, a new series, with the base year as 1970-71, was introduced in January, 1977 on the recommendations of the Working Group.

The new series with 1981-82 as the base year continued the conceptual tradition that has been followed by its predecessors. However, some significant innovations were made in the attempt to restructure the series; which also related to the breadth of coverage of commodities and composition of groups of commodities. As against 360 items in the 1970-71 series, the 1981-82 series included 447 distinct commodities. The sector-wise break up of 447 commodities is i) primary articles–93 (food articles–44, non-food articles–28, minerals-21); ii) fuel, power, light and lubricants–20; iii) manufactured products-334. In all 2,371 quotations of wholesale prices in respect of 447 commodities were collected, on weekly basis, through official as well as non-official sources. The official sources are Directorate of Economics and Statistics, Ministry of Agriculture; Agricultural Marketing Departments of Central and State Governments, State Directorates of Economics and Statistics, District Statistical Offices, Registrars of Co-operative Societies and other primary agencies belonging to various State Governments. The non-official sources are various chambers of commerce, trade associations, leading manufacturers and prominent business houses. This series was issued regularly every week from July, 1989 to March, 2000.

Laspeyres base-weighted formula is used to compile WPI. Price relatives are calculated as percentage ratios which the current prices bear to those prevailing in the base period; and are obtained by dividing the current prices by the corresponding base year prices, and multiplying by 100. Commodity index is computed as a simple arithmetic average of the price relatives of the quotations under that commodity. Subgroup index is derived as weighted average of the indices of the commodities included in that subgroup. Group index is obtained as weighted arithmetic average of the indices of subgroups included under that group. The major group index is arrived at as weighted average of the indices of the groups that are included under that major group. Index for all commodities is computed as weighted average of the indices for major groups.

A Working Group to revise the WPI series was constituted on 18th June, 1993 under the Chairmanship of Prof. Y.K. Alagh, the then Vice Chancellor of Jawaharlal Nehru University. Prof. S.R. Hashim took over the Chairmanship from September 1996 consequent to Prof. Alagh taking over as Minister of State in the Government of India. This Group, in its Report submitted to the Minister of

Commerce & Industry on 5th November, 1999 recommended revision of the base year to 1993-94 with a new basket of commodities and revised weighting diagram. As per the established practice, the Report of the Working Group was submitted to the Technical Advisory Committee on Statistics of Prices & Cost of Living (TAC on SPCL) in Central Statistical Organisation (CSO). The TAC in its meeting held on 23.12.99 accepted the Report. The Report was approved by the Committee of Secretaries (COS) in its meeting held on 10th February, 2000 and new WPI series 1993-94 was introduced from 1st April, 2000 through suitable Press Release.

The Ministry of Industry started releasing the WPI series on base 1993-94 from April, 2000. The series covers in all 435 commodities. The sector- wise break-up of commodities is (i) Primary Articles-98 (Food Articles-54, Non-food Articles-25, Minerals-19) (ii) Fuel, Power, Light & Lubricants-19, and (iii) Manufactured Products-318.

The number of items and quotations in the baskets of three successive series of WPI are as follows:

Major Group/Groups	**No. of items**			**No. of Quotations**		
Base Years	**l993-94 Series**	**l98l-82 Series**	**l970-7l Series**	**l993-94 Series**	**l98l-82 Series**	**l970-7l Series**
1	2	3	4	5	6	7
All Commodities	**435**	**447**	**360**	**1918**	**2371**	**1295**
I. Primary Articles	**98**	**93**	**80**	**455**	**519**	**411**
1. Food Article	54	44	39	340	320	264
2. Non-food Articles	25	28	26	96	132	115
3. Minerals	19	21	15	19	67	32
II. Fuel, Power, Light, Lubricants	**19**	**20**	**10**	**72**	**73**	**30**
III. Manufactured Products	**318**	**334**	**270**	**1391**	**1779**	**854**
1. Food Products	41	45	37	168	231	117
2. Beverages, Tobacco & Tobacco Products	11	7	8	49	39	19
3. Textiles	29	27	12	100	120	99
4. Wood & Wood Products	2	2	4	9	14	13
5. Paper & Paper Products	11	11	4	67	74	16
6. Leather & Leather Products	1	3	4	9	26	18
7. Rubber & Plastic Products	15	13	7	55	73	42
8. Chemicals & Chemical Products	69	77	67	276	428	182
9. Non-Metallic Mineral Products	9	22	21	42	125	63
10 .Basic Metals, Alloys & Metal products	53	57	42	203	235	125
11.Machinery & Machine Tools	56	44	35	312	266	104
12. Transport Equipments & part	21	22	21	101	118	39
13. Other Miscellaneous Manufacturing Industries	-	4	8	-	30	17

A comparative weighting scheme of three successive series of WPI is as follows:

Sl. No.	Major group/group	1993-94 series	1981-82 series	1970-71 series
	All commodities	**100.000**	**100.000**	**100.000**
(I)	**Primary Article**	**22.025**	**32.295**	**41.667**
1.	Food article	15.402	17.386	29.799
2.	Non food article	6.138	10.081	10.621
3.	Minerals	0.485	4.428	1.247
(II)	**Fuel, power, light & lubricants**	**14.226**	**10.663**	**8.459**
(III)	**Manufactured products**	**63.749**	**57.047**	**49.874**
1.	Food products	11.538	10.143	13.322
2.	Beverage, tobacco & tobacco products	1.339	2.149	2.708
3.	Textiles	9.800	11.45	11.026
4.	Wood & wood products	0.173	1.198	0.174
5.	Paper & paper products	2.044	1.988	0.851
6.	Leather & leather products	1.019	1.018	0.385
7.	Rubber & plastic products	2.388	1.592	1.207
8.	Chemicals & chemical products	11.931	7.355	5.548
9.	Non-Metallic mineral products	2.516	2.477	1.415
10.	Basic metal alloys & metal products	8.342	7.632	5.974
11.	Machinery & machine tools	8.363	6.268	5.045
12.	Transport equipments & parts	4.295	2.705	1.673
13.	Other misc. manufacturing industries	0.000	0.972	0.546

A latest Working Group was constituted on 23rd Dec. 2003 for revision of Wholesale Price Index Numbers (Base: 1993-94) and its report has been submitted on 16th May 2008 to the Government by Prof. Abhijit Sen, Member, Planning Commission and Chairman of the Working Group. The Technical Report is preliminary in nature since the product basket and weighting diagram (given in the Report) might undergo change depending on the flow of price data from the field / different organizations.

The Working Group has decided to shift the base to 2004-05 and has accordingly recommended the necessary weights and the product composition. This Report is, however, preliminary in nature since the data required to carry out test run of the proposed new WPI is still under collection. As such, this preliminary Report, which does not yet contains the new index numbers, is a departure from past practices. However, this matter has been discussed with the National Statistical Commission, which has assured its guidance, as and when necessary, to

complete the remaining work. The deliberations of the Working Group have been spread over a fairly long period of time. The Working Group had initially decided that the base year for the new series of WPI would be 2000-01. Accordingly, the product basket and weighting diagram for the new series with base 2000-01 was finalized by the Working Group. However, the test run of the new series with base 2000-01 could not be carried out in view of inadequate flow of price data from the manufacturing units. It was only later, in the light of this inadequate flow of data, that the Working Group decided to shift the base to 2004-05. The most important lesson learnt from the experience of the Working Group is that it might be impossible to continue with the Wholesale Price Index unless the regular flow of adequate data is ensured by making suitable arrangements to strengthen the ability of the system to collect the required data. This has not only held up the revision which this Working Group was required to suggest, it also leads to shortcoming in the Index as it exists at present. These shortcomings in adequate and regular flow of data also leads to the main conclusion of this Working Group: that the WPI with 2004-05 be monthly in its frequency rather than weekly, as at present.

This report is available on website: www.eaindustry.nic.in

4.2.4 RETAIL PRICES OF ESSENTIAL COMMODITIES

Under the scheme entitled "Price Position of Essential Commodities", the DESMOA has been regularly collecting data for certain group of essential commodities from number of centers spread all over the country. The primary objective of the scheme is to supply the retail prices of essential commodities regularly every week to the concerned Departments/ Ministries so that appropriate measures for achieving the desired stability in prices are taken in time. The Committee to review the scheme "Price position of Essential Commodities" submitted its report in April 1987, which was subsequently approved by Special Action Committee on Monitoring of Prices (SACP). The Committee revised the list of (49 groups) Commodities and suggested changes in their units, varieties and specifications etc. according to present requirements and conditions. The committee also examined the list of 113 centers/markets selected all over the country and suggested changes.

At present, on the basis of recommendations of the Committee to review the scheme, the retail prices in respect of 43 Food and 42 Non-Food commodities are being collected through the market level price reporting agencies of the States every week/month ending Friday respectively from 83 centers/markets selected in all the States/Union Territories. The list includes all the State capitals & Union Territories Headquarters. The information received is disseminated in

the form of "Weekly Bulletin on Retail Prices of Essential Commodities" with the time lag generally not exceeding two weeks. The information on retail prices is being received by the Directorate of Economics & Statistics directly from the markets/centers through the appointed as market level agencies. Arrangements for the collection of price data were made largely through the existing agencies in the States, e.g. State Market Intelligence Authorities, Bureau of Economics and Statistics and Departments of Food & Civil Supplies.

4.2.5 INDEX NUMBERS

Prices especially wholesale prices (WSP) and farm harvest prices (FHP) are also converted into index numbers using a common base year/years. Group index numbers are also constructed by using appropriate weighting scheme. The index numbers are in percentage terms and makes the inter-temporal and inter-commodity comparison easy. The available price index numbers are:

i) Wholesale price index numbers.

ii) Consumer price index numbers for industrial workers.

iii) Consumer price index numbers for agricultural labourers.

iv) Consumer price index numbers for non-manual employees/middle class.

v) Index numbers of harvest prices of principal crops.

vi) Index numbers of prices received by farmers.

vii) Index numbers of prices paid by farmers.

viii) Index numbers of terms of trade for farmers.

4.2.5.1 INDEX NUMBERS OF WHOLESALE PRICES IN INDIA

The Index Numbers of Wholesale Prices (WPI) is an indicator constructed and utilized for gaining knowledge with regard to the rising or falling trends in the behavior of prices of selected commodities and groups of commodities during a given period of time. Index numbers of prices are used to feel the pulse of economy. They are also used sometimes as indicators of inflationary or deflationary tendencies taking place in the economy. Another major use to which such index numbers are put is in deflating national aggregates such as national income. Index Numbers are specialized averages because they are used for the purpose of comparisons in situations where two or more series are expressed in different units or the series is composed of different types of items. An average of all the items expressed in different units is obtained by using the technique of index numbers which measure the effect or impact of changes over a period of time.

4.2.5.2 ISSUES IN THE CONSTRUCTION OF INDEX NUMBERS

i) Purpose of the index: A clear statement as to what the index is intended to measure, why and how has to be made. There is no all-purpose index. Every index number has a limited and particular use to which it is intended to be put. All other things like the base year, number of commodities/quotations, choice of centres/markets, sources of data supply etc. are to be decided in the light of the purpose of the index.

ii) Scope of the Index: Scope of the index has to be defined completely and in very clear terms.

iii) Selection of appropriate weights: Since different items included in the commodity basket for the index differ in the extent of their importance or significance, there arises a need to assign or allot to each selected commodity an appropriate weight. Weighting refers to a conscious effort made to assign to each commodity an influence that, in the final result, is proportionate to its relative importance.

The determination of appropriate weights that would 'apply to the various commodities used in the index construction is often a very difficult and demanding task and hence has to be done with a lot of care, using a sound sense of judgment. We have a choice between using (a) fixed weights and (b) fluctuating weights. Conceptually speaking, the latter method is the better one. However, from a practical stand point, the method of using fixed weights is often the only feasible method that can be adopted.

4.2.5.3 CALCULATION OF INDEX NUMBERS OF WHOLESALE PRICES IN INDIA

The Office of the Economic Adviser, Ministry of Industry, has been compiling Index Numbers of Wholesale Prices (WPI) since 1942. A number of revisions in the base year have been affected since then. Until! June, 1989 the office was operating the series of WPI which had 1970-71 as its base year and was based on 1295 price quotations relating to 360 commodities. The current series of WPI with base 1981-82 came in vogue from July, 1989. This series has been significantly expanded in terms of both the number of items and the number of varieties/quotations/market centres in order to take into account the structural changes that had taken place in the Indian economy between the revision in the base year from 1970-71 to 1981-82. The revision of base year (1981-82=100) was undertaken in pursuance of the recommendations of the Working Group on revision of Index Numbers of Wholesale Prices in India. The selection of items

has been guided by their relative importance in the economy. The current series covers as many as 2371 quotations constituting 447 commodities.

4.2.5.4 COLLECTION OF DATA ON PRICES

Weekly Price quotations for the selected varieties as prevailing on or each Friday are collected. Price data are collected through official as well as non-official sources. The official sources include: (i) Directorate of Economics and Statistics, Ministry of Agriculture, (ii) Agricultural Marketing Departments of the Central and State Governments, (iii) State Bureau of Economics & Statistics, (iv) District Statistical Officers and other primary agencies belonging to the state Governments. The non-official sources include the Chambers of Commerce, Trade Associations and leading manufacturers and business houses.

4.2.5.5 METHOD OF CALCULATION OF THE INDEX

There is no change in the method of compilation of the index for the 1981-82 series as compared to the method used for the earlier WPI series. It is calculated on the principle of weighted arithmetic mean, according to the Laspeyre's formula which has a fixed base year weighting diagram operative through the entire life span of the series.

The formula used is as follows:

$$I_{WP} = \frac{\sum_{i=1}^{n} I_i \cdot W_i}{\sum_{i=1}^{n} W_i}$$

where I_{WP} : Index Number of Wholesale Prices of sub-group / group / major group / all commodities,

W_i : Weight assigned to the i^{th} item / sub-group / group / major group,

I_i : Index of the i^{th} item / sub-group / group / major group for i = 1, 2, …., n being the total Number of groups.

Price relatives are calculated as the percentage ratios which the current prices bear to those prevailing in the base period, i.e. by dividing the current prices by the corresponding base year prices and multiplying it by 100. The commodity index is arrived at as the simple arithmetic average of the price relatives of the varieties or quotations selected under that commodity. The sub-group index is derived as the weighted average of the indices of the commodities included in

that sub-group. The group index is obtained as the weighted arithmetic average of the indices of the sub-groups included under that group. The major group index is arrived at as the weighted average of the indices of the groups which are included under that major group. The 'All Commodities' index is obtained as the weighted average of the major group indices.

4.2.5.6 Provisional vs Final Index

Because of the late receipt of a few returns, the weekly index of wholesale prices at the time of its initial compilation is provisional. In such cases, the prices of the missing quotations are either repeated or estimated, depending on the nature of the commodity. The provisional index is made final after a period of eight weeks by which time almost all the required price data become available. In case some price returns are received late by more than eight weeks, the same would be used only with effect from the week for which the index is being finalized in the current week and no index finalized earlier is revised.

4.2.5.7 Linking Factor

In order to maintain continuity in the index series, it is imperative to provide a linking factor between the new and old series. Of the three commonly known methods of linking, viz. (i) arithmetic conversion method, (ii) ratio method and (iii) regression method. The arithmetic conversion method is the simplest and operationally the most convenient one. The Office of the Economic Adviser has been using this method to link the various WPI series. The choice of linking method, is, however, left to the users.

4.2.5.8 USES OF THE WPI

The WPI is used as a measure of inflation in the economy. It is also made use of by others. The wholesale price index numbers are used extensively by various research bodies/organisations, Reserve Bank of India, Planning Commission, and other government and non-government organisations. It is also used for working out escalation costs for supply of raw materials and in construction work. Use of WPI data is also made use by many other ministries to monitor prices of items concerning their departments. Time series data on WPI are also being used by a large number of researchers all over the country.

4.3 CONSUMER PRICE INDICES

On account of the importance of the subject, the International Labour Organisation (ILO) had set general guidelines and standards for compilation of Consumer Price Indices by all the member countries. In principle and practice, a Consumer Price Index (CPI) measures changes over time in the general level of

prices of goods and services that a reference population acquire, use or pay for consumption.

There are four Consumer Price Indices (CPIs) released on monthly basis at the national level viz. CPI for Industrial Workers: CPI (IW); CPI for Urban Non-Manual Employees: CPI (UNME); CPI for Agricultural Labourers: CPI (AL); and CPI for Rural Labourers: CPI (RL). The CSO publishes CPI (UNME), whereas the other three CPIs are brought out by the Labour Bureau, Ministry of Labour. Wholesale Price index (WPI) is compiled and released on weekly basis at the national level by the Ministry of Industry.

4.3.1 CPI (UNME) COMPILED BY THE CENTRAL STATISTICAL ORGANISATION, MINISTRY OF STATISTICS AND PROGRAMME IMPLEMENTATION

CSO has been compiling Consumer Price Index Numbers for Urban Non-Manual Employees CPI (UNME), on monthly basis, since 1961. The weights for the index on base 1960, were based on the estimates generated from the data collected through Middle Class Family Living Survey (MCFLS) conducted during 1958-59 covering 36,000 urban non-manual employees families in 45 selected urban centers across the country. With a view to revise the CPI (UNME) series on base 1960, a scheme for MCFLS was proposed for inclusion in Fifth Five-Year Plan. However, the scheme was not approved. An MCFLS covering 45,000 UNME families in 59 selected urban centers was conducted during 1982-83. Depending on the size of the centre, the number of families canvassed varied from 432 to 1,728. Using the weights, derived from the data collected through MCFLS conducted during 1982-83, the current CPI (UNME) series on base 1984-85, is being compiled and released since November, 1987. The number of items of goods and services, for which retail prices are collected, on monthly basis, from 1022 markets in 59 urban centers by NSSO for compilation of CPI (UNME), varies from centre to centre. The smallest number of items is in the case of Imphal, with the number being 146. The largest number of items is in the case of Delhi; with the number being 345. The various items of goods and services, are grouped into five main groups, namely, i) food, beverages and tobacco; ii) fuel and light, iii) housing, iv) clothing, bedding & footwear; and v) miscellaneous. The weights at all-India level, in respect of group / sub-groups of items of goods and services are given in ANNEXURE-X.

The Index numbers are compiled using Laspeyres' Index formula. For each centre, the index is compiled firstly at sub-group level, then at group level and General Index level, which is called the centre index. In order to compile an average all-India index the centre indices are combined using center weights, weights being the ratio of total consumption expenditure of estimated number of

families allocated to a centre in the State to the sum of all such expenditures over all centers in the country. The centre-wise and all-India CPI (UNME) along with salient features are released every month with a time lag of about two weeks.

An exercise to revise the base year from 1984-85 to 2001-02 was initiated. However, because of outdated base year and also deployment of field investigators for collection of price data for a broad based CPI (Urban) number, the National Statistical Commission in its meeting held on 15.02.2008 decided to:

i. discontinue the CPI (UNME);

ii. adopt link index, based on ratio method after aggregating the sub-group level indices of Labour Bureau's CPI (Industrial Workers) using CPI (UNME) weights at group/sub-group level for all India; and

iii. compile linked CPI (UNME) numbers till new series of CPI (Urban) is brought out.

Based on the methodology given by National Statistical Commission, ratio of CPI (UNME) numbers to CPI (IW) numbers for each of the 24 months for the two year period from January, 2006 to December, 2007 at sub-group level has been worked out. Average ratio at each level based on 24 months figure is taken as the linking factor at the respective level. The CPI (UNME) weights have been used to get the indices at group and all groups levels.

Price collection for CPI (UNME) was discontinued with effect from April 2008. As decided by the National Statistical Commission, linked all-India CPI (UNME) numbers for the month of July 2008 are given below for meeting the requirement of users.

Linked all-India CPI (UNME) on base 1984-85 = 100 for July 2008

Sl. No.	Group	UNME weight	Linked index for July 2008	Index for July 2007	% change
I	Food, beverages, tobacco	47.13	563	512	10.0
II	Fuel and light	5.48	616	580	6.2
III	Housing	16.41	558	538	3.7
IV	Clothing, bedding and footwear	7.03	456	442	3.2
V	Miscellaneous	23.95	542	505	7.3
	General Index (all groups)	100.00	552	514	7.4

4.3.2 CPI (IW) COMPILED AND RELEASED BY THE LABOUR BUREAU, MINISTRY OF LABOUR

The history of compilation and maintenance of Consumer Price Index Numbers for industrial Workers owes origin to the deteriorating economic condition of the workers on account of abnormal rise in prices following the First World War. As a result of sharp rise in prices and the cost of living, some Provincial Governments started conducting Family Budget Enquiries and compilation of Consumer Price Index Numbers for Industrial Workers in the country. But none of them was entirely satisfactory. In pursuance of the recommendations made by the Rau Court of Enquiry, the job of compilation and maintenance of Consumer Price Index Numbers for Industrial Workers was taken over by the Central Govt. in 1943. However, the compilation of index numbers on uniform and scientific lines was started only after the conduct of the Family Living Surveys by the Labour Bureau during 1958-59 at 50 important industrial centres, spread over length and breadth of the country, under the guidance of a Technical Advisory Committee on Cost of Living Index Numbers and compilation of Consumer Price Index Numbers for Industrial Workers on base 1960=100. Since then the compilation and maintenance of Consumer Price Index Numbers are being done by the Labour Bureau on a continuous basis. The series (1982=100) had replaced the old (1960=100) series in December, 1988 with the release of October, 1988 index. The new series on base 2001=100 has been released on 9th March, 2006 with January, 2006 index which has replaced the earlier (1982=100) series.

The Labour Bureau compiles Consumer Price Index Numbers for Industrial Workers CPI (IW), on monthly basis, using the retail prices collected from 261 markets in 76 centres by the officials of various State Governments, Labour Commissioners, etc. The number of items in the consumption baskets of different centres generally varies between 120 to 160, depending upon the prevailing situation in each centre and the consumption pattern of the centre. The various items of goods and services are classified into six main groups, namely, (i) food; (ii) pan, supari, tobacco and intoxicants; (iii) fuel and light; (iv) housing; (v) clothing, bedding and footwear; and (vi) miscellaneous. The base year of the index was 1982 and the weights for the index were based on estimates generated from the data collected through Working Class Family Living Survey (WCFLS) conducted during 1981-82. The weights at all-India level, in respect of groups / sub-groups of items of goods and services are given in ANNEXURE-X. The indices for all-India (computed from the indices of 70 centres) and 76 centres are released, on monthly basis, with a time lag of one month.

For WCFLS conducted during 1981-82, a working class family was defined as one (i) which was located within the centre; (ii) which had at least one member working as manual worker in an establishment in any of the seven sectors of employment covered viz. factories, mines, plantations, ports and docks, public motor transport undertakings, electricity generating and distributing establishments, and railways; and (iii) which derived 50 per cent or more of its income during the calendar month preceding the day of enquiry through any manual work.

The retail prices used in the compilation of CPI (IW) are those actually charged from the consumers for cash transaction and are inclusive of all taxes which are payable by him. However, rebates and discounts, given to consumers in general are taken into account. Thus, the retail price may be defined as money cost to the consumer of a specified unit of sale which is inclusive of all taxes but excludes all rebates, discounts etc. The retail prices of price sensitive items such as cereals, pulses, vegetables and fruits, oils and fats etc., are collected on a weekly basis. Similarly, the prices of some other items, like cinema, furniture, utensils, clothing, house-hold appliances etc., which are known to vary less frequently are collected on monthly basis. However, the price data relating to house rent, school/college fees and books etc. are collected on six-monthly/yearly basis as these items do not show much change in their price behaviour. The retail prices of the selected items are collected on the fixed date/day by part-time Price Collectors, who are generally the employees of the State Governments working either with the Directorate of Economics and Statistics or Labour Department, and sent to the Headquarter for further processing. While collecting prices, various elements such as fixity of markets, shops, specifications, unit of purchase, day and time of price quotations etc. are maintained for the purpose of comparability. These price data, after cleaning it for conceptual/factual error at various levels, are utilised for the compilation of index numbers.

A six monthly House Rent Survey is conducted for collection of house rent data for compilation of House Rent Index. For compiling housing index, the rent paid for rented, self-owned and rent free houses are taken into account. The rental data for self-owned houses are collected from the comparable rented dwellings of the locality or within the vicinity of the locality. However, for rent free houses, rent index is taken as 100. Thus, for compiling the housing group index, three separate indices are compiled for rent free, rented and self-owned houses and these indices are combined by using their respective weights, which are proportion of families residing in these three categories of houses, to work out the weighted housing index for the centre. Housing index is compiled by following

'Chain Base method', once in every six months viz., January and July and kept constant for the subsequent five months. Rental data, for utilising in the compilation of housing index, are collected by the field officials of the Labour Bureau, twice a year, from a sample of dwellings through a half yearly Repeat House Rent Survey.

Under the latest series with base year 2001=100 series, the Labour Bureau has been compiling Consumer Price Index Numbers for Industrial Workers for 78 selected centres and an all-India index on the basis of 78 constituent centres as against 70 centres in the 1982 series. These 78 centres were selected on the basis of their industrial importance in the country and distributed among different States in proportion to the industrial employment in the State subject to a maximum allotment of 5 centres in a State in a sector.

The Centre-wise Weighting Diagrams for the Index have been derived on the basis of results of Working Class Family Income and Expenditure Surveys (WCFIES) conducted during 1999-2000 in all the 78 selected centres. The survey was conducted over a period of 12 months in each selected centre during 1999-2000, when an equal number of a moving sample of families was canvassed every month. The data collected through this survey was thoroughly scrutinized and inconsistencies, if any, were got rectified before getting it tabulated for the purpose of derivation of Weighting Diagrams. As it was not feasible to monitor the price behaviour of all the items on which index population reported consumption expenditure (nor it is necessary) a number of representative items were retained in the index basket, which were manageable over time. For this purpose the first step was to form group of items which meet similar or related demands of the consumers. The total expenditure on consumption items was divided into 6 main groups viz.,

I-A - Food;

I-B - Pan, Supari, Tobacco & Intoxicants;

II - Fuel & Light;

III - Housing;

IV - Clothing, Bedding & Footwear; and

V - Miscellaneous.

In the first and the last group a few well-defined sub-groups have also been formed. Weights, which are meant to indicate relative importance attached to different items of goods and services consumed by the index population, are determined on the basis of expenditure made by the targeted industrial workers on these goods and services. However, the expenditures on non-consumption

items are excluded from the weighting diagram. The items directly retained in the basket were those which had a) at least one percent expenditure in the Group/Sub-Group; (b) significant number of families reporting expenditure; and c) could be priced satisfactorily over the life of the series. The remaining items were imputed to related items or to a group of items depending upon their similarity of want satisfying quality, manufacturing process or price behaviour etc. The percentage expenditure on each item in the sub-group/group represents its weight. Similarly, the percentage expenditure on sub-group/group in the Group/Total consumption expenditure represents their weight.

The Index numbers are compiled using Laspeyres' Index formula. In the first stage, price quotations of an item in all outlets of all the markets in a month are averaged for a centre. On the basis of this average price, a price relative (over base period price), or item index as known in some of the countries, is worked out. However, in case of certain items which are supplied through subsidised outlets (fair price shops), first the weighted average price of open market and fair price outlets in each selected market of a centre is worked out (weight being availability ratio in the respective outlets in that month). In the next stage a simple average of these market prices is worked out to arrive at the centre price. On the basis of this average centre price, a price relative is worked out. The sub-group or group index is worked out as a weighted average of an item/sub-group index respectively. The general index of a centre is worked out as a weighted average of group indices.

An all-India index which is weighted average of 78 centre indices is also worked out every month. The weight assigned to each centre is the proportion of the total consumption expenditure of estimated number of families allocated to a centre in the State to sum total of all such expenditure over all centres in the country.

These index numbers are disseminated to various users through Press Release, Monthly Index Letters, Indian Labour Journal and Labour Bureau's Web Site www.labourbureau.gov.in

4.3.3 CPI (AL) AND CPI (RL) COMPILED BY THE LABOUR BUREAU, MINISTRY OF LABOUR

The Labour Bureau has been compiling CPI Numbers for Agricultural Labourers since September, 1964. The existing series of CPI Numbers for (i) Agricultural Labourers and (ii) Rural Labourers (base 1986-87=100) replaced the hitherto existing earlier series on base 1960-61=100 w.e.f. November, 1995. For compilation of these index numbers, the Field Operations Division (FOD) of the National Sample Survey Organisation (NSSO) collects every month the data on

prices from 600 sample villages selected from 20 States in a specially designed price collection schedule, i.e. Schedule 3.01(R). Consumer expenditure data collected by the NSSO during 38th round of NSS (1983) formed the basis of the State-wise weighting diagrams for the series. The methodology approved by the Technical Advisory Committee on Statistics of Prices and Cost of Living (TAC on SPCL) is followed for compilation of indices for 20 States and all-India separately for (i) Agricultural Labourers and (ii) Rural Labourers and these indices are released on monthly basis by 20th of every succeeding month.

The various items of goods and services, are grouped into four main groups, namely, i) food; ii) fuel and light; (iii) clothing, bedding and footwear; and iv) miscellaneous. The items of goods and services are common but the varieties of most of the items differ from village to village. The base year of both the indices is 1986-87. The weights for both the indices are based on the estimates generated from the data collected through Household Consumer Expenditure enquiry conducted by NSSO in its thirty eighth round during 1983. The weights at all-India level, in respect of group / sub-groups of items of goods and services are given in ANNEXURE-X. It is only the weights at the compilation stage, which are different for both the labour class households i.e. agricultural labour households and rural labour households. As the housing cost of the rural labour population was observed negligible in the base year, data on house rent have not been collected, and as such the housing index (as a part of general index) is not being compiled. The Labour Bureau started releasing CPI (RL) series for all-India and 20 States since November, 1995. The population of agricultural labour households is about 60 per cent that of rural labour households. The indices for all-India and 20 States are released, on a monthly basis, with a time lag of 3 weeks. The CPI (AL) and CPI (RL) for all-India are based on the respective indices in respect of 20 States only.

An agricultural labour / rural labour household is considered as one which derived 50 percent or more of its income from gainful employment on occupations of one or more of its members as agriculture/rural labour. A person is considered engaged in agricultural labour if he/she follows one or more of the following agricultural occupations in the capacity of a wage paid manual labour, whether paid in cash or kind or both:

(i) farming;

(ii) dairy farming;

(iii) production of any horticultural commodity;

(iv) raising of livestock, bees or poultry; and

(v) any practice performed on a farm as incidental to or in conjunction with farm operations (including forestry and timbering) and the operation for market and delivery to storage or to market or to carriage for transportation to market of farm produce. Carriage for transportation refers to the first stage of the transport from farm to the first place of disposal. Working in fisheries was excluded from agricultural labour.

A person who does manual work in return for wages in cash or kind or partly in cash and partly in kind (excluding exchange labour) is a wage paid manual labour. Persons who are self-employed doing manual work are not treated as a wage paid manual labour. Peoples living in rural areas and engaged in manual labour by working in agricultural and / or non-agricultural occupations in return for wages paid either in cash or in kind (excluding exchange labour) is considered as rural labour. Thus, rural labour includes both agricultural labourers and other labourers as well.

The index is worked out using Laspeyres' weighted aggregate method. First the price relative of each item in respect of each village is worked out. A simple average of village-wise price relatives of the item is calculated at the zonal level in the State. Zonal price relatives are weighted to arrive at the average State level price relatives. The State index is worked out as the weighted average of the State level price relatives, the weights being the proportion of consumption expenditure as determined by the Consumption Expenditure Survey of the rural and agricultural labour households. All-India Index is worked out as a weighted average of the State index numbers, weights being the estimated consumption expenditure in respect of Rural and Agricultural Labour Households in each State as a proportion of total of such expenditure for all the States for which the index is being compiled separately. An exercise for revision of the base year is underway.

4.4 PRICE COLLECTION

4.4.1 TIME OF PRICE COLLECTION

If it is intended to collect data on prices and quantities involved in each transaction in the reporting day, obviously the price reporter will have to be at work the entire day unless there are some institutional arrangements (like a market committee or an association of market men) to do the job. If the prices to be calculated for the various agricultural products are the modal prices, the price reporter need not be in the market the whole day. It would be sufficient if he visits it during the peak marketing period of the day, i.e., when the bulk of the transactions usually take place. The peak period will not necessarily be the same hour of the day in all markets and throughout the marketing season or the year.

Accordingly, the programme for price collection should provide for determining the peak marketing period of each market over different months of the marketing year.

4.4.2 PERIOD OF PRICE COLLECTION

Unlike most industrial products, agricultural products are characterized by seasonality. In general, the marketing year for an agricultural crop may be defined as starting with its harvesting and continuing until the next harvest. There are, of course, exceptions to this, e.g. where a crop is grown under contract and sold even before harvesting. Whether or not the agricultural producer spreads his sales over the twelve months of the marketing year after the harvest depends on the volume of output, the perishability of the crop and on the storage facilities, owned or hired, available to him. lf the storage facility is inadequate or non-existent; or if the roads are fair-weather roads and not all-weather roads; or if, as the marketing year advances, snowfall or rains might interrupt the transportation or damage the commodity in transit; or if the cash needs of the producer are very pressing immediately after the harvest in all such cases, the producer will have little option but to dispose of his produce within a short period after the beginning of the marketing year. Again, even if none of these disabilities exist, the crop may be too small to permit sales to be spread over the full year. The period of collection of farm-gate prices will therefore coincide with the period of marketing, which may stretch over a full year in some instances, but not in others. The programme for collection of prices received by the farmer should, therefore, lay down appropriate guidelines for determining, in respect of each location and each commodity, the period over which the prices should be reported. This problem will not generally arise in the case of wholesale and retail markets. They run on a regular basis, making continuous reporting of prices possible.

4.4.3 FREQUENCY OF PRICE COLLECTION

How often should prices be collected: daily, weekly, fortnightly or monthly? The answer depends on the uses to which the prices are to be put. Anyone interested in the buying and selling of a commodity, and thereby earning a profit, requires daily prices of that commodity. A state or public agency wishing to disseminate market prices for the guidance of producer-sellers through the press, price bulletins, radio or television also needs daily quotations. For administering a policy of direct market intervention, the State, with the help of daily prices, would be enabled to decide where to buy in order to support prices and where to sell in a bid to counter excessive price rises. The above are special cases which call for collection of daily prices. For other uses, such as for studying price trends,

making comparisons, or watching price movements as an indication of the interaction of the forces of supply and demand, daily prices are unnecessary. A fortnight or a month, on the other hand, is a rather long period, particularly where wide variations in prices are known to occur. A week is probably the most suitable period, and instructions for price reporting might, therefore, provide for collection of prices on a specified day of every week.

Which particular day in the week should be declared as the price reporting day? Ordinarily, any day of the week would be as good as any other day excluding, of course, the day (or days) on which the market is closed. As the market opens for only one day in each week as is not uncommon for primary wholesale markets in several countries, there is no choice except to report on the weekly market day. lf the market opens more often than one day per week, the reporting day should be chosen so that the weekly postal holiday does not intervene to cause additional delays in the transmission of prices to the headquarters of the organization where such communications from various reporting markets are received for compilation, study and dissemination. The day prescribed must be adhered to so that prices are reported on the same day every week. Sometimes, instead of specifying a day of the week, dates in a month are prescribed, such as the 7^{th}, 14^{th}, 21^{st} and 28^{th} of each month.

4.4.4 UNIT OF QUOTATION

In determining the unit of quotation, three points require investigation. The first concerns the unit of weight. In a country where standardized weights and measures are in use, there should be no problem and prices may be reported per standard unit of weight applicable to the commodity, such as, per metric ton, per quintal or per kg. Where, however, weights have not yet been standardized and a wide variety of local weights are in use, differing from region to region within the country, the price reporter should be provided with a table of coefficients with which to convert the prices collected in local units into standard units before reporting the latter to the headquarters. It would be the duty of the supervisor, during his inspection tours, to provide the necessary guidance to the price reporter and to verify the accuracy of the conversions.

The second requirement is to define the form of the commodity to which the unit of weight should refer. For example, in the case of wheat, should it relate to the net weight of the grain, or be inclusive of the weight of the bag, sack, or basket in which it may be brought for sale? Decisions on this point will have to be taken in advance so that they can be applied uniformly to the commodities concerned in all reporting markets in order to permit valid comparisons of prices. Prices should, however, normally refer to the unit net weight of the commodity, the

weight of the container in which it is brought for sale being excluded. If there is any insurmountable difficulty in doing this, and the prices for a commodity are, for example, quoted including the container in some markets and without it in others, the facts should be specified by the reporter when reporting the prices to enable the user to make appropriate adjustments and to exercise caution when comparing such quotations.

In this context, it should also be noted that farmers generally sell their produce in the form in which it is harvested. A grower of paddy would normally sell unhusked paddy rather than cleaned or milled rice (also called dehusked paddy). A cotton producer normally sells raw cotton as harvested, that is cotton from which cotton seed has not been separated. These situations are applicable to farm-gate prices or prices in primary wholesale markets. In secondary wholesale markets and retail markets, however, the form of the product will most probably have undergone a change due to processing. There, milled rice or cotton lint (also known as ginned cotton) would be sold. The form of the commodity to which the prices refer should, therefore, be unambiguously defined and kept in view when comparing farm-gate prices with wholesale or retail prices, or when estimating farm-gate prices from wholesale or retail prices. The third requirement is how to express the price. Prices should be quoted in terms of so many units of a country's currency per unit of standard weight, and not in terms of so much weight per unit of currency. If international comparisons of prices are desired, up-to-date information on exchange rates to convert national currency into currencies of other countries will be needed.

4.4.5 SELECTION OF MARKETS

In selecting markets for regular price reporting, the most important consideration is whether the national price collection authority is responsible for collecting only prices received by farmers, or prices at all stages of marketing. If the latter is the case (which is the most likely), the list of markets selected should include farm-gate locations, primary, secondary and terminal wholesale markets and retail outlets. If, however, the authority is charged with collecting farm-gate prices only, the selected list can be confined to farm-gate locations. But, if in a country, or for some commodities in a country, the majority of transactions are not made at the farm-gate, it will be necessary to select markets where the producer-sellers generally dispose of their produce.

Markets should be selected on the criterion of their being representative. A market, regardless of the volume of transactions it handles, can be considered as representative if it is sensitive to changes in supply and demand conditions; i.e., if it reacts or responds quickly to changes in prices in other markets with which it

has trade links. In selecting the reporting markets from such representative markets preference should be given to those which operate throughout the year so that continuous price data would be available and, in the interests of staff economies, to those from which quotations for more than one commodity can be reported. The choice of the number of markets will depend on how extensive are the needs for price data. If it is intended to evaluate agricultural production by districts or by smaller regions within a country, or if the inter-regional variations in prices within a country are known to be large, the number of markets to be selected for reporting price data needs to be much greater than if it is intended merely to observe overall price trends. Likewise, the implementation of price support measures, for example, would call for a much larger spread of markets than that needed for constructing price indices.

As a general rule, the number of reporting markets should be such as to ensure that the calculated national, regional and sub-regional average prices for a given commodity are sufficiently accurate for the objectives in view. At the sub-regional level, the concerned authority may require information on prices in respect of a few important markets, located within its administrative jurisdiction for, say, an appraisal of the economic situation or an estimation of the value of agricultural output in the sub-region. The total number of markets for all sub-regions within a region may turn out to be too large for the purposes of the regional authority who may therefore, for its own uses, select a manageable number of markets from the sub-regional lists. Likewise, the national price collection authority may find the total number of markets in all regional lists too unwieldy for its purposes and may therefore select from the regional lists only the more sensitive and important markets. Thus, the sub-regional lists will include the regional lists, and the regional lists will include the national list of markets.

In conclusion, while the number of markets should be selected in the light of technical considerations such as those mentioned above, a limiting factor is the availability of trained reporting staff and/or resources for appointing new staff. It should be the aim, however, to strengthen the reporting staff gradually over the years until all the selected markets are covered.

4.4.6 DESCRIPTIVE MARKET SCHEDULES

For every market selected for price reporting, a schedule should be drawn up to show certain important details. Firstly, the schedule should give the market's identification - where is it located; in what direction and at what distance from a well-known place; and by what route is it reached? Is it situated on a river bank, or near a lake, or in hilly terrain, or in a desert area or a plains region? Is it approachable by rail, by road, or by boat? Secondly, what are the means of

communication; i.e. are postal, telegraph and telephone facilities available in the market, so that the price reporter knows in advance the fastest means to adopt in case of need? For each market should be indicated details of the individual commodities traded and their varieties and qualities for which price data are to be collected. The nature of the market should also be stated, i.e. whether the market is a farm-gate location, a primary, secondary or terminal wholesale market, or a retail market. If this function varies with commodities, it should be stated separately in respect of each. A detailed inventory of market practices should also be included.

Lastly the price reporter should be informed through the schedule about any institutions, such as a market committee or a chamber of commerce, and any individuals who are well conversant with the market, the system of sale adopted in it, the marketing practices and charges, etc., to whom the reporter may turn for clarification or closer understanding.

It should be emphasized that all the information about markets will have to be kept up-to-date and the schedules revised periodically since they will be in constant use not only by the price reporters but also in headquarters.

4.4.7 PRICE REPORTING FORM (PRICES RECEIVED BY FARMERS)

The descriptive schedules will provide essential information for the completion of the standard form which all price reporters will be required to transmit to their headquarters. Such a form should include the following details:

1. Price reporting form for prices received by farmer
2. Name of market:
3. Sub-region (county or district):
4. Region (province):
5. Prices as on (date):
6. Time of visit to market:
7. Commodity Modal Variety & Quality or Standard
8. Specification (specify)
9. Standard unit of weight (specify)
10. Prices per standard unit of weight
11. Nature of price (i.e. farm-gate, primary, whole, retail, etc. (specify)

Date of Dispatch: Signature of price reporter:

From the prices for a particular modal variety and quality recorded, the farm-gate modal price will be calculated at headquarters unless the price reporter is sufficiently experienced to determine the modal price himself.

4.5 AGENCIES ENGAGED IN COLLECTION / PUBLICATION OF DATA

Data on various aspects of agricultural marketing are important for policy formulation and conducting research leading to solution of different marketing problems faced by the farmer-producers and consumers. The non-availability of primary data from different market functionaries and secondary data of time series nature from published sources has limited the scope of research in this field. There is difference in the coverage of data collected at the primary level and those published by different organisations. Published data include farm (harvest) prices at the district level, wholesale prices of selected crops for selected markets, retail prices of few selected markets of the states, market arrivals in important markets, market charges prescribed by the market committees, import and export of selected commodities at the national level and production and area of commodities at district and state level. From raw price data, index numbers are also constructed with reference to a particular base year. Since most secondary data in respect of all crops and markets on a time series basis are not available, it becomes difficult for analysts and researchers to draw meaningful conclusion unless these are supplemented by other data from unpublished sources. The agencies engaged in collection of market information/statistics are:

i) Directorate of Marketing and Inspection, Government of India, Faridabad and Nagpur

ii) State Agricultural Marketing Boards

iii) State Agricultural Marketing Departments

iv) Directorate of Economics and Statistics, Government of India

v) Corporations such as the Food Corporation of India, the Warehousing Corporation of India, Commodity Boards and other Corporations

vi) The Agricultural Produce Market Committees (APMCs)

vii) The Revenue Department of State Governments

viii) The Directorate of Economics and Statistics (DES) of State Governments.

Marketing statistics/data are available in the following publications brought out by the concerned departments viz.:

i) Agricultural Situation in India - Monthly

ii) Bulletin on Prices - Weekly

iii) Reserve Bank of India Bulletin - Monthly

iv) Agricultural Marketing - Quarterly

v) Bulletin on Food Statistics - Bi-annual

vi) Indian Agriculture in Brief – Bi-annual

vii) Economic Survey - Annual

viii) Commodity Survey Reports - Occasional

ix) CMIE Publications - Occasional

x) Indian Journal of Agricultural Marketing - Thrice a year

xi) Indian Journal of Agricultural Economics - Quarterly

xii) Reports of Various Commissions and Corporations

xiii) Annual Reports of different Departments stating their progress

xiv) Newspapers (especially the Economic Times and Financial Express) - Daily

xv) Monthly Bulletins of Market Committees and State Agricultural Marketing Boards – Occasional.

Of the various organisations, Directorate of Economics and Statistics is the main agency collecting and compiling price statistics of agricultural commodities. This Directorate was set up in 1948 in the Ministry of Agriculture. Three types of prices – wholesale, farm harvest and retail prices of various agricultural commodities, their sub-groups and groups are collected and compiled on a regular basis using a standard methodology.

4.5.1 NATIONAL INSTITUTE OF AGRICULTURAL MARKETING (NIAM)

Ch. Charan Singh National Institute of Agricultural Marketing (NIAM), Jaipur

National Institute of Agricultural Marketing (NIAM) started functioning at Jaipur (Rajasthan) with effect from 8th August, 1988. NIAM has been imparting training to senior and middle level executives of agricultural and horticultural departments, Agro Industries, Corporations, State Marketing Boards, Agricultural Produce Market Committees and Apex level Cooperatives, Commodity Boards, export houses recoganized by Agricultural and Processed Food Products Export Development Agency (APEDA), Commercial banks and non governmental organizations. Besides these clients, the NIAM also imparts training to farmer on marketing management. The main objectives of NIAM are the following:-

1. To provide specialized training in agricultural marketing designed to develop leadership potential in the management of agricultural marketing enterprises and services;

2. To undertake research in agricultural marketing for Government, Cooperative and other Institutes, both on public funding and by contract;

3. To undertake appraisal of markets/marketing projects for approval and financial support by the Central Government, on consultancy basis;

4. To formulate objective criteria for selective development of physical markets and to evolve a practical methodology for the application of such criteria in their planning;

5. To offer advisory and consultant services on marketing policies, investment programmes and marketing development strategies and specific advice to marketing enterprises (State, Private and Cooperatives);

6. To survey, study and analyze the rural market management and to examine in depth the principal and practice of market regulation as a development sector in the agricultural economy.

NIAM is managed by a Governing Body under the Chairmanship of Minister of Agriculture and an Executive Committee under the Chairmanship of Secretary, Department of Agriculture & Cooperation.

The Institute has conducted more than 300 training programmes upto 1999-2000. The Institute has also undertaken long and short-term research studies on various facets of agricultural marketing. The long-term projects handled by the Institute include formulation of master plans for the development of agricultural markets for the states of Jammu & Kashmir, Andhra Pradesh and Sikkim. The Institute has also undertaken a collaborative research project on the formulation of Integrated Action Plan for the Promotion of Handicrafts and Handlooms in the States of Uttar Pradesh and West Bengal in association with IRMA-Anand. The short-term research activities include case studies on various agri-business activities and commodity marketing studies. The Institute has developed a data bank on various aspects of agricultural marketing including infrastructural facilities available in different market yards of Rajasthan, Delhi, Meghalaya, Jammu & Kashmir, Goa, Himachal Pradesh, Andhra Pradesh and others. The publication entitled “Statistical Abstract” containing data on post-harvest technology and different marketing aspects of national and international level is being brought out by the Institute since 1997.

4.5.2 INFORMATION SYSTEM ON PRICES

Information is the key factor deciding the quality of decisions, and subsequent actions, taken by those who are entrusted with the nation's socio-economic planning. In this problem-solving process, the more error free the data are, the more relevant the information would be, higher the quality of the decisions, and

lower the uncertainty and element of risk. Information system on prices may be deemed to comprise: i) data collection, scrutiny, and storing, ii) data analysis and information generation, iii) data communication/transmission, iv) information communication / dissemination, and iv) end use. A visualisation of the information system on prices is delineated in the figure given below. Primary data on prices collected by various agencies form the foundation on which information on general price level in the country is built up.

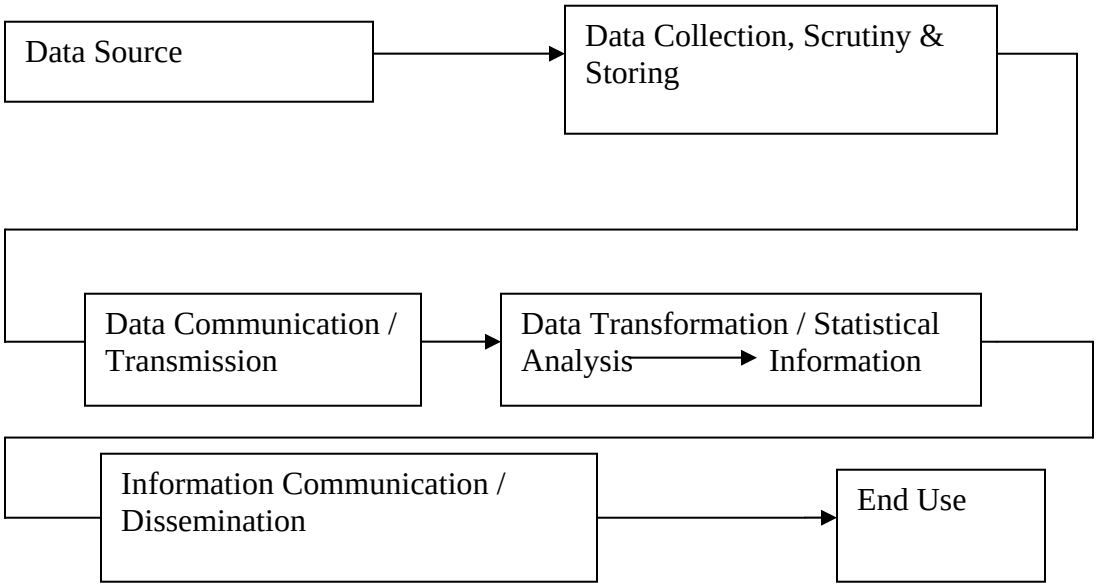

Figure: Information system on prices

4.5.2.1 INFORMATION TECHNOLOGY IN AGRICULTURAL MARKETING

Market information is needed by farmers in planning production and marketing, and is equally required by other market participants in arriving at optimal trading decisions. The existence and dissemination of complete and accurate marketing information is the key to achieving both operational and pricing efficiency in the marketing system and IT has an important role to play in the process.

There are several areas of agricultural marketing with which farmers need to be fully familiarized in order to improve price realization. Promotion of nationally and internationally acceptable standards of grading and standardization, packaging and labelling, storage and warehousing and sanitary and phyto-sanitary measures and quality certification in farm sector will enable trade and processing sector to undertake large scale agricultural marketing operations in domestic as well as international markets. Once the farm produce is standardized and

labelled, backed by reputed quality certification, it can be directly offered for sale in national and international markets.

Several Ministries in Government of India take decisions directly affecting the process of Agricultural marketing in the country. Important among these are Agriculture, Commerce, Food and Public Distribution, Consumer Affairs and Health. Several central institutions set up by Government of India viz. NCDC, NAFED, TRIFED, NDDB, NHB, APEDA etc., are directly involved in implementing programs to strengthen agricultural marketing in the country and to help farmers in the process of marketing of agricultural produce. Then there are Commodity Boards and Export Promotion Councils for specific commodities and to promote exports. All the relevant programs and policies of these institutions need to be disseminated to the farm producers and the target groups to enable them to take full advantage of newer opportunities made available by the Government. Although many of these organizations have their independent web sites hosted through NIC or other internet service providers, the portal developed by NIC (AGMARK-NET) should provide linkages to these sites to access marketing related information to all market players.

Data on various aspects of agricultural marketing is important for policy formulation, infrastructure planning and research. To facilitate both the Government as well as the private sector in planning development of an appropriate marketing strategy in agriculture sector, it would be necessary to create at national level an ‘Atlas of Agricultural Markets’ which would provide information in respect of each commodity, major areas of production, movement and storage and of market and consuming centers. In parallel, commodity profile should be prepared for all major commodities outlining the market requirements in terms of quality, standards, labelling, packing, storage, transport, regulations, taxation, warehousing, forward and futures markets etc. This information has to be translated in local languages and uploaded onto the State level portals to facilitate market led extension to farming community in local language through internet.

4.6 NATIONAL INFORMATICS CENTRE - IMPLEMENTING AGENCY

National Informatics Centre (NIC) is the nodal Scientific & Technology organization in the Ministry of Communications & Information Technology, for informatics development and networking in government, corporate and cooperative sectors for decision support. NIC offers state-of-the-art network services in the country, over C-band and Ku-band (TDMA, FTDMA & SCPC) VSATs, Wireless Metropolitan Area Networks (MANs) and Local Area Networks (LANs) with NICNET gateway for Internet resources, so as to facilitate economic,

social, scientific and technological activities, and also for “macro-economic adjustment programme” of the Government. NIC implements IT projects, in collaboration with the Central/State Governments, in respect of

i) Centrally Sponsored Schemes,

ii) Central Sector Schemes,

iii) State Sector & State sponsored Programmes, and District Administration sponsored Projects.

NIC provides the state-of-the-art IT solutions to information management, information dissemination, and decision support requirements of the Central as well as state Governments, the Corporate Sector and the Cooperative Sector. NIC plays “Data Warehousing” (Data Bases & Model Bases), Network Services (Internet, Intranet), & Ex-Geographical Information System (GI Application of Remote Sensing Data), Multi-media Information System, E-Governance & E-Commerce, Decision Technological Sectoral IT Plans, IT Training for Government Employees. NIC Project Offices have been established in 1980s, with NICNET facilities for Internet & Intranet access, through a Memorandum of Understanding (MOU), in all the Central Government (Civilian) Departments/ Ministries, 29 State Government Secretariats, 6 Union Territories Administration.

4.7 DIRECTORATE OF MARKETING AND INSPECTION (DMI)

The Directorate of Marketing and Inspection (DMI), headed by Agricultural Marketing Advisor to the Government of India (AMA), implements agricultural marketing programmes of the Central Government, under the supervision and control of the Central Ministry of Agriculture. DMI aims at bringing integrated development of marketing of agricultural and allied produce in the country, and maintains a close liaison between the Central and State Governments through its regional offices (11) and sub-offices (37) spread all over the country. DMI has a network of 22 regional AGMARK Laboratories with its Central AGMARK Laboratory at Nagpur. Its thrust areas functional responsibilities include:

- promotion of standardization and grading of agricultural and allied produce;
- market research and surveys;
- manpower training in Agricultural Marketing;
- market development through Regulation, Planning and Designing of physical markets;
- marketing extension to educate consumers/producers;

- administration of Meat Food Products Order (1973);
- promotion of Cold Storage; and
- market information network.

CHAPTER-V

ENSURING QUALITY STANDARDS

5.1 INTRODUCTION

Farm produce being diversified in nature, the quality based price assessment becomes disputable and also poses a big challenge in the whole process of marketing. Therefore, homogeneity has to be introduced by sorting, cleaning and grading to impart a uniform appearance to the produce and to make the same of defined and assured quality, which in turn eliminates the need of inspection/testing any more.

Inspection, sampling, analyses, packing, marking, labeling etc., are the primary elements of any quality control system. In order to enforce systematic and scientific grading of farm produce and quality control, matching with the present day requirement either at national or international level, agricultural marketing personnel should have a clear understanding and knowledge of the basic concepts and modus operandi of quality system.

With the objective of making aware the market users and farmers, information on inspection, sampling, grading, packing, marking, labeling etc., on scientific lines has been incorporated in the manual prepared by the DMI. Quality parameters stipulated for export has also been discussed precisely to apprise them with these requirements under the WTO regime. This would enable the various market functionaries and farmers to shoulder the responsibility of achieving the goal of “Customers satisfaction” by making produce of a requisite quality norms. This will help in identifying the demand for particular quality produce and getting right returns with assured market.

5.2 BASIC CONCEPTS OF STANDARDISATION AND GRADING

Standard: Standard is a measure that is generally accepted as having fixed value. The measure is in units of intrinsic qualities or characteristics of a product or a service. According to ISO, a standard is a result of a particular standardisation effort approved by a recognised authority and may take the form of a document containing a set of conditions to be fulfilled.

Standards are of three types, namely, (i) Object standard, such as mass, length and time; (ii) Documentary standards, include specifications, methods, nomenclature and administrative aspects; and (iii) Conceptual standards, which is neither in the form of object nor document but is passed from mouth to mouth and generation to generation such as behaviour norms.

According to ISO, standardisation is the process of formulating and applying rules for an orderly approach to a specific activity for the benefit and cooperation of all concerned, and in particular for the promotion of the overall economy, considering due safety requirements such as (i) determines classes of a commodity or service that has fixed limits; (ii) involves the determination of basic limits; (iii) provides scientific language to define a commodity; and (iv) yardstick of quality.

OBJECTVES

- To achieve overall economy in terms of cost, human resources and conservation of essentials. It involves judicious choice of raw material, production and handling techniques more economically.
- Simplification –convenience in use, rationalisation, interchangeability of parts, increased productivity and cutting unnecessary waste.
- To evolve best possible solution to recurring problems, involving standardisation of basic terminology, codes, practices, models, contracts.
- To define requisite levels of quality for practical evaluation and attainment of quality.

The standard system is system of systems, which pervades all aspects of marketing and provides infrastructure for their operation and regulation of marketing activities.

Standards are framed under Agricultural Produce (Grading and Marking) Act, 1937 by the Central Government. They are popularly known as AGMARK-STANDARD. These standards are implemented in accordance with grading and marking rules and instructions stipulated for the commodity. These specifications are revised from time to time and amended suitably, keeping in view qualitative changes, consumer preferences etc.

GRADE: The lots having approximately the same quality characteristics.

GRADING: It is the process of dividing a quantity of the same kind of commodity into different homogenous groups according to prescribed standards.

SALIENT FEATURES OF AGRICULTURAL PRODUCE (GRADING & MARKING) ACT, 1937

The AP(G&M) Act, 1937 is the first legislation enacted for the quality control of Agricultural Produce by the Central Government. The Directorate has laid down grade standards under this Act. These are popularly known as AGMARK grades. The act is permissive in nature and the grading is voluntary. The

Directorate with the active cooperation of State / UT governments is implementing the grading programme.

AGRICULTURAL PRODUCE: Includes all produce of agriculture or horticulture and all articles of food or drink wholly or partly manufactured from any such produce, fleeces and the skin of the animals.

OBJECTIVES

- To notify the agricultural commodities for which grade standards are to be prepared under this Act.
- To prepare standards for agricultural commodities popularly known as “AGMARK Standards”.
- To implement the grading of Agricultural Commodities on the basis of AGMARK Standards.
- To make rules to carry out the provisions of this Act.
- Fixing the grade designation to indicate the quality of any scheduled article.

DEFINITIONS

Quality in relation to any article includes the state and condition of the article.

- AGMARK grading – means the grading of an article in accordance with the grade standards prescribed under the provisions of the Act.
- AGMARK label – means the label specifying name of the commodity, grade designation and bearing prescribed insignia.
- AGMARK Replica – means a grade designation mark, in lieu of AGMARK label consisting of prescribed design with the word AGMARK and the certificate of authorization number.
- Authorised Packer – means a person or a body of persons who has been granted Certificate of Authorisation to grade and mark an article under provisions of the Act.
- Authorised Premises – means the premises specified in the certificate of authorization to grade and mark an article under provisions of the Act.
- Certificate of Authorisation – means a certificate in prescribed proforma issued under this rules authorizing a person or body of persons to grade and mark an article with grade designation mark.

- Certificate of AGMARK Grading – means a certificate in prescribed proforma issued by an authorized officer in respect of AGMARK graded consignment meant for export.
- Marking – includes stamping grade designation mark on an article or affixation of AGMARK labels or printing /stenciling of AGMARK replica on the covering of container.
- “Trade Brand Label” – includes private marks, brand, label, pictorial representation, used or proposed to be used by an authorised packer.

5.3 GRANT OF CERTIFICATE OF AUTHORISATION

Any person or body of persons desirous of being authorized to grade and mark an article under the provisions of Act shall apply to the Agricultural Marketing Adviser or any officer of the central or state government authorized by the Agricultural Marketing Adviser. The application should be accompanied by

(i) proprietorship declaration or partnership deed;

(ii) blue print of premises to be used for under taking grading work;

(iii) ownership declaration;

(iv) consent of approved Laboratory, grinding mill etc.;

(v) specimen copy of TBL, if any, along with declaration of ownership of the TBL and an undertaking to use the same, on permission, for AGMARK graded products only;

(vi) prescribed fee, if any, for grant of Certificate of Authorisation; and

(vii) any other particulars as may be prescribed from time to time

The application for authorization shall be signed by the proprietor or partner and submitted through concerned state authority and / or office of the Directorate for grading of notified commodities under the provisions of the Act. The Certificate of Authorisation (CA) will be issued only after complete verifications. The CA is issued for specific commodity, premises, period, processing unit, TBL, to the approved laboratory and to the person or body of persons mentioned in the application. The CA is renewable subject to the conditions stipulated under the Act.

Private commercial laboratory shall be accorded approval for grading and marking under the provisions of the act, provided there is no State Grading laboratory.

CA can be suspended or cancelled, if, the grade designation marks are not applied correctly or authorized packer has contravened any of the provisions of

the Act or violated any rule or has failed to comply with any of the instructions issued under the provisions of the Act.

PACKING AND MARKING: Graded article shall be packed in the manner and using the type of packaging material and the pack sizes, by weight or number as prescribed for the said article. Every package containing AGMARK graded article will, in addition to the grade designation mark, carry such details like CA number, Lot/batch number, date of packing, place of packing, net weight etc. as prescribed for the said article. Private marks, if any, applied on the packages of AGMARK graded article shall not represent quality or grade different from that indicated by the grade designation mark affixed thereon.

PAYMENT OF CHARGES: The CA holder will pay prescribed charges for

- Grant and renewal of CA;
- Issue of duplicate CA;
- Training of chemists employed by the authorized packer; and
- Measures for enforcing the quality control of scheduled articles marked with grade designation mark including testing of samples and inspection of such articles.

CERTIFICATE OF AGMARK GRADING or CAG/CG shall be issued in a prescribed form to the authorized packer for articles graded for export under AGMARK.

REDRESSAL OF CONSUMER'S GRIEVANCES AND COMPLAINTS

Complaints and grievances of consumers in respect of AGMARK graded products shall be made to the AMA, giving full particulars regarding AGMARK label number, place of packing, trade brand etc. of the concerned product and name and address of the seller

Redressal, if complaints found to be genuine shall be

- Free-of-cost replacement of the product within 30 days of issue of such direction.
- The complainant, if so desires, may also get the sample analysed from any other laboratory recognized by the Directorate.
- In case complainant is not satisfied with the result of investigation of the Directorate, complainant may ask for the analysis of the sample by the Central AGMARK Laboratory (CAL), whose decision will be final.
- Compensation for misgraded product, at the rate of current market value of corresponding quality.

- If free of cost replacement is not possible, reimbursement of the actual price paid as per cash memo or on the basis of current market price of comparable quality and corresponding quality of the produce.

POWERS OF ENTRY, INSPECTION AND SEARCH

Any officer authorized by the AMA, may enter any premises, at any reasonable time, and inspect in storage, processing, packaging and transit and search for the agricultural produce against any contravention of the provisions of the Act.

SEIZURE, DETENTION AND DISPOSAL

An officer, authorized by the AMA may seize and detain any agricultural produce in relation to which an offence under this Act or the rules made thereunder is being or appears to have been committed, or which intended or likely to be used in the commission of such offence. Any agricultural produce, seized is subject to speedy or natural decay. Officer may dispose of such produce in such manner as may be prescribed.

PENALTY

- For unauthorized marking with grade designation mark - six months imprisonment and fine not exceeding Rs 5000/-.
- For counterfeiting grade designation mark - imprisonment for a term of not exceeding 3 years and fine not exceeding Rs 5000/-. Penalty for selling misgraded article - imprisonment for a term not exceeding 6 months and fine not exceeding Rs 5000/-.

FACTORS AFFECTING THE QUALITY OF FARM PRODUCE

- Quality encompasses both inherited and acquired characteristics of farm produce. The inherited characteristics are commodity and variety specific and remains unchanged or unaffected from the impact of environment and these are shape, size, colour, odour, weight, and taste. Inherited characteristics very often form the basis of the marketing decision. Since such quality factors reflect the consumer's preference, they play a dominating role in identifying the demand potential of that particular commodity.
- On the other hand, acquired characteristics are the result of the impact of the external environment, which varies from place to place and area to area. Such characteristics are by and large, responsible for heterogeneity and alter the quality of the produce. This includes both animate sources e.g. insects, microbes, fungi and their metabolites such as aflatoxin, uric acid, excreta etc. and autolysis of the produce itself.

- Cultural practices such as harvesting technique and post-harvest practices like storage, packaging, and handling also contribute to the quality of the produce, and play a major role in quality maintenance and rendering the produce marketable at acceptable price.

5.4 QUALITY FACTORS / REFRACTIONS

INHERITED CHARACTERISTICS: Shape, size, colour, odour, taste, texture, weight, strength, lustre etc.

AQUIRED CHARACTERISTICS: Foreign matter, admixture, slightly damaged, damaged or discoloured, immature and shrivelled, green grains, chalky, red kernels, broken, fragments, partially husked / splits and wholes, weevilled, other foodgrains, non-foodgrains, other varieties.

Husked rice, milled rice, hand pounded rice, raw milled rice, coated rice, broken rice, fragment, husks and bran.

Damaged pods and kernels, pods and other varieties / seeds / kernels, unripe shrivelled and immature, splits, nooks, dead seeds, small atrophied seeds, weevilled, slightly damaged.

In case of fruits and vegetables, blemish, damaged, diseased, mechanical injury, cuts, spotted, wrinkled, foul smell, oozing, punctured etc. are factors considered to be responsible for down grading the quality of the produce.

GRADING

- Sorting the unlike lots of the produce into different lots according to the quality specifications laid down.

Norms for Grading

- Grading should be on the basis of standards, which are largely used and easily understood.
- Grading should be done on measurable quality factors.
- Inter-grade variations should be less
- Grade standards should cover maximum percentage of the produce.
- Cost of grading operations should be less.
- Test for good grading norms is used by maximum percentage of the market users.
- Unless the standards are economically meaningful to the trade they are not accepted.

- Grading is sorting of unlike lots of products into uniform categories according to quality standards of the same product.

Advantages of Grading

1. Grading before sale enables farmers to get a higher price for their produce.
2 Grading facilitates marketing, for the size, colour, qualities and other grade designations of the produce well known to both the parties, and there is no need on the part of the seller to give any assurance about the quality of the produce.
3. Grading widens the market for the product, for buying can take place between the parties located at distant places on the telephone without any inspection of the quality of the product.
4. Grading reduces the cost of marketing by minimizing the expenses on the physical inspection of the produce, minimizing storage loss, reducing its bulk, minimizing advertisement expenses and eliminating the cost of handling and weighing at every stage.
5. Grading makes it possible for the farmer to

- get easy finance when commodities are stored;
- get the claims settled by the railways and insurance companies;
- get storage place for the produce;
- get market information;
- pool the produce of different farmers;
- improve the 'keeping' quality of the stored products by removing the inferior goods from the good lot; and
- facilitate futures trading in a commodity.

6. Grading helps consumers to get standard quality products at fair prices.

7. Grading contributes to market competition and pricing efficiency. The product homogeneity resulting from grading can bring the market closer to perfect competition, encourages price competition among sellers, and reduces extraordinary profits.

Thus, the grading of product is beneficial to all the sections of society, i.e. the producers, traders and consumers of the product.

Grading and storage

Storage of graded produce will have the following advantages:

- easy to assess the value and provide pledge loan and loan against the warehousing receipt.

- quality disputes can be resolved;
- storage with special case is possible for different grades as per their requirements; and
- helps in planning the plant protection measures. Low-grade produce needs different care.

Procurement and grading

- Easy to assess the quality and decide the price
- Easy to isolate the lots
- Easy to plan blending
- Easy to plan its storage
- Easy to plan distribution
- Price disputes can be resolved easily
- Producers get proper price and exploitation can be checked
- Farmers will get encouraged to produce the best
- Easy to match the demand and supply

Distribution and grading

- Easy to plan the blending and supply to different consuming segments
- Consumers will be able to select their choice
- Farmers will be able to plan the production matching with the demand.
- E. commerce is possible in well defined quality of the produce
- Global distribution is largely based on the grade of the produce Consumer loyalty may be maintained

INSPECTION AND SAMPLING

PACKING, MARKING, LABELLING & SEALING

INSPECTION: Inspection in relation to a commodity means “the process of determining whether a commodity in a particular lot complies with the standard specifications applicable to it or any other specification stipulated in the trade contract”.

Either whole lot or selected samples or sample which purport to represent the whole lot may be inspected before drawing a representative sample in order to observe whether the lots offered for grading are in sound and in merchandisable condition, free from moulds, weevils, obnoxious smell and excessive pesticidal

residues. In case any part of the consignment is found sub-standard, it should be segregated and sampled separately and if any lot(s) contain pesticidal residues beyond the prescribed limits or is polished or coloured with prohibited dyes, such lot should also be sampled separately and the representative sample sent to the appropriate laboratory for chemical examination .The grading of such lots should not be carried out until the results are received.

The commercial grading is subjective by nature and done generally by inspection method. As such, it not only requires technical expertise but adequate experience also to judge the commercial quality and to allot the grade on the spot. Therefore, before taking up the grading work , the standard samples must be prepared in respect of the important commodities of that market area, which will help in comparing the quality of the produce offered for grading. The grade and other details may be recorded in a register before examining next lot. On the basis of comprehensive inspection, the grades may be announced/allotted, as early as possible and a small plate indicating the grade or any appropriate indicator may be used to denote the grade.

SAMPLING: Sampling either for the grading or for checking the correctness of the grading should be done most accurately, because unless the sample is truly representative of the entire lot, correct grading can not be done. The general characteristics of the commodity should be preliminarily inspected before drawing samples from the lot. In the case of packed material or the packing material, stitching of the bags or metallic linings, the gross and net weight of the contents etc., should be invariably noted and verified.

SAMPLING TECHNIQUE

1. The key to the success in grading of a lot lies in drawing a truly representative sample, which reveals the exact composition of the commodity.

2. Primary sample: Each sample drawn from the heap or bag by Parkhi or Tube sampler from a single position of the Lot.

3. Composite sample: Primary samples drawn from the same lot shall be thoroughly mixed and blended to form homogeneous composite sample in a sample divider.

4. Test sample: One portion of composite sample weighting 500 gms. and packed in cloth bag.

5. Sample for Moisture: Part of the composite sample weighing about 250 gms. packed in polythene bag and heat-sealed kept in airtight container.

6. Labelling of sample: Gives all the details of the commodity, i.e. Lot Number, quantity, name etc. Label is affixed to the sample pack and sealed.

7. Sampling from bags: from bulk or heap depending upon lot size r = N/n, where N= Number of Containers and n= Number of Containers to be sampled. Every r^{th} bag is to be sampled.

8. Sampling scale: For food grains

9.

(a)	Bags	Total No. of bags	No. of Bags to be sampled
		30	All
		31-300	30
		301-1000	50
		1001-2000	100
		Above 2001	5%

(b)	Bags	Quantity in Heap	Places to be sampled
		Upto 3000 tonnes	30 places
		301-1000	50 places
		Above 1001	100 places

Number of sub-Lots for OIL SEEDS

Number of bags in a Lot	Weight of Oilseeds in a Lot	Number of sub-Lot
Upto 300	Upto 30 tonnes	2
Upto 1000	31 to 100 tonnes	3
1001 to 3000	101 to 300 tonnes	4
3001 & over	Over 300 tonnes	5

Sampling for bagged oilseeds	Number of bags in a Lot	Number of bags to be sampled
	For small oilseeds	Medium and Large oilseeds
Upto 50	5	8
51 to 100	8	13
101 to 150	13	20
151 to 300	20	32
301 and above	32	50

Weight of Laboratory and Moisture Sample

Oilseeds	Minimum weight of each of the	
	Laboratory Sample	Moisture Sample
Small	200 gms	150 gms
Medium	600 gms	150 gms
Large	1000 gms	250 gms

VARIOUS SAMPLERS: i) Tube Sampler; ii) Deep Bin Probe; iii) Parkhi or Scoop; iv) Thermo Sampler; and v) Sample Divider.

SAMPLE SIZE FOR ANALYSIS:

Commodity	Weight (in grams)
Small oil seeds (sesame, mustard, poppy, rape, linseed, hemp, cotton seed and others in the Size range)	10.00
Medium oil seeds (Castor, palm, kernel, groundnut, soybean, mahua and others)	100.00
Large oil seeds (Copra and other oil seeds in the Same size range)	500.00
Foodgrains:	
Wheat, maize, barley, jowar, whole pulses	50.00
Split pulses, husked & unhusked	20.00
Rice	20.00
Millets	10.00

ANALYSIS: After drawing the proper sample from the lot, correct sample size is taken to analyse the same for its various refraction and percentage by weight of these refractions is calculated to know the tolerance limit prescribed for various grades and finally the grade is assigned for that commodity. Sample for moisture assessment is taken separately and moisture percentage is determined by any of the available moisture meter, before assigning the grade.

APPARATUS AND EQUIPMENT FOR PHYSICAL ANALYSIS

Enamelled tray, Analytical Balance, Sample Scoop, Standard Set of Sieves, Magnifying glass, Sample Bottle, Universal Electronic Moisture Meter or Farmex Electronic Moisture Meter.

METHOD OF ANALYSIS FOR OIL SEEDS

- All particulars of the sample should be checked and entered in a Register.
- For analysis, sample should be emptied on a flat smooth surface, thoroughly mixed on the Table in a circular layer of 1.5 cm to 5 cm thickness.
- Oil seeds should be smoothly scooped out from the Center, sides and different point on the surface all round and weighed exactly.
- Oil seeds having greenish tinge on seed coat should be separated by hand in gloves to prevent the spread of aflatoxin.
- If Argemone mexicana seeds are found in mustard/rape seed, the same should be sieved out to avoid health hazard.

SIZE OF COMPOSITE SAMPLES

- 200 gms for small oil seeds
- 600 gms for medium oil seeds
- 1000 gms for large oil seeds
- Sample is poured over set of sieves, agitated thoroughly to strain out the foreign matter at various levels.
- The sieves are then separated and all the foreign matter is picked up by hand and added to the foreign matter collected at the bottom and percentage of FM is obtained.
- Top sieve will contain bold seeds and lower sieve will contain smaller one.
- The contents of the upper sieves should be mixed and spread out evenly in a thin circular layer. From this surface, prescribed size of the sample for analysis may be taken.
- For groundnut, a separate small lots of 100 gms would be taken for determination of shelling percentage (Kernels/Pods)
- Moisture of oil seeds is determined by the Hot Air Oven method, heating at
  135 + 3 ^{0}C for two hours. Only hermetically sealed sample separately drawn for the purpose should be used.

METHOD OF ANALYSIS FOR FOODGRAINS

Grains having greenish tinge on seed coat should be separated by hands in gloves to prevent the spread of aflatoxin. Thoroughly mix and spread the sample

on the Table or glass tops in a circular layer of about 1.5 to 2.5 cm thickness and even out with a ruler. Smoothly scoop out the sample from the Center, sides and different points on the surface all around and weigh exactly 250 gms. of samples, taking care that no dirt is left over from the sample, which has been removed. Pour the sample over the appropriate sieve and remove the dirt component of the foreign matter. Weigh the dirt and multiply it by 0.4 to work out the percentage. Analyse on an enamelled tray and calculate percentage of each refraction on weight basis and assign the grade on the basis of analytical data on factorial basis.

CERTIFICATION: A procedure by which a third party gives written assurance that a product, process or service conforms to specified requirements. Certification involves the issue of a certificate or a mark (or both) to demonstrate that a specific product meets a defined set of requirements for that product, usually a standard.

The mark carries a reference to the number or name of the relevant product standard against which the product has been certified. A product bearing a mark carries a third party guarantee that

- the product has been produced according to specified standard;
- production has been supervised and controlled; and
- product has been tested and inspected.

Customers can approach certification agency, if the product does not meet the declared standards.

Certification agency uses various evaluation techniques, before issuing the certificate such as testing of the product, in-process quality control, surveillance visit to factory and testing the samples drawn from the open market.

In India, for agricultural commodities, Directorate of Marketing & Inspection, Ministry of Agriculture, Government of India, is the designated certification body, which is empowered to issue the certificate to the quality of notified commodities graded under AGMARK. **Generally, AGMARK standards are accepted internationally, however, with the advent of WTO, the international requirements for quality have become more specific (Codex Standard) and need to be incorporated in the domestic or national standards strictly, to match them with the standards prevailing in the international parlance**.

For products in the regulated sector, one can contact the enquiry points (in India, it is Director (Quality System), Bureau of Indian Standards, Manak Bhavan, 9-Bahadur Shah Zafar Marg, New Delhi–110002) set up in the country under WTO agreement on TBT and from these points, the needed information, technical

regulation and conformity procedures may be obtained from its counterparts in the target market.

A supplier's declaration of conformity is a procedure by which a supplier gives written assurance that a product, process or service conforms to specified requirements. The details include:

- name and address of supplier
- the identification of the product, process or service
- conformity statement
- the reference normative document (standards, technical regulation etc.)
- date and place of issue of declaration
- the authorised signatory on behalf of the supplier

PACKING: Agricultural commodities should be packed in new packing material which is hygienic and capable of maintaining the quality including organoleptic characteristics and quantity of the produce intact during the course of its distribution. Generally for foodgrains, new, clean jute bags, cloth bags, polywoven bags, polyethylene, high density polyethylene or other foodgrade plastic / packaging material free from any insect infestation or fungal contamination, which are safe and suitable for their intended use are used. They should not impart any toxic substance or undesirable odour or flavour to the produce. Produce should be packed only after proper drying, cleaning and grading. Package should contain only one grade produce in standard pack size (As per the provisions of PFA Act 1955 and Packaged Commodity rules 1977; if the consignment is for export, it should conform to the provisions of Technical Barriers to Trade –TBT).

Fruits and vegetables shall be packed in each container in compliance with recommended International Code of Practices for Packaging and Transport of tropical Fresh fruits and vegetables (CAC RCP-44-1995) for export and as per the instructions issued by the Agricultural Marketing Adviser from time to time for domestic market

Contents of each package or lot must be uniform and contain only produce of the same origin, variety and grade designation

MARKING: Marking is the action and result of stamping, inscribing, printing, labelling etc., marks, symbols, numeral letters etc. upon a product itself or on its package, for the purpose of identifying the product and its origin and giving its basic characteristic its intended use etc.

LABELLING: It is a means for the identification and presentation of a container or package, a means for protecting the contents against pilfering as they form a security-seal, gives information regarding batch number or quality control reference, may either be printed directly on the packaging or on the printed label itself by the packer applying the label. Following details on each package clearly and indelibly marked:

1. The grade designation mark shall be securely affixed to or printed on each package in a manner approved by the Agricultural Marketing Adviser or an officer authorised by him in this behalf.

2. Name of the commodity

3. Variety

4. Grade designation

5. Size code (if prescribed)

6. Lot / batch / code number

7. Country of origin

8. Net weight / Number of units

9. Name and address of the packer / exporter

10. Best before date (where applicable)

11. Storage condition, if any

12. Date of packing

13. Such other particulars as may be specified by the Agricultural Marketing Adviser

14. The marker used for marking on packages shall be of such quality which may not contaminate the product.

For domestic trade, fruits, vegetables shall comply with the residue levels of heavy metals, pesticides as specified in Prevention of Food Adulteration Rules, 1955, as amended.

MAINTENANCE OF RECORDS

The quality assessment system needs to be documented carefully and all relevant information is preserved in a systematic way and to provide people with precisely the document or information they need. Now a days, **Quality Assurance System** under ISO-9000 emphasizes the importance of maintaining all the records and perfect documentation, for the safety worthiness of the food.

The following records are required to be maintained in a quality assessment system:

i) Priority/ Sample Register

ii) Analysis Report Register

iii) Check Sampling Analysis Register

iv) Moisture testing report Register

v) Rejection Record Register

vi) Label /Seal Records

vii) Label/ Certification charges or Fee Register

viii) Certification of AGMARK Grading Register (CAG), in case of grading under AGMARK only

ix) Record of Inspection of Laboratory and Equipment and Calibration of Instruments

x) Grading Statistics Register

Now, in the **Agreement on Sanitary and Phytosanitary** under WTO, which recognizes the codex standards for food safety, are required to be adopted for the international trade in food. Therefore, HACCP's first and foremost requirement is, perfect recording of all data pertaining to the Seven Principles specified thereunder to produce a Safe Food for customers. Similarly ISO-9000 is also based on perfect documentation and maintenance of records in areas where its absence would have an adverse effect on quality, for accrediting the system of production and awarding ISO-9000 (ISO-15000,1998) certification as a mark of accreditation.

The maintaining of records helps in implementing the quality system elements and is one of the important instruments in resolving the disputes originating on quality grounds. This record is also helpful in guiding the producers in preparing their commodity for the market, so that the deal is completed efficiently.

5.5 CODEX ALIMENTARIUS COMMISSION

To develop food standards, guidelines and related texts such as codes of practice under the Joint Food and Agriculture Organization (FAO) and World Health Organization (WHO) Food Standards Programme, the Codex Alimentarius Commission was created in 1963 by FAO/WHO. The main purposes of this Programme are protecting health of the consumers and ensuring fair trade practices in the food trade, and promoting coordination of all food

standards work undertaken by international governmental and non-governmental organizations.

The Codex Alimentarius Commission envisages a world afforded the highest attainable levels of consumer protection, including food safety and quality. To this end, the Commission will develop internationally agreed standards and related texts for use in domestic regulation and international trade in food that are based on scientific principles and fulfill the objectives of consumer health protection and fair practices in food trade.

5.5.1 EVALUATION OF CODEX

In December 2002, FAO and WHO completed an evaluation of the Codex Alimentarius and other FAO and WHO Food Standards work and this was discussed at a Special Session of the Codex Alimentarius Commission in February 2003. This evaluation was undertaken at the request of FAO, WHO and the Codex Executive Committee and although it concentrated on the FAO/WHO Codex Alimentarius Commission, the evaluation covered all aspects of the food standards work of FAO and WHO, which includes also capacity building and expert scientific advice. The work of the evaluation was undertaken by an independent team advised by an independent expert panel. The evaluation team consisted of five persons, three of whom, including the team leader, were external to the two Organizations. The independent expert panel had ten members drawn from all parts of the world and stakeholder interests. The evaluation also benefited from the advice of the Codex Executive Committee. The evaluation team visited 24 Member Nations and the European Community. Information was also received from an open call for public comment on the Internet and from detailed questionnaires to Member governments and stakeholder organizations. There was a very high level of responses to the questionnaires with over 100 Member Nations replying.

The evaluation found Codex food standards to be given very high importance by members. Codex standards were considered a vital component in promoting food control systems designed to protect consumer health, including issues related to international trade and the agreements on the Application of Sanitary and Phytosanitary Measures (SPS) and on Technical Barriers to Trade (TBT) of the World Trade Organization (WTO). International standards also provide a basis for standard setting by smaller and less developed countries. Capacity building activities of FAO, WHO and Codex were found to be continuing to make a substantial contribution internationally and to individual countries both in protecting their own citizens and in benefiting from an increasingly globalized market in food.

The report of the evaluation was considered by the 25th (Extraordinary) Session of the Codex Alimentarius Commission (Geneva, 13-15 February 2003). The Commission supported the overall thrust of the Evaluation report and expressed its commitment to the implementation of strategies that would meet the objectives of the recommendations contained therein. It strongly agreed that these recommendations should be reviewed expeditiously.

In order to maintain the strong support from all Member Nations and stakeholders, the Commission agreed that in their response to the Evaluation, the Commission and its parent Organizations should work towards: greater efficiency and effectiveness in the development of Codex standards, whilst maintaining transparency and inclusiveness and procedural consistency in the process of their development; increased participation of developing Member Nations and Member Nations in economic transition in the work of the Codex Alimentarius Commission throughout the standards development process; greater usefulness of Codex standards to Member Nations in terms of relevance to their needs and timeliness; strengthening of the scientific base for risk analysis, including food safety risk assessment to improve the efficiency and effectiveness in providing expert scientific advice to the Commission and Member Nations and to improve risk communication; and more effective capacity building for the development of national food control systems.

The Commission also agreed that it should have greater independence, within the overall structure of FAO and WHO, for proposing and executing its work programme and budget, once approved by the two parent organizations. It strongly supported the recommendation that the Secretariat be expanded and that the seniority and composition of its staff should match the Commission's increased requirements.

The Commission expressed the view that there needed to be sufficient capacity within the parent Organizations to ensure that scientific advice was provided on a timely basis. It also agreed that this work needed to have greater identity within the Organizations, stronger links to Codex priorities, and internal coordination as well as significantly increased resources. Its independence from external influences and its transparency needed to be further reinforced within FAO/WHO. It strongly recommended that WHO markedly increase its contribution to health risk assessment carried out by FAO/WHO expert committees and FAO/WHO Expert consultations. It also recommended that FAO strengthen its input in areas reflecting its responsibility and expertise. In the area of capacity building, the Commission called upon FAO and WHO to undertake a major effort to mobilize extra-budgetary funds and foster coordinated bilateral assistance in capacity

building. It also called for a more coordinated approach for capacity building between FAO and WHO.

The Commission called upon FAO and WHO to provide additional Regular Programme resources, supplemented with extra-budgetary resources where necessary, to strengthen Codex and Codex-related work throughout the two Organizations. If all recommendations of the evaluation were to be implemented with immediate effect, the incremental core funding for Codex would need to increase by some US$ 1.4 million per biennium. Immediate incremental costs of implementing recommendations relating to improving the timeliness of expert scientific advice to Codex and Member Nations is estimated to be US$ 2.5 million per biennium, shared equally between FAO and WHO. It is the intention of FAO to proactively seek extra-budgetary resources to be able to implement fully the recommendations of the Evaluation of Codex and Codex-related work.

Such standards for about 278 crops/commodities have been given on the website of Codex Alimentarius Commission. For illustration purpose, Codex Standards for Maize, Wheat; and Pearl Millet have been appended in detail in the next Sub-Sections 5.5.2; 5.5.3 and 5.5.4 respectively.

5.5.2 CODEX STANDARD FOR MAIZE (CORN)
CODEX STANDARD 153-1985 (Rev. 1 - 1995)

The Annex to this standard contains provisions which are not intended to be applied within the meaning of the acceptance provisions of Section 4.A (I)(b) of the General Principles of the Codex Alimentarius.

1. SCOPE

This standard applies to maize (corn) for human consumption, i.e., ready for its intended use as human food, presented in packaged form or sold loose from the package directly to the consumer. This standard specifies requirements for whole grain shelled dent maize, Zea mays indentata L., and/or shelled flint maize, Zea mays indurata L., or their hybrids. It does not apply to processed maize.

2. DESCRIPTION

2.1 Product Definition

Maize (corn) is the shelled grains of the species defined in the scope.

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Quality Factors - General

3.1.1 Maize shall be safe and suitable for human consumption.

3.1.2 Maize shall be free from abnormal flavours, odours and living insects.

3.1.3 Maize shall be free from filth in amounts which may represent a hazard to human health.

3.2 Quality Factors - Specific

3.2.1 Moisture Content 15.5% m/m max

Lower moisture limits should be required for certain destinations in relation to the climate, duration of transport and storage. Governments accepting the Standard are requested to indicate and justify the requirements in force in their country.

3.2.2 Extraneous matter are all organic and inorganic materials other than maize, broken kernels, other grains and filth.

3.2.2.1 Filth are impurities of animal origin (including dead insects). 0.1% m/m max

3.2.2.2 Toxic or Noxious Seeds

The products covered by the provisions of this standard shall be free from the following toxic or noxious seeds in amounts which may represent a hazard to human health.

Crotolaria (Crotalaria spp.), Corn cockle (Agrostemma githago L.), Castor bean (Ricinus communis L.), Jimson weed (Datura ssp.), and other seeds are commonly recognized as harmful to health.

3.2.2.3 Other organic extraneous matter which is defined as organic components other than edible grams of cereals (foreign seeds, stems, etc.) (1.5% m/m max).

3.2.2.4 Inorganic extraneous matter which is defined as any inorganic component (stones, dust, etc.) (0.5% m/m max).

4. CONTAMINANTS

4.1 Heavy Metals

Maize (corn) shall be free from heavy metals in amounts which may represent a hazard to human health.

4.2 Pesticide Residues

Maize (corn) shall comply with those maximum residue limits established by the Codex Alimentarius Commission for this commodity.

4.3 Mycotoxins

Maize (corn) shall comply with those maximum mycotoxin limits established by the Codex Alimentarius Commission for this commodity.

5. HYGIENE

5.1 It is recommended that the product covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1969, Rev. 2-1985, Codex Alimentarius Volume 1B) and other Codes of Practice recommended by the Codex Alimentarius Commission which are relevant to this product.

5.2 To the extent possible in good manufacturing practice, the product shall be free from objectionable matter.

5.3 When tested by appropriate methods of sampling and examination, the product:

- shall be free from microorganisms in amounts which may represent a hazard to health;
- shall be free from parasites which may represent a hazard to health; and
- shall not contain any substance originating from microorganisms in amounts which may represent a hazard to health.

6. PACKAGING

6.1 Maize (corn) shall be packaged in containers which will safeguard the hygienic, nutritional, technological, and organoleptic qualities of the product.

6.2 The containers, including packaging material, shall be made of substances which are safe and suitable for their intended use. They should not impart any toxic substance or undesirable odour or flavour to the product.

6.3 When the product is packaged in sacks, these must be clean, sturdy and strongly sewn or sealed.

7. LABELLING

In addition to the requirements of the Codex General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985, Rev. 1-1991, Codex Alimentarius Volume 1A), the following specific provisions apply:

7.1 Name of the Product

7.1.1 The name of the product to be shown on the label shall be "maize (corn)."

7.2 Labelling of Non-Retail Containers

Information for non-retail containers shall either be given on the container or in accompanying documents, except that the name of the product, lot identification and the name and address of the manufacturer or packer shall appear on the container. However, lot identification and the name and address of the

manufacturer or packer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

8. METHODS OF ANALYSIS AND SAMPLING

See Codex Alimentarius Volume 13.

ANNEX

In those instances where more than one factor limit and/or method of analysis is given we strongly recommend that users specify the appropriate limit and method of analysis.

FACTOR/DESCRIPTION	LIMIT	METHOD OF ANALYSIS
KERNELS OF OTHER COLOURS		Visual Examination
· in yellow maize. Maize grains which are yellow and/or light red in colour are considered to be yellow maize. Maize grains which are yellow and dark red in colour, provided the dark red colour covers less than 50% of the surface of the grain, are also considered to be yellow maize	MAX: 5.0% by weight of maize of other colours	
· in white maize. Maize grains which are white and/or light pink in colour are considered to be white maize. White maize also means maize grains which are white and pink in colour, provided the prink colour covers less than 50% of the surface of the grain	MAX: 2.0% by weight of maize of other colours	
· in red maize. Maize grains which are pink and white or dark red and yellow in colour are considered to be red maize, provided the pink	MAX: 5.0% by weight of maize of other colours	

or dark red colour covers 50% or more of the surface of the grain		
· mixed maize		
KERNELS OF OTHER SHAPE		Visual Examination
· in flint maize	MAX: 5.0% by weight of maize of other shapes	
· in dent maize	MAX: 5.0% by weight of maize of other shapes RANGE: 5.0% to 95%	
· flint and dent maize	by weight of flint maize	
DEFECTS		
· blemished grains: grains which are insect or vermin damaged, stained, diseased, discoloured, germinated, frost damaged, or otherwise materially damaged	MAX: 7.0% of which diseased grains must not exceed 0.5%	Visual Examination
· broken kernels	MAX: 6.0%	ISO 5223-1983 (4.50 mm metal sieve)
· other grains	MAX: 2.0%	Visual Examination

5.5.3 CODEX STANDARD FOR WHEAT PROTEIN PRODUCTS INCLUDING WHEAT GLUTEN

(CODEX STAN 163-1987, Rev. 1-2001)

1. SCOPE

This standard applies to Wheat Protein Products prepared from wheat by various processes. The products are intended for use in foods requiring further preparation and for use by the food processing industry. Wheat gluten or wheat protein products should not be used for technological reasons e.g. coating or processing aids for foods which are gluten-free by nature (This does not preclude the use of these products as ingredients in composite pre-packaged foods provided that they are properly labelled as ingredients)

2. DESCRIPTION

2.1 Definitions

Wheat Protein Products (WPP) covered by this standard are food products produced by separation from wheat or wheat flour of certain non-protein constituents (starch, other carbohydrates).

- Vital wheat gluten is characterized by its property of high viscoelasticity as hydrated.

- Devitalized wheat gluten is characterized by its reduced property of viscoelasticity as hydrated due to denaturation.

- Solubilized wheat proteins are characterized by their reduced property of viscoelasticity as hydrated due to partial hydrolysis of wheat gluten.

3. ESSENTIAL COMPOSITION, QUALITY AND NUTRITIONAL FACTORS

3.1 Raw Materials

Wheat or wheat flour essentially free from other seeds and foreign matter in accordance with Good Manufacturing Practice.

3.2 Compositional Requirements

WPP shall conform to the following compositional requirements:

3.2.1 Moisture content shall not exceed 10 % (m/m).

3.2.2 Crude protein (N x 6.25) shall be:

- in case of vital and devitalized wheat gluten, 80 % or more

- in case of solubilized wheat proteins, 60% or more

On a dry weight basis excluding added vitamins, minerals, amino acids and optional ingredients as specified in Section 3.3.

3.2.3 Ash

The yield of ash on incineration shall not exceed:

- in case of vital and devitalized wheat gluten, 2.0 %

- in case of solubilized wheat proteins, 10 %

on a dry weight basis.

3.2. 4 Crude fibre content shall not exceed 1.5 % on a dry weight basis.

3.3 Optional ingredients

No optional ingredients are permitted in vital and devitalized wheat gluten.

For solubilized wheat proteins, the following classes of ingredients may be used:

(a) carbohydrates, including sugars

(b) edible fats and oils

(c) other protein products

(d) amino acids, vitamins and minerals

(e) salt

(f) herbs and spices

(g) enzymes

3.4 Nutritional factors

Processing should be carefully controlled and sufficiently thorough to secure optimum flavour and palatability.

Processing must not be so severe as to appreciably impair the nutritive value.

4. FOOD ADDITIVES

No food additives are permitted in vital and devitalized wheat gluten and in solubilized wheat proteins.

5. CONTAMINANTS

The products covered by the provisions of this standard shall comply with those maximum limits established by the Codex Alimentarius Commission.

6. HYGIENE

6.1 It is recommended that the products covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the Recommended International Codex of Practice B General Principles of Food

Hygiene (CAC/RCP 1-1969, Rev 3-1997), and other relevant Codex texts such as Codes of Hygienic Practice and Codes of Practice.

6.2 The products should comply with any microbiological criteria established in accordance with the Principles for the Establishment and Application of Microbiological Criteria for Foods (CAC/GL 21-1997).

7. PACKAGING

WPP shall be packed in suitable hygienic containers which will maintain the product during storage and transport in a dry and sanitary condition.

8. LABELLING

In addition to the requirements of the General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985, Rev 1-1991) the following specific provisions apply:

8.1 Name of the food

8.1.1 Vital wheat gluten

The name of the food shall be "vital wheat gluten" or "wheat gluten".

8.1.2 Devitalized wheat gluten

The name of the food shall be "devitalized wheat gluten" or "devital wheat gluten".

8.1.3 Solubilized wheat proteins

The name of the food shall be "solubilized wheat protein" or “soluble wheat protein”.

8.2 Instructions for use

The manufacturer of WPP shall provide clear instructions for specific uses claimed on the label. Cautionary statements for gluten intolerant persons shall be on the label if required by national legislation.

8.3 Date Marking

The "date of minimum durability" (preceded by the words "best before") shall be declared by the day, month and year in uncoded numerical sequence except that for products with a shelf-life of more than three months, the month and year will suffice. The month may be indicated by letters in those countries where such use will not confuse the consumer. In the case of products requiring a declaration of month and year only and the shelf-life of the product is valid to the end of a given year, the expression "end (stated year)" may be used as an alternative.

8.4 List of ingredients

A complete list of ingredients shall be declared on the label in descending order of proportion except that in the case of added vitamins and added minerals, these ingredients shall be arranged as separate groups for vitamins and minerals, respectively, and within these groups the vitamins and minerals need to be listed in descending order of proportion.

8.5 Labelling of Non-Retail Containers

Information for non-retail containers shall either be given on the container or in accompanying documents, except that the name of the product, lot identification and name and address of the manufacturer or packer shall appear on the container. However, lot identification and the name and address of the manufacturer or packer may be replaced by an identification mark provided that such a mark is clearly identifiable with the accompanying documents.

8.6 Declaration of ingredients of animal origin

Optional ingredients of animal origin shall be declared on the label of the product to read as follows:

“Contains (state optional ingredient) of animal origin”.

9. METHODS OF ANALYSIS AND SAMPLING

9.1 Moisture Content

According to AOAC 925-09.

9.2 Protein

Vital wheat gluten and devitalized wheat gluten

According to AOAC 979.09.

Solubilized wheat protein

According to AOAC 920.87.

9.3 Ash

According to AOAC 923.03 or ISO 2171 (1980, method B).

9.4 Crude Fibre

According to AOAC 962.09.

9.5 Sampling

According to ISO 13690:1999.

5.5.4 WHOLE AND DECORTICATED PEARL MILLET GRAINS (CODEX STANDARD 169)-1989 (Rev. 1 - 1995)

The Annex to this standard contains provisions which are not intended to be applied within the meaning of the acceptance provisions of Section 4.A (I)(b) of the General Principles of the Codex Alimentarius.

1. SCOPE

This standard applies to whole and decorticated pearl millet destined for human consumption which is obtained from Pennisetum americanum L., Senegalese varieties "souna" and "sanio".

2. DESCRIPTION

2.1 Definition of the Product

Pearl millet grains shall be whole or decorticated and suitable dried if necessary. They shall have the characteristics of the species Pennisetum americanum L.

2.1.2 Whole Grains

These are grains of pearl millet obtained as such after proper threshing with no mechanical treatment.

2.1.3 Decorticated Grains

These are grains of pearl millet from which outer parts, amounting to 20-22% of the weight of the whole grains have been removed in an appropriate manner using mechanical treatment (for example, simple abrasion).

3. ESSENTIAL COMPOSITION AND QUALITY FACTORS

3.1 Quality Factors - General

3.1.1 Pearl millet grains shall be safe and suitable for human consumption.

3.1.2 Pearl millet grains shall be free from abnormal flavours, odours, and living insects.

3.1.3 Pearl millet grains shall be free from filth (impurities of animal origin, including dead insects) in amounts which may represent a hazard to human health.

3.2 Quality Factors - Specific

3.2.1 Moisture Content 13% m/m max

Lower moisture limits should be required for certain destinations in relation to the climate, duration of transport and storage. Governments accepting the Standard are requested to indicate and justify the requirements in force in their country.

3.3 Definition of Defects

Extraneous Matter is vegetable matter, shrivelled grains (grains which have not reached normal maturity), altered grains, etc.

3.4 Tolerances for Defects

Extraneous Matter - Whole pearl millet grains shall not have more than 2.0% of extraneous matter. Decorticated pearl millet grains shall not have more than 0.5% of extraneous matter. Also, whole and decorticated pearl millet grains shall be practically free from dirt, animal debris, mineral particles and diseased grains.

4. CONTAMINANTS

4.1 Heavy Metals

Pearl millet grains shall be free from heavy metals in amounts which may represent a hazard to human health.

4.2 Pesticide Residues

Pearl millet grains shall comply with those maximum residue limits established by the Codex Alimentarius Commission for this commodity.

4.3 Mycotoxins

Pearl millet grains shall comply with those maximum mycotoxin limits established by the Codex Alimentarius Commission for this commodity.

5. HYGIENE

5.1 It is recommended that the product covered by the provisions of this standard be prepared and handled in accordance with the appropriate sections of the Recommended International Code of Practice - General Principles of Food Hygiene (CAC/RCP 1-1969, Rev. 2-1985, Codex Alimentarius Volume 1B), and other Codes of Practice recommended by the Codex Alimentarius Commission which are relevant to this product.

5.2 To the extent possible in good manufacturing practice, the product shall be free from objectionable matter.

5.3 When tested by appropriate methods of sampling and examination, the product:

- shall be free from microorganisms in amounts which may represent a hazard to health;

- shall be free from parasites which may represent a hazard to health; and

- shall not contain any substance originating from microorganisms in amounts which may represent a hazard to health.

6. PACKAGING

6.1 Pearl millet grains shall be packaged in containers which will safeguard the hygienic, nutritional, technological, and organoleptic qualities of the product.

6.2 The containers, including packaging material, shall be made of substances which are safe and suitable for their intended use. They should not impart any toxic substance or undesirable odour or flavour to the product.

6.3 When the product is packaged in sacks, these must be clean, sturdy and strongly sewn or sealed.

7. LABELLING

In addition to the requirements of the Codex General Standard for the Labelling of Prepackaged Foods (CODEX STAN 1-1985, Rev. 1-1991, Codex Alimentarius Volume 1A), the following specific provisions apply:

7.1 Name of the Product

7.1.1 The name of the product to be shown on the label shall be "millet grains," or "decorticated millet grains."

7.2 Labelling of Non-Retail Containers

Information for non-retail containers shall either be given on the container or in accompanying documents, except that the name of the product, lot identification and the name and address of the manufacturer or packer shall appear on the container. However, lot identification and the name and address of the manufacturer or packer may be replaced by an identification mark, provided that such a mark is clearly identifiable with the accompanying documents.

8. METHODS OF ANALYSIS AND SAMPLING

See Codex Alimentarius Volume 13.

ANNEX

In those instances where more than one factor limit and/or method of analysis is given we strongly recommend that users specify the appropriate limit and method of analysis.

FACTOR/DESCRIPTION	LIMIT	METHOD OF ANALYSIS
APPEARANCE · brown, white or green **1,000 KERNEL WEIGHT** · whole millet grains · decorticated millet grains None Defined	 Buyer Preference RANGE: 5.0 to 10.0 g RANGE: 4.0 to 8.0 g	Visual Examination
1 LITER WEIGHT	RANGE: 750 to 820 G	None Defined
ASH · decorticated millet grains	 RANGE: 0.8 to 1.0% on a dry matter basis	AOAC 923.03
PROTEIN (N x 5.7)	MIN: 8.0% on a dry matter basis	AOAC 920.87
DECORTICATION	MAX: 20%	None Defined
CRUDE FIBER · whole millet grains · decorticated millet grains	 RANGE: 3.0 to 4.5% on a dry matter basis MAX: 2.0% on a dry matter basis	ISO 5498:1981
FAT · whole millet grains · decorticated millet grains matter basis	 RANGE: 3.5 to 6.0% on a dry matter basis RANGE: 2.0 to 4.0% on a dry	AOAC 945.38F; 920.39C ISO 5986:1983

For inquiries about Codex work in general or the use/adoption of Codex standards in a given country or region, please contact the Codex Contact Point of the country or region. Their email and website addresses are found by choosing “About Codex” tab at the top of the page and clicking on “Members of the Codex Commission”. For inquiries about national or regional food standards or regulations, please address them directly to the authorities of the country or region concerned.

Another resource for related information is the new FAO International Portal on Food Safety, Animal and Plant Health, which provides direct, easily searchable access to a range of international standards, national regulations, scientific evaluations, and other supporting information on sanitary and phytosanitary measures.

For inquiries that cannot be handled by your national Codex Contact Point, please contact:

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CHAPTER VI

INSTRUCTIONS FOR COLLECTION AND REPORTING OF DAILY AND WEEKLY WHOLESALE AND RETAIL PRICES OF AGRICULTURAL COMMODITIES

I. GENERAL

1. DEFINITION OF WHOLESALE PRICES

The wholesale price is generally taken as the rate at which a relatively large transaction of purchase, usually for further sale is effected.

2. COLLECTION OF THE WHOLESALE PRICES

The price quotation should be obtained by actually visiting the market and observing the major transactions, supplemented by oral enquiries from a number of dealers in the market. The price, quotation should not be obtained on telephone or through a peon or on a hearsay basis. It should not be collected from only one particular shop in the market but should be based on a sense of the whole market. Whenever regulated markets exist, the price records of the market committee should be utilized in collecting the price quotation. The person deputed for collecting prices should be properly trained in the price collection work.

II. NATURE OF QUOTATION AND PERIOD TO WHICH IT SHOULD RELATE

3. NATURE OF PRICE QUOTATION AND INDICATION OF INCLUSION OR EXCLUSION OF COST OF BAG OR CONTAINER IN THE PRICE QUOTED.

The quotation should relate to the actual price at which the transactions take place irrespective of the terms of contract and without excluding the different incidental, such as, charges for weighment, Wholesalers' commission, charity, cost *or* container, etc. They are normally included in the price quoted. Clear indication (in footnotes) in the weekly prices returns should always be given of the fact whether a quotation is inclusive of the cost of bag or container or not.

4. INDICATION WHETHER THE RATE OF SALE OF PURCHASE TAX OR EXCISE DUTY IS INCLUDED

In case, the price of a commodity is inclusive of sales or purchase tax or excise duty, the rate of tax or excise duty included in the price quotation reported should be indicated.

5. THE DAY ON WHICH THE WEEKLY WHOLESALE PRICE SHOULD BE COLLECTED

The weekly wholesale price should be collected as on Friday every week, where the markets are held daily. Where, however, the markets are held on specified days of the week and that day is not a Friday the weekly prices reported should related to the market day preceding the Friday. If the day fixed for price reporting happens to be a holiday, the price quoted should relate to the previous day where the holiday is known in working advance the reporter should visit the market on the previous day and collect the price on that day. Wherever the price quotation relates to any day other than Friday, this fact should be specifically indicated. Where daily wholesale price is required to be reported, the wholesale price should be collected every day.

6. REPORTING OF MODAL PRICE

The quotation should neither be the maximum nor minimum nor average price. The quotation should be the modal price, i.e., the price at which most of the transactions have taken place during the peak period of marketing on the day of reporting. When number of transactions is few and there is no mode the price at which the maximum quantity is sold in one lot may be reported.

7. INDICATION OF THE MANNER OF TRANSACTIONS

If in a particular market, transactions take place in a different manner than that indicated above, e.g. if it is customary to quote f.p.r. price etc. the fact should be indicated clearly while quoting the price.

8. FURNISHING OF THE REAS0NS FOR CONSTANT PRICES AND NO TRANSACTIONS

If constant prices are reported for weeks together, reasons for the same should invariably be given. Similarly, if no transactions are effected in a commodity continuously for some time, reasons for the same should also be stated.

9. INDICATION OF THE REASONS FOR INCREASE OR DECREASE OF 10 PER CENT AND MORE IN THE PRICE QUOTATION

The reasons for increase or decrease of 10% and more in the price of a commodity for the week under report over that for the previous week should invariably be given in the relevant column of the weekly prices returns.

10. ADOPTION OF PRESCRIBED PROFORMA AND INDICATION OF CODE WORD "W.P.T." ON THE LEFT HAND TOP CORNER OF ENVELOPE OR POSTCARD

The weekly wholesale price should be furnished in the prescribed proformae given in ANNEXURE-I, II (for cotton) and III (for sugarcane). The prices should be reported by ordinary post on the reporting day itself. A code word "W.P.T." may be put preferably in red ink, on the left hand top corner of the envelope or postcard containing the prices returns to enable their immediate delivery to the concerned Branch of the Directorate of Economics & Statistics. The daily price may be reported to the ECOSTAT NEW DELHI Telegraphically.

11. FURNISHING OF SEPARATE RETURNS FOR WEEKLY AND DAILY PRICES

The price reporters who are required to report daily as well as weekly prices should send a separate weekly prices return by ordinary post on every Friday in addition to the telegram reporting prices for that day. The price quotation reported in the daily telegram for Friday and the weekly return should invariably be the same.

12. REPORTING OF NOMINAL QUOTATION

The price quotation should relate to the actual transactions, nominal quotation to be avoided as far as possible. In case no transactions are effected in the selected commodity for weeks together, 'N.T.' or 'No Transaction' should be reported against the respective commodity. However, if no transactions take place in a particular commodity on the day of reporting, but the prices for other days during the week are available, the prices prevailing on the day nearest to the reporting day should be quoted.

13. PRIMARY AND SECONDARY PRICES

Primary wholesale price for a primary market and secondary wholesale prices for a secondary market may be quoted in the weekly prices returns. A market may be designated as a primary market for a commodity if the bulk of the arrivals is from villages or villages hats. On the other hand, a secondary market is a market where bulk of the arrivals is from other markets.

In the case of a primary market, sometimes it may be found that transactions between producer or village merchant or, itinerant trader and wholesalers generally take place in the morning through auction or otherwise and in the afternoon transactions also take place between wholesalers themselves or between wholesalers and retailers. In such cases prices to be reported should be those which prevail during the morning transactions only i.e., in the primary

market; afternoon prices at which transactions might take place between wholesalers or wholesalers and retailers should not be reported.

In those primary markets where the system of open auction does not prevail but producers sell their produce through broker, modal price at which the producer or village merchant or itinerant trader sell their produce should be reported and not the prices quoted by the wholesalers which would generally be the prices at which they are prepared to sell rather than the prices at which they have actually purchased.

When there are no transactions between producer or village merchant or itinerant trader and wholesalers in a primary market during the lean part of a year, secondary price, i.e., the price at which wholesalers transact among themselves, should be reported.

In the case of processed commodities such as rice (milled), cotton lint, oil etc., the price at which the transaction takes place between the miller and the wholesalers may be treated as secondary price. However, in those regions, where the general practice is for the cultivator to get the commodity processed through a mill or a gin and then to sell the processed commodity to the wholesaler, the price at which such transaction may take place between the producer or village merchant or itinerant trader and the wholesaler may be treated as a primary price.

14. INDICATION OF PRIMARY OR SECONDARY PRICES

The nature of price viz., primary or secondary (as explained in para 13) should invariably be indicated by symbol (P) for primary price and (S) for secondary price against the-quotation in column (5) of the prescribed proforma (Appendix I).

III. SPECIFICATION OF VARIETY

15. SELECTION OF VARIETY AND QUALITY

The variety and quality of the commodity to which the price quotation relates should be specified for each commodity. As far as practicable, the price reported should relate to the same variety and quality throughout the year.

If only a single variety is commonly transacted and its arrivals are continuous throughout the year, this variety should be selected for the commodity. If this is not possible, two or three additional varieties which are most common and which are sufficiently close to the original variety should be fixed up in advance and one of them should be quoted if the original variety ceases to arrive in the market. However, as soon as the variety, originally fixed is again available, price reported should relate to that variety. Whenever, there is a change in the variety the prices

of both the old and the new varieties should be given in the returns for one or two weeks so as to enable comparison.

The price quoted should relate to the fair average quality of the selected variety. The prices for food grains and sugar may be collected in the light of specifications for FAQ laid down by the Food Corporation of India and circulated by the Directorate from time to time.

16. INDICATION OF VARIETY AND QUALITY IN PRICE RETURNS

The variety and quality should invariably be indicated against each commodity in column (2) of the prescribed proforma given in ANNEXURE-I. In specifying the variety, its name should be indicated, e.g. in case of rice, it will not be enough to specify the variety as fine, medium and coarse or first sort or second sort. The actual name of the variety (i.e. Sela, Sali, Akkulu, Samba, Basmati, etc.) should be given and its classification into fine, medium, coarse or first sort or second sort should also be given along with the name of the variety. In case of rice it should be also mentioned whether it is milled (M) or hand pounded (H.P.) and whether it is boiled (B) or arwa (A). Generally, the fair average quality (FAQ) should be selected and this should also be mentioned in column (2) of the prescribed proforma.

17. REPORTING OF PRICE WHEN OLD AND NEW CROPS ARE MARKETED SIMULTANEOUSLY

When both old and new crops are being marketed concurrently, the prices of both the crops should be quoted simultaneously for 4 to 6 weeks.

IV. UNIT Of QUOTATION

18. REPORTING OF THE RICE QUOTATION IN STANDARD ALL-INDIA UNIT

The wholesale price should be quoted in terms of rupees and paise per quintal. In the case of baled Jute, however, the appropriate standard unit would be a bale of 18 kg. The wholesale price of coconuts and eggs may be quoted in terms of rupees per thousand (1000), of Bananas, Sheep skins and Goat skin per hundred (100), of Tea per kg., of Coffee per 50 kgs., of super-phosphate per metric ton and of cauliflower per dozen. In the markets where local weights and measures are in vogue, the primary reporters should collect the price in terms of local weights or measures and should convert it into all-India standard Unit. The All-India standard unit to which the price quoted relates should invariably be indicated against each commodity in the respective column of the prescribed proformas (ANNEXURE-I & II).

V. SUPERVISION

19. MAINTENANCE OF A PRICE REGISTER

The price collected should be properly recorded and maintained in a bound register by the price reporter. In the price register a column may be provided where the reasons for increase or decrease in the prices may be noted by the price reporter.

20. PERIODICAL CHECKING OF THE PRICE REGISTER BY A SENIOR OFFICER

The price register should be put up to a senior officer for periodical checking and it should be signed by him in token of having checked the same.

21. CHECKING OF THE PRICE REGISTER BY INSPECTING OFFICERS

The price register should also be shown for checking to the Inspecting Officers, appointed by the Govt. of India under the scheme, for improvement of market intelligence whenever they visit the centre.

VI. MISCELLANEOUS

22. REPORTING 0F PRICE INCLUSIVE OF EXCISE DUTY

The price quotations of vegetable oils, tobacco, sugar, khandsari, tea and coffee reported in the price returns should be inclusive of excise duty. The rate of excise duty for the quotation reported should also be indicated in the return.

23. DISTINCTION BETWEEN RAPESEEDS AND MUSTARD SEEDS

For the purpose of reporting prices of Rapeseeds and Mustard seeds, Sarson (Hindustani), Sarosav (Gujarati), Shwet Rai (Bengali) may be treated as Rapeseeds and Rai (Hindustani and Gujarati) Rai Sarisha (Bengali) be treated as Mustard seeds.

INSTRUCTIONS FOR COLLECTION AND REPORTING OF WEEKLY RETAIL PRICES OF AGRICULTURAL COMMODITIES

1. DEFINITION OF RETAIL PRICE

The retail price is the price which the ultimate consumer pays when buying from a retailer.

2. AREAS FROM WHERE RETAIL PRICES SHOULD BE COLLECTED

The retail price for a town may be collected from areas where the lower middle class/labour class population is concentrated.

3. REPORTING OF THE RETAIL PRICE OF THE SAME VARIETY FOR WHICH WHOLE SALE PRICE OF A COMMODITY IS REPORTED

It is very important that the retail price is reported for the same variety of a commodity for which the wholesale price of that commodity is reported even though the reporting agencies for the two sets of quotations may not be the same.

4. FURNISHING OF RETAIL PRICE INCLUSIVE OF SALES OR PURCHASE TAX AND INDICATION OF THE AMOUNT OF TAX

The retail price should be inclusive of sales of purchase tax wherever the same is levied. The amount of tax included in the price quotation may also be indicated.

5. DAY OF COLLECTION AND REPORTING OF RETAIL PRICES

The retail price should relate to Friday and should be dispatched on the same day. If the day fixed for price reporting happens to be a holiday, the price quoted should relate to the previous working day. Where the holiday is known in advance the reporter should visit the market on previous day and collect the prices on that day, otherwise the market should be visited next day. This fact should be specifically mentioned in the return. In the case of markets selected for reporting daily retail prices, they may be collected and reported daily.

6. ADOPTION OF PRESCRIBED PROFORMA

The retail price may be reported as per proforma given in ANNEXURE-IV.

7. FURNISHING OF RETAIL PRICE IN STANDARD ALL INDIA UNIT

The retail price should be quoted in rupees per quintal. In case of vegetables, fruits, fish and livestock products, however, the appropriate standard units would be a kilogram for peas, tomatoes, lady finger, onions, potatoes, dry fruits, fish, milk, mutton etc. and dozen for cauliflowers, oranges, bananas and eggs. The

all-India standard unit to which the price quoted relates should invariably be indicated against each commodity in column (3) of the prescribed proforma (ANNEXURE- IV).

8. INDICATION OF REASONS FOR

The reasons for rise or fall i.e. say of more than Rs.1/- in the retail prices of food grains and 50 paise more in the retail prices of vegetables, fruits, fish and livestock products for the week under report over that for the previous week should invariably be given in column (6) of the prescribed proforma (ANNEXURE-IV).

ANNEXURE–I

WHOLESALE PRICES OF AGRICULTURAL COMMODITIES

State---------- --

District ----------

Market----------

For the week ending Friday ----------

Peak marketing period of the
Day to which the prices refer ----------

Name of Commodity	Variety & Quality	Standard All India Unit	Price per Standard All India Unit of Weight (Rs.)	Nature of Price i.e., Primary (P) or Secondary (S)	Reasons for Variation in Prices for 10% or more over previous week's price
1	2	3	4	5	6

Signature of the Reporter

Address:

Designation ----------

ANNEXURE–II

WEEKLY WHOLESALE PRICES OF COTTON

State----------

District ----------

Market ----------

For the week ending Friday ----------

Peak marketing period of the
day to which the prices refer ----------

Commodity	Variety	Quality	Staple Length	Unit	Price	Reasons for Variation in Prices for 10% or more compared to previous week's price
1	2	3	4	5	6	7

Signature of the Reporter

Address:

Designation ----------

ANNEXURE–III

WEEKLY RETURN ON PRICES OF SUGARCANE

Name and address of the factory to which the information relates

Week end Friday, the

1. Name of the variety of cane.

2. Approximate per cent rate of recovery

3. Price actually paid by sugar factory at the factory rate (Rs. per quintal).*

4. Price paid by sugar and khandsari units in the factory area covered by the above factory.

* In case cane is not delivered at the factory rate, the prices to be quoted should relate to the price actually paid in the interior plus the transport cost.

Signature of Reporter

Designation. . . . . ..

Date. . . . . .

ANNEXUR–IV

RETAIL PRICES OF AGRICULTURAL COMMODITIES

State----------

District ----------

Market ----------

For the week ending Friday ----------

Time to which quotations refer ----------

Name of Commodity	Variety & Quality	Standard All India Unit of Weight	Price per Standard All India Unit of Weight (Rs.)	Whether the quotation includes sales tax or purchase tax or excise duty	Reasons for rise or fall when the variation is 5% or more in the case of food grains compared to last week. For vegetables, fruits and livestock products, reasons may be given if variations are by 50 paise per kg. or 25%, whichever is less.
1	2	3	4	5	6

Signature of the Reporter
Designation ----------
Date ----------

ANNEXURE-V

NUMBER OF AGRICULTURAL PRODUCE MARKETS IN INDIA

Period	Number of Regulated Markets	Regulated Markets as per cent of Total Wholesale Assembling Markets
End of 1945	146*	2.00
End of 1950	286*	3.92
March, 1956	470*	6.44
March, 1961	715*	9.80
March, 1966	1,012*	13.88
March, 1974	1,777*	24.37
March, 1976	3,528	48.38
March, 1980	4,446	60.96
March, 1985	5,695	78.09
March, 1990	6,217	85.25
March, 1995	6,836	93.73
March, 2001	7,161	98.19
March, 2006	7,566	Almost 100
March, 2007	7,465	Almost 100
March, 2008	7,566	Almost 100

Note: * Represents only Principal Markets.

Source: Directorate of Marketing and Inspection.

ANNEXURE-VI
NUMBER OF WHOLESALE ASSEMBLING, RURAL PRIMARY AND REGULATED MARKETS IN STATES OF INDIA

(As on 31.03.2008)

Sr. No.	States/UTs	Number of markets			Regulated markets		
		Whole – Sale	Rural Primary	Total	Principal	Submarket Yards	Total
1	Andhra Pradesh	314	577	891	314	577	891
2	Arunachal Pradesh	6	56	62	14	48	62
3	Assam	405	735	1140	20	204	224
4	Bihar *	325	1469	1794	95	431	526
5	Jharkhand	205	603	808	28	173	201
6	Goa	4	24	28	1	7	8
7	Gujarat	207	129	336	196	218	414
8	Haryana	284	187	471	106	178	284
9	Himachal Pradesh	42	35	77	10	32	42
10	Jammu & Kashmir	26	8	34	APMR Act not yet implemented		
11	Karnataka	498	730	1228	146	352	498
12	Kerala	348	1014	1362	APMR Act not enacted		
13	Madhya Pradesh	237	1321	1558	237	264	501
14	Chhattisgarh	2	1132	1134	73	108	181
15	Maharashtra	880	3500	4380	295	585	880
16	Manipur	20	98	118	APMR Act not enacted		
17	Meghalaya	101	112	213	2	-	2
18	Mizoram	10	105	115	APMR Act not implemented		
19	Nagaland	8	144	152	---	Nil	------
20	Orissa	398	1150	1548	45	269	314
21	Punjab	437	0	437	145	292	437
22	Rajasthan	428	312	740	125	303	428
23	Sikkim	7	12	19	1	-	1
24	Tamil Nadu	300	677	977	277	15	292
25	Tripura	89	559	648	21	-	21
26	Uttar Pradesh	584	3244	3828	245	342	587
27	Uttarakhand	20	29	49	25	31	56
28	West Bengal	279	2925	3204	43	641	684
29	A & N Island	0	0	0	APMR Act not enacted		
30	Chandigarh	1	0	1	1	-	1
31	D & N Haveli	0	0	0	APMR Act not enacted		
32	Daman & Diu	0	0	0	Reported	Nil	
33	Delhi	30	0	30	9	14	23
34	Lakshadweep	0	0	0	APMR Act not enacted		
35	Puduchery	8	0	8	4	4	8
	Total	**6503**	**20887**	**27390**	**2478**	**5088**	**7566**

Note : * Bihar Agril. Produce Marketing (Regulation) Act Repealed From 1st September, 2006.
In Bihar and West Bengal sub yards include cold storages and hence figures of total regulated markets and wholesale markets are not comparable.
All principal regulated markets are wholesale markets, whereas sub market yards may / may not be a wholesale market as it also includes some of Rural Primary Markets notified for regulation.
Source: Different State Marketing Departments / Boards.

ANNEXURE-VII

STATE-WISE AREA SERVED BY REGULATED MARKETS

Sr No	States/UTs	Geographical Area (km^2)	Regulated Market (as on 31.03.2008)	Area covered by each market (km^2)
1	Andaman & Nicobar Islands	8,249	--	--
2	Andhra Pradesh	2,75,068	891	308.71
3	Arunachal Pradesh	83,743	62	1,350.69
4	Assam	78,483	224	350.37
5	Bihar	94,164	526	179.01
6	Chandigarh	114	1	114.00
7	Chhattisgarh	1,35,194	181	746.92
8	Dadra & Nagar Haveli	491	--	--
9	Daman & Diu	122	--	--
10	Delhi	1,483	23	64.47
11	Goa	3,702	8	462.75
12	Gujarat	1,96,024	414	473.48
13	Haryana	44,212	284	155.68
14	Himachal Pradesh	55,673	42	1,325.54
15	Jammu and Kashmir	2,22,236	--	--
16	Jharkhand	79,700	201	396.51
17	Karnataka	1,91,791	498	385.12
18	Kerala	38,863	--	--
19	Lakshadweep	32	--	--
20	Madhya Pradesh	3,08,144	501	615.05
21	Maharashtra	3,07,713	880	349.67
22	Manipur	22,327	--	--
23	Meghalaya	22,429	2	11214.50
24	Mizoram	21,081	--	--
25	Nagaland	16,579	--	--
26	Orissa	1,55,707	314	495.88
27	Puduchery	492	8	61.50
28	Punjab	50,362	437	115.24
29	Rajasthan	3,42,236	428	799.61
30	Sikkim	7,096	1	7,096.00
31	Tamil Nadu	1,30,058	292	445.40
32	Tripura	10,492	21	499.62
33	Uttar Pradesh	2,38,566	587	406.41
34	Uttarakhand	53,566	56	956.53
35	West Bengal	88,752	684	129.75
	All India	**32,87,300**	**7,566**	**434.48**

ANNEXURE-VIII

FACILITIES / AMENITIES IN REGULATED MARKETS

Amenities	Number of Markets with Facility (%)	Utilisation (%)
Common Auction Platform (Covered)	64	84
Common Auction Platform (Open)	67	82
Common Drying Yards	26	87
Traders Modules	63	89
Retailer's Shops	28	100
Storage Godowns	74	91
Cold Storages	9	100
Weighing Equipment	85	100
Processing Units	7	83
Grading Equipments	30	89
Pledge Financing	17	93
Bank	42	100
Post Office	28	100
Police Post	15	85
Security Post	42	97
Farmer's Rest House	61	89
Agricultural Input Shop	29	96
Bath Rooms	57	98
Toilets	88	98
Canteen	43	97
Drinking Water Taps	28	100
Loading, Unloading & Parking	100	100
Internal Roads	89	100
Boundary Wall	84	93
Electric Lights	89	100
Avenue & Shed Trees	57	98
Seating Benches	28	100
Price Display Boards	61	92
Public Address System	34	91
Public Telephone System	24	100
Garbage Disposal System	84	100
Drainage System	55	98

Source : Directorate of Marketing and Inspection (1999).

ANNEXURE-IX

MARKET FEES IN THE STATES AND UNION TERRITORIES OF INDIAN UNION

Sl. No.	Name of the State	Market fee	License fee Rs. per annum Traders	Market charges Rs. per unit	Commission charges F&V and others	Octroi	Sales Tax All Commodities	VAT	Remarks (any other)
1.	Andhra Pradesh	All commodities- 1% except fish and prawn which is 0.5%	A-3000 B-2000 C-1000	1.Unloading- 0.75 per bag, 2. Heaping Rs. 0.85, 3.Filling /placing Rs 1.00 per bag 4. Replacing bag to bag Rs 0.75 ps, 5.Weight men charges Rs 0.75 per bag , 6. Sweeping charges Rs.1.05 ps (unit weight above 40 kgs bag)	F&V-4% Others- 2%	Nil	-	4%	charges paid by seller
2.	Arunachal Pradesh	All commodities- 2%	A-1500 B-1000 C-200 D-100	1.Weighing -Nil 2.Unloading- Nil 3.Brokers -Nil 4.Hamal - Nil 5.Cleaning- Nil 6.Loading- Nil	F&V-Nil Others- Nil	Nil	Nil	Nil	-
3.	Assam	All commodities- 1 %	Traders- Rs.10/-	Not in PMY and SMY, but the charges are different in different markets under other local authorities.	Not in PMY and SMY, but the charges are different in different markets under other local authorities	-	-	Nil	-
4.	Bihar	-	-	-	-	-	Fresh vegetables and fruits, coarse grains other than rice, Wheat, Paddy, Sattu (exempted) Arecanut And Bettlenut Processed, preserved vegetables and fruits- 4%	-	APMC Act repealed wef 1.9.2006

Sl. No.	Name of the State	Market fee	License fee Rs. per annum Traders	Market charges Rs. per unit	Commission charges F&V and others	Octroi	Sales Tax All Commodities	VAT	Remarks (any other)
5.	**Chattishgarh**	All commodities-2 % except Fruits, Vegetables and Soybean where it is 1%	Trader-Rs 1000 for five years small Trader-Rs. 100 for one year	1.Weighing-Rs1.32 per bag 2.Unloading-Rs1.19 per bag 3.Brokers-Rs 1.70 per bag 4.Hamal -Rs 1.71 per bag 5.Cleaning and Bagging-Rs 1.70 per bag 6.Loading-Rs1.19 per bag (**unit**- 75 kg per bag for cereals, Pulses-100 kg per bag, Til- 85 kg per bag,Groundnut-35Kg per bag)	F &V and others-Nil	Nil	-	Food grains-Nil Imported Pulses and Wheat –No Tax	-
6	**Chandigarh**	Market Fee - 2% RDF-2%	-	1.Weighing and filling -0.63-1.20 per unit. 2.Unloading-0.66-2.25 per unit	F & V – 5% Food Grains – 2.5% Fodder – 3%			Food Grains – 4% Coarse Grains – exempted Spices – 12.5%	-
7.	**Goa**	1%	-	Nil i.e. no fee charged by market committee	-	-		Food grains, Fruit and Vegetables, flour maida, Suji Maida, Tobacco, Gur, Jaggery Sugar (exempted), Spices, Edible oil cakes, Vegetable oils, honey-4%	-
8.	**Gujarat**	All commodities-0.50 to 2.00%	Min Rs 20/- Max.Rs 200/-	1.Weighing-0.90 to1. 20 2.Unloading-0.48 to 1.20 3.Brokers-1.0 to 1.50 4.Hamal- 0.50 to 1.00 5.Cleaning-0.50 6.Loading -0.50 to 1.00	F&V- 6% Others- 1 to 2%	1.Chilli, Dhania, Haldi, Zeera, Rai-Rs 7/- per 100 kg 2.Curry powder-2% 3.Hing –2% 4.maize-0.45 per 100 kg weight 5.Ground nut Rs 2=00 per Kg weight 6. Oil – 0.75%	2 to 4%	-	-

Sl. No.	Name of the State	Market fee	License fee Rs. per annum Traders	Market charges Rs. per unit	Commission charges F&V and others	Octroi	Sales Tax All Commodities	VAT	Remarks (any other)
9.	**Haryana**	2% and 1% for items like Maize, Gram, Barley, Pulses etc. 2% RD			Wheat, paddy, Bajra, Sarson, Maize, Jowar, cotton, toria-Rs 2.5 per 100 rupees Chilles-Rs 2 per 100 ruppees Fruits and vegetables- Rs 5	-	-	Food Grains – 4% Coarse Grains-exempted Spices – 12.5%	-
10.	**Himachal Pradesh**	1 % on ad-valorem basis	-	Unloading Rs. 1.00 per box weighing Rs. 1/- per quintal	F & V - 5% Fibre & Wool – 2%	-	-	Food Grains – 4% F&V – Nil Spices – 4%	HP has introduced single point levy system
11	**Jharkhand**	All commodities-1%	All traders- Rs 50 Renewal Rs20	-	0.25/Rs 100 F&V 5% Edible Oil-0.50/Tinof 16 Kgs	Nil	-	Foodgrains, Flour, Maida, Suji (exempted from VAT up to 31.3.2009) Spices, Dalda, Vegetables Oils-4%	-
12.	**Karnataka**	1.5% (for Onion, Potato, and Tomato it is 1%)	1.Trader and commission agent-Rs 200 2.Others-Rs 100.00 3.Retail traders-Rs25	Different rate in each market	F&V- 5% Others-2%	Nil	-	Goods exempted from tax-Betal leaves, fresh vegetables and fruit jaggery etc.-4% Betele leaves, Honey, Spices in all form etc.- 4%	-

Sl. No.	Name of the State	Market fee	License fee Rs. per annum Traders	Market charges Rs. per unit	Commission charges F&V and others	Octroi	Sales Tax All Commodities	VAT	Remarks (any other)
13.	**Kerala**	Nil	Nil but Rs 100 for corporation	1.Weighing-Rs1.00 2.Unloading-Rs 3.50 3.Cleaning-Rs 1.00 4.Loading- Rs 3.00	F& V- 3-5% Others(food grains, Oilseeds, spices)- 1-2%-	Nil	Nil	Rice, wheat, Spices, veg oils-1% Cashew nut , Arecanut, dry fruits, Honey , oilseeds, oilcakes, pulses, processed items- 4% Exempted -Fruit and vegetables, coconut, meat, fish, milk, jaggery exempted up to 31.3.2009	As there is no regulation no market fee nor license fee is reported
14.	**Madhya Pradesh**	All commodities- 2% (Except Orange-1% Banana -8%)	Rs 1000/- for five year in market yard. But in one specified area-10,000 and more than one market area-200000 for the five years.	Differ from APMC to APMCs and Paid by buyers	F&V-7% Others -Nil	Nil	NA	Nil	-
15.	**Maharashtra**	0.50 to 1%	A-100 to 200 B-20 to 200 C-20 to 80 D-6 to100	(Rice, Coarse grains, Oilseeds, Pulses, Cotton) 1.Weighing- 0.25 to 4.00 2.Loading/Unloading- 0.20 to 5.00 3.Cleaning-0.07 to 1.00	Rice, Coarse grains, Oilseeds, Pulses, Cotton- 0.80 to 3.00 %	Nil	Nil	NA	-
16.	**Meghalya**	1%	Nil	1.Weighing-Nil 2.UnloadingNil 3.Brokers-Nil 4.Hamal- Nil 5.Cleaning-Nil 6.Loading -Nil	Nil	Nil	-	Nil	Weighing, loading, unloading, cleaning, etc. are done by employees of the traders themselves. There is no commission agents involved

Sl. No.	Name of the State	Market fee	License fee Rs. per annum Traders	Market charges Rs. per unit	Commission Charges F&V and others	Octroi	Sales Tax All Commodities	VAT	Remarks (any other)
17.	**Mizoram**	Tobacco, Eggs,Dried fish,Betelnuts and leaves,Rice cabin, state own agril. produces fruit juice etc.Potato Onion, State Produced vegetables cattle-Rs.5 per head Second hand garments, Hawkers, fish, imported commodities from out side the state, Bundle of fire woodStates own agril. produced brigging into market area for sale, imported vegetables - Rs.10 per head Poultry-Rs.10/cabin Imported commodities entering market for saleRs.10/-Tukri/Bag/Box(Big), Rs.10/-Tukri/Bag/Box(small),	Nil	1.Weighing-Nil 2.Unloading-Nil 3.Brokers-Nil 4.Hamal- Nil 5.Cleaning-Nil 6.Loading -Nil	Nil	N.A	-	-	-
18.	**Nagaland**	Nil	-	Nil	-	-	-	Nil	Till now APMC do not impose any fees or charges with in the APMC Complex. However in private market complex nominal fees ranging from Rs. 5 to Rs 10 is charged daily .

Sl. No.	Name of the State	Market fee	License fee Rs. per annum Traders	Market charges Rs. per unit	Commission charges F&V and others	Octroi	Sales Tax All Commodities	VAT	Remarks (any other)
19.	**NCT of Delhi**	F & V -1% Food grains-1%	Traders- A-100 to 200 B- 100 C- 100 D- 100 E- 50	1.Weighing-0.70/bag 2.Unloading-0.70/bag 3.Brokers-Nil 4.Hamal-Nil 5.Cleaning -0.40/bag	F&V-6% Food grains & pulses-2% Flowers 6% Chilles-1.5% Fish 3% Egg 1%	Nil	-	Edible and Vegetable Oils Oil Cake, Tea Honey, Processed meat, poultry fish or processed or preserved - 4%	-
20.	**Orissa**	All commodities- 1% Cattle-3%	Licensing fees varies from Rs. 50 to Rs. 675 in the state.	1.Weighing -0.40 per bag 2.Unloading-1.00 per bag 3.Hamal -2.00 per bag 4.Loading -1.00 per bag	F&V- 5 to 8 % Others -0.5%	Nil	Nil	4%	The rates of market charges are not uniform throughout the state . The rates furnished are most prevalent rates.
21.	**Pondicherry**	0.7 to 0.8%	Rs 25 /annum for one commodities Rs. 50/annum for two commodities Rs. 75/annum for more than two commodities	-	F&V-Nil Others-Nil	-	-	4% for all agricultural commodities except Paddy	-
22.	**Punjab**	Market Fee -2% RDF-2%	-	1. Weighing and filling -0.63-1.20 per unit. 2.Unloading-0.66-2.25 per unit	F & V – 5% Food Grains – 2.5% Fodder – 3%			Food Grains – 4% Coarse Grains – exempted Spices – 12.5%	
23.	**Rajasthan**	All commodities-1.6 % (except Til and Mustard where it is 1% and jeera/ Isabgol where it is 0.5%)	A-200 B-20 C-Nil D-Nil	1.Weighing-1 to 2 2.Unloading-0.50 to 1.0 3.Brokers - 2.0 4.Hamal-1 to 4 5.Cleaning-1 to 2	F&V-0.6 Others- 0.2	Nil	-	Processed (Oil, Ghee, Atta, Maida and Suji-4%) Pulses-1% Whole food grains-Nil	-
24.	**Sikkim**	0.5 to 2% on advalorum basis	-	-	-	-	-	-	-

Sl. No.	Name of the State	Market fee	License fee Rs. per annum Traders	Market charges Rs. per unit	Commission charges F&V and others	Octroi	Sales Tax All Commodities	VAT	Remarks (any other)
25.	**Tamil Nadu**	All commodities-1%	Trader- Wholesale Traders Rs 300/- for three years Other Traders-Rs. 75 per year Petty traders-Rs.25/- per year	1.Weighing-2.50/qtl 2. Unloading-2/qtl 3. Brokers-Nil 4. Hamal-Nil 5. Cleaning –Nil 6. Loading-Rs.3 /qtl 7. Drying-0.75/qtl	F&V-Nil Others-Nil	Nil	-	4% except Instant Coffee and Tea where it is 12.5% Tobacco, Paddy, Betel leaves, Animal Feed - Exempted	All vegetable Oils where turnover exceeding 300 Crores/Year than VAT -4%
26.	**Tripura**	All commodities-2%	A-30 B-20	Varies in different market & depending upon the market	Rs 5 per 100 Kg.	Nil	-	Nil	-
27.	**Uttar Pradesh**	All commodities-2% (+0.5% Development cess)	Traders-Rs.250=00 Retailers-Rs100 Godown Operator/Transport Agency-Rs. 200	1.Weighing-0.50/qtl 2.Unloading-0.50/qtl 3.Hamal-1.0/qtl 4.Cleaning 1.00 /qtl 5.Brokers-0.50/qtl	F&V-3% Others-1.5%		-	Nil	-
28.	**Uttrakhand**	2% (+0.5% Development fund)	Traders-Rs20 Retail Trader-Rs100	Nil	F&V-3% Others-1.5%	1%		Rice Wheat -4%, Pulses-1% F&V-Nil	-
29.	**West Bengal**	Paddy-0.5% to 1% F & V and others-1-2% depending upon market to market	Rs 25 to 250	Nil	Nil	Nil	Nil	Paddy, Rice, Wheat, Pulses, Coarse grains Maida, Suji, Besan -Nil Cereal Bran except wheat Barley, Arecanut-4%	-

Source : Different State Marketing Departments / Boards.

ANNEXURE-X

WEIGHTS* OF VARIOUS CPI SERIES FOR ALL-INDIA AT GROUP AND SUB-GROUP LEVELS

No.	Group/Sub-Group	CPI (UNME) ** Base: 1984-85	CPI (IW) Base: 2001	CPI (AL) Base: 1986-87	CPI (RL) Base: 1986-87
I	**Food, Beverages and Tobacco**	**47.13**	**48.47**	**72.94**	**70.47**
	1. Cereals	10.97	13.48	40.94	38.15
	2. Pulses	2.51	2.91	3.39	3.40
	3. Milk	9.02	7.31	3.74	3.94
	4. Edible Oils	4.39	3.23	3.83	3.79
	5. Meat	2.99	3.97	3.10	3.31
	6. Vegetables	4.31	6.05	4.18	4.05
	7. Fruits	1.99		0.88	1.00
	8. Sugar	1.84		2.58	2.59
	9. Salt and spices	1.53	2.57	4.12	3.92
	10. Beverages	6.12		2.39	2.62
	11. Pan, Tobacco etc.	1.46	2.27	3.79	3.70
	12. Other Food		6.68		
II	**Fuel & Light.**	**5.48**	**6.43**	**8.35**	**7.90**
III	**Housing**	**16.41**	**15.27**	-	-
IV	**Clothing & Footwear**	**7.03**	**6.57+**	**6.98**	**9.76**
	1. Clothing	6.14		6.28	6.17
	2. Footwear	0.89		0.70	3.59
V	**Miscellaneous**	**23.95**	**23.26**	**11.73**	**11.87**
	1. Amusement	2.19	6.18***	0.53	0.60
	2. Personal care	4.55	4.22	2.04	2.28
	3. Transport & Communication	5.18	4.87	1.67	1.80
	4. Education	4.58	***	0.41	0.39
	5. Medical	2.51	4.56	4.38	4.23
	6. Household Requisites	2.02		2.70	2.57
	7. Others	2.92	3.43		
	Total	**100.00**	**100.00**	**100.00**	**100.00**

* Based on estimates of consumer expenditure generated from the data collected through respective Family Living Surveys conducted during 1982-83 for CPI (UNME) and 1999-2000 for CPI (IW), and household consumer expenditure enquiry conducted during 1983 for CPI (AL) and CPI (RL).

** Price collection for CPI (UNME) was discontinued with effect from April 2008. National Statistical Commission in its meeting held on 15.02.2008, decided to discontinue the CPI (UNME), adopt link index, based on ratio method after aggregating the sub-group level indices of Labour Bureau's CPI (IW) using CPI (UNME) weights at group/sub-group level for all India, and compile linked CPI (UNME) numbers till new series of CPI (Urban) is brought out.

*** Includes Amusement, Education and Recreation.

\+ Includes Clothing, Bedding and Footwear.

Notes:

1. The sub-groups 'Vegetables' and 'Fruits' are combined into one sub-group in CPI (IW).
2. Under group 'Miscellaneous' in CPI (IW), CPI (AL) and CPI (RL); the sub-group 'Others' has been included under sub-group 'Household Requisites'.
3. There is no 'Housing' group under CPI (AL) and CPI (RL) as the housing cost of the rural labour population was observed negligible in the base year.
4. In CPI (IW), Base: 2001, under Group-I: Sub-group 1 includes Cereals and Products; Sub-group 2 includes Pulses and Products; Sub-group 3 includes Milk and Milk Products; Sub-group 4 includes Oils and Fats; Sub-group 5 includes Meat, Fish and Eggs; Sub-group 9 includes Condiments and Spices.

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