



Trends And Implementation Of Agricultural Policies And Framework In India

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Abstract

India has '140 million hectares' of net cropped area, next only to that of the 'USA'. Similarly, India's irrigated area is also the second largest in the world, next only to 'China'. The country is well-endowed with natural resources and varied climatic circumstances, and much of the land in India can be double cropped. Traditionally, crop production has accounted for over four-fifths of the agricultural output, but over the past two decades or so the condition has changed dramatically. The share of livestock in the agricultural production has risen sharply and now accounts for close to 30 per cent of the total agricultural output. Overall, the composition of agricultural output has gradually been shifting towards high-value crops and animal products, especially milk. The performance of agricultural sector has been quite inspiring, making the country self-reliant in food. The country has even started exporting some food products. This performance is due largely to 'green revolution'. The Present review paper emphasis on trends, challenges, evolution and policy frame work on Agriculture sector in India.

Keywords: Agriculture, Animal Products, Climate, Crop, Food, Green revolution and Policy

1) Introduction:

During the Eleventh Five-Year Plan, the agriculture and allied sector has registered an average annual growth rate of 3.6 per cent, slightly lower than the target of 4.0 per cent, but higher than the average annual growth rate of 2.4 per cent attained during the Tenth Plan. This improved performance in recent years is also credited to the impressive growth in capital formation in the sector. The gross capital formation in agriculture and allied sector has more than doubled in the past 10 years with an average annual growth of 8.1 per cent. India is the world's largest producer of pulses, milk, many fresh fruits and vegetables, major spices, select fresh meats, select fibrous crops such as jute, several staples such as millets and castor oil seed. India is the second largest producer of wheat and rice, groundnut, fruits, vegetables, sugarcane, and cotton. India is also the world's third largest producer of cereals, rapeseed, tea, tobacco, eggs, several dry fruits, and roots and tuber crops (Acharya, S.S. 1985)

2) Evolution of Agricultural Policies:

Agriculture has remained a highly regulated sector in India with government agencies and parastatals exercising a pervasive influence over it. These regulatory controls are imposed by both central and state governments. The state governments, however, continue to retain the constitutional authority over the sector. After independence, India pursued a policy of food self-sufficiency in staple foods rice and wheat. The policies were initially focused on the expansion of cultivated area, introduction of land reforms, community development, and restructuring of rural credit institutions. Trade was strictly regulated through quota restrictions and high tariff rates. The main policy measures in the agriculture sector were adopted in the mid-1960s. These included input subsidies, minimum support prices, public storage, procurement and distribution of food grains, and trade protection measures. The gains from green revolution technologies continued through the mid-1980s, but slowed down thereafter. Unlike reforms in other emerging economies of the world (e.g. Brazil and China), a series of reforms instituted in India in the early-1990s, left its agricultural sector relatively untouched, except for the removal of export controls (Chadha, G.K. and Sahu, P.P. 2002). While reforms in agriculture have been modest, the macroeconomic reforms of the 1990s had two important impacts. First, the reforms increased per capita income and strengthened the domestic demand. Second, they reduced industrial protection and improved agriculture's terms of trade to attain food self-sufficiency, ensure remunerative prices to farmers, and maintain stable prices for consumers. India's protectionist trade policies, introduced in the 1960s, continued virtually unchanged, until the major economic reforms were introduced after signing the 'AoA' (Agreement on Agriculture) under World Trade Organisation (WTO) (Dholkia, Bakul H. 1997)

2.1) Phase I: Pre-Green Revolution Period (1950-65):

The main policy thrust in the first phase (after Independence) was on enhancing food production and improving food security through agrarian reforms and large-scale investment in irrigation and power. The first major agricultural legislation enacted by the state governments after Independence was the Zamindari Abolition Act (1950s). The basic objective of this policy was to eliminate land intermediaries, ensure ownership rights to the tillers of land, and ensure a permanent improvement in the quality of the landholding. The government made additional changes to the land ownership policy to ensure greater equity in the rural society. These decisions involved placing a ceiling on the size of holdings, state control on idle or unused lands, and the distribution of some of the idle land to the underprivileged rural people. Provisions were also made to ensure that recipients of this land do not lease out or sell the land. The consolidation of fragmented and scattered landholdings was encouraged so that farmers could have better access to mechanization and land improvements could be made. Other policy measures during this period included enhancing of farmers access to credit, markets and extension services.

2.2) Phase II: Green Revolution Period (1965-80):

The second phase of agricultural and food policy started in the mid-1960s with the advent of green revolution. The adoption of improved crop technologies and seed varieties became the main source of growth during this period. The Government of India adopted the approach of importing and distributing the high-yielding varieties (HYVs) of wheat and rice for cultivation in the irrigated areas of the country. This was accompanied by the expansion of extension services and increase in the use of fertilizers, agro-chemicals and irrigation. A number of important institutions were set up during the 1960s and 1970s, including the Agricultural Prices Commission (now Commission for Agricultural Costs and Prices), the Food Corporation of India, the Central Warehousing Corporation, and State Agricultural Universities.

- Another major policy decision was the nationalization of major commercial banks to enhance credit flow to the agricultural sector. Several other financial institutions, for example the National Bank for Agriculture and Rural Development (NABARD) and Regional Rural Banks (RRBs), were also established to achieve this objective. The cooperative credit societies were also strengthened. This strategy produced quick results with a quantum jump in crop yields and consequently, in the food grain production. However, impact of the green revolution technology was largely confined to two crops, wheat and rice, and in the irrigated regions. The traditional low-yielding varieties of rice and wheat were replaced by the high-yielding varieties. Today, more than 80 per cent of the area under cereals is sown with high-yielding varieties. The use of fertilizers (NPK) has risen sharply over the past three decades, *albeit* from a low base. In 2011-12, the Indian farmers used almost 144.3 kg of fertilizer per hectare of cultivated land. The use of pesticides, including herbicides, increased until 1990, but has fallen steadily, partly due to the shift in emphasis, away from the heavy use of chemical pesticides to a more environment-friendly integrated pest management system.

The biggest achievement of the 'green revolution' era was the attainment of self-sufficiency in food grains. The green revolution also had an impact on the agricultural input industry, resulting in a rapid growth in the fertilizer, seed and farm machinery industries. A significant increase in the funding of agricultural research and extension, marketing of agricultural commodities and provision of credit to farmers was also noted (Bhattacharya, B. and Pal, Parthapratim, 2002)

2.3) Phase III: Post-Green Revolution Period (1980-91):

The third phase in agricultural policy development started in the early-1980s and was characterized by the expansion of green revolution technology to other crops and regions. This resulted in a rapid growth in agricultural output. During this period, the main policies aimed at encouraging investment in the sector. Moreover, the agricultural economy started experiencing the process of diversification towards high-value commodities like milk, fish, poultry, vegetables and fruits. The growth in output of these commodities accelerated. Finally, the ongoing research on pulses, oilseeds and coarse grains started showing a positive impact with the expansion of these crops into the drier areas.

2.4) Phase IV: Economic Reforms Period (1991 onwards):

Following several decades of sustained output growth, the focus of agricultural policy since 1991 has shifted to improving the functioning of markets, reducing excessive legislation, and liberalising agricultural trade. Economic reforms launched in the 1990s virtually by-passed the agriculture initially. However, the subsequent trade policy reforms have been aimed at liberalizing the export and import of agricultural and food commodities by gradually removing various restrictions and controls on agricultural trade.

Over the past 10-15 years, India's share in world agricultural trade has been gradually increasing, *albeit* from a low base. India has also taken an active role in promoting regional economic co-operation and trade in South Asia through the South Asian Association for Regional Cooperation (SAARC). In April 1993, a regional trading block was formed with the signing of the SAARC Preferential Trading Agreement, which was improvised in 2004 in the form of an Agreement on South Asian Free Trade Area (SAFTA) that supersedes the Agreement on SAARC Preferential Trading Arrangement.

3) Challenges of Agricultural Policy:

However, there were several policy challenges facing the agricultural sector, including the need to reverse the sharp decline in output growth, which occurred in the late-1990s, and the need to ensure more sustainable use of the existing natural resources. A steady fall in the public sector investment in agriculture posed a big challenge which necessitated policy initiative to attract private investment in agriculture for the long-term growth and competitiveness of the sector. Another important challenge during this phase was on improving competitiveness along the agro-food chain, especially through enhancing efficiency in production, marketing and processing of agricultural commodities. In 2000, the Government of India, for the first time, published a comprehensive agricultural policy statement — the National Agricultural Policy (NAP) that sets out clear objectives and measures for all the important sub-sectors of agriculture. Over the next two decades, this policy aims to attain an agricultural growth rate in excess of 4 per cent per annum. The main elements of the policy include:

- Efficient use of natural resources, while conserving soil, water and biodiversity.
- Growth with equity, i.e. growth which is widespread across regions and farmers.
- Growth that is demand-driven and caters to the domestic markets and maximizes benefits from exports of agricultural products in the face of challenges arising from economic liberalization and globalization.
- Growth that is sustainable technologically, environmentally and economically.
- The policy also seeks to utilize large areas of wasteland for agriculture and afforestation. Moreover, the NAP calls for special efforts to raise crop productivity to meet the growing domestic demand for food and agricultural products.
- The major focus is on horticulture, floriculture, roots and tubers, plantation crops, aromatic and medicinal plants and bee-keeping. Higher emphasis is also placed on raising the production of animal and fish products.

While the overall investment (public and private) in agriculture remains low (1% of the GDP), the reforms in domestic regulations would improve the incentive structure for increasing private sector investment in the agro-food sector and thus enhancing productivity growth. The new policy also proposes to re-channel resources from agricultural input and price support measures to capital investment in the sector. The NAP also mentions private sector participation through contract farming, assured markets for crops, especially for oilseeds, cotton and horticultural crops, increased flow of institutional credit, and strengthening and revamping of the cooperative credit system and agricultural insurance as other important issues deserving policy attention. The NAP is a very comprehensive statement covering almost all dimensions of the Indian agriculture. The land reforms launched during the 1950s and revisited in 1970s also find place in this document. The policy states that *“Indian agriculture is characterized by pre-dominance of small and marginal farmers. Institutional reforms will be so pursued as to channelize their energies for achieving greater productivity and production. The approach to rural development and land reforms will focus on the following areas:*

- Consolidation of holdings all over the country on the pattern of north-western states;
- Redistribution of ceiling surplus lands and waste lands among the landless farmers, unemployed youths with initial startup capital;
- Tenancy reforms to recognize the rights of the tenants and share croppers;
- Development of lease markets for increasing the size of holdings by making legal provisions for giving private lands on lease for cultivation and agribusiness;
- Updating and improvement of land records, computerization and issue of land pass-books to the farmers; and Recognition of women’s rights in land.

Table: 1 Ministries and public institutions involved in implementation and monitoring of agricultural policies in India

Particulars	Agencies at central level	Agencies at regional/state level
Production	Ministries of Agriculture, Food Processing, Water Resource, Energy, and the ICAR	Ministries of Agriculture, Horticulture, Food Industry/ Processing, Irrigation, Power, SAUs
Prices	Ministries of Agriculture, Food Processing, Commerce, and Commission on Agricultural Costs and Prices	Ministries of Agriculture and Finance, SAUs
Marketing	Ministries of Agriculture, and Rural Development, APEDA, Directorate of Marketing and Inspections, NAFED, Food Corporation of India (FCI), Cotton Corporation of India (CCI), Central Warehousing Corporation (CWC), Jute Corporation of India (JCI), National Dairy Development Board (NDDB), Special	Ministry of Agriculture, Directorate of Agricultural Marketing, State Level - Agricultural Cooperative Marketing Federation, State Level – Agricultural Marketing Boards, Primary, Central and State level marketing societies/unions, Special marketing/processing societies, Tribal Cooperative Marketing Federation (TRIFED)

	marketing/processing corporations, Commodity Boards,	
Credits	Ministry of Finance, Reserve Bank of India, and National Bank for Agriculture and Rural Development (NABARD)	Ministry of Finance, State Level Bankers Committee, Regional Offices of NABARD, Commercial Banks, Credit Cooperatives, Regional Rural Banks
Trade	Ministry of Commerce, Commodity Boards, Agricultural and Processed Food Export Development Authority (APEDA), National Agricultural Cooperative Marketing Federation (NAFED)	Agri Export Zones (AEZs), Ministry of Agriculture
Research	Indian Council of Agricultural Research, Veterinary Council of India (VCI), Indian Council of Forest Research (ICFR), Central Agricultural Universities, Deemed Universities	State Agricultural Universities, Private Agricultural Colleges, Private Institutions and Autonomous Institutions
Education	Indian Council of Agricultural Research, Indian Institute of Management, Central Agricultural Universities, MANAGE, IRMA, NIAM	State Agricultural Universities, Private Colleges, Agribusiness Management Institutes (e.g. CABM)
Extension	Ministry of Agriculture, Indian Council of Agricultural Research	State Agricultural Universities, Krishi Vigyan Kendras, Krishi Gyan Kendras, State Government Departments

Sources: Ministry of Agriculture, Government of India

4) Current Agricultural Policies:

The process of formulating and implementing agricultural policies in India is very complex, involving a number of ministries, departments and institutions at both the centre and the state levels. The Union Ministry of Agriculture, under the guidance of the Planning Commission, provides the broad guidelines for agricultural policies. However, the implementation and administration of agricultural policies remain the responsibility of respective state governments. The allocation of funds to agriculture is guided by the Planning Commission and is routed primarily through the Ministry of Agriculture to various departments

5) Land Reforms:

Indian agriculture is dominated by a large number of small-scale operators that are predominantly owner-operators. In 1995-96, there were 115 million farmers operating on an average holding size of 1.41 hectares. This number increased to 137.76 million in 2010-11. About 67 per cent of the landholdings have an average size of only 0.38 ha, and another 17.9 per cent have an average size of 1.42 ha. Land reforms now need to address three important issues;

- (i) To map land carefully and assign conclusive titles;
- (ii) To facilitate land leasing, and
- (iii) To create a fair but speedy process of land acquisition for public purposes.

The 'National Land Records Modernization Programme' (NLRMP) which started in 2008, aims at updating and digitizing land records by the end of the Twelfth Plan. Eventually, the intent is to move from presumptive title where registration of land does not imply that the owner's title is legally valid to conclusive title, where it does. Digitization will help enormously in lowering the cost of land transaction, while conclusive title will eliminate legal uncertainty and the need to use the government as an intermediary for acquiring land so as to 'cleanse' the title. Given the importance of this programme, its rollout in various states needs to be accelerated. For large public welfare projects, such as the proposed National Industrial and Manufacturing Zones and National Highway Project, large-scale land acquisition may be necessary. Given that the people currently living on the identified land will suffer significant costs, including the loss of property and livelihoods, a balance has to be drawn between the need for economic growth and the costs imposed on the displaced. The Land Acquisition, Rehabilitation and Resettlement Bill 2011 passed by the Lok Sabha recently, is likely to ensure the Right to Consent, Fair Compensation and Transparency to farmers in the process.

6) Agricultural Credit Policy

The Third Five-Year Plan emphasized the urgent need to create an institution to provide funds for investment in the agricultural sector. This resulted in the establishment of the Agricultural Refinance Corporation (ARC) in 1963. In 1969, the Lead Bank Scheme was introduced with the primary objective of taking a territorial approach to rural development. The scheme involved commercial banks, cooperative institutions, government, and semi-government agencies in the process of economic development. The nationalisation of 14 scheduled commercial banks in 1969 made this transition easier and influenced further developments in banking for agriculture. However, during 1990s, a cut on bank branch network in the rural areas; fall in the credit-deposit ratios; disproportionate decline in credit to small and marginal farmers; and a worsening of the regional inequalities in rural banking were noted. The gap so created was attempted to be filled with expansion of micro credit projects in the rural area. However, this met with only limited success due to high transaction costs.

Several issues in the area of rural credit still remain to be addressed. The major one relates to the provision of cheap and timely credit to the small and marginal farmers with low transaction costs and associated risks. Another issue relates to the developing of ways to provide working credit to tenant farmers. The recent developments in credit policy include agricultural loans waiver of margin/ security; advances granted for agricultural purposes being treated as NPA (non-productive asset); incentives to bank branches to finance self-help groups with minimum of bureaucratic procedures; and launching of Kisan Credit Card Scheme.

7) Marketing Reforms and Policies

The process of market regulations started in the mid-1960s with the enactment of Agricultural Produce Market Regulation Act (APMC). It is, however, noted that in many ways the physical markets are restrictive, over-regulated and monopolistic. Direct procurement from the farmers was seldom permitted; in most states private players were not permitted to create private mandis; cartelization of local traders

often resulted in lower price realization by the farmers; and there was often lack of transparency in the process of price formation and dissemination.

There has remained a huge variation in the density of regulated markets in different parts of the country. While the all-India average area served by a regulated market is 459 sq km, the same is 103 sq km for Punjab and 11,215 sq km in Meghalaya. The National Commission on Farmers had suggested that the services of a market should be available within a radius of 5 km. This and the monopoly of APMCs have led to large intermediation and have effectively resulted in limiting the access of farmers to market (Chand, Ramesh, Kumar, P. and Sinha, Sapna, 2003)

The agricultural marketing policies in the country have moved considerable distance away from the restrictive regulations of 1960s and 1970s, dominated by the excessive and needless use of the Essential Commodities Act and other restrictive laws. To further reform the sector, a model Agricultural Produce Marketing (Development and Regulation) Act was formulated in 2003 and circulated to all the state governments for amending respective Act. The rules under the Act were also circulated in August 2007. The reforms proposed under the Act include (Kahlon, A.S. and George, M.V. 1986):

- Replacement of fragmented nature of markets by an integrated and unified market place;
- Permission for direct procurement from farmers;
- Promotion of grading and quality control services;
- Introduction of single point reasonable market fee within the state;
- Formulation and implementation of legal and institutional framework for contract farming;
- Simplification and introduction of a “unified” single licensing system;
- Single window clearances to replace multiple authorities for various market operations;
- Simplification of market tax laws;
- Encouragement of private investment in market infrastructure development;
- Permitting functioning of private mandis outside the purview of the ‘APMC Act’;
- Creation of ‘Special Markets’ for commodity or commodity group specific;
- Permitting electronic pan-geographic spot mandis;
- Promotion of commodity exchanges;
- Linking spot markets closely with futures markets for price discovery;
- Managing market committees more professionally; and
- The Essential Commodities Act should be either repealed or provisions relating to stock limits and movement restrictions removed from its purview (Fan, S., Hazell, P. and Thorat, S. 2000)

The number of regulated markets, however, came down to 7190 (2456 principal and 4734 sub-market yards) as on 31st March 2013 with the Bihar State Government repealing the APMC Act. There is an urgent need to legalize contract farming in the interest of farmers as well as the “sponsors”. There should be an institutional arrangement to record all contractual arrangements with a government body or a local body such as the Panchayat. There is a strong need for an independent market regulator for the issue of single registration/license to the market functionaries to transact their business in the entire state and collect single point market fee, specially for ‘Contract Farming’ (including recording, registration and dispute settlement) and direct marketing or sourcing of produce from the farmers, setting markets in more than one market area and to ensure transparency and quality service to the farmers.

The incurable Markets are wholesale markets which ensure better price realization and timely payment of sales proceeds to the producer, lower price payable by the final consumer, and remove impediments to smooth supply of raw materials to agro- industries and minimize post-harvest losses and wastages by allowing direct procurement from the producer. The private sector can bring in the required investment and management skills for successful development of these markets.

The Central Government is committed to support the initiative by providing equity assistance up to 49 per cent of the project equity, returnable at par on successful operation of the project through the Venture Capital Fund of the Small Farmers Agribusiness Consortium. The Terminal Market Complex (TMC), based on PPP model, at Patna (Bihar) and Perundurai and Chennai (Tamil Nadu) have been approved under the National Horticulture Mission (NHM).

The recent rapid growth in the organized retail has attracted attention of media as well as elected representatives. The critics fear that organized retail will be to the detriment of the large multitude of small retailers. These fears appear to be largely misplaced as the retail space that would be occupied by the large corporate would remain insignificant. It also needs to be recognized that small retailers in India have inherent advantages. They are located next to the consumer, know them well, some even by name, offer sale on credit, and enjoy low fixed costs.

The organized food retail business in India is among the least developed in the world. A large chunk of fresh fruits and vegetables is lost because of inadequate post-harvest handling, cold storage, and processing facilities and convenient marketing channels. A huge quantity of grains too is wasted because of improper handling and storage, pest infestation and poor logistics management. The farmer gets low price as his produce varies in size, shape and quality. The small harvest lots do not bring economies of scale in transportation and lower net realization. With the growth of organized retailing, new supply chain structures, using global technologies and best practices and offering customized product and services, will become possible. Involvement of global players in retailing would improve services to consumer and would lead to efficiency in supply chain, reducing costs and realization of better prices, benefiting both the supplier and the end consumer.

The enactment of the Warehousing (Development and Regulation) Act 2007 in October 2010 should facilitate improved commodity financing and also give a fillip to attracting investment in warehousing. This along with initiatives being taken both by the government and the private sector in setting up cold storages and grading, standardization and quality certification would significantly contribute to modernizing agricultural marketing practices. Under the legislation, Warehouse Receipts (WRs) have become negotiable instruments that can be traded. The legislation also provides for the establishment of a Warehouse Development and Regulatory Authority (WDRA) to regulate the WR system. Notwithstanding the lacunae in the legislation, this is landmark legislation and will provide a lot of fillip to both collateral commodities financing as well as the growth of private sector investment in agriculture warehousing.

The establishment of commodity exchanges in recent past has provided a new platform for price discovery and price risk management for the farming community. The challenge is to widen farmer participation in the exchanges and ensure that the exchanges provide a platform for genuine price discovery and hedging opportunities for the farming community. Futures markets, by themselves cannot improve supply efficiency and boost agriculture credit and financing of the agricultural sector unless concomitant reforms take place along the entire value chain. The next generation of reforms should facilitate emergence of pan-Indian electronic trading platforms (Spot Exchanges) leading to an integrated market. Simultaneously, there should be freeing of the “futures” market by providing autonomy to the Forward Markets Commission (FMC), empowering it to regulate the ‘futures’ market professionally *sans* government control and interference.

An electronic spot exchange will ensure greater transparency in price determination as electronic screen terminals across the country will display the prices and quantities of various commodities traded. Transparency of transaction would help governments in addressing evasion of mandi taxes. Electronic exchanges will promote quality standardization which would ensure greater access to finance from banks and other financial institutions (FIs) to the farmer. Transaction costs are lower under the electronic auction system as compared to the current mandi system by about 10 per cent.

Futures markets provide a platform for risk mitigation, price discovery, arbitrage and clearing and settlement. For speculators, hedgers, and other traders, trading in the futures markets offers an opportunity for financial leverage. The participants in the exchange are able to control a large quantity of a commodity with a comparatively small amount of capital, because of the small margin, normally set at 2-5 per cent of the value of commodity. There are, however, a number of misconceptions and concerns about future exchanges, few of which are briefed hereunder (Vaidyanathan, A. 1996)

8) Price Volatility: Empirical evidence suggests that the introduction of derivatives does not destabilize the underlying market; either there is no effect or there is a decline in volatility. To the extent that carrying costs are predictable, price smoothing through storage becomes an arbitrage activity. If agents are risk averse, this should lead to increase inter-temporal price smoothing. Futures markets may also influence spot prices if they have an effect on the behaviour of producers.

9) Futures trading and Inflation: It is widely recognized that prices of several agricultural commodities have been rising at the global level in recent years, and India has been no exception. Apart from the increase in money supply which has contributed to the price rise, inflation in food articles has been primarily due to continuous shortages on the supply side and increase in demand which has led to an upward thrust to prices. Further, global shortages in agricultural commodities also got translated into higher domestic prices with the correlation between international and domestic prices being very strong. It needs to be noted that the annual average inflation in both pulses and cereals has been generally higher than the overall inflation rate even in the period prior to the introduction of futures trading in these commodities. Growing current account deficit and fiscal deficit are also responsible for inflation in the country. Some observers have noted that the benefit of futures trading to farmers has been limited due to lack of awareness. It is true that the direct participation of farmers on the futures trading platform has been limited in India as elsewhere.

9) Price Policy:

The major objective of the price policy is to protect both producers and consumers. Currently, food security system and price policy basically consist of three instruments: procurement prices/minimum support prices (MSP), buffer stocks operations, and the public distribution system (PDS). Originally, the price support policy of the government aimed at providing a safety net or insurance to farmers against sharp fall in farm gate prices. Subsequently, however, need was felt to provide remunerative prices to farmers for maintaining food security and increase farm incomes. The policy has had a positive effect on farm income and led to economic transformation, particularly in well- endowed, mainly irrigated, regions (Kahlon, A.S. and George, M.V. 1986)

Besides announcement of MSP, the government also organizes procurement operations of concerned agricultural commodities through various public and co-operative agencies such as

- Food Corporation of India;
- Cotton Corporation of India;
- Jute Corporation of India;
- Central Warehousing Corporation;
- National Agricultural Co-operative Marketing Federation of India Ltd;
- National Consumer Co-operative Federation of India Ltd and
- Tobacco Board

The state governments also appoint state agencies to undertake price support scheme (PSS) operations. The Department of Agriculture and Cooperation is the nodal agency to implement PSS.(Jha, S. and Umali-Deininger, D. 2003)

10) Constitutional Responsibilities and Policy Planning:

While India's Constitution lists agriculture only as a state subject, the central government, on grounds of agriculture being a subject of national significance, is an important actor in agricultural policy. It acts both in developing and implementing national policy and in co-operating with and funding much of the policy effort implemented by the states. The Constitution also allows the states to devolve their authority in some subjects, including agriculture, to a lower level of government (*panchayat*, sometimes called village-level government). The administration of agricultural and food policy in India is therefore complex and involves many ministries, agencies and other institutions at both the central, state and other levels, such as districts within a state (Bhalla, G.S. and Singh, G. 1997)

From 1950 until 2014 India's Planning Commission, a senior body chaired by the prime minister, outlined national plans and policy priorities. From 1951 it launched a series of five-year plans, the last one for 2012-17. In 2015 the government replaced the Planning Commission with the newly formed National Institution for Transforming India (NITI) Aayog. It is designed to foster greater involvement of the state governments in the economic policy process.

India's Constitution gives the centre's Finance Commission certain responsibilities with regard to recommending how to redress imbalances between the taxation powers and expenditure responsibilities among the central and state governments. The recommendations of the fourteenth Finance Commission cover a five-year period from 2015. The central government has accepted the Commission's recommendation about increasing the share of the states in the pool of central taxes that can be divided between the centre and the states, the so-called devolution of taxes (Government of India, 2016k). This would give the states greater autonomy in designing and financing schemes according to local priorities. For 2016-17 the central government's budget foresaw allocating 44% of total plan expenditure as central assistance to the plans of states and union territories (Government of India, various years). This percentage can fluctuate considerably – both in 2012-13 and 2013-14 the share of central plan expenditure that was allocated as central assistance was 25% but in 2014-15 it was 58%. Plan expenditure is essentially what in some countries is called programme expenditure, but it does not include some major subsidy items, such as fertiliser subsidies and food subsidies. The revenues that state governments receive from the central government contribute significantly to how much they are able to spend. On average for all states, the own revenue of the states accounted for 63%, 59% and 55% of their expenditure in 2012-13, 2013-14 and 2014-15, respectively (Government of India, 2017u) (Reddy, V. Ratna and Badri Narayan, K. 1992)

11) Central Government Roles in Administering Policy:

The central government's Ministry of Agriculture, which in 2015 became the Ministry of Agriculture and Farmers' Welfare (MAFW), provides broad guidelines for agricultural policies. The implementation and administration of many policies remain the responsibility of the state governments. Agencies of the central government directly administer central schemes (CS) and state government agencies administer state sector schemes (schemes are also called programmes). Centrally sponsored schemes (CSS) operate in subjects that are constitutionally the domain of the states. The central government provides resources to the state governments for these schemes while the schemes themselves are implemented by the state government and its agencies. Funds can be transferred from the central to the state level through CS and CSS and also through additional central assistance (ACA) (Chaturvedi, 2011). The priorities, approaches and funding possibilities for agricultural policies differ among India's states. The extent and nature of the state governments' co-operation with the centre in CSS and other schemes thus vary greatly among the states (Schultz, T.W. 1964)

The MAFW's Department of Agriculture, Cooperation and Farmers' Welfare (DACFW) has 27 divisions, five attached offices, and twenty-one subordinate offices across the country for co-ordinating with state level agencies and implementing central schemes. One public sector undertaking, nine autonomous bodies, ten national level co-operative organisations, and two authorities also function under the DACFW's administrative control. The MAFW's two other departments are the Department of Animal Husbandry, Dairying and Fisheries and the Department of Agriculture Research and Education.

While the MAFW is responsible at the central level for agricultural policy as such, other ministries have responsibilities in areas that are closely linked to agriculture. At least twelve of the about 40 ministries at the central level have some responsibility for the formulation, implementation or monitoring of agricultural and food policy. Table 3.2 summarises the areas with which the twelve ministries and some of their agencies and institutions are involved.

Many kinds of variable inputs are provided to agricultural producers at artificially low prices, i.e. the inputs are subsidised. This applies mainly to fertilisers, electricity, irrigation water, seeds, machinery, and operating credit. The Ministry of Chemicals and Fertilizer administers the large fertiliser subsidies through its Department of Fertilizers. Many other ministries have responsibilities that concern agriculture and food, including subsidies for electricity and irrigation. The Ministry of Consumer Affairs, Food and Public Distribution administers most food subsidies through its Department of Food and Public Distribution (DFPD). The Ministry of Commerce and Industry administers India's trade policy through its Department of Commerce.

Depending on the subject matter, the processes for developing and implementing policies in agriculture and food require co-ordination among various ministries, departments, and institutions. Cabinet level decisions on many subjects in agriculture and food are taken by the Cabinet Committee on Economic Affairs, a standing committee chaired by the Prime Minister. Co-ordination among ministries for Committee decisions is ensured by the Cabinet Secretariat. The implementation of policies is guided by a variety of committees or groups of officials at various working levels, established in formal or less formal ways. Such committees can include officials from several ministries and, depending on the subject matter and the committee's responsibility, representatives from interest groups. Some committees can have decision making responsibilities and others are advisory. Occasionally a temporary high level committee is established with some independence from government to examine a particular issue and provide recommendations. While there are thus many opportunities for sharing information, views and evidence in the processes for policy formulation and implementation, the large number of ministries, departments, regions, and other centres of interest obviously poses a challenge for timely and effective co-ordination. This challenge is amplified by the fact that, in agriculture, the central government's identification of policy priorities and implementation of policies in large measure depends on the co-operation of state governments. (Rao, C.H. Hanumantha and Gulati, Ashok 1994)

12) State Government Roles in Administering Policy

Many state governments have ministries or departments of agriculture, animal husbandry, irrigation or the like. While they implement central and centrally sponsored schemes in co-operation with, e.g. the centre's DACFW and DFPD, many state ministries and departments also implement state-specific agricultural policies in line with their own priorities and availability of own funds. The effectiveness of shared or delegated implementation of many policies relies in many instances on how effective is the work of a committee comprising officials from both the central and state governments. Co-operation with officials of lower levels of government, such as districts where the policy benefits are actually delivered, is also essential for effective administration. The nature of the co-operation between central and state government officials can help to inform the positions taken by a state in interacting with the central government at the political level, whether in a formal or an informal setting. Such interactions appear normally to occur more in pursuit of particular needs than as an institutionalised ongoing process to articulate shared policy priorities. For example, in 2010 a committee of state ministers, chaired by the central government's minister of agriculture, was constituted with a view to persuade the various state governments to implement certain reforms in agricultural marketing and to suggest further reforms in that field (Government of India, 2013b) (Pal, Suresh, Mruthyunjaya, Joshi, P.K. and Saxena, Raka 2003)

There are large differences among states and regions in India in terms of natural resource endowments, level of economic development, and potential for growth in production and income in agriculture. The central government has over time sought to address such disparities in its policy development by monitoring regional and state-to-state differences, identifying problems and opportunities in specific states, and paying special attention to states characterised by relatively lower levels of economic

development. The central government's budget planning allocates resources by taking into account the situation of specific states and regions and providing expenditures and investment incentives accordingly. For example, schemes in agriculture where expenditure is shared by the central and the state government often provide for a larger share of central government expenditure in certain states than in other states or a lower threshold for a farmer's eligibility as a beneficiary of a scheme. The eight north-eastern states are given priority in this respect (Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim) sometimes along with three Himalayan states (Himachal Pradesh, Jammu and Kashmir, and Uttarakhand). (Pal, Suresh, Mruthyunjaya, Joshi, P.K. and Saxena, Raka 2003)

13) Major components of agriculture and food policy in India:

The set of policies directly relating to agriculture and food in India has for a long time consisted of five major categories. They include managing the prices and marketing channels for many farm products, making variable farm inputs available at government-subsidised prices, providing general services for the agriculture sector as a whole (such as research and extension), regulating border transactions through trade policy, and making certain food staples available to selected groups of the population at government-subsidised prices. More recently, environmental measures concerning agriculture have gained prominence (Haque, T. 2003)

14) Concluding Remarks and Implications:

Indian agriculture is becoming export-oriented after having attained nearly self-sufficiency in basic food production. In addition to the traditional export commodities, India is now also an exporter of rice and wheat, as well as livestock products. The direction of trade is also changing. As a result, there has been an increase in the private investment in agriculture, farmers are becoming market-oriented, level of value addition has gone up, agricultural exports are growing, and farm income is rising (Singh, R.B., Kumar, P. and Woodhead, T. 2002)

The major challenges before the policymakers are sustainability of farm productivity; protection of environment; degradation of natural resources like land; depleting sources of water; and value addition and agribusiness. Moreover, the drive for more downstream processing of agricultural products and greater competitiveness along the agro-food chain are also key priorities. Addressing of the problems being confronted by farmers as mentioned above and macro level challenges before policymakers call for inclusion of the followings in the policy framework:

Justification of Leasing of Agricultural Land: The leasing of land for agricultural use is not permitted in many states, except Punjab, West Bengal, Maharashtra, and Tamil Nadu. Though land lease is in practice. Legalization of land leasing will attract entrepreneurs with passion for agriculture to undertake commercial farming. Such entrepreneurs will adopt scientific technology to attain maximum yield and also to maintain the soil health in a sustainable manner. Small landholders will prefer to lease out their fields without the risk of losing title and will seek engagement elsewhere. This will lead to consolidation of landholdings and size of holdings will become sufficiently large for adoption of technology.

- **Liberalization of APMC Act:** Flexibility in 'APMC Act' will enable farmers to benefit from demand–supply phenomenon. Currently, this benefit is reaped in by middlemen, as buyers are not allowed to trade directly with farmers. Investment in food processing industry is also not happening due to this reason. Under APMC Act, operating cost is high which is keeping the investors away.
- **Investment in Infrastructure in Agricultural Sector:** The infrastructures like roads, canals, micro irrigation, tube-wells, warehouses, food processing facility, etc. are important for the growth in agriculture. Investment in such infrastructure is to be made by the government as well as attract private investment to make agriculture processing viable. Higher the investment better would be the growth and income of farmers.
- **Skill Development:** Skill deficit in agriculture has been a major concern. It hampers the adoption of technology and mechanization of agriculture. Looking at the importance of agricultural productivity to ensure food security, mechanism to institutionalize skill development is critical to growth. Skilled drivers, operators and technicians in agriculture will arrest the growing inefficiencies and encourage farmers to adopt modern technology for higher yields.
- **Precise Forecast of Monsoon:** More than 50 per cent of foodgrains production is dependent on monsoon. Accuracy in forecast of monsoon is important for sustaining and enhancing productivity. Scientific technology is available for proper forecasting for adoption.
- **Food Processing:** Food habits in urban India are fast changing, creating the need to promote food processing. A proper mechanism is to be tabled in a phased manner to encourage changes in food habits in the urban areas. Cold chains, warehouses, processing facilities, etc. will automatically flourish as a result of growing demand for processed foods in the urban areas. This will also establish strong linkages between rural and urban economy for mutual benefits.
- **Producer Company at Village Level:** Landholdings are fragmented making agriculture less remunerative. Concept of producer company is well thought out proposition for small farmers to aggregate not only resources for efficient utilization but also decision-making process like what crop to grow, which varieties to use, where to buy seed from, when to sow, etc. Producer company concept facilitates this in most democratic manner for the benefit of all.
- **Mechanization of Small Farms:** Shortage of labour is the biggest pain farmers are experiencing post-MNREGA. Mechanization is the answer. This is not possible unless sufficient skills are developed at the village level. Besides, government needs to provide support, especially at the initial stages, for promotion and adoption of mechanized operations.
- **Regulatory Authority in Agriculture:** Land being a precious resource of the country with high population cannot be allowed to be under-used. Regulatory authority in agriculture must develop processes and systems to gauge and monitor optimum utilization of land for food grain production.
- **Leverage Potential of Hills:** Hills are boon for any nation. They provide diversity in climate, flora–fauna and opportunity to grow what cannot be grown in the plains. The potential of hills has to be

assessed properly and investments on infrastructure have to be made to exploit the opportunity for the benefit of all.

- **Government Support Commensurate with Farmers in Agriculturally-advanced Countries:** In the global economy, farmers from not so rich countries suffer due to uneven support of the government. In a free market, support needs to be equitable to provide level playing fields to all and remove any natural or manmade advantages in the larger interests of the farmers with lower income.

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