

Agricultural Legislations

Indian agriculture has made tremendous strides since Independence. A country with recurring food shortages and dependence on food imports is now not only self-sufficient but a net exporter also. The agriculture has slowly shifted from subsistence to semi-commercial, and the traditional systems have been replaced by improved production systems, which are technology-driven. At the time of First Five-Year Plan in 1952, the foodgrain output was around 50 million tonnes and population was nearly 360 million. In 2007–08, the total foodgrains production exceeded 230.8 million tonnes and the population was around 1,138 million. The average growth rate of food production has been well above population growth rate. This transformation in Indian agriculture has been possible by technology development, adoption, policies, and hard work of farmers, supported by the legislative measures with codified laws for observation in agricultural and allied activities. Although agricultural legislations in the country was the legacy of British, real efforts were commenced only after 1947 to alter the economic condition of farmers and status of farming through legislative measures. The democratic governments of states and centre had moved in a large way to remove the most unhealthy impediments to the progress of the agrarian sector. Since Five-Year Plans became an integral part of the development process, agricultural legislations also became portion of a purposeful national effort for changing the socio-economic condition of the society.

In the early period, the legislations could be categorized into main four groups such as: Abolition of the intermediaries, Tenancy Reforms, Ceiling of Land holdings and laws relating to Gramdan and Bhoodan. The abolition of Zamindari and similar measures helped actual cultivators to co-ordinate directly with the state. Similarly, the foremost cause of enhanced productivity was reforms in tenancy laws in most states. The land-reforms measures in the country adopted the principle of conferring ownership on the tenants, although the laws varied from state to state. Similarly, to achieve social justice and redistribution of agricultural land, laws were passed in almost all states to restrict the size of agricultural holdings. As a result, more than 1 million ha of agricultural land was declared surplus with the government for distribution to those who needed it the most. For facilitating the implementation of these laws, most of them have been included in the Ninth Schedule of the Constitution of India, to place these laws above challenge in the courts of law, by necessary amendments. In addition to these, the Bhoodan Movement, started in early fifties by Acharya Vinoba Bhave to collect the donation of land for distribution among the landless was subsequently supported by legislative sanction and approval by states through series of laws and rules.

The land-reforms measures attempt to rationalize the agrarian structure and the land-man relationship. A dynamic approach towards the reorganization of agricultural operations was essential for agro-progress. A number of legislative measures have been taken to facilitate land use and management. The consolidation of land-holdings

is probably one of the major steps in this direction. To overcome the problem of fragmented and dispersed holdings, the voluntary approach was slowly replaced by legislative measures such as: Bombay Prevention of Fragmentation and Consolidation of Holdings Act, 1948; the Punjab Holdings (Consolidation and Holding) Act, 1953; The UP Consolidation of Holdings Act, 1953; The Rajasthan Holdings (Consolidation and Prevention of Fragmentation) Act, 1954; The MP Land Revenue Code, 1959; The Jammu and Kashmir Consolidation Holdings Act, 1960 etc. Similar laws were enacted in Bihar (1966), Asom (1960), Andhra Pradesh (1956), Himachal Pradesh (1953) and other states during 1974–75. Much of the consolidation work was done in north Indian states and is still in progress in others.

To further support the consolidation efforts, some states have enacted legislative measures to facilitate the organization of co-operative joint-farming societies on voluntary basis. In some states, surplus land is allotted to co-operative societies of landless labourers. Although the purpose was good, the end result of co-operatives has not been very successful. This is undergoing further changes in recent times, and we may see land share companies propping up in future.

The chapter covers agricultural legislation under following broad categories—land legislations and reforms; legislation and reforms of input management [legislations, related to fertilizer, seed, pests and pesticides, genetically modified organisms (GMOs), agricultural biotechnology and other inputs]; labour laws in Agriculture; legislation in agricultural marketing; legislations in livestock sector; legislations of agriculture credit and finance, legislation in co-operative sector and the panchayat.

LAND LEGISLATIONS AND REFORMS

Land, land tenures, land holdings, consolidation etc. are under the exclusive legislative and administrative jurisdiction of the states as provided in Entry No.18 of List II (State List) in the Seventh Schedule of the Constitution. However, the Central Government has been playing an advisory and co-ordinating role in the field of land reforms since the First Five-Year Plan. Agrarian reforms have been a core issue for rural reconstruction as a means of ensuring social justice to actual tillers and the landless rural poor, thereby creating a sustainable base for the overall growth of the industrial and tertiary sectors of our economy. Generating greater access of landless rural poor to land is considered an important component of poverty alleviation. The major objective of land reforms have been the re-ordering of agrarian relations to achieve an egalitarian social condition, elimination of exploitation in land relations, realizing the age-old goal of land to the tiller, enlarging the land base of the rural poor, increasing agricultural productivity and infusing an element of equality in local institutions. The Department of Land Resources in the Union Ministry of Rural Development has been playing a crucial role in evolving a national consensus for initiating effective land reforms which include abolition of Zamindari system and all intermediaries since the beginning of the fifties, introduction of family ceiling in the mid fifties, reduction of the ceiling limit, consolidation of land holdings and monitoring the progress of the distribution of ceiling surplus land as part of the 20-point programme of the Central Government. The Department also initiated amendments of the Constitution 13 times for incorporation of 277 land laws in the Ninth Schedule of the Constitution. The last such amendment was the 78th Amendment of the Constitution to incorporate 27 land

laws in that Schedule.

The Land Reforms Division in the Department of Land Resources also acts as the nodal division of the Ministry of Rural Development for administration of the Land Acquisition Act, 1894, including issues covered under Entry No. 42 of the Concurrent List of the Seventh Schedule of the Constitution. The activities of the Division can, therefore, be broadly divided into 3 major groups, i.e. discharging constitutional obligations, monitoring of programmes relating to land reforms and implementing centrally sponsored schemes.

Discharging of constitutional/legal obligations

Administration of Land Acquisition Act, 1894

The Ministry of Rural Development being the nodal one in the Union Government to administer the Land Acquisition Act, 1894, processes the proposals for amendment of various provisions of the said Act from time to time. The aforesaid Act was last amended in 1984. The Land Acquisition (Amendment) Bill, 2007 was passed in the Lok Sabha in 2009 with the aim to protect the interests of the poor farmers whose land is acquired for setting up industries.

Examination of central and state legislations on acquisition and requisition of properties

All state legislative proposals covering any enactment on the subject of Acquisition and Requisition of Property or any other state legislation having a bearing on the acquisition and requisition of land are examined by Land Reforms Division for the purpose of seeking Presidential Assent as required under Article 200 (in case of Bills) or under *pro viso* to Article 213 (1) of the Constitution. The Division also examines all proposals of state Governments for amendments to Land Acquisition Act, 1894, for purpose of concurrence, as required under Clause (2) of Article 254 of the Constitution.

Examination of other land laws

This Ministry is also the nodal Ministry for implementation of land reform measures. All proposals for introduction of land reform legislations or amendments therein initiated by the States/Union Territories are therefore referred to the Land Reforms Division for ensuring their conformity with the National Land Reforms Policy. This Division processes all land legislations for incorporating them in the Ninth Schedule of the Constitution to protect them from being challenged in any Court of law on the ground of violation of Fundamental Rights (with special reference to Article 31A and 31 C) and moves Parliament for amendment of the Constitution. During the period of imposition of President's Rule in any state, the Ministry of Rural Development is required to discharge the responsibility of laying Ordinances in Parliament or enacting President's Acts as and when powers are conferred on the President by Parliament under Article 357(1). In addition, this Division also gives suitable advice to any Central Ministry proposing to make legislation having any bearing on acquisition/requisition of land. Thus, Central and state legislations on the subject are examined in the Division.

Legislation on resettlement and rehabilitation

The Land Reforms Division has also been acting as the Nodal Agency for

formulating a Policy/Legislation on the Resettlement and Rehabilitation of Project Affected Persons/ Families. We now have the Rehabilitation and Resettlement Bill, 2007 and the revised National Policy of 2007. The Bill ensured rehabilitation before acquisition of land of farmers and tribals and allowed states to acquire 30% of land for private developers only after the developers had acquired 70% directly from farmers.

Monitoring of land reforms activities

To play an effective co-ordinating and advisory role for implementation of land reform measures, the Land Reforms Division organizes conferences of Chief Ministers and Revenue Ministers from time to time, monitors conferment of ownership rights to tenants, restoration as well as prevention of alienation of tribal land, consolidation of holdings, distribution of government wasteland, ceiling surplus land, *Bhoodan* land, etc.

Conferment of ownership rights to tenants: Legislative measures have been taken in many states for conferment of ownership rights to tenants, protecting their rights from willful eviction and allowing cultivating tenants to acquire ownership rights on payment of compensation. Some of the states have acquired ownership of land from certain categories of landowners and transferred the same to tenants. Sub-tenancies have generally been prohibited all over the country except in certain cases, viz. widows, members of armed forces, minors, unmarried women, persons suffering from disabilities, etc. Till date, 125.86 lakh tenants have got their rights protected over an area of 167.14 lakh acres.

Distribution of surplus land: Since inception till March 2006, the total quantum of land declared surplus in entire country is 6.838 million acres, out of which about 5.980 million acres have been taken possession of and 4.940 million acres have been distributed to 5.350 million beneficiaries of whom 39% belong to Scheduled Castes and 16% belong to Scheduled Tribes.

Distribution of government wastelands: Distribution of government wastelands has been one of the key strategies of land reforms in the country. It has been the accepted policy of the Central Government that wastelands at the disposal of the State Governments should be distributed amongst eligible rural poor. The criteria governing the distribution of ceiling surplus land also applies to the distribution of wasteland. So far, 14.747 million acres of government wastelands have been distributed amongst landless rural poor.

Consolidation of holdings: Consolidation of fragmented agricultural land holdings forms an integral part of the Land Reform Policy. Successive Five-Year Plans have accordingly been laying stress on consolidation of fragmented land holdings for planned development of villages and increased agricultural output. Consequently, many states had enacted legislations and had taken up the work relating to consolidation of land holdings. Uttar Pradesh, Haryana and Punjab have achieved commendable success. In Uttar Pradesh, even now, consolidation of land holdings is in operation in about 9,000–10,000 villages. In other states, work was continued for some years but lost momentum thereafter. So far, an area of 163.347 million acres has been consolidated all over the country. A National Level Committee has been constituted under the Chairmanship of Secretary (Rural Development) to evaluate the progress of consolidation of land holdings and look into matters pertaining to updation of survey

data/record of rights and maps through technological upgradation. The committee will also draw a plan of action for consolidation of holdings and identify the initiatives required on consolidation of land holdings. On the recommendations of the committee, the Administrative Staff College of India (ASCI), Hyderabad, was assigned a study on Land Consolidation and Computerization of Land Records and to document the efforts made on consolidation and computerization in various states. The ASCI has carried out such a study in 10 states. The final report by the ASCI has since been received wherein it has been recommended that there is no need of centrally sponsored scheme on consolidation of land holdings. This Ministry has accepted the recommendations of the committee.

Prevention of alienation and restoration of alienated tribal lands: Article 46 of the Constitution enjoins upon the states the obligation to promote the interests of Scheduled Castes and Scheduled Tribes and to protect them from social injustice and all forms of exploitation. The state governments have accepted the policy of prohibiting the transfer of land from tribals to non-tribals and for restoration of alienated tribal lands to them. The states with large tribal populations have since enacted laws for this purpose. Reports received from various states indicate that 3.75 lakh cases of tribal land alienation have been registered so far, covering 0.855 million acres of land, of which 162 lakh cases have been disposed in favour of tribals covering 0.447 million acres. The courts on various grounds have rejected 1.54 lakh cases covering 0.363 million acres. Although good results have been forthcoming in prevention of alienation and restoration of alienated tribal lands through efforts made by different states, the task remains to be completed. With a view to preparing a draft Model Law on prevention of tribal land alienation and restoration of alienated tribal lands, the Government of India had constituted an Expert Group under the chairmanship of Shri B.N. Yugandhar, former Secretary, Ministry of Rural Development for making recommendations.

Gender and land rights: Many of the states have improved women's access to land and landed property. Karnataka, Tamil Nadu and Andhra Pradesh have amended the Hindu Succession Act, 1956, to formalize issues related to women's right to property including land. Some states like Rajasthan and Madhya Pradesh have decided that issues relating to property, including landed property would be dealt with in accordance with the appropriate Personal Laws. However, some states including Haryana, Jammu and Kashmir, Delhi and Punjab are yet to take adequate steps to provide constitutional/legal safeguards to women with respect to access to land.

Implementation of centrally sponsored schemes

Computerization of land records (CLR): The centrally sponsored scheme on Computerization of Land Records was started in 1988–89 with 100% financial assistance as a pilot project in eight districts, viz. Rangareddy (Andhra Pradesh), Sonitpur (Assam), Singhbhum (Bihar), Gandhinagar (Gujarat), Morena (Madhya Pradesh), Wardha (Maharashtra), Mayurbhanj (Orissa) and Dungarpur (Rajasthan) with a view to removing the problems inherent in the manual systems of maintenance and updating of land records and to meet the requirements of various groups of users. It was decided that efforts should be made to computerize core data contained in land records, to assist development planning and to make records accessible to people, planners and administrators.

The broad objectives of the scheme are:

- (i) To implement a comprehensive and transparent land information system capturing the entire work flow of land records maintenance with a provision to store, retrieve and process land records data containing ownership, tenancy rights, crop details, land revenue, source of irrigation, mutation, its updation and dispute resolution.
- (ii) On demand distribution of computerized copies of Record of Rights to the landowner at reasonable charges with the provision of an online mutation module for ownership changes, seasonal crop updation etc. at tehsil level.
- (iii) Provision of legal sanctity to computer generated certificates of land records/ title documents after authentication by authorized revenue official.
- (iv) To generate and integrate various level of data for purposes of planning, monitoring, evaluation of developmental programmes.

A decision was taken during 1997–98 for operationalization of the scheme at the tehsil/taluk level for facilitating delivery of computerized land records to users and public at large. Under this programme, funds are released to the state governments for purchase of hardware, software and other peripherals. 3,142 tehsils/taluks have been covered under the programme. Nearly 33 Pilot Projects on Digitization of Cadastral Survey Maps, covering 22 states, viz. Andhra Pradesh, Madhya Pradesh, Maharashtra, Manipur, Meghalaya, Mizoram, Gujarat, Goa, Haryana, Jammu and Kashmir, Bihar, Kerala, Karnataka, Tamil Nadu, Tripura, Nagaland, Orissa, Punjab, Uttar Pradesh, West Bengal, Puducherry and Sikkim are in various stages of implementation.

Strengthening of revenue administration and updating of land records: With a view to assisting the states/union territories in the task of updating of land records, a centrally sponsored scheme for Strengthening of Revenue Administration and Updating of Land Records (SRA and ULR) was started in 1987. Initially, the scheme was approved for Bihar and Orissa in 1987–88 and extended to other states/union territories during 1989–90. The scheme is being implemented by the state governments through their Revenue/Land Reforms Departments. The centre and the states finance it on 50 : 50 funds sharing basis. However, union territories are provided full central assistance.

LEGISLATIONS AND REFORMS IN INPUT MANAGEMENT

In the mid-sixties, the course of Indian agriculture drastically altered for good. The green revolution was set in and for the first time food security was achieved by the combination technology, which was economically viable and inspiring to the farmers. Good water services and extensive supply of improved seeds including hybrid technology, fertilizers, pesticides and electricity, and adoption of public policies in terms of input-output pricing and marketing made it further possible. The green revolution not only gave the requisite food security but also gave much needed self-confidence to a beleaguered nation which was often reeling under the impacts of drought, calamities, shortages and supply-chain disruption. What is very important is the transformation of agrarian input-industry into a full-fledged business. Seed industry, fertilizer industry and pesticide industry grew at rapid speed and began competing with world players. This, therefore, needed the logistic legal support from government for fair play and genuineness. Although water and electricity are crucial inputs for

modern agriculture, their legislations are not covered in details, as again a spate of Laws for their use vary from state to state.

Fertilizer legislations

Various legislations on fertilizers in India are inherited from “Entry – 33” of list III (Concurrent List) of VII Schedule of the Constitution which empowers the Central Government to regulate trade, commerce and the production, supply and distribution of any product or any industry, where the control by the Union is declared by Parliament (by law), to be expedient in public interest. In exercise of this power, the Parliament enacted the Industries (Development and Regulation) Act, 1951 (IDRA). The Section 2 of the IDRA declares that it is expedient in public interest that the Union shall take under its control the industries specified in its First Schedule. At serial number 13 of the said Schedule, “FERTILISERS – INORGANIC, ORGANIC AND MIXED” has been included. Subsequently, in exercise of the powers conferred under VII Schedule – List III – Entry 33, read with section 2 of IDRA, the Central Government enacted the Essential Commodities Act, 1955 (1 of 1955) (ECA), to control the production, supply and distribution of, and trade and commerce in certain commodities, in the interest of the general public. Under section 2 (a) (xi) of the ECA, the Central Government declared “Fertilizers whether inorganic, organic or mixed” as an Essential Commodity, vide notification S.R.O. No. 10 dated 29.3.1957. Section 3 of the ECA empowers the Central Government to make order providing for regulating or prohibiting the production supply and distribution of any essential commodity and trade and commerce therein so as to maintain or increase its supply or for securing its equitable distribution and availability at fair price, etc.

Government of India has been all along conscious of the need for ensuring the availability of right quality and adequate quantity of fertilizers, at right time and at fair price to the farmers in all parts of the country. As a result, the Central Government promulgated the following orders in exercise of the powers conferred under Section 3 of the ECA to regulate manufacture, quality, sale, distribution, price movement, etc. of fertilizers:

1. Fertilizer (Control) Order, 1957/1985 (FCO.)
2. Fertilizer (Movement Control) Order, 1960/1973/2001 (FMCO)
3. ECA Allocation Orders (issued bi-annually).

Fertilizer Control Order, 1957/1985: Initially, the Fertilizer Control Order (FCO) was issued in 1937 and came into force w.e.f. 15 May 1957. Since then, a lot of changes in fertilizer technology, production and distribution system has taken place. A number of new products like micronutrients also came into the market. Need was also felt to make the provisions of the FCO more stringent and up-to-date so that the fertilizer quality control machinery is more effective. This led to several amendments in the FCO, 1957. Subsequently, an overall review of the FCO, 1957 was conducted by the ‘FCO Review Committee’ set up by the Central Government. Finally, the revised FCO called FCO, 1985 was issued on 25 September 1985, which came into force with immediate effect.

The objectives of the FCO are to protect the interest of the farmers as well as that of genuine traders/manufacturers from the exploitation by unscrupulous elements. These are achieved by ensuring the availability of fertilizers of right quality and at

right time by regulating their quality, price, distribution, sale etc. The enforcement of the FCO is entrusted to the state governments, who have been vested with adequate powers in this regard. Till July 2003, specifications of 80 fertilizers have been notified by the state governments. Sale of fertilizer in 11 groups has been laid down in the FCO. Besides, a number of drags of mixture of fertilizer have been notified by state governments. Sale of fertilizers not conforming to the prescribed standards such as non-standard, adulterated, spurious, fake, etc. has been prohibited and made punishable offence. It has been made obligatory for all the manufacturers, importers, pool handling agencies, dealers etc. to make a memorandum of intimation to the notified authority of the concerned state government as fertilizer dealers (except industrial dealers who are to be registered with the Central Government). Provisions for inspection, drawal, analysis of fertilizer samples, detention/seizure of stocks, and debarment have been made. Any violation of the provisions of FCO is punishable under ECA, and has been made cognizable and non-bailable offence and attracts penalties like suspension/cancellation of the certificate issued under FCO and/or imprisonment up to seven years, with or without fine.

Important features of the structure of FCO, 1985, include: definitions, price control, allocation of fertilizers, import of decanalized fertilizers, manufacture of mixtures of fertilizers, packing/marketing of containers, minimum laboratory facilities to be maintained by manufacturers, disposal of non-standard fertilizers, sale/use of fertilizers for non-agricultural/industrial purposes, authorization of wholesale and retail dealers and sale of fertilizers, registration of industrial dealers, provision for referee laboratory, maintenance of books and accounts and submission of returns, other restrictions on manufacture, import, sale, storage, distribution, etc.; enforcement agencies, inspectors – powers and responsibilities: search/seizure, drawal of samples and analysis, re-analysis (clause 28, 29 and 30, 32 and Schedule –II Part –A); and Part B, fees and advisory committees, minimum laboratory facilities to be maintained by notified laboratories, specification for provisional fertilizers, punishment–suspension/debarment/cancellation; and appeals and prosecution.

Fertilizer (Movement Control) Order: The Fertilizer (Movement Control) Order (FMCO), 1969 was first issued on 31 December 1960 and came into force on 1 January 1961. This was revised on 23 October 1967. Subsequently, FMCO, 1973, was issued on 25 April 1973, which came into force on the date of its publication. The order was subsequently ammended 15 times and the last amendment was in 2001. The objective of FMCO is to ensure the equitable distribution of fertilizers in different states. The enforcement of this order has been entrusted to the state government.

The main features of the FCO, 1973, are as under:

Definition: For purpose of FMCO, 1973, the term fertilizer has the same meaning as in Clause 2 (h) of FCO, 1985, but includes, by and large, all those fertilizers which are decontrolled by the government from the movement restrictions. At present, all low analysis nitrogenous fertilizers namely ammonium sulphate, ammonium chloride, calcium ammonium nitrate (25% N and 26% N), all phosphatic, potassic complexes; micronutrients and fortified fertilizers are exempt, and are outside the purview of FMCO. Thus, only urea, zincated urea, anhydrous ammonia and mixture of fertilizers are subject to control under FMCO.

Prohibition on export of fertilizers from one state to another (Clause 2). The export

of fertilizers from one state to another is prohibited. The prohibition does not apply in cases where the export of fertilizer, except physical and granulated mixtures of fertilizers, is done in accordance with the authority issued by the Central/State Government. In case of export of physical and granulated mixtures of fertilizers, permissions of both exporting and importing state governments are necessary.

Search and seizure (Clause 4). The Inspector of Fertilizer, appointed under FCO, or a police officer not below the rank of head constable, is empowered to enter and search any place or vehicle, etc. used for export of fertilizer and also to seize any stock of fertilizer along with the vehicle etc. used for the purpose, so as to ensure the compliance of the provision of FMCO.

Punishment. For violation of any provision of FMCO, a court case under the ECA, 1955 has to be filed. The cases for violation of FMCO are to be tried by the Court of 1st Class Magistrate.

ECA Allocation Order: With a view to securing equitable distribution and availability of fertilizers to the farmers in time, the Central Government issues an order every six months before the onset of each cropping season allocating the total production of a manufacturing unit to different areas/districts/states. These allocation orders are called ECA Allocation Orders for respective seasons.

The ECA Allocation Orders are issued keeping in view the requirements of different areas. These Orders specify the quantities of fertilizers produced by the manufacturing unit to be sold in specified areas/districts/states, and within specified time. At present, ECA Allocation Orders are issued with regard to urea, as other nitrogenous and P and K fertilizers are decontrolled.

The non-compliance/violation of the ECA Allocation Order by the manufacturing unit results in the stoppage of various incentives in the form of subsidy given to the manufacturer by the Central Government, besides the penal action as per ECA, 1955.

Seed legislations

Until 1966, there was no Central Legislation on Seeds. The Seeds Act was enacted in 1966 to ensure that farmers get good quality seeds. Quality is ensured through variety development. Seed legislation provides notification of varieties/kinds of crops, certification, labelling of seeds, seed testing; and the Seeds (Control) Order, provides licensing of dealers, display of stock etc.

Seeds Act, 1966: Seeds Act, 1966 and Seeds Rules, 1968 provide certification and minimum quality standards of notified kinds/varieties. The seed legislation authorizes formation of advisory bodies like Central Seed Committee, Central Seed Certification Board and its sub-committees, Seed Certification Agencies, Seed Testing Laboratories, Appellate Authorities, etc. Seed quality control as envisaged in the Act is to be achieved through pre-and post-marketing control, voluntary certification and compulsory labelling of notified kind/varieties. The notification of the varieties is done under Section 5 of the Seeds Act in consultation with the Central Seed Committee. Minimum limits for germination, physical and genetic purity of varieties/hybrids have been prescribed and notified for labelling the seeds of notified kind/varieties under Section 6(a) of the Seeds Act. Size, colour and content of the label are also notified under Section 6(b) of Seeds Act.

Seed testing/analysis. There is a provision to set up a Central Seed Laboratory and

State Seed Laboratory to discharge functions enshrined under Section 4(1) and 4(2) of the Seeds Act. At present, there are 108 Seed Testing Laboratories, 23 State Seed Certification Agencies and 35 Seed Law Enforcement Agencies. For obtaining uniformity in seed testing at national level, the Government of India, Ministry of Agriculture, Department of Agriculture and Cooperation has started the National Seed Research and training Centre (NSRTC) at Varanasi (Uttar Pradesh) during 2005. The NSRTC is serving as Central Seed Testing Laboratory (CSTL) as well as Referral Laboratory for court for the entire country. During 2005-06, 3.84 lakh seed samples were tested in the Seed Testing Laboratories of different states, out of which 38,649 seed samples were found to be sub-standard. The functions of the Central Seed Testing Laboratory is to initiate testing programme in collaboration with the State Seed Laboratories designed to promote uniformity in test results between all seed laboratories in India. A lot of financial support has been given by the Ministry of Agriculture, Government of India to seed labs since Sixth Five-Year Plan. The State governments could appoint seed analysts through notification in the Official Gazette under Section 12 of the Seeds Act, defining his geographical area of jurisdiction.

Appointment of Seed Inspector. The state governments, under Section 13 of the Act may appoint such persons as it thinks fit, having prescribed qualification through notification as Seed Inspectors, and define the areas within which they shall exercise jurisdiction for enforcing the Seed Law. Seed Inspectors appointed under relevant provision have adequate power under Section 14 of the Seeds Act to draw the samples of notified kind/varieties of seeds from the source where the seeds are being sold. Seed Inspectors can seize the stock of the seed, and issue stop sale order in case the seed under reference contravenes the Act and Rules.

Penalty. If any person contravenes any provision of the Act or Rules, or prevents a seed inspector from taking sample under this Act, or prevents a seed inspector from exercising any other power conferred on him, such person could be punished under Section 19 of the Act with a fine of Rs 500 for the first offence. In the event of such person having been previously convicted of an offence under this Section, there is provision for imprisonment for a term, which may extend to 6 months, or with fine, which may extend to Rs 1,000 or with both.

Seeds (Control) Order, 1983: The Ministry of Civil Supplies through an order dated 24 February 1983 had declared the seed for sowing or planting of food crops, fruits, vegetables, cattle fodder and jute to be essential commodities in exercise of power conferred by Section 2(a)(viii) of Essential Commodities Act, 1955. It was followed by the issue of Seeds (Control) Order dated 30 December 1983 by the Ministry of Agriculture, Department of Agriculture and Co-operation in exercise of powers contained in Section 3 of Essential Commodities Act which deals with Central Government's power to control and regulate production, supply and distribution of essential commodities. A number of Seeds Dealers' Association and Bodies had challenged the order in the High Court on the ground that seeds of the above mentioned categories do not constitute essential commodities. However, the Supreme Court in its order dated 20 October 1993 upheld the validity of the Seeds (Control) Order. After consideration of all relevant aspects, it was decided that the order be implemented by the state governments with effect from 01 July 1994. The Seeds (Control) Order 1983 had been notified as per Gazette Notification GSR 932 (E) dated 30 December

1983. The notification under reference holds good and remains operative. Joint Secretary (Seeds), Government of India, Ministry of Agriculture, Department of Agriculture and Co-operation has been appointed as Seed Controller for implementation of the Seeds (Control) Order. During 2005-06, a total of 62,381 seed samples were drawn by the notified seed inspectors and 72 cases were taken up for prosecution.

Issue of license. It is one of the legal instruments, being enforced to check the supply of inferior seeds of notified and unnotified seeds to the farmers. All persons carrying on the business of selling, exporting and importing seeds will be required to have a license to carry on the business in accordance with terms and conditions of license granted to him. Based on such inquiry, as it thinks fit, the licensing authority may grant or refuse the license in provisions of the Order. A holder of license shall be eligible for renewal.

Seeds Bill, 2004: An outline of the Seeds Bill, 2004 has been prepared on the basis of the recommendation of the Seed Policy Review Group and consultations with the seed experts and the stakeholders. The Seeds Bill, 2004 has been approved by the Cabinet and introduced in the Rajya Sabha and the same has been referred to Parliamentary Standing Committee on Agriculture. The Committee has recommended several modifications in the Bill. These are being examined in consultation with the relevance ministries/departments of the Government of India.

The salient features of the proposed Seeds Bill, 2004 include: compulsory registration of varieties based on performance that ensures the quality of seeds, accreditation of Indian Council of Agricultural Research (ICAR) centres, State Agricultural Universities (SAUs) and private organizations to conduct the performance trials, maintenance of national register of varieties, provision for self certification (accreditation of organizations for certification), accreditation of private seed testing laboratories, regulation of export and import of seeds, regulation of horticultural nurseries, exemption for farmer to save, use, exchange, share or sell their seeds without registration and brand names; enhancement of penalty for major and minor infringement, provision of compensation to the farmer; and inclusion of provision to regulate the Genetically Modified (GM) crops and ban on terminator seeds.

Protection of Plant Varieties and Farmers' Rights Act, 2001: *Authority for the act and registry.* There is a provision for an Authority for protection of plant varieties and farmers' rights at national level (Chapter II (Sec.3-11)) and also a provision for a registry. The Authority shall be an independent and permanent body vested with exclusive authority for implementation of the Act. It shall have a broad-based composition comprising scientists, state representatives, farmers/tribals, women's organizations etc. There shall also be a Standing Committee on farmers' rights. A registry shall also be there in the Authority for facilitating the registration of plant varieties along with provision of branch offices. A national register of plant varieties shall be maintained.

Implementation of legislation on Plant Varieties and Farmers' Rights Protection. The scheme for implementation of legislation on Plant Varieties and Farmers' Rights Protection was launched during the Ninth Five-Year Plan. The Bill was passed by both the Houses of Parliament and was assented to by the President of India in October 2001. The implementation of this Legislation involves the setting up of a Plant Varieties and Farmers' Rights Protection Authority, which will give effect to the provisions of the Act.

Objectives of the legislation. The objectives are (i) to stimulate investments for research and development both in the public and the private sectors for the development of new plant varieties by ensuring appropriate returns on such investments; and (ii) to facilitate the growth of seed industry in the country through domestic and foreign investment, which will ensure the availability of high quality seeds and planting material to Indian farmers.

Salient features of the legislation. (i) The legislation extends to all categories of plants except micro-organisms, (ii) in order to be eligible for protection, a variety must be new, distinct, uniform and stable; and (iii) the legislation contains provisions for compulsory licensing in the public interest.

Farmers will continue to enjoy their traditional rights to save, use, exchange, share and sell their produce of the protected variety with the only restriction that the farmers will not be able to sell branded seed of the protected variety for commercial purposes. Researchers will remain entitled for use of any variety registered under the Act for conducting experiment or research, or the use of any variety for the purpose of creating other varieties. There is also provision for protection of different kinds of already existing varieties, which is supported by a provision for 'essentially derived varieties' for honoring the contribution of an earlier breeder. Other important provisions include benefit sharing with owners of earlier protected varieties, and compulsory licensing to get the production of seed of a registered variety undertaken in situations when the reasonable requirements of the public for seed have not been satisfied. The Rules under the "Protection of Plant Varieties and Farmers' Rights Act, 2001" have been notified in the Gazette. The Protection of Plant Varieties and Farmers' Rights Authority was set up to administer the Act. The Chairman of the Authority has been appointed. The Central Government has so far notified 15 crops with their genera, viz. Black Gram, Bread Wheat, Cotton (Tetraploid), Cotton (Diploid), Chickpea, Field Pea, Green gram, Jute, Kidney bean, Lentil, Maize, Pearl Millet, Pigeon pea, Rice and Sorghum eligible for registration of varieties.

Pests and pesticide legislations

Pesticides: Import, manufacture, sale and distribution of pesticides is regulated under the Insecticides Act, 1968 and Insecticides Rules, 1971. The Act is now referred as the Insecticide (Amendment) Act, 2000. There is a provision for registration of pesticides at the Central Government level and licensing for manufacturing and sale of pesticides by states/UT Governments after registration.

The Registration Committee constituted under Section 5 of the Insecticides Act, 1968 registers pesticides only after satisfying itself regarding their efficacy and safety to human beings and animals. If the pesticides are used as per the guidelines contained on their labels and leaflets, they do not cause any damage to human beings, animals or the environment.

The Act provides for notification of four important functionaries for this purpose, viz. Licensing Officer, Appellate Authority, Insecticide Inspector and Insecticide Analyst, to ensure that only genuine/quality pesticides are dispensed/distributed in the market. Stringent administrative/legal action is taken against defaulters of law by the State/Union Territories.

Further, the government has set up a Task Force in the Department of Agriculture

and Co-operation to get pesticide samples drawn for analysis, to check quality thereof by the notified Central Insecticide Inspectors.

There is a network of 49 State Pesticide Testing Laboratories and 2 Regional Pesticide Testing Laboratories of the Central Government, and the Central Insecticides Laboratory, established under Section 16 of the Insecticides Act, 1968 to test and analyze the quality of insecticides. About 50,000 samples are drawn and tested annually. These State Pesticides Testing Laboratories (SPTLs) are located in 20 states and one union territory with a total annual capacity of 51,440 samples. Besides, two Regional Pesticide Testing Laboratories (RPTLs) at Kanpur and Chandigarh, have also been set up for supplementing the resources of the states/union territories in the analysis of pesticides, particularly for those states/union territories that do not have their own State Pesticide Testing Laboratory. A grant of Rs 240 lakh was released during 2005-06 for strengthening/setting up of SPTLs.

At the central level, Central Insecticides Laboratory has been set up under Section 16 of the Insecticides Act, 1968, to perform the statutory role of referral analysis.

Therefore, both central and state governments implement the Act. The Central Government is responsible for registration of pesticides and state governments are responsible for enforcement of the provisions relating to manufacture, sale, transport, distribution and use. The manufacturing and sale licensing are given by state governments. Central and state governments are both responsible for quality control, and for the purpose, there are laboratories at centre, state and regional levels. Under the Act, there are two statutory bodies. One, the Central Insecticide Board, which is constituted under Section 4 of the Insecticides Act, 1968. The Chairman of the Board is Director-General of Health Services, Ministry of Health and Family Welfare, Government of India. The functions of the Board are to advise central and state governments on technical matters, viz. (i) safety measures necessary to prevent risk to human beings, animals and the environment in manufacture, sale, storage, distribution, use etc.; (ii) assess suitability for aerial application, (iii) specify shelf-life, (iv) advise residue tolerance limit and waiting period, (v) suggest colourization, (vi) recommend inclusion of chemicals/substances in the schedule as insecticide, and (vii) other functions incidental to these matters.

Another statutory body is Registration Committee (RC) constituted under Section 5 of the Insecticides Act, 1968. Agriculture Commissioner, Government of India, is the Chairman of the Registration Committee. The function of RC is to register the pesticides after satisfying itself regarding efficacy of the pesticide and its safety to human beings, animals and the environment. It also registers pesticides after scrutinizing the formulae, verifying claims of efficacy and safety to human beings and animals, specify the precautions against poisoning and any other function incidental to these matters.

Before the registration of any pesticide, the registration committee also evaluate data on various parameters such as chemistry, acute toxicity, long-term and supplementary toxicity, shelf life, persistence in water, soil and environment; and its efficacy. After being satisfied with these data, the Registration Committee registers the pesticides. Under the provisions of the Insecticides Act, the pesticides are registered under the following sections.

Section 9 (3)(b): Any new molecule/pesticide which have to be registered for the first time in the country is registered provisionally for a period of 2 years on such

conditions as may be specified by the registration committee. This registration is for data generation and commercialization is not permitted under this Section.

Section 9 (3): After fulfilling the pending enquiry or the conditions as specified by the registration committee while registering the pesticide provisionally, the pesticide may be registered regularly under this section. It is a permanent registration, and commercialization is permitted.

Section 9 (4): If an insecticide has been registered regularly under Section 9(3) on application of any person, then any other person desiring to import or manufacture insecticide on payment of prescribed fee be allotted a registration number and granted a certificate of registration in respect thereof on the same conditions on which the insecticide was originally registered.

Data requirement for registration of any pesticide includes various parameters of chemistry, bioefficacy, toxicity and packaging. Onus of data submission lies with the applicant. It varies with the nature of pesticide, type of material (technical or formulation), and purpose of registration (domestic consumption or export). The Registration Committee based on assessment of data imposes certain restrictions of instructions or cautionary statements to be given on labels and leaflets. For example: (i) carbaryl – should not be sprayed on the crops at the following stage (given), (ii) methyl parathion – permitted only on those crops where honeybees are not acting as pollinator, (iii) B.t.k – should not be used near the places of sericulture, (iv) permethrin 5% smoke generator (s.g.) – permitted through pest control operators only should be used, etc.

Labels and leaflets: As per the rules on insecticides, the labels and leaflets approved by the registration committee should form the integral part of containers of every pesticide. These are identification marks of every pesticide. The labels and leaflets are required to contain information on: (i) name of the product, (ii) chemical composition, (iii) name of the manufacturer, (iv) symptoms of poisoning, (v) first-aid measure, (vi) cautionary statements, (vii) directions concerning usage, (viii) restrictions (if any), (ix) instructions for storage, (x) information regarding disposal of used packages, (xi) application equipment, and (xii) waiting period.

Safety concern. Registration Committee ensures that potential benefits from pesticides are obtained without any adverse implications as regulatory agencies are aware that the damage to ecosystem may lead to reduced agricultural production, decrease quality of environment and also economic losses outside agriculture. However, since the pesticides are not used according to recommended instructions, the pesticide residues are detected. Pesticide residues could affect human health and also influence the international trade.

For registration of any pesticide, data are required on toxicity which includes data generated on acute and sub-acute toxicity (oral, dermal and inhalation) and chronic toxicity such as carcinogenicity, effect on reproduction and neurotoxicity, etc. on animals.

Toxicity data give information on: (i) No Observes Effect Level (NOEL)-(which is the highest dose that does not give any adverse effect?) The NOEL is extrapolated to human being by dividing by 100 (10×10) as safety factor to derive Acceptable Daily Intake (ADI); (ii) Acceptable Daily Intake (ADI)-this is the dose of pesticide taken daily by a human being that is not likely to lead to suffering from any adverse effect

(terminal residue is determined after observing pre-harvest interval. With food consumption pattern, pesticide residue and ADI, Minimum Residue Limit (MRL) of pesticide on crop and food is established.); (iii) Quality Control of Pesticides-for quality control of pesticides, the specifications as approved by the registration committee and later formulated by Bureau of Indian Standards are required to be followed by the manufacturers/importers. The states and union territory (UT) authorities monitor the quality of pesticides in their respective state/UT by appointing the insecticide inspectors. The insecticide inspectors collect samples for analysis and send to the insecticide analysts for testing; (iv) Registration of Safer Formulations-the adverse effects due to pesticides are not only caused by active ingredient but also solvents, carriers, emulsifiers and other constituents of the formulation. Considering this, a number of safer formulations, viz. emulsifiable wettable (EW), flow able, soluble liquids and granules are registered for use. The Registration Committee has framed simplified guidelines for registration of safer formulations; (v) Registration of Biopesticide-to promote the concept of integrated pest management (IPM) technology and also to reduce the use of chemical pesticides, Registration Committee has framed simplified guidelines/data requirements for registration in respect of biopesticides. Biopesticides based on *Bacillus*, neem, *Trichoderma*, *Pseudomonas*, *Beauveria*, *Metarhizium*, nuclear polyhedrosis virus, etc. are registered under the Act.

Review of pesticides. Government keeps on reviewing those registered pesticides for their continued use or otherwise in the country, which is known to cause hazards to human health and environment. Based on such review, use of 27 pesticides and 4 formulations of 3 other pesticides have been banned, restrictions have been imposed on 7 other pesticides and 18 pesticides have been refused registration.

Pests: The Destructive Insects and Pests Act, 1914 passed by the Central Government provided for measures against entry of pests and diseases from other countries into India. Suitable provisions also exist in the Act for preventing the spread of pests and diseases from one state to another within the country. For implementing the provisions relating to the prevention of the entry of injurious pests and diseases, a chain of plant quarantine and fumigation stations have been established at all import airports, seaports and land frontiers. The state governments have also passed suitable legislations for dealing with the epidemics of plant diseases and pests. In exercise of the powers conferred by sub-section (1) of Section 3 of the Destructive Insects and Pests Act, 1914 (2 of 1914), the Central Government made the Plant Quarantine (Regulation of Import into India) Order, 2003 for the purpose of prohibiting and regulating the import into India of agricultural articles mentioned therein. The Order provides for: general conditions for import (permit for import of plant and plant products etc.), special conditions for import, post-entry quarantine, appeal and revision, power of relaxation, repeals and savings, etc. The details of text of the Order have been made available at website www.quarantine.india.org for the benefit of importers.

Plant quarantine legislations

Plant quarantine is a government endeavour enforced through legislative measures to regulate the introduction of planting material, plant products, soil, living organisms etc. in order to prevent inadvertent introduction of pests and pathogens harmful to the agriculture of a region and if introduced, prevent their establishment and further spread.

As early as in 1914, the Government of India passed a comprehensive Act, known as Destructive Insects and Pests (DIP) Act, to regulate or prohibit the import of any article into India likely to carry any pest that may be destructive to any crop, or from one state to another. The DIP Act has since undergone several amendments. In October 1988, New Policy on Seed Development was announced, liberalizing the import of seeds and other planting material. In view of this, Plants, Fruits and Seeds (Regulation of import into India) Order (PFS Order) first promulgated in 1984 was revised in 1989. The PFS Order was further revised in the light of World Trade Organization (WTO) Agreements, and the Plant Quarantine (Regulation of Import into India) Order 2003 [hereafter referred to as PQ Order], came into force on January 1, 2004 to comply with the Sanitary and Phytosanitary Agreement. Till August 25, 2009, 14 amendments of the PQ Order were notified and five draft amendments were prepared, revising definitions, clarifying specific queries raised by quarantine authorities of various countries, with revised lists of crops under the Schedules VI, VII and quarantine weed species under Schedule VIII. The revised list under Schedules VI and VII now include 677 and 286 crops/ commodities, respectively, and Schedule VIII now include 31 quarantine weed species. The PQ Order ensures the incorporation of “Additional/ Special Declarations” for import commodities free from quarantine pests, on the basis of pest risk analysis (PRA) following international norms, particularly for seed/ planting material.

The Directorate of Plant Protection, Quarantine and Storage (DPPQS) under the Ministry of Agriculture is responsible for enforcing quarantine regulations and for quarantine inspection and disinfection of agricultural commodities. The quarantine processing of bulk consignments of grain/ pulses etc. for consumption and seed/ planting material for sowing are undertaken by the 35 Plant Quarantine Stations located in different parts of the country and many pests were intercepted in imported consignments. Import of bulk material for sowing/ planting purposes are authorized only through five Plant Quarantine Stations. There are 41 Inspection Authorities who inspect the consignment being grown in isolation in different parts of the country. Besides, DPPQS has developed 21 standards on various phytosanitary issues such as on PRA, pest-free areas for fruit flies and stone weevils, certification of facilities for treatment of wood packaging material, methyl bromide fumigation etc. Also, two Standard Operating Procedures have been notified on Export Inspection & Phytosanitary Certification of plants/plant products and other regulated articles and post-entry quarantine inspection.

The National Bureau of Plant Genetic Resources (NBPGR), the nodal institution for exchange of plant genetic resources (PGR) has been empowered under the PQ Order to handle quarantine processing of germplasm including transgenic planting material imported for research purposes into the country by both public and private sectors. NBPGR has well-equipped laboratories and green house complex. A containment facility of CL-4 level has been established for processing transgenics. At NBPGR, adopting a workable strategy, a number of pests of great economic and quarantine importance have been intercepted on exotic material, many of which are yet not reported from India. If not intercepted, some of the quarantine pests could have been introduced into our agricultural fields and caused havoc to our agriculture.

Locust control and research: This scheme is implemented through Locust Warning

Organization (LWO), established in 1939, and was amalgamated with the Directorate of Plant-Protection, Quarantine and Storage in 1946. This organization is responsible for monitoring and controlling the desert locust over an area of 2.0 lakh km² in the Scheduled Desert Area (SDA) of Rajasthan, Gujarat and parts of Haryana. Locusts have been an ever impending threat to India, being an international pest they need international co-operation for effective control strategy. The monitoring and control of locust in SDA is an international obligation. Locust control work requires community approach, depends on high intelligence, quick communication of information and education of staff through trainings and readiness of equipments and expert deployment of resources.

Genetically modified organisms (GMOs) and agricultural biotechnology

With the advent in molecular biology sciences and DNA-recombinant technology, the last 15 years saw a spurt of activities in the agricultural biotechnology and its commercial application for improvement of crops, animals and micro-organisms. The world over, biotechnology along with information technology has revolutionized the entire concept of improvement of living species. With free movement of agricultural goods after collapse of national restrictions under WTO agreement, the issues of non-tariff barriers, ethics, the environmental concern, health etc. have taken primary stage, and hence a series of legislations earlier unconcerned with agriculture have come in forefront during the last decade.

In India, the release of *Bt* cotton, the first transgenic crop (GMO) witnessed a prolonged debate on the acceptance of biotech products in agriculture. However, this is followed by a clear boost in research in the area, and hence it is necessary to understand as to how the GMOs are governed legally by the Government.

GMOs are regulated products in India since 1989. The rules and guidelines applicable for transboundary movement of GMOs are provided in:

- The Rules for the manufacture, use, import, export and storage of hazardous microorganisms, genetically engineered organisms or cells, 1989 under the Environment Protection Act, 1986. The Rules came into force from 01.10.1993.
- Protection of Plant Varieties and Farmers' Rights Act (PPVFRA), 2001
- National Biodiversity Act, 2002
- National Seed Policy, 2002
- Plant Quarantine (Regulation of Import into India) Order, 2003
- Foreign Trade Policy, 2006
- Food Safety and Standards Act, 2006
- Recombinant DNA Safety Guidelines, 1990
- Revised Recombinant DNA Safety Guidelines, 1994
- Revised Guidelines for Research in Transgenic Plants & Guidelines for Toxicity and Allergenicity Evaluation of Transgenic Seeds, Plants and Plant Parts, 1998.

The guidelines by Department of Biotechnology (DBT) cover the entire spectrum of activities relating to GMOs and deliberate/accidental release into environment of organisms, plants, animals and products derived from r-DNA technology. The Revised Guidelines of 1998 encompassed Research in Transgenic Plants and Guidelines for Toxicity and Allergenicity Evaluation of Transgenic Seeds, Plants and Plant Parts; add to the regulatory architecture by calling for toxicity and allergenicity data for

ruminants such as goats and cows from consumption of transgenic plants. Another important amendment in the 1998 guidelines is the requirement to generate data on comparative economic benefits of a modified plant. Thus, the 1998 guidelines demand for a demonstration that a transgenic crop is both 'environmentally safe and economically viable'. Thus, when the government granted permission for large-scale field-testing of transgenic cotton in India in July 2000, the first transgenic crop to receive such approval and data has been generated on cost of transgenic seed, projected demand and the area to be covered under transgenic cotton cultivation.

There is a multi-tiered Inter-ministerial Regulatory Framework in India having six Statutory Committees Viz., Recombinant DNA Advisory Committee (RDAC), Institutional Biosafety Committee (IBSC), Review Committee on Genetic Manipulation (RCGM), Genetic Engineering Approval Committee (GEAC), State Biotechnology Coordination Committee (SBCC) and District Level Committee (DLC) prescribed under the Rules, 1989 to implement the legal instruments to assess and ensure biosafety of genetically engineered organisms.

General procedure for approval of environmental release of transgenic crops

Applicant/ investigator needs to inform the IBSC about the research work intended to be carried out by him/ her. The IBSC notes the intentions of the work at institutional level and based on the risk category, it recommends to RCGM for noting/ approval to conduct research. RCGM directs the applicant to generate biosafety data, which includes environmental, toxicity and allergenicity and agronomic advantage of the GMOs and products thereof on case by case basis. RCGM regularly reviews the progress of the work and accords approval to generate toxicity and allergenicity data. The applicant needs to submit the information generated on the transgenic crops at lab and greenhouse level and also during the initial contained field trials level for obtaining approvals to conduct relevant studies. After RCGM satisfies itself about the safety of the GMOs/ r-DNA products, it recommends to GEAC for granting approval for environmental clearance for release into the environment.

The GEAC, after examination of data and recommendations of the RCGM may direct the applicant to generate more data on safety of the environment, if necessary. Based on the data available, the GEAC grants approval for environmental clearance. Also based on the nature of the products, the applicant has to follow other statutory requirements applicable to the products for commercialization.

Import of GMOs

The procedure for import of GMOs has been categorized into the following three categories based on their intended use as given below:

- import of GMOs for R & D
- import of GMOs for intentional release (including field trials)
- import of GM foods

The import of GMOs for intentional release into the environment and GM foods is dealt by GEAC under MoEF. The National Bureau of Plant Genetic Resources (NBPGR) was entrusted with the responsibility of quarantine processing of the germplasm and transgenic planting material meant for research purposes vide Govt. of India Notification No. GSR 1067(E) dated 05.12.1989 and the Plant Quarantine

(Regulation of Import into India) Order, 2003 vide Govt. of India Notification No. S.O.No.1322(E), dated 18.11.2003. The import permit is issued after the technical clearance for import is accorded by the RCGM. The national identity numbers (Exotic Collection number) are also allocated to each and every accession of the imported transgenic material at NBPGR. Till date, ~8000 samples of transgenic crops (*Brassica*, soybean, cotton, maize, rice, wheat, tobacco, potato and chickpea) have been processed for quarantine clearance wherein they are tested for associated exotic pests, if any, and also for ensuring the absence of terminator gene technology (embryogenesis deactivator gene) which are mandatory legislative requirements. A number of pests have been intercepted of which *Peronospora manshurica*, downy mildew of soybean from USA and *Cryptolestes ferrugineus* in paddy from Singapore are yet not reported from India.

Initiatives to streamline the national regulatory system

- Notification exempting GM Processed Food from purview of Rules, 1989 issued in August, 2007 has been kept in abeyance (MoEF)
- Notification empowering Seed Inspectors, Seed Analysts and Laboratories notified under Seed Act, 1966 under EPA, 1986 issued in September, 2006 (MoEF)
- Guidelines for Conduct of Confined Field Trials of Regulated, Genetically Engineered Plants in India and Standard Operating Procedures (SOPs), 2008 adopted by GEAC/ RCGM
- ICMR Guidelines for the Safety Assessment of Foods derived from Genetically Engineered Plants in India, 2008 adopted by GEAC/RCGM
- Protocols for Safety Assessment of Genetically Engineered Plants, 2008 adopted by GEAC/ RCGM
- Foreign Trade Policy, 2006 requires mandatory declaration of GM products at port of entry (Ministry of Commerce and Industries)
- Food Safety and Standards Act, 2006 (Ministry of Health and Family Welfare)
- Notification on Mandatory Labeling of GM Products, 2005 (Ministry of Health and Family Welfare)
- Report of the 'EXPERT GROUP ON GM FOOD POLICY', 2005 (Ministry of Health and Family Welfare)
- Notification exempting Therapeutic Proteins from Rules 1989 issued in October 2006 (MoEF)
- Environment Policy, 2006 (MoEF)
- National Biotechnology Strategy, 2005 (DBT)
- Report of the Task Force on Recombinant Pharma, 2005 (MoEF)
- Report of the Task Force on Agriculture Biotechnology, 2004 (Ministry of Agriculture)

Other input legislations

There are a series of other input legislations, particularly with respect to cultivation of fallow and wasteland, soil and water conservation, irrigation (command area development programme) etc., which have direct bearing on improvement of agricultural production. However, as with other land and water legislations, the role

of each state is very important in framing them. A few examples are discussed here.

- (i) There are a number of legislations to bring fallow or untilled land under cultivation. Uttar Pradesh, Bihar, Madhya Pradesh, Punjab and some other states brought legislations for compulsory cultivation of fallow or wasteland. If landlord fails to do so in a specified time, the government is empowered to get the land cultivated by a tenant. In Madhya Pradesh, the Cultivation of Lands Act, 1966 was passed repealing the provisions of the Madhya Bharat Law for cultivation of fallow and wasteland. Similarly, laws are available for reclamation of land. In Maharashtra, Boards have been established for reclamation of *Khar* and *Khojan* lands. The Bihar Soil and Water Conservation and Land Development Ordinance was promulgated in 1970.
- (ii) Besides the Fertilizer Control Orders, most of the states have amended their Municipal Acts for organic manures and farmyard manures, making obligatory on the part of Municipal Committees to adopt composting as a method of refuse disposal. The Gram Panchayat Acts have in themselves a clause regarding compulsory composting.
- (iii) To prevent soil deterioration owing to erosion, most of the states have enacted legislation, empowering their governments to take up anti-erosion measures like massive soil conservation through land leveling and in recent years promote the watershed programmes through public-private-NGO participation.
- (iv) Provisions have been made in several states for restructuring, improving and maintaining irrigation works. Some have passed on the maintenance work to Panchayati Raj bodies. Similarly, an Integrated Area Development Programme is also being taken up in Irrigation Commands in many states. Rajasthan Government has enacted the Rajasthan Colonization Amendment Act, 1974 (Act No. XXII of 1974) under which the allottees and the tenants can be directed to carry out land development work at their own cost.

With increasing exploitation of groundwater resources for irrigation, the need for regulating such misuse has been felt. Based on the Model Bill of Government of India in 1970, many states have made necessary legislations for groundwater use and recharging. There are undergoing series of amendments and Ministry of Water Resources is critically looking into the matter for giving guidance to states.

LABOUR LAWS IN AGRICULTURE

Important sections in the rural population that can benefit from welfare measures are agricultural labourers, an overwhelming majority of whom live below the poverty line. The practical method by which they can be helped to achieve a higher standard of living is only by improving their levels of income. For this purpose, the Government of India enacted the Minimum Wages Act, 1948. It is applicable *inter alia* to employment in agriculture. This Act was amended in 1954, 1957 and 1961 and was extended to Jammu and Kashmir in 1970. The Act empowers the states to fix the minimum wages for various categories of agricultural workers. The implementation of the various provisions of the Minimum Wages Act, 1948, in agriculture, is beset with considerable difficulties because of the nature of work, fragmentation of holdings, payment of wages in kind, borrowings by the agricultural labour, vagaries of weather, traditions and customs, lack of adequate organization among the agricultural labour

and illiteracy among the employers and the employees alike.

The following laws are also applicable to the agricultural labourers: (a) Payment of Bonus Act, 1965, applicable to agricultural labourers (is not excluded from the purview of the Minimum Wages Act); (b) Employees' Provident Fund and Family Pension Act, 1972; (c) Payment of Gratuity Act, 1972; (b) and (c) Acts do not cover agricultural labour as a class by itself, but both the Acts are applicable to labourers employed by plantations, fruit orchards, etc.; (d) The Industrial Disputes Act, 1947-applicable to labourers on agricultural farms run on commercial lines; the Act does not apply to other labourers engaged in agriculture; (e) The Trade Unions Act, 1926 which provides for the registration of unions; the Act is applicable to registered unions of agricultural workers; and (f) The Workmen's Compensation Act, 1923 is applicable *inter alia* to workers employed in farming with tractors and other contrivances driven by steam or other mechanical power or by electricity.

The Kerala Agricultural Workers Act, 1974, has introduced a new dimension in legislation for agricultural labour. This enactment provides for the security of employment and welfare of agricultural workers. An important feature of this Act is the setting up of the Agricultural Workers Provident Fund to which both the employer and the employee make contributions at a given rate. The landowner or the employer shall not reduce the wages of any agricultural labour by reason only of his liability for a payment of contribution to the fund. The enactment also fixes the number of hours at 8 that an adult worker is required to put in per day. No adolescent or child is to work for more than 6 hours per day. The periods of work on each day shall be so fixed that no period shall exceed 4 hours continuously, and no agricultural labourers works for more than 4 hours before he has a rest for at least half-an-hour. Conciliation machinery is conceived in the Act to deal with cases of dispute on the issue of wages.

The Act provides for punishment of various offences varying from imprisonment for a term that may extend to 6 months or fine, which may extend to Rs 1,000 or both. The Act also provides that the executive authority of every local body shall prepare a register of agricultural workers residing within the jurisdiction of the local authority and the Act enjoins on every land-owner that he shall maintain such registers and records as may be prescribed by the rules. This enactment has been brought into force recently.

The Bonded Labour System (Abolition) Ordinance, 1975 came into force with effect from 25 October 1975. The Ordinance provided for the abolition of the bonded labour system with a view to preventing the economic and physical exploitation of the weaker section of the people and the matters connected therewith or incidental thereto. The Ordinance has since been replaced by an Act of the Parliament on 9 February 1976. Rules under this Act were finalized and published on 28 February 1976.

The National Policy on Skills Development, 2009 approved by the Union Cabinet in February 2009 aims at empowering all individuals to enable them to get access to decent employment and to promote inclusive national growth. Further, the policy promotes public-private partnership to ensure that the needs of the industry are met.

The Union Cabinet has approved the National Policy on Safety, Health and Environment at Workplace in 2009 to address the issue of securing health and safety of workers in the country as envisaged in the Constitution. It provides general guidelines

for all stakeholders such as Governments, inspection authorities, employers, research and development institutions, educational institutions, etc. for developing a safety culture and environment at all work places. The policy envisages actions for improving safety, health and environment at workplace by providing for a statutory framework, administrative and technical support, system of incentives, prevention strategies and their monitoring and inclusion of safety health and environment aspects in other related national policies. It also spells an action programme comprising development of standards and codes of practices, encouraging compliance by stakeholders, increasing awareness, promoting and proving for research and development, knowledge and skill development, practical guidance and providing financial and non-financial incentives. The provisions of the policy would be reviewed every five years, if necessary.

LEGISLATION ON AGRICULTURAL MARKETING

An organized marketing service in the country started in 1935 with the establishment of a central organization, the office of the Agricultural Marketing Adviser to the Government of India, now known as the Directorate of Marketing and Inspection in the Ministry of Agriculture, Government of India. A series of measures, such as the Agricultural Produce Market Act, the Weights and Measures Act, the Agricultural Produce (Grading and Marketing) Act, etc. have been enacted for the marketing of agricultural produce in more orderly manner beneficial to the farmers. Under these measures, marketing practices are regulated, marketing charges are clearly defined and specified, unwarranted deductions are prohibited, correct weighments are ensured, suitable arrangements for the settlement of disputes regarding quality-weighments, deductions, etc. are made, reliable and correct information of prices is supplied and suitable quality standards and standard contracts for buying and selling are enforced. The Agricultural Produce Market Act exists in all the states and the union territories, except in Kerala, Manipur and the union territories of Andaman and Nicobar Islands, Dadra and Nagar Haveli, Lakshadweep, and Daman and Diu, to protect the farmers from exploitation by middlemen and traders. So far, 7,418 agricultural produce markets have been regulated under the different State Agricultural Produce Market Acts in the country.

Studies indicated that the institutions of regulated markets set up to strengthen and develop agricultural marketing in the country have, however, achieved a limited success in providing transparent and efficient marketing practices, development of required infrastructure, etc. The restrictive legal provisions did not augur well with competitive market structure. The Government of India under the Ministry of Agriculture appointed an expert Committee in December, 2000 followed by an Inter-Ministerial Task Force on agricultural marketing reforms to review the present system and make it more efficient and competitive. The recommendations of the Task Force were discussed with the State Governments. On request from states/union territories, a Model Act was developed to assist the states in removing barriers, whether legal or policy induced, which introduced inefficiencies and monopoly rents in the functioning of agricultural markets. It also provides for establishment of direct purchase centres, promotion of public-private partnership in management and development of markets along with contract farming, etc.

The Model Act has been circulated to all states/union territories for further follow

up action as the subject matter falls within their purview. The feedback received by the Department indicated that Madhya Pradesh, Tamil Nadu, Himachal Pradesh, Andhra Pradesh, Sikkim and Nagaland have amended their respective Acts on the lines of Model Act and other state governments/union territories administration had initiated action for amending their State Marketing Regulation Acts.

Under the Weights and Measures Act, the state governments have developed elaborate organizations to ensure that only standardized, tested and stamped weights, measures and balances are used in the country. The introduction of the metric system in 1958 throughout the country, replacing the innumerable systems of weights and measures prevalent in different parts, has been an important step towards the improvement of trade practices.

The Agricultural produce (Grading and Marking) Act, 1937 (amended in 1986) provides for the grading and marking of the agriculture and allied commodities. Agricultural produce has been defined to include all produce of agriculture or horticulture, and all articles, food or drink, wholly or partly manufactured from any such produce, and fleeces and the skins of animals. The Act has a provision for making Rules to carry out the provisions of the Act. Till day, 119 Grading and Marking Rules covering 181 commodities have been notified. Standards prescribed under the provision of the Act are popularly known as 'Agmark' standards. The purity standards under the provision of Prevention of Food Adulteration (PFA) Act, 1954; Prevention of Food Adulteration (1st Amendment) Rules, 2002; Prevention of Food Adulteration (Amendment) Rules, 2006; Prevention of Food Adulteration (5th Amendment) Rules, 2008 and Bureau of Indian Standards (BIS) Act, 1986; The Bureau of Indian Standards Rules, 1987; The Bureau of Indian Standards (Certification) Regulations, 1988 are invariably taken into consideration while framing the Agmark standards. Certification of commodities notified under the provision of the Act is carried out on voluntary basis. Grading is carried out in accordance with the standards notified, following meticulous procedure of sampling, testing, packaging, marking and sealing as per the instructions issued under the Act and Rules. It serves a means of describing the quality of commodities to be purchased or sold by the buyers or sellers all over the country and abroad. This establishes a common trade language and avoids the need for physical checking and handling at many points. The system of grading and quality control under Agmark certification benefits both the sellers and buyers in view of the fact that the government acts as the third party to guarantee quality of the products with this certification mark. Vegetable oils, *ghee*, spices, wheat *atta*, *besan*, honey, pulses, etc. are popularly graded and certified under Agmark. More than 10,000 authorized packers are attending to grading and certification of agricultural commodities. Agmark standards are being harmonized with standards framed by international organizations such as Codex Alimentarius Commission and International Organization for Standardization keeping in view the requirement of World Trade Organization. All the fresh fruits and vegetables exported to European Union are to be inspected and certified by the Directorate of Marketing and Inspection. For this purpose, grade standards of 18 fruits and vegetables have been formulated and harmonized with the standards of European Union and Codex.

The Food Safety and Standards Authority of India (FSSAI) has been established under the Food Safety and Standards Act, 2006 as a statutory body for laying down

science based standards for articles of food and regulating manufacturing, processing, distribution, sale and import of food so as to ensure safe and wholesome food for human consumption. According to the new food safety guidelines being drafted by the FSSAI, there may be provisions of testing and tracing the origin of the food products right back to farm level. Now we have Food Safety and Standards (Amendment) Act 2008.

LEGISLATIONS IN LIVESTOCK SECTOR

Livestock development

India ranks first in milk production in the world. Milk production rose from about 17 million tonnes in 1950–51 to nearly 88 million tonnes in 2003–04, and per caput availability has improved. A series of steps have been taken by the governments at centre and state to boost livestock sector. Fisheries is yet another promising area for India. Recognizing the importance of livestock in the rural economy, Article 49 of the Constitution prescribes that all states shall endeavour to organize agriculture and animal husbandry on modern and scientific lines and shall take steps for preservation and improvement in breeding, conservation of local breeds, prohibition of slaughter of cows, calves and other cattle.

Livestock upgradation

Legislation for upgrading of livestock through improved breeding has been passed in all the states, except Assam and Tripura. In Uttar Pradesh, the Livestock Improvement Act is in force in a few tehsils. The legislative measure provides for the elimination of defective breeding bulls through compulsory castration.

Contagious diseases

Legislative measures have been taken by many states for prevention and control of animal contagious diseases. The law provides for regulation of the entry and movement of infected animals into different states, their registration and treatment, regulation of markets, fairs and exhibitions, cleaning and disinfections of vehicles used for the transport of diseased animals and reporting the occurrence of scheduled diseases. There is also a Central Act, called the Livestock Importation Act, 1898, amended in 2001, under which the Central Government has the authority to regulate, restrict or prohibit the entry by sea, land or air into India of any livestock affected or is liable to be affected by diseases; or the importation of fodder, dung, clothing, harness, etc. pertaining to such livestock. State governments have been empowered by the central government to frame rules under the Act and set up quarantine stations for the purpose. The regulation of import and export of livestock and livestock products, control of exotic disease and certification as per OIE regulations is done through the Animal Quarantine and Certification Services (AQ&CS) under the control of Department of Animal Husbandry Dairying and Fisheries (DADF) through Stations located at New Delhi, Mumbai, Kolkata and Chennai. These Stations are equipped to deal with all imports into the country. Their functions include testing of imported livestock and livestock products for quarantine purposes, export certification of livestock/livestock products as per the requirements of the importing country and as prescribed in the Terrestrial Animal Health Code of OIE and/or implementation of various provisions of the Livestock Importation Act, 1898 (as amended in 2001). To monitor ingress of

exotic diseases a state-of-the-art laboratory exists under the Indian Council of Agricultural Research (ICAR) the High Security Animal Disease Laboratory (HSADL) at Bhopal with Biosafety Level-4 standards. All state-level laboratories, Regional Diagnostic Laboratories, laboratories of the ICAR/ National Dairy Development Board (NDDB), and the HSADL are capable of diagnosing animal diseases. Besides these regulatory provisions, diseases like Bovine Viral Diarrhoea (BVD), Malignant Catarrh Fever (MCF), Rabbit Hemorrhagic Disease (RHD) and Avian Influenza (AI) were recently diagnosed in imported livestock and poultry at entry point. Had they not been intercepted and effectively controlled, they could have potentially played havoc with our livestock and poultry.

Another Central Act is the Glanders and Farcy Act, 1899. During the last few decades, most of the states have framed comprehensive laws for the prevention and control of certain important infectious diseases including glanders, farcy and donvine and have repealed other Acts, whereas others are in the process of being repealed. The following Acts are also available: The Madhya Pradesh Cattle Diseases Act, 1934; The Madras Rinderpest Act, 1940; The East Punjab Animal Contagious Diseases Act, 1948; The Bengal Diseases of Animals Act, 1944; The Assam Cattle Diseases Act, 1948; The Bombay Diseases of Animals Act, 1948; The Orissa Animal Contagious Diseases Act, 1959; The Diseases of Animals Act Mysore, 1949-repealed by the Mysore Animal Diseases (Control Act, 1961); The Madhya Bharat Animal Contagious Diseases Act, 1959; The Rajasthan Animal Contagious Diseases Act, 1959; The Madhya Pradesh Horse Sickness Act, 1960; and The Gujarat Diseases of Animals (Control) Act, 1963.

The main objectives of these Acts are to control the spread of notifiable infectious diseases and to curtail the infection by vaccination, treatment and destruction of infected livestock. The notifiable diseases are: (i) rinderpest or cattle plague, (ii) foot-and-mouth disease, (iii) haemorrhagic septicaemia, (iv) black quarter, (v) anthrax, (vi) tuberculosis, (vii) Johne's disease, (viii) rabies, (ix) glanders and farcy, (x) epizootic lymphagitis, (xi) donvine and dourine, and (xii) surra.

The notification of disease outbreak preventive vaccination of the cattle, control of the movement of animals in the disease-affected area, and compulsory quarantining for fresh birds and animals, compulsory segregation and treatment of cattle in the infected area are the steps taken under these Acts. The Director of Animal Husbandry of a state shall appoint a veterinary officer or inspectors who may take the help of police officers to implement the law in the event of outbreaks.

Prevention and Control of Infectious and Contagious Diseases in Animals Act, 2009 aims to provide for the prevention, control and eradication of infectious and contagious diseases affecting animals, for prevention of outbreak or spreading of such diseases from one State to another, and to meet the international obligations of India for facilitating import and export of animals and animal products and for matters connected therewith or incident thereto.

Marketing of livestock and certain livestock products

Regulated markets have been established in the states under the Agricultural Produce Market Act for regulating market practices in respect of agricultural commodities including livestock products. The Agricultural Produce (Grading and Marketing) Act, 1937, which is a Central Act, provides for the grading and marketing of agricultural

produce with a view to facilitating their organized marketing. Poultry products like eggs, and byproducts like hides and skins, also come under the Act. The carcass, meat and products thereof have been included in the Schedule to the Agriculture Produce (Grading and Marketing) Act, 1937.

Cattle trespass

To prevent the depredations of crops by stray cattle, a Central Act, known as Cattle Trespass Act was passed in as early as 1871 (amended in 1921) for regulating the trespass of cattle. The Act empowers state governments to take steps for checking the damage caused by stray animals to crops and provides for the establishment of a pound for each village, the appointment of a pound-keeper, etc.

Prevention of cruelty to animals

To take effective steps to avoid or reduce unnecessary pain and suffering to animals, the Prevention of Cruelty to Animals Act, 1890, further ammended in 1960 allows for punishment for violating the provisions of the Act. The Animals Welfare Board established under the Act co-ordinates the activities of societies for the prevention of cruelty to animals and animal welfare organizations in various parts of the country and gives them financial assistance for the purpose. The Committee for the Purpose of Supervising Experimentation of Animals ensures that animals or birds are not put to unnecessary pain or suffering while experiments are conducted on them by research and other institutions.

Milk and Milk Product Order 1992

The Government of India promulgated the Milk and Milk Product Order (MMPO), 1992 on 9 May 1992 under the provisions of Essential Commodities Act, 1955 consequent to de-licensing of the dairy sector in 1991. As per the provisions of this Order, any person/dairy plant handling more than 10,000 litres per day of milk or 500 million tonnes of milk solids per annum has to be registered with the registering authority appointed by the Central Government. The main objective of the Order is to maintain and increase supply of liquid milk of desired quality in the interest of the general public and also to regulate the production, processing and distribution of milk and milk products. Government of India has amended Milk and Milk Product Order, 1992 from time to time to make it more liberal and oriented to facilitate the dairy entrepreneurs. The last amendment was notified on 26 March 2002. Now, there is no restriction on setting up of new capacity and the requirement of registration is only for enforcing the prescribed standards of quality and food safety. Altogether, the Central and the State Registering Authorities have registered 751 units with a combined capacity of 8,414.8 million litres/day in the co-operative, private and government sectors as on 31 March 2005.

LEGISLATIONS OF AGRICULTURAL CREDIT AND FINANCE

Agriculture credit policy

The Government of India has initiated various policy measures to improve the accessibility of farmers to institutional sources of credit. The emphasis of these policies has continued to be on progressive institutionalization for providing timely and adequate

credit support. The spate of suicides amongst the farmers in the last few years has brought the subject of credit and finances to Indian farmers on the forefront. The role of moneylenders is again being viewed legally. Various studies revealed that rural indebtedness among the farmers was due to the money lending system and still they are in the clutches of local moneylenders. The terms of money lending were unfavourable and inimical to the interests of farmers. Therefore, in 2004–05, the Government of India emphasized the target of agri-credit to be tripled in three years from Rs 86,000 crore. All the commercial Banks (63.25%), co-operative Banks (26.58%) and Regional Rural Banks (RRBs) (10.17%) have been involved in the credit distribution of Rs 105,000 crore in 2004–05. A series of restructuring measures have been adopted for providing loan to farmers in distress, in arrears and farmers indebted to informal sources. Based on the recommendations of the Committee on Financial System under the Chairmanship of Shri M. Narasimhan (1991), a number of initiatives have been taken to strengthen the Banking system. A series of measures have been taken for improving the flow of institutional credit through novel schemes like Kisan Credit Cards (KCC).

Deccan Agriculturists Relief Act (1879)

In fact, the first attempt at regulating the entire business of money lending was made in Bombay in 1879 under the Deccan Agriculturists Relief Act. Several States passed legislations after the depression of 1930s. The main features of these laws were—licensing and registration of money lenders, maintenance of accounts, fixing maximum rates of interest, protection of debtors from exploitation, furnishing receipts and periodical statement of accounts, penalties for infringement and area specification of money-lending business.

The subject of money lending being a state subject, the laws differ from state to state. However, after the guidelines were framed by the centre for states, several debt-relief legislations were introduced which can be classified as— (i) Moratorium laws, (ii) the total discharge of debt to marginal and small farmers, and rural artisans; (iii) Debt Conciliation Act, and (iv) Acts for scaling down debts and safeguarding the land and productive assets of the debtors against their transfer to the creditor in lieu of the repayment of loan.

Taccavi or government loans

A system of making advances for agricultural purposes was commenced in 1873 through various regulations. These were followed by a series of enactments such as, the Northern India Act 1879, the Land Improvement Act 1871, the Agriculturist Loans Act 1884, etc.

In the co-operative policy, the National Development Council considered it essential to make taccavi loans and other facilities available through co-operatives. Similarly, co-operative societies (registered under the Co-operative Society Act) were allowed to give credit on the lines of others. Land Development Banks also extended long-term loans during 1970–1990. A massive change in structure and function of the lending institutions have taken place and now commercial banks, Regional Rural Banks (RRBs), credit societies, Self Help Groups SHGs, National Bank for Agriculture and Rural Development (NABARD), etc. are playing a vital role in agricultural credit.

LEGISLATIONS IN CO-OPERATIVE SECTOR

The co-operatives have been playing an important role in shaping our agricultural and rural economy. They are engaged in several economic activities such as disbursement of credit, distribution of agricultural inputs like seeds, fertilizers and agro-chemicals; and in arranging storage, processing and marketing of farm produce. Co-operatives enable farmers in getting quality inputs at reasonable price as well as in getting remunerative returns for their farm produce through co-operative agro-processing units in respect of milk, sugarcane, cotton, fruits, vegetables, etc. The co-operative sector in India has emerged as one of the largest in the world with more than 5.49 lakh societies of various types with membership of more than 229.5 million and working capital of about Rs 3,827,496 million. Almost 100% villages and about 75% of the rural household have been covered under the co-operative fold. The Government of India is implementing various central sector and centrally sponsored Schemes to promote the co-operatives in the country.

Recent policy measures

With phenomenal expansion of co-operatives in almost all the sectors, signs of structural weakness and regional imbalances have also become apparent. The reason for such weakness would be attributed to the large percentage of dormant membership, heavy dependence on government assistance, poor deposit mobilization of members, lack of professional management, mounting overdues, etc. Concrete steps, therefore, have now been initiated to revitalize the co-operatives to make them vibrant democratic organizations with economic viability and active participation of members. National Policy on co-operatives has been enunciated in consultation with States/Union Territories. The objective of the national policy is to facilitate all round development of the co-operatives in the country. Under this policy, co-operatives would be provided necessary support, encouragement and assistance so as to ensure that they work as autonomous, self-reliant and democratically managed institutions accountable to their members and make a significant contribution to the national economy, particularly in areas which require people's participation and community efforts. State governments are being persuaded to undertake legislative and policy reforms in state co-operative laws. It is also being considered to link the central assistance to the co-operative reforms to encourage state governments to take initiative in this regard. To provide greater functional autonomy to co-operatives, to reduce bureaucratic interference and to professionalize the management of these institutions, based on the recommendations of Ch. Brahm Prakash Committee and Mirdha Committee, the Multi-State Co-operative Societies (MSCS) Act, 2002, has been enacted. It came into force with effect from 19 August 2002 replacing the MSCS Act, 1984. The Multi State Co-operative Societies Act, 2002, in line with the Government Policy on co-operatives, gives co-operatives the much-needed functional autonomy and curtails Government's interference in the co-operatives to help them run as vibrant economic enterprises on democratic principles. The co-operatives have been empowered to hold their elections, appoint the auditors and also to raise resources by receiving deposits, raising loans and grants. It is expected that states will amend their Co-operative Societies Act on the lines of the Act of 2002 and National Policy on Co-operatives as enunciated by the Central Government.

Schemes for development of co-operatives

The Department of Agriculture and Co-operation, Government of India, has been implementing the Central Sector Scheme for Co-operative Education and Training since the Third Five-Year Plan through National Co-operative Union of India (NCUI), and National Council for Co-operative Training (NCCT). The scheme aims at providing training and education for manpower development of personnel in Co-operative departments of state governments and co-operative societies. The programmes relating to co-operative education are being implemented by the NCUI through the State Co-operative Unions. The NCUI is getting 100% grants-in-aid from the Government of India for implementing this special scheme and 20% grant for other approved activities, such as monitoring of co-operative education programmes being implemented by the State Co-operative Unions, convening of conferences/seminars, running co-operative data bank, National Centre for Co-operative Education (NCCE), etc. The co-operative training programmes are being implemented by the NCCT through Vaikunth Mehta National Institute of Co-operative Management (VAMNICOM), Pune, 5 Regional Institutes of Co-operative Management (RICMs) and 14 Institutes of Co-operative Management (ICMs) located in various parts of the country. VAMNICOM, Pune, is a premier management institute at the national level for the co-operatives. Besides imparting training to the senior level personnel of the Central and State Government's co-operative departments and organizations, it conducts research in the fields of co-operation, and also provides consultancy service to several organizations. RICMs and ICMs cater to the training needs to intermediate level personnel of co-operative departments and co-operative organizations including co-operative in rural areas. These institutes regularly conduct higher diploma course in co-operative management, sectoral diploma programme and various development programmes in short duration.

Some important acts governing co-operatives

1. Multi-unit Co-operative Societies Act, (1942) governs the working of co-operative societies whose objects and area of operation extend to more than one State.
2. National Co-operative Development Corporation (NCDC) Act, (1962)—By repealing earlier Acts, NCDC 1962 Act was enacted which replaced the earlier NCD Board.
3. RBI Act 1934—The Agri-Credit Department of Reserve Bank of India was established in April 1935 under RBI Act, 1934 to maintain expert staff and co-ordinate operations of the Bank in connection with agri-credit and its relation with co-operative banks. We now have the RBI (Amendment) Act, 2006.
4. RRBs—These Banks were set up under Regional Rural Banks Act, 1976.
5. Agricultural Refinance and Development Corporation Act 1963—The Act has been amended several times by the Agricultural Refinance Corporation (Amendment) Act, 1975.
6. Central State Warehousing Corporations—The Warehousing Corporations were established under the Agricultural Produce (Development and Warehousing) Corporation Act 1956. It is now regulated under Warehousing Corporation Act, 1962. Recently, the Warehouse Corporations (Amendment) Act, 2005 has been passed by the Parliament.

THE PANCHAYATS

The 93rd amendment to the constitution accorded constitutional status to the Panchayats. Democratic decentralization of power gives more functional and social responsibilities to Panchayats. The functions of the Panchayats as enumerated in the Eleventh Schedule, Article 243G are:

1. Agriculture, including agricultural extension
2. Land improvement, implementation of land reforms, land consolidation and soil conservation
3. Minor irrigation, water management and watershed development
4. Animal Husbandry, Dairying and Poultry
5. Fisheries
6. Social Forestry and Farm Forestry
7. Minor Forest Produce
8. Small-Scale Industries, including food processing industries
9. Khadi, Village and Cottage Industries
10. Rural Housing
11. Drinking Water
12. Fuel and Fodder
13. Roads, Culverts, Bridges, Ferries, Waterways and other means of communication
14. Rural Electrification, including distribution of electricity
15. Non-conventional energy sources
16. Poverty alleviation programme
17. Education including primary and secondary schools
18. Technical training and vocational education
19. Adult and non-formal education
20. Libraries
21. Cultural activities
22. Markets and Fairs
23. Health and Sanitation, including hospitals, Primary Health Centres and Dispensaries
24. Family Welfare
25. Women and Child Development
26. Social Welfare, including welfare of the handicapped and mentally retarded.
27. Welfare of the weaker sections, and in particular, of the scheduled castes and scheduled tribes
28. Public Distribution System
29. Maintenance of Community Assets

The legal measures by the nation by way of enactment of different kinds of laws, rules and regulations reflect the socio-economic and political philosophy of the society. The country looks forward in achieving more and more gains in agriculture by regulating its affairs, by observing codified laws. Legislations are an excellent means of achieving the desired progress. In a Welfare State, the primary duty of the government is to secure the welfare of people, free and frank approach, and fair play in any profession/business. Therefore, the legislations in agriculture are primarily meant to improve the well being of farming community, attain social equity and economic prosperity. Since independence, a series of amendments have been made to improve

the legislations, and as the science and art of agriculture advances, new regulations are brought in. Keeping in touch with international developments and treaties, India has also revised some old laws and made new laws that too have a bearing on agriculture. In tune with the International Convention on Biological Diversity, 1992 India has enacted The Biological Diversity Act, 2002, which aims at safeguarding the nation's sovereign rights on its genetic resources. The Patents (Amendment) Act, 2005 and Patents (Amendment) Rules, 2006 have brought patent law in line with requirements of TRIPS (Trade Related Intellectual Property Rights) Section of the agreement of World Trade Organization (WTO). In the same process as a follow-up of WTO, The Trademarks (Amendment) Act, 2007 (replaced the Trademarks Act of 1958 and 1999), the Geographical indications of Goods (Registration and Protection) Act 1999, The Geographical indications of Goods (Registration and Protection) Rules, 2002, The Copyright (Amendment) Act, 1999 (in place of earlier Copyright Act of 1957) have been brought in. The Customs Act, 1962 is a consolidating and comprehensive legislation, replacing earlier enactments like the Sea Customs Act, 1878 and the Land Customs Act, 1924. In all, new or revised legislations aim at still better Indian agriculture in future. Finally, in any organized society, the right to live as a human being is ensured, not by meeting only the needs but also the equitable distribution of all facilities. It is, in this context, the agricultural legislations are viewed as an evolutionary process based on experiences of the past, difficulties of the present and a better vision for the future.