VI. Price Policy and Agricultural Marketing

The Government of India intervenes in the agricultural markets to achieve certain developmental objectives. The overarching reasons for effective government interventions are stated to be food security and price stability. The government intervenes in domestic market in various forms such as food grain procurement and distribution, price support, input subsidies and marketing legislations. The objectives and forms of intervention have undergone substantial changes over time. The interventions attempted to bring in regulation of various agricultural activities to protect the interests of producers and consumers. But, such regulations did not foster a competitive environment for fair play of market forces.

VI.1. Procurement and Distribution

The Government of India's food grain policy aims at achieving reasonable price support and procurement system to increase farm income and making available food grains to consumers at reasonable price through distribution of subsidised food grains and price stabilisations/ buffer stock operations. The Food Corporation of India (FCI) is entrusted with implementation of food grains policy particularly for rice and wheat. FCI or the designated agency of state government procures paddy and wheat from the farmers at minimum support price (MSP). Additionally, FCI procures rice through a levy system from rice mills. Depending on the state, rice mills are required to deliver to the FCI from 10 to 75 per cent of their milled rice at the prescribed levy price. Wheat and paddy/ rice procured thus are used to meet the demand for public distribution system, buffer stocks and other welfare measures. FCI's operations are intended to build buffer stocks to meet any exigency, open market sales to stabilise the domestic price and to meet the food security requirements.

In general, the official procurement operations are carried out through regulated markets set up under APMC Act. A network of regulated markets was created to promote organised marketing of agriculture produce. Except Kerala and Manipur, all the other states had enacted State level APMC Acts. In 2005, there were about 7,557 regulated markets spread across various states in India. The geographical distribution of markets was skewed towards large states: larger the size of area, more the number of markets. States like Andhra Pradesh, Bihar, Maharashtra, Madhya Pradesh, Uttar Pradesh and West Bengal had share of more than 50 per cent of total number of markets. The regulated markets handled about 20 per cent of total marketed surplus (Acharya, 2007).

During initial periods of operations, the regulated markets helped to mitigate the difficulties faced by the agricultural producers in disposing their produce. Despite several drawbacks in the functioning of regulated marketing system, they helped to provide access to the markets and increase income of the farmers. But over a period of time, these regulated markets failed to serve the interests of the farmers in a reasonable manner. Some of the rigidities incorporated in the Act bred inefficiency in the system. There are instances that agricultural produces are marketed bypassing the regulated market yards. Several studies (Acharya, 1998; Jha and Srinivasan, 2004; Gulati et al, 2005; Acharya, 2006; Chand, 2006;

NCAER, 2006) and Committees (Government of India, 2001; Government of India, 2002a, Government of India, 2002b) pointed out restrictive provisions of Act and their impact on the efficient functioning of the market. Some of the obstacles posed by APMC Acts are summarised as follows:

- The restrictive legal provisions like delineation of “market area” do not promote a competitive market structure. Farmers do not have options to sell his produce at any other place/agency than regulated market. This has not facilitated the direct supply to the processing and consuming industries and has hampered the development of retail supply chain.
- The powers vested with market committees to issue and suspend/cancel the licenses granted to traders have resulted in ethical practices of arbitrage and favouritism. The basic functions of regulations, correct weighing and proper sale had not been given much importance.
- The licensed traders acquired monopoly status by forming collusion among them. The monopoly status in marketing and handling has added to marketing costs detrimental to producers and consumers. The new entrants find very difficult to operate under such collusive environment, thus stifling the competition. The monopolistic circumstances also do not allow use of latest technologies in handling, grading, packaging and transportation.
- State Agricultural Marketing Board undertakes market infrastructure development. Market committees contribute some percentage of their income to the Board in this regard. But, it is reported that funds from the Boards are siphoned off to Public Ledger Account of State governments, thereby limiting the development of market infrastructure.
- The regulated markets are mostly located in towns and remained out of reach of farmers living in far-flung areas. Though, the density of regulated markets varies across the states, but on average a market serves 459 sq. Km in the country, which is quite high.
- Market infrastructure is important for performing various marketing operations efficiently. The facilities available in the market are not adequate. For instance, only one fourth of markets have common drying yards. Cold storage facilities exist only in 9 per cent of markets and grading facilities in less than one third of the market.
- Farmers are represented in the Market Committees of regulated markets. But their voice is rarely effective and lack control over certain marketing functions.

Food subsidy

The economic cost of the process of food procurement and distribution includes three components, viz. price paid to the farmers, procurement operations and the cost of distribution. The difference between economic cost of foodgrains and the issue price of FCI is equivalent food subsidy. Food subsidy provided to FCI and decentralised state-level procurement operations increased from Rs. 92 billion in 1999-2000 to Rs. 241.2 billion in 2002-03 and then up to Rs. 436.7 billion in 2008-09.

VI.2. Reform of APMC Act[1]

Observing the inefficiency caused by licensing/registration, market controls and other interference introduced by APMC Acts, it was strongly felt that an alternative marketing system needs to be introduced. The government should facilitate smooth operations of the markets and should not control over it. Further, greater participation of private sector should be encouraged to make investments required for the development of marketing infrastructure and other supporting services.

For the first time a National Policy on Agriculture was introduced in July 2000. The National Policy aims to attain agricultural growth rate of over 4 per cent per annum in the next two decades. The National policy also underlines bringing about domestic market reforms to create favourable economic environment and to remove the distortion. Subsequently, in December 2000, an Expert Committee was constituted to suggest policy recommendations to strengthen the agricultural marketing. The Committee submitted its report in 2001. To examine findings and recommendations of the Expert Committee and to suggest measures to implement them, the Ministry of Agriculture, Government of India constituted an Inter-Ministerial Task Force on July 2001. The important recommendations/measures proposed by Task Force are as follows.

- An alternative marketing systems should be developed to promote competition by amending State APMC Acts; Central assistance should be provided for development and strengthening of general and commodity specific agricultural produce markets
- Progressive dismantling of controls and regulations under the Essential Commodities Act
- The institutional credit for marketing of crops (pledge financing) should be increased; negotiability status should be given to warehousing receipts of agricultural commodities.
- Allowing of futures trading in all agricultural commodities to improve price risk management and facilitate price discovery by amending the Forward Contracts (Regulation) Act, 1952[2];

These recommendations were discussed with State governments. Most of the states expressed the view that reforms in the agricultural markets were necessary to move away from the regime of controls to one of regulation and competition. Accordingly, Ministry of Agriculture, Government of India in consultation with state governments formulated a Model Act, called "The State Agricultural Produce Marketing (Development and Regulation) Act, 2003. The important features of the Model Act are given below.[3]

- Permission for establishment of Private Markets/Yards, Direct Purchase Centres, Consumer/Farmers Markets for direct sale and promotion of Public Private Partnership in the management and development of agricultural markets in the country.

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[1] http://agmarknet.nic.in/amrscheme/modelact.htm
[2] http://www.fmc.gov.in/
[3] http://agmarknet.nic.in/reforms.htm

- Provisions for separate constitution of Special Markets for Commodities like Onions, Fruits, vegetables, Flowers etc.
- A separate Chapter has been included in the legislation to regulate and promote contract-farming arrangements in the country.
- It provides for prohibition of commission agency in any transaction of agricultural commodities with the producers.
- It redefines the role of present Agricultural Produce Market Committee to promote alternative marketing system, contract farming, direct marketing and farmers/consumers markets.
- It also redefines the role of State Agricultural Marketing Boards to promote standardisation, grading, quality certification, market led extension and training of farmers and market functionaries in marketing related areas.
- Provision made for resolving of disputes, if any arising between private market/ consumer market and Market Committee.
- Provision has also been made in the Act for constitution of State Agricultural Produce Marketing Standards Bureau for promotion of Grading, Standardisation and Quality Certification of agricultural produce. This would facilitate pledge financing, E-trading, direct purchasing, export, forward/future trading and introduction of negotiable warehousing receipt system in respect of agricultural commodities. (Government of India, 2003a)

All the State governments have been asked to bring changes in the APMC Acts on the lines of Model Act. The progress of the reforms in APMC Acts is given in Table 1. Several state governments have taken initiatives to adopt the model Act. Karnataka permitted the National Dairy Development Board to set up a fruit and vegetable wholesale market. State governments such as Punjab, Haryana, Madhya Pradesh and Tamil Nadu allowed contract farming arrangements to enable the farmers to sell directly to private buyers.

Table 1: Progress of Reforms in Agricultural Markets (APMC Act) as on 31.12.2009

S. No.	Stage of Reforms	Name of States/ Union Territories
1.	States/ UTs where reforms to APMC Act has been done for direct Marketing, contract Farming and markets in private/ coop Sectors	Andhra Pradesh, Arunachal Pradesh, Assam, Chhattisgarh, Goa, Gujarat, Himachal Pradesh, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Nagaland, Orissa, Rajasthan, Sikkim and Tripura
2.	States/ UTs where reforms to APMC Act has been done partially	a) **Direct Marketing**: Delhi b) **Contract Farming:** Haryana, Punjab and Chandigarh c) **Markets in Private/ Coop. Sectors**: Punjab and Chandigarh

3.	States/ UTs where there is no APMC Act and hence not requiring reforms	Kerala, Manipur, Bihar*, Andaman & Nicobar Islands, Dadra & Nagar Haveli, Daman & Diu and Lakshadweep
4.	States/ UTs where APMC Act already provides for the reforms	Tamil Nadu
5.	States/ UTs where administrative action is initiated for the reforms	Mizoram, Meghalaya, Haryana, J&K, Uttarakhand, West Bengal, Delhi and Pondicherry

* APMC Act has been repealed with effect from September 1, 2006
Source: Economic Survey, Ministry of Finance, 2009-10

Besides, APMC Acts there are several other legal instruments used by both central and state governments to regulate the functioning of agricultural markets. Amongst various Acts the most pervasive one has been the Essential Commodities Act, 1955. Most of restrictions related to movement, storage, processing and stock limits are contained in this Act. The operation of ECA has created obstacles in the free flow of commodities from surplus to deficit region. This has widened the price wedge between the different parts of the country and increased the cost of marketing. ECA has prevented large scale participation of private traders in various marketing activities. In fact, private investment in large-scale storage and marketing has been non-existent due to restrictive provisions of this Act and Control Orders issued thereof. Presently, there are about 15 essential commodities are covered under this Act.

The Food Safety and Standards Act, 2006 consolidates different Acts relating to food. These Acts include The Prevention of Food Adulteration Act, 1954; The Fruits Products Order, 1955; The Meat Food Products Order, 1973; The Vegetable Oil Products (Control) Order, 1947; The Edible Oils Packaging (Regulation) Order, 1998; The Solvent Extracted Oil, De oiled Meal and Edible Flour (Control) Order, 1967; The Milk and Milk Products Order, 1992 and any other order issued under Essential Commodities Act, 1955 relating to food.

The Food Safety and Standard Authority of India (FSSAI) has been established under Food Safety and Standards Act, 2006. It consolidates various acts and orders that have hitherto handled food related issues in various Ministries and Departments. FSSAI has been created for laying down science based standards for articles of food and to regulate their manufacture, storage, distribution, sale and import to ensure availability of safe and wholesome food for human consumption.[4]

In recent times, there is huge enthusiasm generated regarding forward trading of agricultural commodities and is expected to provide price stability in the domestic market. Forward Markets (Regulation) Act, 1952 regulates the commodity futures markets in India. The Forward Markets Commission (FMC) performs the functions of advisory, monitoring, supervision and regulation in futures and forward trading.[5] Futures' trading is conducted in exchanges owned by the private associations registered under the Act. These exchanges operate independently under the guidelines of their bylaws approved by the FMC. Futures'

[4] http://www.fssai.gov.in/
[5] http://www.fmc.gov.in/

trading in agricultural commodities is a recent phenomenon. Government has permitted futures trading in 54 agricultural commodities with effect from April 2003. Futures are traded in 24 commodity exchanges of which 3 are national exchanges and 21 are regional exchanges. Agricultural commodities constitute over 60 per cent of total volume of trade in 2005-06. The major commodities traded in futures market in terms of decreasing order of value are guar seed, chana (gram), urad (black gram), soy oil, tur (red gram), menth oil and guar gum (Forward Markets Commission, 2008). The participation of traders and farmers in the futures trading is very much limited due to uncertainty in the policies of government of India. The government uses futures trading as one of the instruments to contain raise in prices of agricultural commodities. In February 2007, government banned futures trading in rice and wheat. Further, in May 2008, four more commodities such as potato, gram (Chana), soya oil and rubber have been added to the list of banned commodities.

Commodity trade in futures markets in 2009 included various agricultural commodities, bullion, crude oil, energy and metal products. Some new commodities were included including almond, imported thermal coal, platinum and carbon credits. The average daily value of trade in commodity exchanges increased from Rs. 164 billion in 2008 to Rs. 232 billion in 2009.

VI.3. Price Support

Government's price support policy provides guarantee against sharp fall in commodity prices and helps ensure reasonable income to farmers. Presently, government sets minimum support price for 25 commodities. The Commission for Agricultural Costs and Prices (CACP) recommends the MSP for these commodities. The MSP of various commodities has increased rapidly during recent years. However, the operation of MSP system has been controversial as it draws criticism from different quarters of policy makers and academics for its basis of calculation and its relevance in the present context. The minimum support prices, especially for foodgrains, are being effectively implemented only in a few surplus states like Punjab, Haryana, Uttar Pradesh and Andhra Pradesh and only a small segment of farmers in the country are benefited (Acharya, 1997; Vyas, 2003; Chand et al, 2003). The government need not bear the commodity price risks once the income safety nets for the poor have effectively been put in place.

The average annual income transfer per household from the government wheat price support program at C2 Cost was found to be Rs.9,980 in Punjab and Rs. 5,790 in Haryana. In case of rice it was Rs. 3041 in Punjab and Rs. 164 in Andhra Pradesh. Further, the income transfers mainly accrue to the large farmers. Whether for rice or wheat, the average income transfer to large farmers is over 10 times greater than those received by marginal farmers. (World Bank, 2004).

Reforms in Agriculture Market

To protect the farmers' interests and to ensure adequate availability of food grains for official procurement from the unfair practices by private grain traders, a large number of restrictions were imposed by the central and state government. However, excessive regulations of domestic marketing had resulted in increased marketing costs, risks and uncertainty, which impacted the performance of agriculture sector (World Bank, 2004). Excessive regulations dampen growth through suppressing competition in the market. Further, India has achieved food security at the national level through its interventionist policies in input and output markets. However, it is not sustainable to continue with controlled markets for long time. To achieve higher growth and move the sector in long term sustainable growth trajectory, market reforms in agriculture need to be strengthened.

The government of India initiated domestic market reforms in agriculture since 2000. These included improving the performance of commodity markets, reforms in APMC Act, reforms in price policy, rationalisation of input subsidies, increasing public investments, operation of futures trading and encouraging participation of private sector. Necessary changes have been effected to progressively dismantling controls and regulations under Essential Commodities Act. In February 2002, Government of India brought out Removal of (Licensing requirements, stock limits and movement restrictions) on Specified Foodstuffs Order. This order removed all restrictions and licensing of dealers on purchase, stocking, transport of the specified commodities viz., wheat, paddy/rice, coarse grains, sugar, edible oil seeds and edible oils. It also specifies that issuing of any order by the states/UTs under ECA for regulating licensing, storage, transport and distribution of any of the specified commodities will require the prior concurrence of the Central Government.

The trade policy reforms progressed during 1990s to facilitate greater integration of agriculture sector with global market. Quantitative restrictions on import of agriculture commodities were removed in April 2001. The list of commodities which were earlier canalised through State Trading Enterprises was trimmed down. The average import tariffs were also reduced considerably over time. Agricultural export policies were liberalised in 1994. It included relaxation in export quotas, abolition of minimum export prices and increased availability of credit. To boost agricultural exports, “Vishesh Krishi Upaj Yojana” (Special Agricultural Produce Scheme) was introduced in EXIM policy 2002-07 with special incentives. However, the Government often tampers with export policies to make available commodity supplies to stabilise the price level in the domestic market.

Production Performance of Agriculture

Table 2: Growth in Area, Production and Yield of Important crops (% per annum)

Particulars	1985-86 to 1995-96			1995-96 to 2004-05		
	Area	Production	Yield	Area	Production	Yield
Foodgrains	-0.38	2.74	3.14	-0.35	0.55	0.90
Cereals	-0.38	2.92	3.31	-0.39	0.61	1.00

Rice	0.59	3.00	2.40	-0.37	0.45	0.82
Wheat	1.03	3.67	2.61	0.11	0.67	0.56
Pulses	-0.41	0.61	1.03	-0.17	-0.24	-0.07
Oilseeds	3.76	7.56	3.67	-1.03	-0.83	0.20

Source: Agriculture Statistics at a Glance, various issues, Ministry of Agriculture

The trend growth rates for the periods 1985-86 to 1995-96 and 1995-96 to 2004-05 are presented in Table 2. These periods correspond to pre and post liberalisation periods. The area under food grains registered negative growth rates during both the periods. The growth rates in production and yield of foodgrains were at 2.7 per cent and 3.1 per cent per annum, respectively during pre-liberalisation period. However, there was significant decline in these rates during the post-liberalisation period. The similar pattern is observed for all the major crops including cereals, pulses and oilseeds. The decline in growth rates indicates the lack on new technological breakthrough to improve the productivity.

The slowdown in the growth of agriculture is a serious concern. This is in contrast to growth in industry and services sectors, which grew at 7 per cent and 8 per cent, respectively during 1990-91 to 2006-07. In fact, the growth gap between agriculture and non-agriculture sector has began to widen since 1981-82 and more pronounced since 1996-97 (Economic Survey, 2007-08). Table 3 provides an assessment of the trend growth rates of various parameters that contribute to agricultural growth. It may be observed that except for credit supply to the agricultural sector all other parameters have posted deceleration during the last decade.

Table 3: Growth in Important Parameters of Agriculture

Items	1980-81 to 1990-91	1990-91 to 1996-97	1996-97 to 2005-06
Technology @	3.3	2.8	0.0
Public sector net fixed capital stock	3.9	1.9	1.4*
Private Sector net fixed capital stock	0.6	2.2	1.2*
Gross irrigated area	2.3	2.6	0.5*
Terms of trade	0.2	1.0	-1.7*
Credit supply	3.7	7.5	14.4*
NPK use	8.2	2.5	2.3
Total cropped area	0.4	0.4	-0.1
Net sown area	-0.1	0.0	-0.2

@ Yield potential of new varieties of paddy, wheat, maize, groundnut, and rapeseed and mustard
* Data upto 2003-04
Source: Economic Survey, 2007-08, Ministry of Finance

Further, high rural population exerts pressure on land resulting in fragmentation of operational holdings. According to Agriculture Census (2000-01), there are about 121 million operational holdings in India. Marginal and smallholdings (<2 ha) accounted for over 80 per cent of total operational holdings. The number of large farms (>10) have declined from 1.2 per cent to 1.0 per cent between 1995-96 and 2000-01. A disturbing trend of falling average size of operational holding has been observed across the farm sizes and has reached 1.32 ha in 2000-01 from 1.32 ha in 1995-96. Agriculture is dominated by small holders, who should be enabled to get a fair deal in the market through effective policy mechanism.

VI.4 Performance of Grain Market

Agricultural marketing system has undergone transformation over time to meet the rapidly changing needs of the other sectors of the economy, advent of information technology, greater direct access to domestic and international markets by farmers and consumption requirements. Efficient agricultural markets are important to transmit the price signals effectively to producers to take decision on production, sale, storage and input purchases. This will facilitate farmers to move close to the domestic and international consumers. Functioning efficient agricultural markets would protect the consumers through reasonable price for their produce. To foster competitive marketing system, the government should reorient its role in regulation to create enabling environment for greater participation of private players.

FCI procures rice and wheat at minimum support price announced by the government. Almost all the states grow rice and some grow wheat. However, FCI procurement operations are concentrated only in a few states (Table 4 and 5). FCI procures rice from over 20 states in India. However, Punjab, Andhra Pradesh and Uttar Pradesh accounted for about two-thirds of total procurement in 2004-05. In Punjab and Haryana, FCI purchases almost 100 per cent of total market arrivals (World Bank, 2004).

In the case of wheat, the average marketed surplus is estimated to higher in Gujarat (93.6 per cent) followed by Punjab (81.3 Per cent) and Haryana (74.6 per cent). There are other wheat growing states like Uttar Pradesh, Madhya Pradesh, Rajasthan, Bihar and Himachal Pradesh. But, wheat procurement is concentrated in three states viz., Punjab, Haryana and Uttar Pradesh. While Punjab accounted for about 55 per cent of total procurement, Haryana and Uttar Pradesh accounted for 30 per cent and 10 per cent, respectively.

Table 4: Marketed surplus and government procurement of rice

	Marketed Surplus (%)		% of government procurement	
States	2003-04	2004-05	2003-04	2004-05
Andhra Pradesh	85.2	83.1	18.5	15.8
Assam	39.6	41.3		
Bihar	66.1	73.5		
Haryana	94.9	98.2	5.8	6.7
Karnataka	79.5	84.4		
Kerala	58.5	64.6		
Madhya Pradesh	65.4	65.1	0.5	0.2
Orissa	61.9	65.4	6.0	6.4
Punjab	98.7	97.7	37.9	36.9
Tamil Nadu	78.1	78.4	0.9	2.6
Uttar Pradesh	90.5	46.5	11.2	12.0

West Bengal	55.6	60.4	4.1	3.8

Source: Agriculture Statistics At a Glance, 2006-07

Table 5: Marketed surplus and government procurement of wheat

	Marketed Surplus (%)		% of government procurement	
States	2003-04	2004-05	2003-04	2004-05
Bihar	62.04	70.12		
Gujarat	80.92	93.62		
Haryana	75.80	74.64	32.4	30.5
Himachal Pradesh	30.09	29.49		
Madhya Pradesh	67.29	74.54		
Punjab	83.07	81.34	56.6	55.0
Rajasthan	73.03	27.20	1.6	1.7
Uttar Pradesh	55.48	50.21	7.7	10.4

Source: Agriculture Statistics At a Glance, 2006-07

Agricultural markets are characterised by large number of sellers and small number of buyers. Though, government controls most of the activities related to marketing of agricultural products, the private trade and agro-processors continued to dominate handling large quantities of crop produce. Private traders handled about 80 per cent of marketed surplus of agricultural products (Acharya, 2004). In 2000-01, private traders handled more than 100 million tonnes of cereals, which constituted 71.1 per cent of total marketed surplus (Acharya, 2006). Government permitted establishment of private markets and direct purchase centres by private firms under Model Act. As a result big private traders such as Cargill, Reliance and ITC entered in a big way to purchase about 3.9 million Tonnes of wheat in 2007.

Based on the survey of regulated wheat market in Narela (Delhi), Banerji and Meenakshi (2002) observed that wheat market had high degree of buyer concentration and collusion and thus cannot be characterised as competitive. They found that three largest buyers accounted for about 45 per cent of market arrival. Further, wheat market displayed collusion between traders in such that when one of them bids, the other two did not participate in the auctioning process. Collusion depressed the market price appreciably, because the two traders with highest valuations are part of the cartel, which disallowed their bidding simultaneously for a particular lot of grain. Similarly in paddy markets in Panipat (Haryana), Meenakshi and Banerji (2005) found evidence of collusive behaviour of traders. Cartel formation affects not only price received by the farmers..

VI.5 Direct Marketing through Farmers' Market

State governments encourage new channels of marketing so as to reduce involvement of intermediaries middle between farmers and consumers. Under direct marketing, farmers sell their produce directly to the consumers. It was developed mainly to deal with perishable commodities like vegetables, fruits and flowers. Thus, farmers' markets facilitate the sale of farmers' produce directly to the consumers. The physical infrastructure is provided by the state governments. Farmers bring their produce to the market yard daily and transactions take place on the price fixed on a daily basis by the market committee. Such initiatives include Apni Mandi in Punjab and Haryana, Rythu Bazaars in Andhra Pradesh, Uzhavar Santhaigal in Tamil Nadu, Krushak Bazaars in Orissa and Hadaspur Vegetable Market in Pune. It is estimated that about 10 per cent of total produce is marketed through direct marketing (Government of India, 2007).

VI.6. Co-operative Marketing

In the marketing and processing of agricultural products, co-operatives organisations play an important role. Co-operatives have been successful in processing of sugar, paddy, milk and cotton (Acharya, 2007). Sugar co-operatives, numbering around 203 account for about 55 per cent of total sugar production. Similarly, co-operative spinning mills (173) produce about 22 per cent of yarn and fabric production. There are oilseed co-operative units, which act as marketing outlet and input delivery system for oilseed growers. The performance of oilseed co-operative processing units is dismal. They account for only 1.8 per cent of expelling capacity, 2.1 per cent of solvent extraction capacity and 18 per cent of refining. Private processors dominate and function well when compared to co-operative sectors, which suffered due to lack of working capital to purchase seeds to utilise their capacity.

VI.7 Contract Farming

Another channel of linking farmers directly with consumers and agro-processors is through contract farming. Several domestic and multinational firms have entered into agreement with farmers to produce agricultural commodities of desired quality with assurance of procurement at pre-announced prices. Contract farming helps farmers to reduce price risk, remove input supply bottlenecks, technology constraints and access to viable procurement options. Contract farming is also seen as medium for diversification of cropping system in the country. The Model Act recognises and encourages its expansion in the country. In 2007, total area under contract farming was 426 thousand hectares (Table 6). The area under contract farming varies across the states. The percent area under contract farming in gross cropped area was the highest in Tamil Nadu (4.0 per cent) followed by Mizoram (2.6 per cent) and Punjab (1.5 per cent).

Table 6: Statewise area under contract farming in 2007

States	Contract Farming (Hectares)	% Contract farming in GCA*
Bihar	20	-
Assam	160	-
Haryana	1416	0.02
Goa	1924	1.14
Gujarat	2000	0.02
Mizoram	2447	2.55
Orissa	5900	0.07

Punjab	121457	1.51
Tamil Nadu	236610	4.02
India	425834	0.22

* GCA data for 2004-05 and - negligible
Source: www. Indiastat.com

The emergence of supermarkets has added new dimensions to agricultural marketing system in India. The supermarket chains purchase large volume of agricultural produce either directly from individual farmers, wholesalers or through specialised suppliers. There are concerns that small producers are excluded from such supply chains. It was because that small and marginal farmer is unable to undertake production of high value agricultural products like vegetables and fruits due to lack of resources with them (Singh, 2007). The medium and large farmers have mostly benefited from the operations of supermarkets chain.