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FOOD & RETAIL CHAINS: CASE STUDY OF ANDHRA PRADESH AND PUNJAB

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SECTION I – ANDHRA PRADESH

Demographics of Andhra Pradesh

Andhra Pradesh comprises of 23 districts and has three well-defined regions viz., Telangana, Rayalaseema and Coastal Andhra. Geographically, it is the fourth largest state (276814 sq. km) in India. It is situated on the globe in the tropical region between 12^o14' and 19^o54' North latitudes and 76^o46' and 84^o50' East longitudes and is bordered by Maharashtra, Chhattisgarh and Orissa in the north, the Bay of Bengal in the East, Tamil Nadu to the south and Karnataka to the west². The State has a coastline of 974 kilometres. It occupies 8.34 percent of the country's geographical area and supports 7.37 percent of the country's population (Census 2001). Andhra Pradesh is the fifth largest by population and has a population of 7.69 crore. Sixty-three percent of the total population is from rural areas. Andhra Pradesh's gross state domestic product for 2005 is estimated at \$62 billion in current prices. Andhra Pradesh is a predominantly services economy:

- 49 per cent of the total GDP comes from the services sector
- Industry accounts for 27 per cent of GDP
- Agriculture accounts for 24 per cent

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² Andhra Pradesh (2006) (<http://en.wikipedia.org>).

The state accounts for about seven per cent of all new investments in the country. The state ranks fourth in terms of attracting FDI.³

State of Agriculture: Major Crops and Farming Sector

Andhra Pradesh is considered as the 'rice bowl of India' It accounts for about 8 percent of the country's net sown area and around 7 percent of the country's food-grain production. The State with its seven agro-climatic zones and varied soils, produce various fruits accounting for 29 percent of the country's mango production, 25 percent of citrus, 12 percent of pineapple, 8 percent of grape and 7 percent of Banana and Guava. The state is crossed by two major rivers, the Godavari and Krishna. Agriculture contributes 12.9 percent of the State GDP and employs 62 percent of the total workforce.⁴

Forty-five percent of the total geographical area of the state is under irrigation. The state is known as the granary of south India. The Krishna and Godavari are the major river systems in the state. They irrigate 6 million hectares (14.8 million acres) of farmland. Andhra Pradesh is an important agricultural state of the country. The state is a leading producer of cereals like rice, maize and jowar, and cash crops like tobacco, groundnut, chillies, turmeric, cotton, sugar and jute. Rice dominates the cropping pattern of Andhra Pradesh. In the foodgrains production as a whole, Andhra Pradesh's position is about 6 percent of all India area and about 7 percent of output in the year 2003 (Patnaik 2003⁵). The state occupies more than 23 percent of the area under chillies in India but at the same time contributes 43 to 50 percent of the country's total output. Andhra Pradesh holds the first rank in area and production of mango, oil palm, chillies, turmeric, second rank in citrus and coriander, third rank in cashew, fourth rank in flowers and fifth rank in grapes, banana, ginger and guava.

Production of Various Crops in Andhra Pradesh

Horticulture contributes to approximately 4 percent of the state GDP. Horticulture crop covers 13 percent of the gross cropped area in the State. The area under horticulture is 16 lakh Ha, with an annual production of 118 lakh tonnes. Andhra Pradesh's rank in all India for

³ CMIE (2006), Andhra Pradesh (<http://www.cmie.com/database>).

⁴ *National Horticulture Mission: Action Plan for Andhra Pradesh*, Prepared by Rabo India Finance Pvt. Ltd for Ministry of Agriculture Government of India, September 2005.

⁵ Patnaik Navolina, (2003), '*Impact of Modern Agricultural Inputs on Land Degradation in Andhra Pradesh*', M.Phil Thesis, Submitted to the University of Hyderabad, Hyderabad.

particular horticultural crops is depicted in the next page. Table 3.1 shows the area and production of major horticultural crops in Andhra Pradesh and Table 3.2 shows their all India rank.

Fruits

Mango, Sweet Orange and Banana are the leading fruit crops in Andhra Pradesh and account for over 86 percent of the area under fruit and over 77 percent of the total fruit production.

Table 2.1: Area and Production of Major Horticultural Crops in 2004-2005

Crop	Area (in Ha)	Production (in M.T)
Mango	391896	3135168
Oil Palm	41422	144976
Chillies	224474	538738
Orange & Batavia	109316	1421108
Grapes	1892	37840

Source: Andhra Pradesh Horticulture Department, 2006

Table 2.2: Crops in Andhra Pradesh and their all India rank

Name of the Crop	All India Rank
Mango, Chillies, Turmeric, Sweet Lime, Papaya	1
Lemons / Lime, Coriander, Pomegranate, Loose flowers	2
Cashew	3
Sapota	4
Banana, Guava, Grapes, Ginger	5

Source: National Horticulture Mission: Action Plan for Andhra Pradesh, 2005⁶

Table 2.3: Fruit crops in districts of Andhra Pradesh

FRUIT	MAIN PRODUCTION AREAS
Mango	Chittoor, Krishna, Vizianagaram, Khammam, Cuddapah, West Godavari
Sweet Orange	Nalgonda, Prakasam, Ananthpur, Karimnagar
Banana	East and West Godavari, Guntur, Vizianagaram, Cuddapah, Kurnool
Papaya	Cuddapah, Ananthpur, Prakasam
Lemon / Lime	Nellore, Cuddapah, West Godavari, Nalgonda
Sapota	Guntur, Prakasam, Ananthpur

Source: National Horticulture Mission: Action Plan for Andhra Pradesh, 2005

⁶ National Horticulture Mission: Action Plan for Andhra Pradesh, Prepared by Rabo India Finance Pvt. Ltd for Ministry of Agriculture Government of India, September 2005.

Vegetables

The major vegetables grown in the state are Tomato, Onion, Tapioca, Brinjal and Bhendi. There is an opportunity to increase productivity through replacement of local varieties with hybrids, cluster approach for seasonal vegetable cultivation, quality improvement through improved pre harvest management practices such as integrated nutrient management, integrated pest management, etc. The major crops where hybrid varieties are cultivated include Tomato and Bhendi.

Table 2.4: Vegetable in Andhra Pradesh and major productions districts

VEGETABLE	MAIN PRODUCTION AREAS
Tomato	Kurnool, Chittoor, Rangareddy, Prakasam
Onion	Kurnool, Medak, Cuddapah, Mahabubnagar, Rangareddy
Tapioca	East Godavari
Bhendi	Kurnool, Krishna, Warangal, Vizag, Nalgonda
Brinjal	Vizag, East Godavari, Nizamabad, Rangareddy, Ananthpur, Krishna
Beans	Vizag, Medak, Nizamabad, Rangareddy

Source: National Horticulture Mission: Action Plan for Andhra Pradesh, 2005

Spices

Andhra Pradesh ranks first in the area, production and productivity of Chillies and Turmeric. The other important spice crops are Garlic, Ginger, Coriander and Black Pepper.

Table 2.5: Spices in Andhra Pradesh and major productions districts

SPICES	MAIN PRODUCTION AREAS
Chillies	Guntur, Krishna, Warangal, Khammam, Prakasam
Turmeric	Nizamabad, Adilabad, Karimnagar, Warangal
Coriander	Kurnool, Cuddapah, Ananthpur, Prakasam
Tamarind	Ananthpur, Chittoor

Source: National Horticulture Mission: Action Plan for Andhra Pradesh, 2005

Oil Palm

The farmers in the state are keen to promote oil palm cultivation and the area coverage is increasing. The locations in the state are Anantpur and Eluru.⁷ In Andhra Pradesh the following 11 districts have been identified for oil palm cultivation. Srikakulam, Vizianagaram, Visakapatnam, East Godavari, West Godavari, Krishna, Guntur, Prakasam, Nellore, Chittoor and Khammam. The perishable nature of oil palm dictates the grower to dispose of the produce immediately after the harvest⁸.

Table 2.6: Districts wise area in Ha for oil palm cultivation

District	Hectares
Srikakulam	35000
Vizianagaram	20000
Visakapatnam	10000
East Godavari	100000
West Godavari	100000
Krishna	50000
Guntur	20000
Prakasam	10000
Nellore	30000
Khammam	20000
Chittoor	10000

Source: Andhra Pradesh Horticulture Department (2006)

Sugarcane

Sugarcane is grown extensively in the tropical belt including States of Maharashtra, Andhra Pradesh, Tamil Nadu and Gujarat, as sugar cane, which is a tropical crop, has favourable agro climatic conditions for its growth in these States. The yields are substantially higher in the tropical belt as compared to the sub-tropical regions. Almost 35 percent of the 300 million tons of sugarcane produced in India is utilized for the purpose of manufacture of Gur and Khandsari and for chewing purposes. The manufacture of Gur and Khandsari is predominant in Karnataka, Tamil Nadu and Uttar Pradesh but large quantities of Gur and Khandsari are also produced in Andhra Pradesh, Haryana and Punjab.⁹

⁷ UNDP Initiatives in Andhra Pradesh (<http://www.undp.org.in>).

⁸ Andhra Pradesh Horticulture Department (2006) (<http://www.aphorticulture.com>).

⁹ Department of Food and Public Distribution (2006) (<http://fcamin.nic.in/dfpd>).

Table 2.7: Sugarcane Production in India

State	Utilization of sugarcane in the year 1999-00	
	For Sugar	For Gur & Khandsari
AP	63.3	29.0
Karnataka	39.3	27.6
Tamil Nadu	54.5	35.4
Uttar Pradesh	42.3	43.5
All India	59.6	28.9

Source: Department of Food and Public Distribution (2006)

Status of Horticultural Sector of Andhra Pradesh

The *Vision 2020* document anticipates that by 2020, Andhra Pradesh will have a thriving horticulture sector and will be the country's leading supplier of fruits and vegetables to both domestic and international markets. Horticulture is expected to account for 10-15 percent of the State's GDP and contribute convincingly to higher per capita agricultural incomes.¹⁰

Horticulture crops cover a wide variety of fruits, vegetables, tuber crops, mushrooms, floricultural, medicinal and aromatic plants, plantation crops, spices. They provide a remunerative means for diversification of land use for improving the productivity and returns, providing nutritional security, increasing employment opportunities, providing raw materials for agro-processing industries. The State is identified as "horticultural bowl of India."

The strategy for achieving this growth in horticulture is through private sector investment in infrastructure and food processing. It also includes strengthening of the fresh produce value chain through farmer co-operatives and the provision of institutional support. This includes the establishment of Agricultural Export Zones (AEZs). Companies located within AEZs are offered incentives to enter into contract farming arrangements with producers, with a view to improving standards and cutting wastage, companies benefit by accessing an assured supply of low-cost, high quality produce, and farmers will have an assured market and technical and financial support (Deshingkar et al, 2003¹¹).

¹⁰ *Food processing industry to grow by 15 p.c.: survey*, cited in 'The Hindu', Hyderabad, Feb 20, 2005.

¹¹ Cited in 'Goal I Promoting Opportunities: State government promotes employment in horticulture, India', IDRC Books, Canada (<http://www.idrc.ca>).

In a fast changing International Trade Environment, with a view to providing remunerative return to the farmer community in a sustained manner, efforts will be made to provide improved access to the produce / products of the agriculture and allied sectors in the international markets by setting up (AEZs). The AEZ is expected to give a focus and direction for exports of key agricultural produce with potential from the country. It involves a detailed action plan for the development of a specified geographic area /s for effecting systematically greater exports of a specific produce.

Agri-Export Zones (AEZs) in Andhra Pradesh

Table 3.1: AEZs in Andhra Pradesh

S.no	Name of AEZ	Districts covered	Fruits / Products	Total estimated cost (crore R)
1	AEZ Vijayawada	Krishna	Mangoes	18
2	AEZ Hyderabad	Ranga Reddy, Mahabubnagar and Medak	Grapes and Mangoes	57
3	AEZ Gherkins	Ranga Reddy, Mahabubnagar, Medak, Karimnagar, Warangal, Nalgonda and Ananthapur.	Gherkins	20
4	AEZ Chittoor	Chittoor	Mango pulp and vegetables	11
5	AEZ Chillies	Guntur	Chillies	—

Source: A.P Horticulture Department.

In Andhra Pradesh, five AEZs have been set up in line with the policy of the Government of India. The major activities of the AEZs are extensive pre and post harvest training programs, adoption of IPM agri information system, setting up of processing industries, convergence of facilities available under various departments and organizations. The location and focus crops for each of the AEZs are shown in Table 1.9. The Government of Andhra Pradesh (GoAP) formed five AEZs for different fruits and vegetables. But there are no major initiatives harnessing livestock potential and exports.

Though agro-processing is identified as one of the growth engines in Vision 2020 (GoAP 1999¹²), the policy support level has been slow.

Contract Farming in Andhra Pradesh

Table 3.2: Contract farming: a new frontier

Company	Crop	Area (ha)	District Covered
Sical, Godrej, Palmtech Mark fed.	Oil palm	38000	East & West Godavari
Cadburys India Ltd	Cocoa	8500	East & West Godavari
BHC Agro	Vegetables	417	Chittoor
Global Green, Capricorn Foods Ltd.,	Gherkins	3333	AEZ-Gherkins Districts
A.V.Thomas Co.	Marigold	208	Ananthapur
Dabur India	Amla (Indian Gooseberry)	417	Across State
Exim Foods Pvt. Ltd.	Baby corn	208	Around Hyderabad
Venkateshwara Hatcheries	Broiler birds	50-75 farms	Around Hyderabad

Source. A.P Horticulture Department.

The State govt. encouraged contract farming in early 1990s to expand the area under oil palm. The govt. of India identified 4 lakh hectares of area in 10 districts of the State, as suitable for growing the oil palm (Sukumar 1999¹³).

Food Processing Industry in Andhra Pradesh

Food Industry in Andhra Pradesh

Andhra Pradesh is the second biggest contributor (10 percent) to the net value added in food industries and beverages in the country and first among south Indian states. (Joseph 2003¹⁴).

¹² GoAP (1999), *Vision 2020 – Andhra Pradesh*, Government of Andhra Pradesh, Hyderabad.

¹³ Sukumar, A R, (1999), 'Status Paper on Oil Palm Development in Andhra Pradesh' in P Rethinam and K Suresh (eds), *Oil Palm Research and Development*, National Research Centre for Oil Palm, Pedavegi, West Godavari District, Andhra Pradesh.

¹⁴ Joseph, Mathew (2003), 'Performance of the Southern States: A Comparative Study', *Economic and Political Weekly*, Vol 38, No 37, September 13, pp 3915-30.

The state witnessed high growth rate in food processing industries in the 1980s than that in the all-India level and maintained the same rate in the 1990s. The growth rate in the net value added increased marginally from 8.98 percent during 1981-82 to 1990-91 to 9.01 percent during 1991-92 to 1999-2000 (Dev and Rao 2004¹⁵).

The agro-based industry in Andhra Pradesh employs around 65 percent of its total population. The state produced 14.9 MMT of food grains in 2004-2005. Production of oilseeds and cotton stood at 2.6 MMT and 2.74 million bales of 170 kg respectively. Andhra Pradesh contributes 20-30 percent to the total seafood exports in the country.

The state is keen to improve the research infrastructure in the agro sector and has established several organizations. Several MNCs like Conagra and Krafts foods, have established their facilities in the state. It has about 106.03 lakh operational land holdings.¹⁶ Small and marginal farmers are the major land holders and account for 81 per cent of the holdings. The area under cultivation by small and marginal farmers is only 42 percent. The industries in food products contribute 19.36 per cent to total industrial production in the state.

There is a large potential for production of a variety of processed products from the fruits and vegetables grown in the state. The post harvest losses in fruits and vegetables were estimated at Rs 50,000 crore in the country, whereas in Andhra Pradesh it was Rs 2,500 crore. The loss of fresh produce is 30 per cent of the production in the state. Less than two per cent of meat is converted to processed product in spite of having second largest livestock of buffaloes and sheep in the country.

Andhra Pradesh is the country's largest egg (6,933 million eggs per annum) and poultry meat producer. It contributes about a third of country's egg and about one fifth of broiler meat production. There are two modern integrated poultry processing plants functioning in the state. The productivity levels are one of the best in the world, with hen-housed egg production of 310 per year and 1:1.8 feed conversion ratio in broilers.¹⁷

¹⁵ Dev, Mahendra S, and N Chandrasekhara Rao, (2004), 'Food Processing in Andhra Pradesh: Opportunities and Challenges', Centre for Economic and Social Studies, Hyderabad.

¹⁶ Indian States Economy and Business, Andhra Pradesh, August 2005 (www.ibef.org).

¹⁷ Industry Monitor – Andhra Pradesh (<http://www.ciionline.org>)

Features of the Food Industry of Andhra Pradesh

The following are the characteristics of food processing industry:

- Food industry accounts for 19.36 percent of Industrial production
- Second amongst all states in value added in food products and beverages
 - 10 percent of national value added
 - Rice, mangoes, orange, oil palm, chillies, turmeric.
- Rs. 1210 crores invested in 5350 factories in organized food processing
 - Rapid growth in 80's and early 90s followed by slow-down
- 65 percent enterprises in grain milling
- Other key segments: processing of nuts, bakery products and dairy products
- Employs 1.81 lakh people
 - Share of work force increased from 13.42 percent in 1981 to 18.28 percent 1998

The GoAP has released a food processing policy through its department of industries and commerce in March 2004 (GoAP 2004¹⁸).

Agro Food Processing Industries

Bread, Oilseed meals (edible), breakfast foods, biscuits, confectionery, including cocoa processing and chocolate, oil expellers and refining, malt extract, protein isolates, high protein foods, weaning foods, extruded/other ready to eat food products and all other processed foods (excluding non packed food items served in Hotels and Restaurants).

Allied Industries:

- Cold Storage unit.
- Refrigerated Transport vehicles containers; (excluding second hand Refurbished vehicles/containers).
- Units manufacturing food grade packaging materials
- Units engaged in packaging, canning and bottling of processed foods.
- Units manufacturing additives/preservatives/colors/fragrances.
- Biotechnology industries.

¹⁸ GoAP (2004), *Food Processing Policy of Andhra Pradesh*, G O Ms.No.55, Department of Industries and Commerce, Government of Andhra Pradesh (<http://apts.gov.in/apgos>).

Marine Foods, Meat, Poultry and Dairy

The thousand kilometer coast line, the perennial rivers, the fresh water aquarium and lakes have been a principal source for production of a variety of marine foods, fresh water foods, including fish and prawns in addition to the institutionalized aqua culture. The State is producing 2.61 lakh tonnes of fresh water fish, 1.50 lakh tonnes of Marine fish and 0.45 lakh tonnes of Prawn from coastal aquaculture. The State has well knit cold chain infrastructure. The state ranks first in the country in coastal aquaculture and second in fresh water fish production. The total value of marine products exports from the country is Rs 4700 crores, out of which the state contributes Rs. 1500 crores and there is scope for enhancing exports.

Andhra Pradesh ranks first in Poultry, second in sheep and goat and fourth in Bovine population in the country. Andhra Pradesh is annually producing 69,000 M.Ts. of Beef, 48,000 M.Ts, of Mutton, 1,30,000 of M.Ts. of poultry meat and 12,000 Million eggs. The State is having high potential for export of meat, eggs and chicken. The State is encouraging large players in poultry and meat sector to achieve annual growth rate of 6 percent in egg production, 10 percent in Broiler production and 2.5 percent in meat production for next 20 years.

Dairy has been identified as an important growth engine in Andhra Pradesh and has tremendous potential for increasing income levels in the rural areas of the State. Enormous investment opportunities exist for creation of adequate infrastructure for processed food industry including packaging. Entrepreneurs are invited to come forward for setting up cold chains, ice plants, freezing plants, processing plants, feed mills, hatcheries, setting up fishing harbors, fishing boats, and state of art technologies in packaging industry.

Supermarkets in Andhra Pradesh

There are a number of Supermarket chains in Andhra Pradesh out of which the prominent ones are Food World and Trinetra. *Trinethra* Super Retail Ltd, the Hyderabad-based supermarket chain comprising 72 outlets across Andhra Pradesh, plans to go for an IPO by 2006 after reaching out to all the district headquarters and opening three hyper marts in three major cities. The company is going to invest Rs 25 crore - Rs 30 crore on expansion. Recognizing the potential of hyper marts, the retail major is going to open three hyper marts, one each in Hyderabad, Vijayawada and Visakhapatnam. In order to increase margins in the

groceries business, which is considered to be a low-margin business, *Trinethra* has chalked out a twin-pronged strategy.¹⁹

There are several other malls coming into existence in the state. There are opportunities for investments in rural areas as well. *Rythu Bazars* in Andhra Pradesh are examples where producers and consumers are brought on the same platform and a large number of intermediaries are eliminated. They act as whole sale markets even from where the supermarkets source.

Opportunities for Improvement

Grains

Grain processing is the biggest component in the organized sector sharing over 40 percent of the total value. To be competitive in international market, the cost of production should be reduced along with post-harvest and milling losses. Appropriate care must be taken in threshing, drying, storage and processing to reduce these losses. There is 25 percent post harvest loss due to bad thrashing, storage and processing practices. Rice mills give poor quality rice (15-20 percent) which cannot be exported. No incentive to modernize the process of production. Therefore it is profitable to sell to the Food Corporation of India than invest in mill upgradation. There is problem of double taxation (domestic & export). Permits are needed from civil supplies to move stock. There is no rail wagon allotment.

Horticultural Crops

There are 157 fruit and vegetable processing units in the state mainly in the small and medium sector. Some of the processors are also manufacturer exporters. At present there are 21 pack houses in the state which are used for the sorting, grading and packing of grapes, pomegranates /sweet oranges, mango and vegetables. A total of 80 pack houses have been proposed for 2005-06. The current capacity of cold stores is 8570 tonnes. This is proposed to be increased by 40000 tonnes by adding a total of 8 cold stores across the state in 2005-06.²⁰ Horticultural crops being perishable in nature are subject to post harvest losses. Factors like

¹⁹ Cited in 'Trinethra makes expansion plans in AP' in 'Business Line' by K.V. Kurmanath, Hyderabad, May 29, 2004.

²⁰ *National Horticulture Mission: Action Plan for Andhra Pradesh*, Prepared by Rabo India Finance Pvt. Ltd for Ministry of Agriculture Government of India, September 2005.

respiration, ethylene production, evaporation, temperature and relative humidity affects the keeping quality of these products. Post harvest facilities from production linking to the market and consumption points help in the reduction of losses due to wastage. There is 30 percent loss in post harvest (field – 10 percent, transport & packaging – 7 percent, storage –9 percent, Processing – 4 percent). Unhygienic and manual processing of pulping is followed. There is limited export potential of the produce due to poor quality and diseases.

Processing of Meat, Poultry and Fish

Livestock production is an integral part of farming systems in the state thus it plays a very important role in the state economy. The state has 10.6 million cattle, 9.6 million buffaloes, 9.7 million sheep and 5.2 million goats. The state ranks second in buffalo and sheep population, 7th in cow and 8th in goat population in the country. The sheep in the state are of superior quality with minimum fat level, good taste and good keeping quality. Less than two percent of meat is converted to processed products. These are value added products (ready-to-cook, ready-to-eat and ready-to-serve) or the products that may require less time for preparation. With growing urbanization and increasing quality consciousness, the market for scientifically produced meat products is expected to grow rapidly. There is also a growing domestic demand for ready to eat and semi processed meat.

Andhra Pradesh is the country's largest egg (6,933 million eggs per annum) and poultry meat producer. The increasing awareness of the need for balanced nutrition has led to changes in eating habits with vegetarians accepting eggs as part of their diet. Also Andhra Pradesh occupies important place in the fisheries map of India. The fastest growth is anticipated in case of inland fish production, and fresh water prawn production. The productivity in fresh water ponds is as high as 10-12 tones per hectare per annum in the state. The state has a good network of infrastructural facilities like hatcheries, feed mills and processing plants. There is a good scope for value added products, ready to eat fishery items in the domestic markets also.

Initiatives by the State Government

The Government of Andhra Pradesh, had established APInvest as the proactive nodal agency, to promote Andhra Pradesh as the best Business State in the Country and thereby attract investments into the State. APInvest is the single point of contact that facilitates investments

in Andhra Pradesh and would function along the lines of a Corporate MNC under the Chairmanship of the Chief Minister.

Andhra Pradesh has emerged as the back office to the world, and it is the preferred Investment Destination for the Global ICT Industry. BPO to KPO, Services to Application, Technology to R&D, Design to FAB, EMS to Telecom, Animation to Gaming are the range of sectors of the global ICT industry present in Andhra Pradesh.

Some of the leading names are Microsoft, Oracle, Computer Associates, IBM, Dell, Computer Sciences Corporation (CSC), GE, HSBC, Bank of America, Deloitte, Motorola, Nokia, Qualcomm, Convergys, Cypress Semiconductor, Google, Satyam, Infosys, Wipro, HCL Infosystems, Celetronix, Dataquest, Colorchips, Nipuna and a host of other companies working in different areas.

Hardware Park

The State has developed a Hardware Park at Shamshabad, 25 km from Hyderabad in an area of 5,000 acres in close proximity to the upcoming international airport. This is being developed as an Integrated logistic hub with warehousing and container depots, distribution facilities, multi-modal transportation facilities, high speed direct customs clearance facilities, integrated township having housing, hotels, clubs, recreation and sports facilities, state-of-the-art infrastructure with abundance of power, water and sewerage and treatment with excellent road connectivity.

Preferred Investment Destination

The Government of Andhra Pradesh has identified that for the economic development of the State, aggressive steps for investment promotion would be the critical strategy. To ensure maximum returns-on- investments, the three most important needs of investors; World-class infrastructure, skilled manpower and Connectivity are being provided making the State of Andhra Pradesh the preferred investment destination. There is a mega opportunity in food processing in the state.

SECTION II - PUNJAB

Demographics of Punjab

Punjab is situated in the northwest of India, it is bordered by Pakistan on the west, the Indian states of Jammu and Kashmir on the north, Himachal Pradesh on its northeast and Haryana and Rajasthan to its south. Punjab occupies 1.54 percent of the country's total geographical area, that is, 5,0362 sq. kms. Punjab is on the globe at 29'30" N to 32'32" N latitude and 73'55 E to 76'50 E longitude.²¹ The State has a population of 2.52 crore, accounting for 2.36 per cent of the national population.

Punjab is India's granary. It is famous for its success in developing into a rich state based on rapid agricultural growth. It produces about 22 per cent of India's wheat. It had a sustained economic growth of about 8 percent in 2005-2006.²² The principal crops of the state are barley, wheat, paddy, maize and sugarcane. Among the fodder crops are Bajra and Jowar. The state gross domestic product (SDP) contributes around 3 per cent of the gross domestic product of the country.²³ Services held the largest share of 39 per cent in Punjab's SDP, closely followed by agriculture holding a share of 38 per cent. The industrial sector is relatively small, accounting for a meagre 23 per cent of the SDP. The State boasts of three thermal power plants and six hydro-power plants. It was the second largest producer of spun yarn in the country and the third largest producer of mill-made fabric. International Trade for Punjab in 2005-06 was US\$200 billion. The GDP of Punjab in 2004-05 was US\$ 17.30 billion.²⁴

State of Agriculture: Major Crops and Farming Sector

The economy of the state depends primarily upon agriculture. With 1.56 percent of area, the agriculture sector of Punjab contributes more than 68 percent to the country's food pool. Punjab leads the other States in terms of contribution of wheat and rice to Central Pool. It contributed 55.0 percent of wheat and 37.2 percent of rice to Central Pool in 2004-05

²¹ Punjab (<http://www.indiainbusiness.nic.in/indian-states/punjab>).

²² Agricultural Economy of Punjab, 2000-2005 (<http://www.webindia123.com/punjab/economy/agriculture>).

²³ CMIE, 2006 (<http://www.cmie.com>).

²⁴ National Association of Manufacturers meeting on June 7, 2006 at Washington DC, Government of Punjab Delegation.

(P).The total contribution of wheat and rice to the Central Pool has increased from 115.6 lakh tonnes in 1990-91 to 183.5 lakh tonnes during 2004-05 (P) consisting of 92.4 lakh tonnes of wheat and 91.1 lakh tonnes of rice. There are two main harvests in the year: Rabi (hari) and Kharif (Sawani). The rabi or spring harvest consists of wheat, gram, barley and some oil seeds, fodder crops, potatoes and winter vegetables. The Kharif or autumn harvest consists of rice, maize, sugarcane, cotton, pulses other than gram and peas, bajra, jowar and vegetables like chillies, onions and gourd.²⁵

Agricultural Production in Punjab

The total food grains production in Punjab has increased significantly over the last few decades, especially in the post Green Revolution period. In 1970-71, production of food grains was 73.05 lakh metric tons, which increased to 256.62 lakh metric tons in 2004-05(P) registering more than three fold increase. At the beginning of the decade (1990-91) production of food grains was 192.18 lakh metric tons which increased to 256.62 lakh metric tons in 2004-05 (P). Wheat and rice played a major role in pushing up agricultural production. The production of rice increased to 104.37 lakh metric tons in 2004-05 (P) and the production of wheat rose to 146.95 lakh metric tons during 2004-05 (P). The production of sugarcane (in terms of Gur) is 5.17 lakh metric tons in 2004-05 (P) and that of the oil seeds 1.00 lakh metric tons in 2004-05 (P). The other food grain crops in the State are maize, bajra, barley, gram and pulses. The production of cotton is 20.88 lakh bales in 2004-05.

Status of Horticulture in Punjab

In the state of Punjab, the total net sown area is 42.01 lakh ha. In this horticulture crops are currently grown over an area of 2.05 lakh hectares, which accounts for 4.8 percent of the net sown area. Fruit crops are sown in 0.47 lakh hectares (ha) and 1.58 lakh ha is under vegetable crops. Flowers are grown over an area of 0.006 lakh ha.²⁶ Kinnow, orange, malta, lemon, guava, pear, mango and grapes are the main fruits grown in Punjab. Total production of these fruits is reported to be 6.80 lakh metric tons for the year 2004-05. The total area under all

²⁵ Government of Punjab, Agriculture & Allied Sector, 2006 (<http://punjabgovt.nic.in>).

²⁶ *National Horticulture Mission: Action Plan for Punjab*, Prepared by Rabo India Finance Pvt. Ltd for Ministry of Agriculture Government of India, September 2005.

vegetable crops is about 1.13 lakh hectares in 2004-05. Potato with an area of 0.68 lakh hectares in 2004-05 is the major vegetable crop of the state. As in other states in India, food processing industry is in a nascent stage in Punjab. The Food processing industry will add value to the crops of farmers and also open up big employment opportunities in the State.

Fruits

Presently the total area under fruit cultivation is 0.47 lakh ha and the production is 6.80 lakh tonnes. The major fruit crops of Punjab are citrus, mango, litchi, guava, ber, and pear. Among the citrus group most of the processable varieties are grown in the state. Kinnow is the most prevalent variety covering an area of 20,000 hectares with a production of 3.00 lakh tones. There is a promise to double the production in the next 5 years.

Citrus

The variety Kinnow has established itself as the lead citrus variety in the state. Its productivity of 15 MT/ha is the highest amongst citrus fruits in the country. The demand of this fruit is also increasing in the foreign markets. Thus there is immense opportunity in expanding the cultivation area under this crop.

Table 7.1: Fruits and Vegetables production in Punjab (in Metric Tonnes)

Kinnow/Orange	2,22,456
Mango	58,380
Grape	36,666
Pear	43,780
Peach	17,745
Lichi	11,580
Lemon	4,697
Potato	1,167,000
Root Crops	2,63,000
Tomato	1,75,000
Cabbage	32,700
Cauliflower	85,000
Brinjal	35,000

Source: Punjab – Opportunities in Agribusiness²⁷

²⁷ Punjab – Opportunities in Agribusiness (<http://www.indiainbusiness.nic.in>).

Litchi

Litchi is one of the important tropical fruit crops of Punjab and of great nutritional value and a very popular fruit in India. It also finds great favour in export markets. The export of canned Litchi has been virtually static for the last 2 – 3 years. It is exported mainly to gulf countries like Saudi Arabia, UAE, Qatar, Oman and Bahrain as well to some EU countries. There is good export potential provided quality fruits are produced employing appropriate pre – harvest and post – harvest practices. The total area under litchi cultivation during the year 2004- 05 is 1263 ha with the total production of 12630.

Pear

Pear is an important fruit crop of Punjab. It is cultivated in an area of over 2,450 ha with a total production of 49,000 tonnes. Major variety grown in Punjab is “sand pear”. Sand Pear is a hard textured fruit having juice content to the extent of 65 – 70 percent, with sugar brix varying from 7 – 9 percent. The state has now plans to further develop the production volume by setting up superior post harvest management techniques as well as by promoting its processing.

Guava

The total area under guava cultivation during the year 2004-05 was 7,309 ha with the production of 127,908 MT.

Vegetables

Punjab is a leading state in terms of production of vegetables. The total area under vegetable crop is 1.58 lakh ha. with the production of 27 lakh tonnes. The annual productivity of the state is 16.8 MT/ha as compared to the average national productivity of 14 Mt/ha. The major vegetables grown in the state are cauliflower, peas, potato, onion, chilies, tomato and brinjal.

Spices

Some of the important spices like chili, ginger, and turmeric are also grown in the state. The total area under spices production during the year 2002-03 was 10957 ha with the production of 30249 tonnes.

AEZs in Punjab

There are three AEZs in Punjab. Among these, one AEZ focuses on 'basmati rice' the other two AEZs on 'vegetables' and 'potatoes'. The vegetable AEZ, setup with investment of Rs. 26.77 crores, covering areas of Fatehgarh Sahib, Patiala, Sangrur, Ludhiana and Ropar, have given special emphasis on the cultivation of Cabbage, Broccoli, Okra, Peas, Carrot, Baby Corn, Green Chillies, Green Beans and Tomato. The private sector contribution is Rs. 14.94 crores in the vegetable AEZ .The Potato AEZ covers districts like Singhpura, Zirakpur, Patiala and satellite centres at Rampura Phul, Muktsar, Ludhiana and Jullundur.

The concept of value added agriculture development also calls for more food processing initiatives. According to the Agricultural Production and Export Development Agency (APEDA), the central agency that promotes AEZs, five vegetable processing units have been set up with an investment of Rs. 33 crore in the vegetable AEZ region. With the State Government providing the grant up to Rs. 5000 per product for development of packaging as per international standards, and providing 25 percent of the actual custom duty paid with a cap of Rs. 25 lakh, the AEZ is now in a take off stage. Plans are afoot to create a marketing hub in U.K., and Dubai. APEDA sanctioned Rs. 50 lakh for setting up of mechanized handling facility and Rs. 25 lakhs have been provided as financial assistance for setting up of cold storage for the AEZ. The Agri Export Zone for potatoes was also sanctioned during the same period. Around 100 MT of table variety potato worth Rs. 15 lakhs have already been exported from the zone.²⁸

Contract Farming in Punjab

Punjab, with its amended Agricultural Produce Marketing Act, is fast turning into a hot choice for contract farming. Pepsi, the multinational soft drink major, had a successful contract farming story in tomato. Basmati, which had almost vanished from Punjab due to unremunerative prices, is now being grown abundantly in the state, mostly due to contract farming. Several corporates including Hindustan Lever (HLL), the UB group of Vijay Mallya, PepsiCo and Escorts are increasingly becoming involved in the contract farming of agri-products. Ahmedabad-based textile major Arvind Mills is identifying locations to start a

²⁸ *AEZs integral to Punjab's growth plans*, May 01, 2005, New Delhi (<http://www.fnbnews.com>).

contract farming project to grow cotton.²⁹ Punjab government has signed agreements for at least five projects taking the total area under cultivation to 3,00,000 acres. These include a project to cultivate basmati rice with LT Overseas and barley with the UB group. PepsiCo is also expanding the scope of its basmati rice project in the state. While most of the projects in Punjab are at the initial stages, the UB group has already harvested 1,000 acres of barley.

Contract farming is popular across the country and Corporates are forging alliances with state governments for contract farming. For instance HLL's joint venture project with the Madhya Pradesh government to grow wheat was started three years ago to cultivate wheat in 250 acres. The area has now been increased to almost 15,000 acres. It is the aggressive policies of some state governments that are encouraging private sector investment in contract farming. States like Punjab and UP are amending the rules to promote contract farming. The UP government has recently amended the Agriculture Produce Marketing Committees' (APMC) rule what said that the entire farm produce has to be kept with mandis. Because of this amendment, corporates can now directly procure goods from farmers. Punjab has also amended a similar rule.

Food Processing Industry in Punjab

Punjab is a land of boundless opportunity for agro based industry, 4.2 million hectare sown area with 186 percent cropping intensity and 100 percent assured irrigation makes Punjab granary of India. With 24.86 million tons of food grain production, 9.85 million live stock and 15.3 million poultry population, Punjab is most suitable for agri business. Apart from the food grains large quantity of fruits and vegetables is available for processing.³⁰

The total geographical area of the state is 50.36 lakh hectares out of which 42.24 lakh hectares are under cultivation. Agriculture in Punjab is highly intensive in terms of land, capital, energy, nutrients, agriculture inputs and water etc. The area under cultivation is about 85 percent.³¹ Punjab has essentially an agrarian economy with a low industrial output. There are 194,000 small scale industrial units in the state in addition to 586 large and medium units.

²⁹ Cited in 'Agribusiness on the Rise in India', in 'Economic Times' by M. Sabarinath (<http://www.freeindiamedia.com/agriculture>).

³⁰ Punjab: Land, 2000-2005 (<http://www.webindia123.com/punjab>).

³¹ Government of Punjab, Agriculture, 2006 (<http://punjabgovt.nic.in/Economy>).

Punjab has entered the global business mainstream, with major players from around the world forming joint ventures in the field of agri-business. The state is determined to accelerate its annual industrial rate of growth. Going by the availability of raw materials and the thrust areas identified by the government, investment opportunities exist in the following areas:³²

- Processing of major and minor crops
- Industries based on agricultural waste/ residue (wheat/ paddy straw, paddy husk)
- Processing of fruits and vegetables
- Dairy or poultry based units
- Meat processing
- Infrastructure modernization and development
- Export oriented units

To encourage diversification in agriculture and to build up a climate for industrial investment by providing linkage between agriculture and industry, the Governor of Punjab is pleased to provide the additional incentives to the defined Agro-Industries, under the Punjab Industrial Incentive Code under the Industrial policy.³³

Incorporated in 1996, as a state government undertaking, Punjab Agro-Industries Corporation (PAIC) today has a strong extension service network and excellent rapport with the farmers. The corporation has an equity capital base of Rs.466.6 million and employs about 1000 people at different levels in its regional, district and corporate offices. It is the nodal agency of the state government for promotion of agro-based industries in Punjab.³⁴

PAIC has launched 21 successful projects costing about Rs.3,500 million. The valued partners are Pepsi, Inc. USA, Food Engineering Services, USA, Dairy Tek, USA, Institut Armand-Frappier, Canada, Imporio Lader Wahren, Germany, Westfalia Separator, Germany Schulle, Germany, Carmeltech, Israel, Chemtec, Israel, Sandvik Process System, Italy, AG Seeds, Australia, Rice Engineering, Thailand, Fletcher Challenge, New Zealand, TMCI, United Kingdom Raisio, Finland, Dalsem Holland, Meijer Holland, and IMV, France.

³² Indian States: Economy and Business: Punjab, August 2005 (www.ibef.org).

³³ Punjab: Investment Incentives (<http://www.indiainbusiness.nic.in/indianstates/punjab>).

³⁴ Government of Punjab, Industry & Investment, 2006 (<http://punjabgovt.nic.in/Economy>).

PAIC is currently implementing 15 agro-industrial projects in the areas of agro products, agro-chemicals and food and horticulture at the total capital cost of about Rs.15,000 million. Livestock also plays an important role in the economy of the state which contributed 11.77 percent to the Gross State Domestic Product (GSDP) at constant (1993-94) prices in 2004-05(Q). The per capita availability of milk in the State was 901 grams per day in 2004-05. There are 57 milk plants and chilling centers in running condition in the State. The production of poultry eggs was 3,680 million in 2004-05³⁵.

Opportunities in Agri-Business

National Productivity Council of India after a survey found that in Punjab availability of crop residue is of the order of 31.5 million tons.³⁶ The major crop residues are rice straw, wheat straw and cotton stalk. In addition to that industrial residue/by product such as rice husk and bagasse is also available. Approximately 2 million tons of these two products are generated every year. Keeping these things in mind Punjab offers tremendous investment potential in agro based projects in following area:

- Processing of major and minor crops
- Processing of fruits and vegetables
- Processing of crop and agro industrial residue
- Poultry and animal husbandry
- Dairy and milk processing

In Punjab farmers produce: 20 million tons of grains every year, 3 million tons of fresh produce every year and 30 million litres of milk every day. There are more than 115 food processing units and 16 beverage companies in the large and medium scale sector that are active in the state. The number of SSI units in food and beverage sector is known to be 9689 and 174 respectively. Three major companies have invested US\$ 2 billion in Punjab, they are: Reliance Industries, Bharti-Rothschild, and ITC Ltd.

³⁵ Government of Punjab, Agriculture & Allied Sector, 2006 (<http://punjabgovt.nic.in/Economy>).

³⁶ Government of Punjab, Industry & Investment, 2006 (<http://punjabgovt.nic.in/Economy>).

The main focus of the agri processing industries is on: export & marketing farm fresh produce, processed foods, dairy, meats; promoting safe, hygienic, sustainable, organic farm practices; and international standards for hygiene and health. Punjab has the largest integrated network at ground level comprising of 52 Rural Business Hubs which undertake: Collection and purchase of produce; Distribution of agricultural inputs; Domestic marketing needs of farmer's families. The State aims at strong farmer relationships, disintermediation and 'demand led production'.

There is large scope for business and investment opportunities in agri sector, viz., processing, grading and packaging; handling system; cold chain and logistics; largest food retailing network; massive export drive; productivity focus in F&V, dairy, coarse grains; farm inputs & mechanization; credit & insurance risk management; and facilitating creation of 'Common Indian Market'.³⁷

The government of Punjab has sanctioned a number of projects in food processing industry. These projects deal with integrated poultry processing; frozen ready to serve fruit and vegetable product; milk processing for manufacture of butter, ghee and lactose; integrated rice, wheat and potato processing; processing of tomatoes and chillies; etc. The Punjab State Industrial Development Corporation Limited (PSIDC) has also many projects, viz., processing of fresh fruit and vegetables; packaged fruit juices; dehydrated vegetables; grain based distillery; packaged sterilized flavoured milk; etc.³⁸

Punjab will possibly be the largest gainer in the process of retail evolution in the country. The largest consumption category being the food and grocery, there is immense scope for Punjab farmers & processors to reap the benefits of organized retail. As large retailers, Indian or global, get in to food retailing business there will be huge investments in supply chain logistics, processing, cold chains and contract farming which will eliminate wastage, improve quality and margins for farmers and provide world class produces at affordable prices to consumers.

³⁷ National Association of Manufacturers meeting on June 7, 2006 at Washington DC, Government of Punjab Delegation.

³⁸ Punjab – Opportunities in Agribusiness (<http://www.indiainbusiness.nic.in>).

Reliance is planning for a mega foray into the farm and dairy sector to strengthen its food retailing arm and Mr. Mukesh Ambani's interest in Punjab hints at substantial investments in the state for the development in creating organized base for agriculture and milk produces. Having identified Punjab as a key state in its mega retail business plan, Reliance Industries Ltd (RIL) has signed a memorandum of understanding with the state government for investing Rs 5 billion in agriculture projects. As part of the project, RIL would undertake to complete the roll out by 2012 in Punjab, envisaging forward linkages to encourage demand driven farm production and setting up of captive farms, organic farms, greenhouses along with development of infrastructure for supply chain.³⁹

Fast-food retailer McDonald's, for instance, has invested over US\$ 175 million in building its back end logistics which has helped every one in the chain to grow and set benchmarks in farming, processing, distribution and retail.⁴⁰

A mega food is planned to be set up in Punjab, with an investment of 100 million USD. A memorandum of understanding (MoU) has already been signed between the Confederation of Italian Food Processors and ASSOCHAM (The Associated Chambers of Commerce and Industry of India), for developing this park. The food park will process food based on European Union standards (penne, pastas, tortillas from corn), besides cookies, so that 50 per cent of the food is bought back by the European Union.⁴¹

Agriculture Supply Chain

Several studies have indicated that the introduction of green revolution technology since the mid sixties to meet domestic food shortages amplified the role of regulated markets – being pulled out from wheat / atta (whole wheat flour) distribution to wheat procurement in the major wheat producing states, Punjab being one of these. This brought into existence dual market structures for wheat procurement in the State. Punjab State Mandi Board regulated the wholesale food grain markets. Due to the availability of assured markets for wheat disposal farmers shifted the area under wheat cultivation from the alternative crops during the rabi (winter) season.

³⁹ *RIL to invest Rs 500 cr in Punjab*, July 31, 2006 (<http://www.rediff.com>)

⁴⁰ *Retailing in Punjab: 2010 and Beyond* (www.imagesfashion.com/punjab)

⁴¹ Government of Punjab, 2006 (<http://punjabgovt.nic.in/Economy>)

Coupled with the availability of technology as it led to a fabulous increase in the market supplies, public sector has emerged as a market leader for the procurement of this primary product. It is distributed primarily through a network of fair price shops for the public distribution system in the deficit areas of the country.⁴²

As regards fruits and vegetables, the overwhelming problem is one of lack of modern cold storage facilities in the State where farmers can store produce and market the same when the prices are favourable. Investment in food processing industry on the part of the private sector is being encouraged, which would also help farmers of fruits and vegetables through backward linkages of such investments.

The State amended its Agriculture Produce Market Act to enable the private sector to set up such markets. It needs to be liberally supported from the Horticulture Mission Fund for this purpose.⁴³ Punjab Agro has been instrumental in introducing post harvest management technologies for increasing shelf-life and transportability of perishable horticultural crops such as kinnows; grapes, exotic flowers by creating grading and waxing facilities, pre-cooling centers, refrigerated vans, flower auction house etc. Avenues are being explored for export of fresh fruits, vegetables and flowers, and some success has already been achieved in this direction.⁴⁴

Marketing and Storage Facilities

Marketing and storage facilities are crucial components of post harvest technology. As on 31st March, 2005 there were 144 regulated markets and 519 sub yards in Punjab. The average number of villages and area served per market was 86 and 350 (sq. kms.) in 2004-05. The total storage capacity for foodgrains decreased from 273.66 lakh tonnes in 2003-04 to 223.84 lakh tonnes in 2004-05 which comprises of 147.13 lakh tonnes of covered and 76.71 lakh tonnes of open capacity.

⁴² Goel, Veena (2006), '*Motives and Concerns in Supply Chain Management for Wheat Industry in India*'. (<http://www.runetwork.de>)

⁴³ Government of Punjab, June 2005 (<http://planningcommission.nic.in>)

⁴⁴ Government of Punjab, Industry & Investment, 2006 (<http://punjabgovt.nic.in/Economy>)

Post Harvest Infrastructure

To strengthen the post harvest infrastructure to meet the present level of production as well as the anticipated increase in production volumes, quality at the consumer level can be increased with appropriate post harvest infrastructural facilities⁴⁵ like:

Collection Centres

Nine collection centres, three in each identified district is proposed under the national horticulture mission plan. The collection centre will consist of mechanical sorting, grading and packing line. The estimated cost for each unit is 15.00 lakh and the proposed assistance is credit linked back – ended subsidy @ 25 percent of the capital cost of the project in general areas and 33.33 percent in case of hilly and tribal area.

Multi Product Processing Unit

One multi product processing unit is proposed to be set up in Abohar (Firozpur) for processing of citrus and guava. The unit will be an integrated facility which will be basically for guava and citrus, tomato.

Cold Storage

Two cold storage facilities proposed to be set up, one in Hoshiarpur and one in Firozpur for storage of citrus under controlled condition. The estimated cost of this storage Rs. 2 crore per unit and the assistance is credit linked back – ended subsidy at the rate of 25 percent of the capital cost of the project in general areas and 33.33 percent in case of hilly tribal areas.

Rural/Apni Mandi

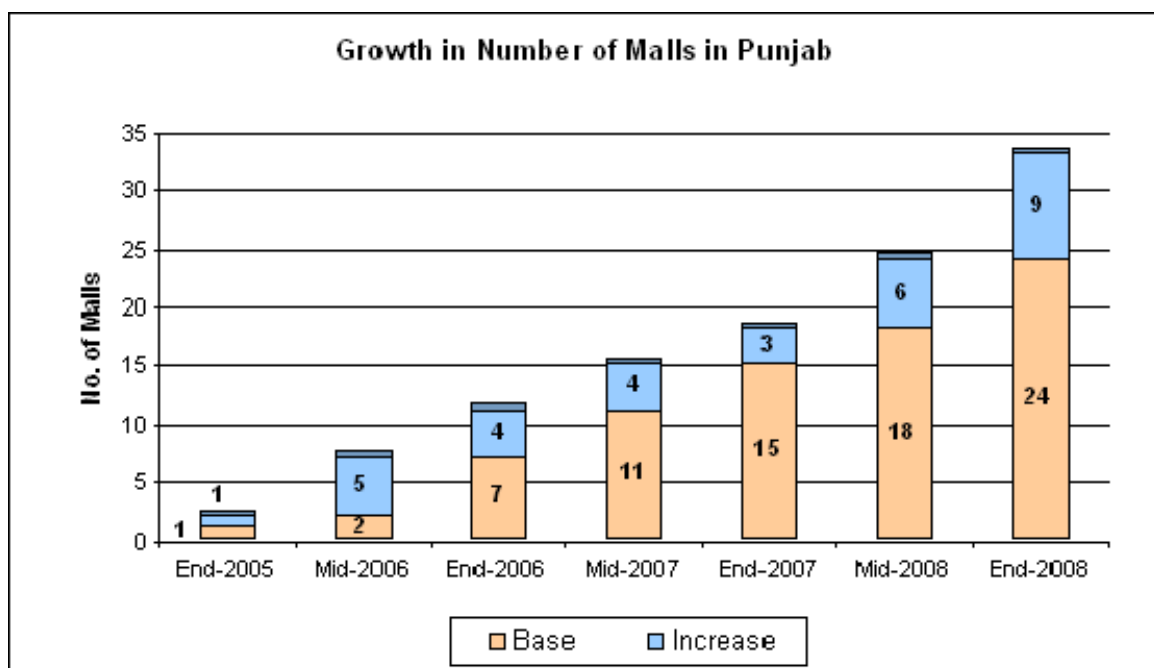
The present haats or weekly bazaars which constitute first contact point with commercial circuits for the producers do not provide even the most basic of amenities and facilities such as shelter, water, electricity, roads etc. Bringing about an improvement in market facilities at rural level has a direct impact on farmer's income. Once developed the rural markets provide improved services for buyers and create an element of market security for the growers. Haats need to be provided with mobile banks on haat days by Gramin Banks.

⁴⁵ *National Horticulture Mission: Action Plan for Punjab*, Prepared by Rabo India Finance Pvt. Ltd for Ministry of Agriculture Government of India, September 2005.

Retailing in Punjab

With the highest per capita income in the country, that is nearly three-and-a-half times the all-India average, an excellent infrastructure to promote new industries and support the existing ones, coupled with high percentage of employment, Punjab stands second to none in fast becoming a favored destination for the retail industry. This state provides a grand opportunity to all the retailers at large to exploit its huge consumption potential. Punjab will possibly be the largest gainer in the process of retail evolution in the country.

Figure 12.1: Malls in Punjab



Punjab ranks first in average per hectare yield of rice, wheat and cotton in the country. Punjab has earned the rare distribution of being called the “food basket” of the whole country. The state produces 1 percent of rice, 2 percent of wheat and 2 percent of cotton of the world. Thus, there is a clear opportunity in Punjab in the foods and beverages category, but more importantly, and strategically, retailers can effectively utilize Punjab as their major sourcing hub for their nationwide chain of stores in the food and grocery sector. Unlike other states, growth of consumption in Punjab gets equal support from the urban as well as rural consumers and this unique feature indicates an immense potential for organized retail, as the choice for “Location” is not really a constraint here. Thus, it is the second-tier cities and semi-urban and rural towns of Punjab that represent a goldmine of opportunity for the

retailers. The big cities of Ludhiana, Jalandhar, Chandigarh, Amritsar, Patiala and Mohali also provide ample opportunity for growth.

As large retailers, Indian or global, get in to food retailing business there will be huge investments in supply chain logistics, processing, cold chains and contract farming in this state. Reliance is planning for a mega foray into the farm and dairy sector to strengthen its food retailing arm and creating organized base for agriculture and milk produces. Corporate Houses like the *Piramals*, the *Tata*, the *Rahejas*, *ITC*, *Godrej*, *S.Kumar's*, *RPG Enterprises*, and *The Future Group (formerly PRIL)* with their mega retail chains *Crosswords*, *Shopper's Stop*, *Pantaloon*, *Piramyd*, etc., have already announced major plans to liven up the retail sector in Punjab. Fast-food retailer McDonald's, for instance, has invested over US\$ 175 million in building its back end logistics and set benchmarks in farming, processing, distribution and retail. Once the systems are in place and the global players build confidence they would be inclined to source from India for the international markets as well.
