

EXPLORING THE AGRICULTURAL EXPORT POTENTIAL OF ANDHRA PRADESH - A SWOT ANALYSIS

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It is now widely accepted that, for India, sound agricultural development is essential to achieve overall economic progress. Because, India has an expanding population of one billion to feed, has over two-thirds of its national work force directly or indirectly dependent on agriculture and has an agricultural sector which generates 25.2 per cent of total GDP (1997-98) and over 15 per cent of its exports, its economy is particularly dependent on sustained and healthy agricultural growth. The agricultural sector has been successful over the past four decades in keeping pace with rising demand for food. In the year 1991, the country entered the new era of globalisation and economic liberalisation, and is bound to have an impact on future land use and production patterns. This shift may also be environmentally desirable, as the producers will concentrate more on quality of production through cost effectiveness. These changes have profound influence on future agricultural research and technology dissemination to the farmers.

However, many expressed concerns and apprehensions fearing adverse impact of World Trade Agreement (WTA) signed by India. The present day ills of agriculture and crashing prices are being attributed to WTA. This is mainly due to the fact that implications and consequences of WTA are not fully understood by many. They called it as a 'no-win' situation for the country because, developed and developing countries do not have same level field for operations. Moreover, they felt that, compulsory market access and patenting of plant seeds provisions adversely affect the food security of the people of the country. This is because, even today, the agricultural sector in the country is more subsistence oriented i.e., production for

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self-consumption and adversely affected by vagaries of monsoons. This clearly implies one important question as far as the food security aspect is concerned, i.e., “Is food production is for godowns or for earning foreign exchange”? So, in this context, the export potential of agricultural commodities from the country should be studied from time to time, which is a dire need because export-led agricultural growth paves the way in the coming future. This also facilitates the establishment of requisite infrastructure in the country. Since Andhra Pradesh state is endowed with diverse agro-climatic conditions and occupies a prominent place on the agricultural map of India, the same is considered for following the management approach to evaluate the existing situation, exploring the export opportunities and preparation of action plans for any threats which would ensure food security on one hand and profitability of agricultural business on the other.

Importance of Agriculture in Andhra Pradesh

Andhra Pradesh is the fifth largest of Indian states both in terms of geographical area and population. The state is broadly divided into seven agro-climatic zones. The Rayalseema zone, which is semi-arid and drought prone receives around 700 mm rainfall. The net sown area is only 38% in this zone and the irrigation infrastructure is poor. South Telangana receives 820 mm rainfall and is marked by low productivity and high waste lands. North Telangana receives a little less than 1000 mm rainfall, but has only 30% of the cultivated area irrigated. In this zone, fallows are very high because of extremist menace and the soils are mostly red sandy. The cropping intensity is only 106% in this zone despite better rainfall. The productivity is too low. North Coastal zone has more than 1000 mm rainfall and the climate is sub-humid. Soil salinity and floods are the limiting factors. The area under cultivation is higher in case of South Coastal Andhra Pradesh, which also has better irrigation facilities and higher productivity. Frequent cyclones, floods, drainage and salinity are the limiting factors. Nellore zone has 60% area under irrigation with reasonably high cropping intensity. Cyclones are major limiting factors in this district. The salient features relating to the importance of agriculture in the state are listed below.

1. Nearly 30% of the states' GDP is from the agricultural and allied sectors.
2. Provides employment to 64.55% of the states population.
3. The state ranks first in the production of various agricultural products in the country.
4. The contribution of agricultural and agro-based industries sectors is a significant 39% of the total exports from Andhra Pradesh.

However, the excessive dependence of food production on small sized holdings has adversely curbed the potentialities of large scale commercialization of this sector. The agricultural extension programmes implemented earlier laid more emphasis to cereals (particularly rice), rather than on farming systems approach. Even though the state is blessed with diverse agro-climatic zones, soils, cropping pattern, food habits, culture and distribution of assets, the actual potential has not been fully exploited. This is mainly due to several inherent weaknesses and constraints such as short comings in the pre and post-harvest operations and management, low productivity of crops, lack of adequate and updated knowledge on developments taking place in the potential and existing overseas markets, infrastructural constraints etc. Hence an effective policy for the amelioration of the above constraints in agriculture and efficient utilisation of states own resources is essential for boosting the agricultural exports from the state. Hence, the Government of Andhra Pradesh should restructure the existing pattern of agricultural production and marketing so as to realise the benefits of foreign trade. This calls for examining the Strengths, Weaknesses, Opportunities and Threats (SWOT) of the agricultural export potentials of Andhra Pradesh state. This is because, it helps in estimating the marketable surplus for different commodities, studying the possible constraints in marketing, utilisation of technology, identification of potential buyers, exporting the commodities based on price trends in the international market etc. In the short-run, it will be useful for understanding the market demand pattern and possibilities of meeting such demands for the available resources. In the long run, it will form the basis for restructuring the supplies to cater the international demand and thereby vibrate the agro-economy of the state.

1. STRENGTHS OF ANDHRA PRADESH AGRICULTURE IN THE CONTEXT OF EXPORT POTENTIALITIES

- ◆ Stands among the top five Indian states in terms of cultivated land.
- ◆ Large population mostly living in rural areas and deriving their livelihood from agriculture and allied activities.
- ◆ Enterprising, receptive and hard working farmers.
- ◆ Diverse soil types which facilitate cultivation of large number of crops round the year.
- ◆ Strategically located in the South-central part of India with easy access to all parts of the country.
- ◆ Climate is fairly congenial for a variety of agriculture and allied activities.
- ◆ Second largest coast line in the country providing several gateways for international trade.
- ◆ Rich natural resources
- ◆ Rich livestock
- ◆ Good scope for marine cultivation
- ◆ Leads all other states in production of poultry.
- ◆ Rich bio-diversity with respect to agriculture and horticultural crops.
- ◆ Sincere support from the State Agricultural University (Acharya N. G. Ranga Agricultural University), presence of several ICAR institutes and an International Institute, ICRISAT in the areas of education, extension, research and training for the welfare of farming community.

Some of the highlights of activities in Agriculture and Allied sectors in Andhra Pradesh are as follows:

Agriculture (Food grains)

- Andhra Pradesh contributed 14.9 million tonnes in 1998-99 to the national food grains production, ranking fourth after U.P., Punjab and M.P.

- Andhra Pradesh ranks third amongst the Indian states with respect production of Rice (11.87 million tonnes) in 1998-99 contributing 13.3% of India total rice production and 2.8% of world's rice production. In terms of rice productivity, (2812 kgs/ha), Andhra Pradesh ranks third in India after Tamilnadu and Punjab.
- Andhra Pradesh ranks second with respect of production of Maize (1.35 million tonnes) contributing to 12.6% of India's total production and top in terms of productivity (3328 kgs/ha).
- Andhra Pradesh produces about 0.8 million tonnes of assorted pulses- Redgram, Greengram, Blackgram, Horsegram, etc.

Oilseeds and cash crops

- Andhra Pradesh produces total 2.26 million tonnes of oilseeds in 1998-99, ranking fourth in the country.
- Andhra Pradesh ranks third in India with respect to production of Groundnut (1.92 million tonnes) and accounts of 21% of country's total Groundnut production and about 5.8% of world's production.
- Andhra Pradesh ranks third with respect of production of Sunflower (0.24 million tonnes) and accounts for 20% of country's Sunflower production.
- Andhra Pradesh produces 1.5 million tonnes of Cotton, which is 12.3% of India's production (3rd highest in the country and 1.7% of world's Cotton production.
- Largest producer of Tobacco in the country (0.25 million tonnes, 36%).
- Andhra Pradesh produces 5.6% of the country's Sugarcane (16.7 million tonnes) ranking 5th amongst the Indian states. This is equivalent to 1.3% of world's Sugarcane production.

Horticulture

- One of the largest producers of fruits and vegetables in the country.
- Andhra Pradesh produces an estimated over 8 million tonnes of Horticultural crops (about 5.3 million tonnes of fruits, 2 million tonnes

of vegetables and 1.1 million tonnes of spices) and about 800 million Coconuts in 1997-98.

- Andhra Pradesh occupies 1st rank in the country, both in production and productivity in respect of mango (over 3 million tonnes), orange, lime and in productivity of papaya, grapes and oil palm. Some other leading products are banana, tomato, guava, onion, okra, sapota and cashew.
- Third largest producer of coconut in India (19.2 million tonnes, 12.9%).
- Andhra Pradesh takes top rank in the country in area under chilly production and produces 0.5 million tonnes. Also large production of turmeric and coriander.

Fisheries, Dairy, Poultry and Animal Husbandry

- Andhra Pradesh has long coastline of 974km, continental shelf area of 33,227 sq.km, river length of 8577 km and 102 reservoirs with spread area of 2.34 lakh hectares. The fish production is 1.50 lakh tonnes of marine fish, 2.61 lakh tonnes of inland fish in 1998-99. Andhra Pradesh ranks 2nd in inland fish production and 1st in coastal aquaculture. About 25% of marine exports of the country are from Andhra Pradesh
- Andhra Pradesh is the 7th largest milk producer in the country, producing about 4.5 million tonnes of milk per year, growing at 5-6% per annum
- 20 million cattle and buffalo population and 12 million sheep population. Andhra Pradesh ranks 2nd in buffalo and sheep population, 7th in cow 8th in goat population in the country.
- Production of 1.5 lakh tones of meat.
- Andhra Pradesh is country's largest egg (575m eggs) and poultry producer, contributing to about a third of country's egg and about one fifth of broiler meat production.

Sericulture

- Andhra Pradesh stands second in the country in Mulberry cultivation with an area of 1.12 Lakh acres.

- Andhra Pradesh stands second in the country in Cocoon production with an annual production of 34193 M. Tonnes of Reeling Cocoons.
- Andhra Pradesh has privilege of having world renowned traditional handloom centers like, Dharmavaram, Pochampally, Gadwal, Narayanpet, Peddapuram, etc.

2. WEAKNESSES OF ANDHRA PRADESH AGRICULTURE IN THE CONTEXT OF EXPORT POTENTIALITIES

- Long coast line often subjected to cyclones and storms.
- Comparatively high percentage of illiteracy of 66% compared to 48% of the country.
- About 60% of the Gross Cropped Area is under rainfed farming.
- Limited irrigation infrastructure.
- Low investment capacity of the farmers.
- Lack of adequate technical manpower and infrastructure to study the implications of WTA on the agricultural exports.
- Low marketable surplus due to high domestic consumption.
- No effective steps have been taken for consolidation of land holdings.
- Rural roads are unmotorable due to poor maintenance.
- Inadequate and erratic power supply to agricultural sector and also high cost of power.
- Lack of proper marketing infrastructure like cold storage facilities, processing facilities, grading facilities, market information network, advertisement etc.

3. OPPORTUNITIES OF ANDHRA PRADESH AGRICULTURE IN THE CONTEXT OF EXPORT POTENTIALITIES

- The existing diversified agro-climatic conditions, soils and cropping pattern offers great opportunities for producing diverse crops both for the international as well as domestic market.

- Conducive environment for direct foreign investment in the state to build requisite infrastructure.
- Sine the state occupies a pride place among several states in the country in different crops, there exists a greater opportunity to enhance their exports by creating requisite marketing infrastructure.
- The spread of Information Technology sector in the state offers great opportunities to export the commodities (importers' need-based) by studying the price trends in the international markets.
- The establishment of bio-technology industries in the state provides a greater scope for releasing pest and disease resistant varieties and promoting quality of production through cost effectiveness.
- Greater scope for private enterprises participation (ex. contract farming) for enhancing quality of production and exports.
- Herbs and medicinal plants are found in abundance in different parts of the state. The 'Ayurveda' system of medicine is still very popular outside, because of the realisation of drawbacks of synthetic chemicals and drugs. This offers an opportunity to the state to explore marketing of such herbs and medicinal preparations overseas.
- Location of several ICAR institutions, an International institution (ICRISAT) and other institutions facilitate exchange of expertise and materials to study the implications of WTA relevant to the state.
- Large extension network system facilitate the farmers to shift their cropping pattern towards more profitable crops.

4. THREATS TO ANDHRA PRADESH AGRICULTURE IN THE CONTEXT OF EXPORT POTENTIALITIES

- Erratic distribution of rainfall may adversely affect the production.
- Droughts, floods and cyclones of high frequency and intensity.
- Limited scope for expansion of area under agriculture.

- Threats of extremism, absentee landlordism leads to ineffective utilisation of land and other resources.
- Superstitious beliefs of the farmers

CONCLUSIONS AND SUGGESTIONS

From the above analysis, it is clear that the farmers should be motivated to take up the agricultural and allied activities as a profit making business and to concentrate more on profitability rather than on productivity of crops. This implies that the farmers should produce and market their produce through cost effective technologies. To achieve this, the following suggestions should deserve special attention.

1. Trained and skilled manpower should be provided in the fields of agricultural research, extension and marketing.
2. The roles and responsibilities of the existing State Agricultural University, State Department of Agriculture and Marketing Department should be properly restructured.
3. Networking of different scientific organisations located in the state should be improved so as to expand application of modern technology in the fields of production and marketing
4. Since the state is having an easy access to all parts of the country and having 2nd largest coast line in the country, there is a greater opportunity to promote exports by developing both air-cargo and ship-cargo facilities with requisite infrastructure.
5. The State Agricultural University and State Department of Agriculture should conduct an extensive research for generating cost effective technologies for agricultural production.
6. The WTO Cell established in the state should conduct studies periodically regarding the implications of WTA on the state agriculture and allied sectors, suggest steps to safeguard the interests of the sector, should aim at exploiting the opportunities offered by this Agreement, conduct marketable surplus studies and export competitiveness of

different agricultural commodities in the international market. In order to stabilize and sustain the exports from the state, the cell must make all-out efforts to gather more competitive strength through cross-comparing the states' innate strengths and weaknesses *vis-à-vis* established rivals.

7. There is a greater need to introduce sophisticated technologies in place of existing and outdated technologies to boost both quantum and quality of production, there by, higher profits from the international market.
8. There is a greater need to educate the farmers to adopt IPM and INM practices with more emphasis on adopting biological control and bio-fertilizers so as to reduce the cost and improve the quality of production.
9. Agricultural research, extension and education system should be totally re-oriented by the State Agricultural University to meet the new requirements in the light of WTA. There is a greater need to start a fresh course in the area of International Agricultural Trade with a major focus on the Implications of WTA on Indian Agriculture to educate the farm graduates or post-graduates. The research agenda should focus on improving the profitability rather than productivity.
10. Bio-technology should be given special attention regarding development of high yielding varieties with drought tolerance, pest and disease resistance and with higher quality.
11. There is a greater need to invest substantially for infrastructure development such as cold storages, grading facilities, processing facilities, market information network etc., which will have a positive impact on export marketing.
12. The Government should encourage private sector agencies to take up contract farming in the state so as to diversify agricultural production, disseminating scientific technology, supply of quality inputs, proper technical guidance etc for boosting the agricultural production and exports.
13. Export Promotion Organisations should be established in the state and they should be entrusted the responsibilities of collecting marketing

information on international trade, production, prices, quality standards, seasonality, marketable surplus etc., for analysing and disseminating information among the producers and exporters. The export competitiveness of agricultural commodities should also be studied from time to time so as to encourage their exports which are having more comparative advantage in the international market. It also facilitates full exploitation of market access opportunities provided by the WTA. The expenditure incurred on export promotion activities does not go against the spirit of WTA, because they come under the Green Box provisions.

14. A long term policy is essential to promote the agricultural exports on a sustainable basis. This policy should aim at proper selection of commodities for exports based on the need of other countries rather than on surplus oriented commodities.

Besides implementing the above suggestions in a systematic manner, adequate attention should be paid to overcome the possible threats and mitigating the weaknesses for a proper and planned development of export-oriented agriculture in the state. This should be carried out both from the short-term and long-term perspective so as to carve out the states' due share in the world trade.

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Appendix I: Agricultural Exports from Andhra Pradesh

(Rupees Crores)

Item	1994-95	1995-96	1996-97	1997-98	1998-99
Agriculture and Agro based Products	956.02	1810.38	2426.05	2681.61	2780.82

Source: Andhra Pradesh Exporters Directory, 2000

Appendix II: Ranks of Major crops in terms of Production & Productivity

Crop	Country/ State	Production (000 Tonnes)	Rank	Productivity (Kgs/Hect)	Rank
Paddy	World	573263	1st	3827	1st
	China	198471		8567	
	India	123012	2nd	(Egypt)	9th
	A.P.	11430		2915	
Maize	World	585828	1st	2781	3rd
	USA	237897		4182	
	India	9800	8th	9478	1st
	A.P.	1350		(Italy)	
Groundnut	World	30169	1st	1594	16th
	Myanmar	9700		3328	
	India	8000	2nd	1st in India	1st in India
	A.P.	1926		1273	
Sugarcane	World	1241260	1st	2828	1st
	Brazil	306599		(USA)	
	India	265000	2nd	988	12th
	A.P.	16680		989	
Cotton	World	19737	1st	63324	1st
	China	4300		11111	
	India	2856	3rd	(Egypt)	11th
	A.P.	1490		69737	
			3rd	78038	4th in India
				584	
				1065	1st
				(Turkey)	
				321	11th
				198	
					6th

Source: Strategy Paper of Agriculture and Allied Departments, Govt. of A.P.

Appendix III: Export of Agricultural, Agro-based industrial & Forest products from Andhra Pradesh

Year	Rs. (million)
1987-88	1733.8
1988-89	1783.7
1989-90	2342.4
1990-91	3009.0
1991-92	4233.0
1992-93	6217.1
1993-94	8482.1
1994-95	9560.2
1995-96	18104.0
1996-97	26460.5

Source: VISION 2020, ANGRAU

Appendix IV: Position of Andhra Pradesh in Sericulture Sector

Status	State Average	Rank	Competitive state
Area under mulberry (in Lakh Acres)	1.12	2 nd	Karnataka
Cocoon production (M.Tonnes)	34193	2 nd	Karnataka
Raw silk production (M.Tonnes)	3757	2 nd	Karnataka
Productivity Levels			
1. Brushing per Acre (In Nos)	500	2 nd	Karnataka
2. Cocoon production per 100 DFLs (in Kgs)	42.2	2 nd	Karnataka

Source: Strategy Paper of Agriculture and Allied Departments, Govt. of A.P.

Appendix V: Share of Andhra Pradesh in India's production in important products in Agriculture & Horticulture

Item	India	A.P.	% A.P / India
Total population (million) 1999	950	75	7.9
Agro production (m tonnes)			
Rice	85.99	11.87	13.3
Wheat	70.80	0.06	0.1
Coarse grains	31.46	2.19	7.0
Maize	10.7	1.38	12.6
Pulses	14.81	0.80	5.1
Total food grains	213.76	14.90	7.1
Total oilseeds	25.21	2.26	9.0
Groundnut	9.16	1.92	21.0
Sunflower	1.17	0.24	20.5
Sugarcane	295.7	16.68	5.6
Cotton	12.18	1.49	12.2
Horticulture (m tonnes)	130	8.3	6.4
Fruits (m tonnes)	42	5.2	12.4
Vegetables (m tonnes)	71.5	2.0	2.8
Mulberry acreage (Lakh acres)	7.50	1.12	29
Cocoon Production (Lakh tonnes)	1.25	0.34	27

Source: Strategy Paper of Agriculture and Allied Departments, Govt. of A.P.

Appendix VI: Comparison of average yields of different products in Andhra Pradesh state, India & World

Crop	Unit	World Highest	India Average	AP Average
Paddy	Mt/ha.	10.269	1.928	2.812
Maize	Mt/ha.	9.478	1.755	3.328
Groundnut	Mt/ha.	2.828	1.210	1.082
Cotton	Mt/ha.	1.065	0.223	0.202
Sunflower	Mt/ha.	2.888	0.584	0.634
Sugarcane	Kg/ha.	136,515	72,560	77,231
Tomato	Mt/ha.	467	15	8.0
Onion	Mt/ha.	82	11	15.50
Grape	Mt/ha.	20	1.8	37.3
Milk	Kgs/animal	6815	877	700
Buffalo meat	Kgs/animal	253	138	150
Mutton & lamb	Kgs/animal	33	12	13
Pig meat	Kgs/animal	140	35	35
Beef and Veal	Kgs/animal	399	103	Banned

Source: Strategy Paper of Agriculture and Allied Departments, Govt. of A.P.