



Oil Palm Cultivation in Andhra Pradesh State – A Study of the Problems and Prospects

KEYWORDS

Oil Palm, Fresh Fruit Bunch Yield, Drip Irrigation

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ABSTRACT India is the largest consumer of Oil palm in the world (18% of world consumption) and also largest importer of oil palm (45% of world imports). Andhra Pradesh has been the leading palm oil producing state in India (85% of country's production) followed by Kerala (10%), Karnataka (2%). The West Godavari, East Godavari and Krishna districts of Andhra Pradesh extensively cultivate oil palm. Oil palm is the highest oil producer among perennial oil yielding crops. Oil palm marketing in the country is well streamlined, earmarking plantation zones for each palm oil mill. Oil palm growers are under an obligation to supply the fresh fruit bunches from the oil palm plantations in that area only to the factory to which the zone is attached.

The Government of India has been supporting oil palm through subsidies (planting, fertilizers, micro-irrigation) and various State Governments also provide assistance for oil palm development. Even though the Government has been trying to expand the area under palm oil cultivation, low productivity, price fluctuations, insufficient processing facilities, lack of suitable technologies for harvesting cause very slow growth rate in expansion of oil palm cultivation.

This research paper is an attempt to address some of the important issues oil palm cultivation in the State of Andhra Pradesh.

I. Introduction:

Palm oil is widely used as cooking oil and has excellent health attributes. It can be used in formulation of margarine and cooking fat such as Vanaspathi. It can also be used manufacture of biscuits, ice-creams, soaps, detergents and shampoos, processing noodles, potato chips, French fries, doughnuts. Palm oil also finds applications in ecocide oil used in plastics, oleo chemicals, fatty acids, diesel substitutes, glycerols etc. Further palm kernel oil has variety of industrial uses. Oil palm (*Elaeis guineensis*) belong to family Palmae and tribe Coccoineae. Oil is extracted from both the pulp of the fruit and the kernel.

Oil palm plays significant role to meet the vegetable oil requirements in India. India is the largest consumer of palm oil in the world, consuming around 18 per cent of total world consumption. Increasing demand and low production of oil seeds in the country has necessitated the import of vegetable oil, so as to meet the demands of ever growing population. India is the largest importer of palm oil amounting to 45 per cent of world imports. In India oil palm is being cultivated commercially since 1990. Estimated area under palm oil cultivation in India is about 1,92,000 had producing approximately 72,000 tons of crude palm oil (2012). Palm oil is grown in about 40 countries of the world with an estimated global production of 50 million tons in 2012. Indonesia and Malaysia are the leading oil palm producers contributing 41 per cent and 40 per cent of the world production respectively followed by Nigeria, Thailand and Colombia.

Andhra Pradesh has been the leading palm oil producing State in India contributing approximately 85 per cent of country's production followed by Kerala (10 per cent), Karnataka (2 per cent). Other oil palm producing states include Orissa, Tamil Nadu, Goa and Gujarat.

II. Literature Survey:

A glance at some of the previous studies is as follows. Retlunam. P. in his study (1998) stated that the production of palm oil by major oil palm growing countries indicated a steady progress compared to other oil seed crops. P. Srinivas et.al. (2011) in their study made an attempt to study the seasonal effects on bunch components and fatty acid composition in

the wet and dry seasons. They also identified that oil content and fatty acid composition in the oil palm are influenced not only by genetical but also by environmental factors. I.V.Y. Rama Rao and V. Rajendra Prasad (2010) in their study assess the impact of WTO on production and productivity of oil seeds in A.P. by estimating the patterns of growth and magnitude of instability. The study revealed that growth performance of oil seeds production was higher during pre WTO period than post WTO period but it was accompanied by high degree of instability. P. Rethinam (2009) in his study "Recent Advances in Oil palm – A Global perspective", felt that a "Three pronged Strategy" should be adopted in planning the Research and development for the industry viz., high income strategy, bio-mass utilization and value added strategy.

M.V. Rao (2009) in his study "Oil palm Development in India – Past, Present and future" opines that Andhra Pradesh is leading in oil palm cultivation in terms of production. He suggested that learning from the experiences of Malaysia, Indonesia shall lead to enhance oil palm productivity in India. H.P. Singh (2009) in his research paper "National and International Scenario of oil palm" during the "Proceedings of National Conference on oil palm" threw light on Indian and Global Scenario of oil palm along with special focus on technological developments, methods for enhancing efficiency, waste recycling etc. M.N. Noormahayu, A.R. Khalid and M.A. Elsadig (2009) in their study on "Financial Assessment of oil palm cultivation in Selangor, Malaysia" explored the social and economic basis of oil palm cultivation in peat land. The result of their study stated that chemical inputs are more important than labour costs in determining the financial output. Oil palm cultivation is profitable so long as growth conditions, costs, selling price do not fluctuate substantially.

III. Objectives of the Study:

The current research paper has a broad objective of studying production, marketing, financial aspects of oil palm cultivation with special reference to Andhra Pradesh. The specific objectives include the following.

1. to analyse production, marketing, financial problems of oil palm growers
2. to examine the socio-economic profile of oil palm grow-

ers

3. to present a broader view of oil palm sector
4. to suggest measures for most profitable oil palm cultivation.

IV. Database and Methodology:

The information and data on which the current research paper prepared was extracted from both primary and secondary sources. Primary data was compiled based on the responses obtained from selected palm oil cultivators in Krishna and West Godavari districts. The secondary data is mainly from the sources: Directorate of oil palm research, Pedavegi; Directorate of oil seed development, Hyderabad; Agricultural University Library, Bapatla and Godrej Agrovet, Ruchi Soa Industries Ltd., 3F Industries. The data collected for the study was analysed using statistical techniques like ANOVA, Chi-Square, Grouped correlation etc.

V. Scope and Importance of the study:

In India the demand for vegetable oils is expected to increase from the current level of 16 million tons to 22 million tons by 2020. The vegetable oil demand growth rate has been faster than the domestic production growth which is really an alarming situation. Low capacity utilization, sickness are the two other problems faced by oil mills and solvent extraction units. Hence serious measures are required to be adopted to bridge the gap between production and consumption of edible oils in India. Oil palm has been recognized one of the significant segment of edible oils is well suited for eco-friendly environment and forms an excellent import substitute to save foreign exchange. However oil palm is subjected to some problems viz., fluctuations in production, lack of scientific production technology, price fluctuations, increasing costs etc.

VI. Results and Discussion:

India is the net importer of palm oil which constitutes about 80 per cent of the country's total edible oil imports. India's import of crude palm oil was estimated at 9 million tons in 2011-12 and Malaysia was the leading supplier of palm constituting over 20 per cent of the total imports. There has been an impressive transformation of the Indian oil seed economy from a "net importer" status in the eighties to the "self-sufficient" and then a "net exporter" status during early nineties and so it has been popularly termed as "Yellow Revolution".

After a detailed study of oil palm growers in Krishna and West Godavari districts of Andhra Pradesh mainly the socio-economic, production, marketing and financial issues, the key findings are as discussed below.

In Andhra Pradesh oil palm is extensively cultivated in West Godavari, Krishna, East Godavari and Khammam districts. The Directorate of Oil palm Research was established in Pedavegi of West Godavari district. Godrej Agrovet and Ruchi Soya Industries Ltd. are the two processing units covering major portion of the oil palm in these two districts. Out of 46 mandals in West Godavari district and out of 50 mandals in Krishna district 28 and 24 mandals respectively are identified as potential for cultivation of oil palm and is done under the supervision of Horticulture Department. There are about 15000 farmers cultivating 45225 Acres of land with an approximate land holding of 3 acres per farmer in these two districts. Triangular method of planting is followed with 9 meter spacing to accommodate 57 plants per acre and 143 plants per hectare. Oil palm cultivators have to depend on bore well and drip irrigation to provide sufficient water to the plants.

Table – 1
Size of farm holdings and method of irrigation in West Godavari and Krishna districts during 2012

Size of farm holdings (hectares)	%	Method of irrigation	%
< = 1	28.56	Basin	64.61
1 – 2	32.15	Flooding	2.95

2 – 3	10.47	Drip	24.69
3 – 4	13.68	Microjet	7.75
> 4	15.14		
Total	100.00		100.00

Source: Compiled from statistical data, Directorate of oil palm Research, Pedavegi, A.P.

Table – 1 indicates that majority of the farmers (32.15%) were having a land holding of 2 hectares followed by 28.56 per cent of farmers ≤ 1 hectare and 15.14 per cent > 4 hectares. Most of the oil palm growers were small and marginal farmers. Majority of the farmers (64.61%) adopted basin method of irrigation followed by drip method (24.69%) to irrigate the oil palm plantations. There is a reduction of use of flooding method of irrigation still awareness needs to be created among the oil palm growers for adopting micro irrigation.

Table – 2
Correlation between yield and adoption practices

Age	< = 0 – 15		15 - 30		> 30		Total	
	No.	%	No.	%	No.	%		
3-10	91	63.57	36	24.94	16	11.49	143	100
10-20	82	38.91	117	55.63	11	5.46	210	100
>20	22	34.75	41	63.41	1	1.84	64	100
Total	195	46.74	194	46.52	28	67.14	417	100

Source: Compiled from statistical data, Directorate of oil palm Research, Pedavegi, A.P.

It can be observed from Table – 2 that maximum farmers (63.57%) having 3-10 years age plantations were getting the yield upto 15 tons / hectare and 63.41 per cent of farmers having plantations more than 20 years of age were getting upto 30 tons hectare. It has to be identified that the application of fertilizers and number of splits have shown significant effect on yield of oil palm.

Oil palm cultivation is not associated with the expenses like ploughing the field, planting seedlings every year which makes this crop beneficial compared to other oil seeds. There is a positive correlation between the age of oil palm and income. The study also revealed that 60% of oil palm cultivators have availed institutional finance and the remaining 40% cultivating from their own money.

The issue of major concern in oil palm cultivation is that price fluctuations which is fixed by price fixation committee. Oil palm farmers find it difficult to cope with the continuous changes in FFB price.

The Government has introduced Market Intervention Scheme under which Minimum Support Price is given to the farmers which is Rs.5000 per ton. But the oil palm cultivators find it difficult to cultivate in view of ever increasing costs and demanding the Government to fix the Minimum Support Price at Rs.8000 per ton.

The area under oil palm cultivation was steadily increased till 2007. Efforts are required to be put for expanding the area under oil palm cultivation. Measures shall also be required to be adopted on increasing the productivity of the plantations. Most of the farmers were not applying the recommended dose of chemical fertilizers, organic manures, and micronutrient fertilizers like Boron and Magnesium.

VII. Conclusion:

It is important to focus on innovative growth strategies such as marketing of high grade derivatives and nutraceuticals, bio-mass utilization and branding of palm oil as health cooking medium. The Union Government has undertaken several steps to increase oil palm production in India. Oil Palm Development Programme (OPDP) under Technology Mission on Oil seeds and Pulses and Programme of Oil Palm Area Expansion (OPAE) under Rashtriya Krishi Vikas Yojana (RKVY) has been the major scheme of the Government. Entrepre-

neers should play an important role in oil palm development in their respective allotted zones for effective transfer of production technologies. As harvesting becomes difficult along with the increase in age and length of oil palm cultivators are of the opinion that harvesting machines shall made available by the processing units. Oil palm should be exempted from VAT. Thus all thrust areas shall be taken care through the co-operation of all agencies.

REFERENCE

1. The Hindu Business Line, 21.11.2011 | 2. M.V. Prasad, Ananta Sarkar and J. Jameena (Directorate of Oil Palm Research, Pedavegi, A.P.), Performance of oil production Technologies, Indian Research Journal Ext. Edu 10(3). | 3. Prasad M.V.Rethinam, P.Kochu Babu.M and Dhander.D.G. (2008), Oil Technologies dissemination and its Adoption. Abstracts of National Conference on Oil Palm for farmer prosperity and edible oil security, pp 48-53. | 4. Chadha.K.L.(3006) Progress and potential of Oil Palm in India. Report of the Committee to reassess fresh potential areas of Oil Palm in India, Department of Agriculture and Co-operation, Government of India, New Delhi 22. | 5. Agricultural Statistics at a glance, Government of India, Ministry of Agriculture, Directorate of Economics and Statistics. | 6. Fertilizer Association of India (2012 a), "Fertilizer Profile 2012", Fertilizer Marketing News, Vol.43, No.5, May 2012, pp.27. | 7. Lal M (2003) Global Climate Change: India's monsoon and its variability, Journal of Environmental Studies and Policy, TERI 6:1-34.