Research Paper

Volume : 4 | Issue : 8 | Aug 2015 • ISSN No 2277 - 8179

Economics of Paddy Cultivation: A Study in Andhra Pradesh

Economics

KEYWORDS : Productivity, Product, Yield, Paddy, Cultivation.

M.ANJANEYULU Research Scholar, Dept. of Economics, S.K.University, Anantapur-515003,

ABSTRACT

Paddy is the most important food crop of India covering about one-fourth of the total cropped area and providing food to about half of the Indian population. This is the staple food of the people living in the eastern and the southern parts of the country, particularly in the areas having over 150 cm annual rainfall. There are about 10,000 varieties of rice in the world out of which about 4,000 are grown in India

The main rice growing season of the state is Kharif(Wet season) with 60% of total rice being cultivated during the season. The season starts from May-June and ending November-December. The Rabi (Dry Season) falls between the months of November-December to March-April and 35% of rice is grown in Rabi. Edagaru (summer) is another season where rice is grown during summer from March-April to July-August. This is grown in some parts of Nellore, Chittoor, Srikakulam and Telangana districts.

This study is an Endeavour towards meeting such a task. A brief profile of Andhra Pradesh and its agricultural sector is provided in Section I in order to bring out the criticality of this sector in ensuring sustainable and inclusive growth in the State economy.

INTRODUCTION

Andhra Pradesh is one of the largest producers of rice in the country and has played a key role in helping the nation achieve self-sufficiency in food grains. In spite of a remarkable growth story, paddy farmers in Andhra Pradesh are facing a situation where the viability of paddy farming has been eroded. On the one hand, the cost of cultivation has risen in the recent times and on the other market price of rice has ruled at a level below the cost of cultivation as well as the minimum support price (MSP). Procurement operations by the State have also not provided much succor to the farmers as majority of them did not receive MSP for their produce. In the year of bumper harvest of 2010-11, the gap between the cost of cultivation and the market prices widened further. The unavailability of paddy cultivation in the State is a peculiar phenomenon as the market and institutional support which is supposed to exist for paddy much more than any other crop, except may be for wheat, is not to the desired extent. This situation owes its origin to a number of structural factors and in order to understand the present predicament, there is a need to analyse the problems in the production and the institutional structure.

Results and Discussion

RAINFALL

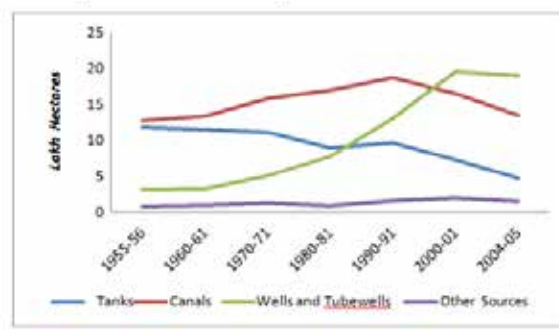
The rainfall received during the South West Monsoon period for 2011-12 was 539 mm. as against the normal rainfall of 624 mm. recording a deficit by 13.6 %. The rainfall received during the North East monsoon period for 2011-12 was 113 mm as against the normal rainfall of 224mm recording a deficit of 49.6%.

IRRIGATION

Agriculture in the State is supported by three major sources of irrigation, namely canals (major irrigation), tanks (minor irrigation) and bore wells & other wells (ground water irrigation). An analysis of the data on source wise irrigation in 2008-09 reveals that 65 per cent of the irrigation comes from tanks and wells, while 36 per cent of irrigation is provided by canals (Figure1).

Thus the major source of irrigation in the State is highly dependent on rainfall. Second, the addition to surface irrigation through canals has been modest in the last thirty years. Third, there has been a decline in the tank irrigation and a steep rise in well irrigation particularly after the 1980s with the arrival of submersible pump sets and completion of rural electrification in the State.

Figure 2: Source-wise Irrigation in Andhra Pradesh



Paddy Production in Andhra Pradesh: Growth and Distribution

As indicated earlier in the Study, there has been a substantial increase in the rice production in the State. It has grown from a level of 4.8 million tonnes in 1970-71 to 14.4 million tonnes in 2010-11, which marks an increase of three hundred per cent (Figure.2). This continuous increase has been largely made possible by shift in area under coarse grains to rice. There are three broad phases in which rice cultivation has expanded in the State. First increase was witnessed during the Green Revolution period during 1971-81 when the high yielding varieties were first introduced in the Godavari-Krishna Delta areas.

The second phase of this rise was during 1982-92, which was primarily due to the expansion of canal irrigation in the State. The third phase is between the years 1993-94 and 2010-11 where the increase in area was overwhelmingly contributed by the expansion in bore well irrigation. The growth in area and production is occasionally disturbed by spells of poor monsoon. All along there was a marginal deficit of production over consumption in the State even until the late 1990s [Ravi and Indrakanth (2003) and Sambi Reddy (2003)]. However, growing demand and overall stability in production and returns encouraged paddy cultivation to expand in several non-traditional areas as well. This growth not only met the PDS requirements of the State, but also led to an increased contribution to the central pool from 1993-94 onwards. The net contribution to the central pool increased from 1.8 million tonnes in 1993-94 to 5.6 million tonnes in 2010-11.

The long term compound growth rates of area, production and yields are set out in Table 2. The long term compound growth rate of rice production during 1970-2011 is 2.7 per cent. After the

peak growth rates of 3.6 per cent during the initial green revolution period in 1973-83, growth rate

decelerated during 1983-91. It has once again accelerated to 3.36 per cent and 3.12 per cent, during 1991-2001 and 2001-11, respectively. The growth in the decade of nineties is largely helped by the growth in yield which grew at 2.5 per cent, but stagnated during 2001-11. During 2001-11 it is the increase in area under rice that contributed to the growth in output. There are two factors that determine fluctuations in area. The first one is through changes in area under the current fallows due to changes in rainfall, and the second one is the relative price.

During the period 1973-2011, the growth rate of productivity of rice in the State was placed at 1.9 per cent. The peak rate of growth in productivity was registered during the `Green Revolution' period during 1973-83. It fell during 1983-91 and rose again during 1991-2001, before decelerating in the subsequent decade. Coastal Andhra's productivity gains were the highest during the Green Revolution decade and Telangana region's productivity picked up in the subsequent three decades.

Table .3: Area, Production and Yield of Paddy in Andhra Pradesh

Years	Area (million ha)			Production (million tonnes)			Yield (qt per ha)		per cent Rainfall Deviation
	Kharif	Rabi	Total	Kharif	Rabi	Total	Kharif	Rabi	(mm)
2000-01	3.0	1.29	4.24	8.21	4.24	12.45	27.41	34.01	+0.96
2001-02	2.4	1.39	3.82	6.50	4.89	11.39	26.79	34.96	+6.12
2002-03	2.1	1.77	3.82	5.05	2.23	7.27	23.97	31.89	-38.38
2003-04	2.1	1.87	3.97	5.84	3.11	8.95	27.72	35.94	-22.79
2004-05	2.2	1.87	3.68	6.39	3.28	9.66	28.86	36.83	-33.97
2005-06	2.5	1.45	3.98	6.37	5.37	11.7	25.24	36.59	+8.60
2006-07	2.5	1.37	3.97	6.94	4.31	11.87	26.31	36.81	-7.84
2007-08	2.5	1.41	3.98	8.19	5.13	13.32	31.78	36.56	-1.827
2008-09	2.8	1.58	4.39	8.38	5.86	14.24	29.89	37.09	-12.90
2009-10	2.0	1.38	3.44	5.95	4.88	10.88	28.87	35.43	+30.21
2010-11	2.9	1.76	4.68	7.50	6.79	14.32	25.58	42.67	+22.90

*Source: Statistical Abstract, Department of Economics and Statistics, Government of Andhra Pradesh.

Note: Normal rainfall is about 930 mm.

CONCLUSION

Economics of paddy cultivation on different size groups of Andhra Pradesh . It was observed that use of human labour generally declined with increase in farm size while that of mechanical labour increased. The share of fixed costs in the total cost of cultivation was higher on large farms than that on small farms. Use of yield augmenting inputs and yield per hectare increased with the increase in farm size and so did the return over variable costs.

Acknowledgements

Indian Council of Social Science Research (ICSSR), New-Delhi. gratefully acknowledges by the financial support for publication of the paper.

REFERENCE

1. ECONOMIC SURVEY 2011, Planning Commission, Government of India. | 2. Joshi. P.K., (2010) "Conservation Agriculture: An Overview", Indian Journal of Agricultural Economics, Vol.66, No.1 pp.53-63. | 3. PRABAKARAN. G "Palakkad Accounts for Half the state's Paddy Production" The Hindu, Sep 14, 2009. | 4. POUCHEPPARADJOYU, A., KUMARAVELU, P. AND LALITH ACHOTH, 2005, An econometric analysis of green technology adoption in irrigated rice in Pondicherry Union Territory. Indian Journal of Agricultural Economics, 60(4): 660-675. | 5. NASURUDEEN, P. AND MAHESH, N., 2004, Impact of technology on paddy farms in Karaikal region of Union territory of Pondicherry. Agricultural Economics Research Review, 17 (conference No.): 43-50. | 6. TAMIZHENIYAN, S., UMESH, K. B. AND KRISHNA, V. V., 2003, Integrated pest management in rice production in Tamil Nadu: A resource Economic Analysis, Agricultural Economics Research Review, 16: 67-74. | 7. NARASIMHAM, S., RAJU, V. T. AND SHAREEF, S. M., 2003, Cost and returns of paddy in Yanam Region of Union Territory of Pondicherry. The Andhra Agricultural Journal, 50(1): 131-135. | 8. SURESH, H., 2001, The performance of organic farming in Shimoga district of Karnataka – An economic analysis. M. Sc. (Agri.) Thesis, University of Agricultural Sciences, Dharwad. | 9. YERRISWAMY, J., 1999, An economic analysis of selected agricultural systems in Tungabhadra project area, Karnataka. M. Sc. (Agri.) Thesis, University of Agricultural Sciences, Dharwad. | 10. GOVARDHAN, R., 1998, an economic analysis of cropping system in left bank canal command area of Tungabhadra Project - Karnataka. Ph.D. Thesis, University of Agricultural Sciences, Dharwad.