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AGRARIAN DISTRESS IN ANDHRA PRADESH

(A Study on Guntur District)

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Abstract

The main objective of the paper is attempted to examine the socio economic status of the farmers in Guntur district of Andhra Pradesh and also examine the indebtedness among the farm households in two agro climatic regions of the district. A multi stage random sampling method will be employed to select the study area. A proportionate sampling method has employed to select the farm households in the state. As a result 300 farm households will be selected, out of the 300 farm households 226 belongs to dryland farm households and 74 are from irrigated farm households. This paper has utilized the descriptive statistics and regression technique is use to estimate the factor effecting the agricultural indebtedness among the dryland and irrigated farmers in Guntur district of Andhra Pradesh

Key words: Indebtedness, Dryland, Irrigated area, Regression, Guntur

Introduction

Agriculture is back bone of Indian economy more than 58 per cent of the population depended on the agriculture and allied activities. Although the share of agriculture sector in gross domestic product has been declined from 48 per cent to 14.5 per cent during the last sixty years. The rainfed agriculture plays an important role in the development of agriculture. In India 68 per cent of total net sown area (136.8 m.ha.) is rainfed. Rainfed crops account for 48 per cent of area under food crops and 68 per cent of area under non-food crops. Half of the total rural workforce and 60 per cent of the livestock depend on rainfed agriculture. The economic policies of the country for the last 60 years have had negative effects on development in rainfed regions. It is not able to provide full employment and sufficient income for the people living in dryland agriculture. Farm profitability has witnessed a sharp decline due to land degradation, risk and uncertainty associated with dryland agriculture. As farming alone is not able to generate sufficient income to small and marginal farmers, dryland farmers are in deep crisis.

Review of Literature

P. Narasimha Rao and K.C. Suri (2006), in their study found that a large number of farmers who cultivated cotton, chillies and groundnut committed suicides because the cost of cultivation is very high when compared to neighbour state. An increasing cash expenditure on modern inputs and a decline in productivity have been steadily taking place over the year and have resulted in a continuous decline in the net surplus from agriculture activity. Most of the farmers to carry out cultivation without taking loans from informal sector and suicides of co-farmers not only affected cost of cultivation but also effected multiple factors like seeds and pesticides, non-remunerative price for their product, increasing expenditure on health and education etc. Economic factors coupled with social factors like a low literary rate breakdown of the joint family system and the collapse of the other social institutions has created depressed conditions in the agrarian economy.

The suicide scenario and agrarian situation in Maharashtra are discussed in Micro level analysis on field survey in the districts of Wardha, Washim and Yavatmal Srijit Mishra (2006) pointed out that over the year profitability from cotton and chillies has declined on average the former has a higher outstanding debt, a relatively lower ownership of assets and access to basic amenities a large family size and a lower value of output. It is evident from declining public investment in agriculture, poor agriculture extension service, and a diminishing role of formal institutions in rural finance market among others. The former now depends on the input dealer for advice leading to supplier induced demand and on informal source of credit with a greater interest burden.

Parvathi Menon (2003) in her study on How Debt Burden Leading to Death, explained that crop losses caused by three successive years of inadequate rainfall and the diminishing presence of institutional credit forced a large number of Karnataka farmers in to the debt trap. Some of them chose death as a way out.

Farmers indebtedness has been singled out as the fore most cause for farmer suicides in a few states.R.S. Deshpande and Nagesh Prabhu's (2005) report clearly shows that 48.6 per cent of the farmers are indebted. The largest percentage of indebted farmers is located in the size class of 0.01 to 1 hectare. The large share of borrowings (50%) is available from banks and co-operative societies. Professional money lenders and tenders lent almost 26 per cent of the borrowed amount from banks. The report on some aspects of farming provides few interesting fact about farming households. It is evident that about two-thirds of farmers did not really like farming because it is not a profitable activity and 40 percent of farmers are even ready to give up farming provided they could secure some other jobs.

Objectives:

The present paper attempt to the estimate the indebtedness among the farm households in two agro climatic regions of the Guntur district in the new state of Andhra Pradesh.

Methodology

A multi stage random sampling method will be employed for the study. In the first stage Guntur district can be dividing in to four revenue regions, namely Guntur,Tenali, Narasaraopet and gurazala. In the second stage one mandal will be selected from each revenue devision,which is mangalagiri from Guntur, Sattenapalli from Narasaraopeta, Vemuru from Tenali and Rentachintala from Gurazala mandal. In the third stage one village from each mandal will be selected which is Nidamarru from Mangalagiri, Kantepudi from Sattenapalli, Battiprolu from Vemuru and Rentachintala from Rentachintal mandal altogether four villages selected. A proportionate sampling method has employed to select the farm households in the district. As a result 300 farm households will be selected, out of the 300 farm households 226 belongs to dryland farm households and 74 are from irrigated farm households. This paper has utilized the descriptive statistics and regression technique is use to estimate the factor effecting the agricultural indebtedness among the dryland and irrigated farmers in Guntur district of Andhra Pradesh.

Results of the empirical study.

As indicated earlier, 300 farm households are selected to examine socio economic dimension of the farmers in dry land and irrigated conditions. Of this total 226 farm households are derived from dryland conditions and 74 farm households are irrigated condition in the study area. The distribution of selected dry land and irrigated farm households by size wise are presented in the table-1. The table shows that the total 300 farm households 22.67 percent (68) are marginal farms. Out of these 24.50 percent (55) are in dryland cultivation and 18.00 per cent (13) are irrigated cultivation. And 32.67 percent (98) of farm households are small. Out of this total 35.00 percent (79) are dry land farm households and 25.00 percent (19) are irrigated farm households, 25.66 percent (77) are semi medium farmhouse holds. Out of total semi- medium farm house holds 22.50 percent (51) are in dryland cultivation, 35.00 percent (26) are in irrigated cultivation. Finally 19 percent (57) of farm households are medium and large. Out of the total medium and large farms 18.00 percent are in dryland cultivation and 22.00 percent are irrigated cultivation. Finally the table conclude that the 75.33 percent of farm households are in dry land condition and 240 (3) percent of farm households are in irrigated conditions.

Table –1: The distribution of farm households by size of holdings

Farming Category	Dry Land	Irrigated	Total
Marginal	55 (24.50)	13 (18.00)	68 (22.67)
Small	79 35.00	19 (25.00)	98 (32.67)
Semi-medium	51 (22.50)	26 (35.00)	77 (25.66)
Medium and Large	41 (18.00)	16 (22.00)	57 (19.00)
Total	226 (100.00)	74 (100.00)	300 (100.00)

Source: Primary Data

Note : Figures in parenthesis indicates the percentage to the total

Source of Credit

In the dryland cultivation, agricultural credit assumes more importance when compared to other irrigated farming. Limited availability of money for farmers to save does not allow them to finance farm expenses. Though private agencies play an exploitative role, credit through institutional channels is the only way to break agricultural stagnation in dryland regions. So the farmers depend on loan from various institutional sources to meet the costs in raising the crops. Farmers are engaged in cultivation to make profit out of capital by investing on land and extracting surplus value from work, but as a

means of self-employment and family maintenance. Typically, a farmer in India, particularly in dryland regions would still be the owner cultivator, who mainly cultivates land with family labour. The returns they get from land in a large measure are a response of their family labour expected in the production process. However, since cultivation needs cash investments, farmers have to borrow money to carry out the agricultural activities, either from government or from cooperative institution or from private money lenders. It should be kept in mind that unlike other professions and occupations, farmers do not receive their income on a daily or weekly or monthly basis. Income for them comes only at the end of the crop season. So, farmers borrow money not only to meet the cultivation expenses, but also to meet their consumption and family needs. It is also difficult to demarcate clearly the loans taken by farmers as the ones taken for cultivation purpose and family needs, as they may spend the loan amount on both, as the situation demands.

The credit requirements of the farms are met by obtaining loans from institutional and non- institutional agencies. Institutional agencies particularly that provide loan to farmers are banks, cooperative societies and bank sponsored self help groups. The non institutional agencies include commission agents, input dealers, money lenders and others. Source wise distribution of credit by irrigated and dryland farm households are presented in the table-2. The data evidently shows that more than 50 per cent of both irrigated and dryland farm households are depended on non-institutional sources on an average of Rs 37,794/- among irrigated farms and Rs 29973/- among dryland farms. Moreover, it can be noticed that major chunk of both categories of farm households depends on money lenders. As shows in the table, 33 per cent of dryland farms and 40 per cent of irrigated farm households borrow loans from money lenders to meet the farm expenditures. It clearly shows that the outstanding debt of irrigated farm households is higher than that of dryland farm households among all farming categories. On an average amount of Rs 13,426/- of credit is higher with irrigated farm households. The small and marginal farms need credit to meet their family expenditure also when they work in their farms. Low return to cultivation and absence of non-farm opportunities are said to be the indication of the larger socio- economic analysis of dryland cultivation. This will be alienated by multiple risks like, income, yield, price and credit among others. This has led to the incidence of indebtedness among farm households.

Table-2: Source-wise Distribution of Credit by Irrigated and Dryland farm households

Source	Dryland									
	Marginal		Small		Semi-medium		Medium		Total	
	Amoun	%	Amoun	%	Amoun	%	Amoun	%	Amoun	%
Banks	8357	22.93	12300	26.80	23978	37.13	30596	35.14	18808	32.15
Co-operative societies	4553	12.49	5693	12.40	4836	7.49	10984	12.62	6517	11.14
Self Help Group	3589	9.85	4109	8.95	3543	5.49	1551	1.78	3198	5.47
Total Institutional (A)	**16499**	**45.28**	**22102**	**48.16**	**32357**	**50.11**	**43131**	**49.54**	**28522**	**48.76**
Commission agent	2500	6.86	3289	7.17	4896	7.58	8956	10.29	4910	8.39
Input dealers	4479	12.29	3808	8.30	6532	10.12	7998	9.19	5704	9.75
Money lenders	12963	35.57	16698	36.38	20789	32.19	26983	30.99	19358	33.09
Total Non-institutional (B)	**19942**	**54.72**	**23795**	**51.84**	**32217**	**49.89**	**43937**	**50.46**	**29973**	**51.24**
Outstanding Total (A+B)	**36441**	**100.0**	**45897**	**100.0**	**64574**	**100.0**	**87068**	**100.0**	**58495**	**100.0**
	Irrigated									
Banks	10436	26.08	12829	25.22	20854	27.95	38537	31.54	20664	28.73
Cooperatives	4631	11.58	7247	14.25	10046	13.46	18733	15.33	10164	14.13
Self Help Group	4254	10.63	3205	6.30	2800	3.75	2935	2.40	3299	4.59
Institutional outstanding (A)	**19321**	**48.29**	**23281**	**45.77**	**33700**	**45.16**	**60205**	**49.28**	**34127**	**47.45**
Commission agents	3207	8.02	3912	7.69	6033	8.08	8397	6.87	5387	7.49
Input dealers	2800	7.00	3200	6.29	3904	5.23	3111	2.55	3254	4.52
Money lenders	14680	36.69	20477	40.25	30987	41.52	50467	41.31	29153	40.53
Non-Institutional outstanding	**20687**	**51.71**	**27589**	**54.23**	**40924**	**54.84**	**61975**	**50.72**	**37794**	**52.55**
Outstanding Total (A+B)	**40008**	**100.0**	**50870**	**100.0**	**74624**	**100.0**	**122180**	**100.0**	**71921**	**100.0**

Source: Primary Data

Indebtedness among Farm Households

The indebtedness among farm households is the indication of distress in dryland and irrigated farm households. The outstanding debt of the farm households by size wise and source wise is presented in the table-3. A farmer gets income from cultivation, and also from other than cultivation, besides, wages employment, non-farm employment, pension and other sources. A farm household is considered to be indebted if he could not repay the loan out of the total receipts from all

sources of income at the end of the agricultural year. The indebtedness of farm households is presented in the table. Out of 300 farm households, 226 (75 per cent) are dryland farm households and the remaining 25 per cent (74) are irrigated farm households. The indebtedness is higher by 27.51 per cent in dryland cultivation .The prevalence of indebtedness is increasing with the increasing farming category among the both irrigated and dryland farm households: except among medium and large farms in dryland cultivation. The percentage of indebtedness of all the farm sizes is higher in dryland farming than that of irrigated farming.

It is 33.42 per cent higher in marginal farms, 38.51 per cent higher in small, 34.47 per cent in semi-medium and 18.19 per cent in medium and large farms. The average amount of debt per acre in irrigated farms is Rs 18,500 of marginal farms, Rs 35,650/- of small farms, Rs 49,423/- of semi-medium farms and Rs 78,567/- of medium and large farms, while the amounts of debts are Rs 22,682/- of marginal, Rs 32,787/- of small, Rs 44,623/- of semi-medium and Rs 75,743/- of medium and large respectively in dryland farms .This clearly shows that the indebtedness is higher by 27.51 per cent in dryland cultivation. The prevalence of indebtedness is increasing with the increasing farming category among the both irrigated and dryland farm households. And also shows a slight variation between dryland and irrigated farms in per acre average debt amount. It is reported that the institutional credit availability is not sufficient for the farmers to meet the required agricultural expenses besides difficulty in securing loans from institutional sources due to their restrictive formalities. So the farmers go for credit from non-institutional sources. Further, as the returns are not favorable, they are borrowing from non-institutional sources to repay loans taken from the institutional sources. It leads to a situation that debt gets accumulated over the years. Thus the debt brings out situation of debt trap among farm households. This clearly reveals the distress conditions of farm households and ultimately its leads to farmers' suicides in the dryland cultivation

Table-3: Distribution of category-wise respondents by Credit (Debt)

Farming Category	Dryland			Irrigated		
	Number of Sample households	Number of Indebted households	Average amount per acre	Number of Sample house-holds	Number of Indebted households	Average amount per acre
Marginal	55	48 (87.27)	22682	13	7 (53.85)	18500
Small	79	72 (91.14)	32787	19	10 (52.63)	35650
Semi-medium	51	47 (92.16)	44623	26	15 (57.69)	49423
Medium and large	41	33 (80.49)	75743	16	10 (62.30)	78567
Total	226	194 (85.84)	41846	74	42 (58.33)	42723

Source: Primary Data

Note : Figures in parenthesis indicates the percentage to farming category.

Utilization of Loan Amount

The main purpose of agricultural loan is to meet the expenses in crop cultivation. The farmers get income only at the end of crop season. As there is no other main source of income other than agriculture, the farmers borrow money not only to meet the agricultural expenditure but also to meet the consumption expenses and other socio-domestic needs. In this regard, the relation between indebtedness and loan utilization has to be examined to understand the roots of indebtedness. The utilization of loan by farm households is presented in the table-4. The table shows that 58.20 per cent of dryland farmers and 68.68 per cent of irrigated farmers are utilizing loan for productive purpose, while 41.81 per cent of dryland farmers and 31.62 per cent of irrigated farm households are spending the loan amount on unproductive purpose. When compared, the utilization of loans on productive purposes among irrigated is 10 per cent higher than that of dryland farms. Regarding utilization of loan amount on unproductive purpose is 10 per cent of higher among dryland farm households. It is to be noticed that the utilization of loan for unproductive purpose is higher among marginal and small farm households in both irrigated and dryland conditions. The data clearly reveals that the indebtedness among farm households is due to unproductive consumption like social ceremonies, marriages and other religious ceremonies and may be causing for piling up of indebtedness.

Table -4: Utilization of Loan Amount

Purpose	Dryland					Irrigated				
	Marginal	Small	Semi medium	Medium and Large	Total	Marginal	Small	Semi medium	Medium and Large	Total

Agricultural inputs	26.75	32.90	35.89	40.85	34.10	46.75	42.9	39.68	52.8	45.53
Labour charges	20.46	25.82	25.73	24.38	24.10	20.46	20.82	25.73	24.38	22.85
Productive purposes	**47.21**	**58.72**	**61.62**	**65.23**	**58.20**	**67.21**	**63.72**	**65.41**	**77.18**	**68.38**
Health	6.35	4.98	11.54	9.22	8.02	3.35	4.98	11.54	2.22	5.52
Education	10.77	5.38	6.87	6.31	7.33	6.77	5.38	5.87	1.31	4.83
Marriage/ rituals	6.50	3.07	2.23	3.14	3.74	2.14	3.07	2.23	2	2.36
House construction	15.63	17.85	12.74	10.10	14.08	8.53	12.85	9.95	7.3	9.66
Consumption	13.54	10.00	5.00	6.00	8.64	12	10	5	10	9.25
Un-Productive purposes	**52.79**	**41.28**	**38.38**	**34.77**	**41.81**	**32.79**	**36.28**	**34.59**	**22.83**	**31.62**
Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Source: Primary Data

Note : Figures in parenthesis indicates the percentage to the total

Functional Analysis:

It is important to study the factors associated with indebtedness. Linear regression is tried to analyse the relative indebtedness of the farm households categorized from the three regions as given below.

$Y_i = a_0 + a_1x_1+a_2x_2+a_3x_3+a_4x_4$

$Y_{ui} = b_0+b_1x_1+b_2x_2+b_3x_3+b_4x_4$

Y_i = Indebtedness in irrigated region

Y_{ui}= indebtedness in dryland region.

X_1 = Income from Cultivation

X_2 = ratio of credit from non- institutional source to that from institutional sources

X_3 = Income from subsidiary occupation

X_4 = Expenditure on unproductive purpose of borrowed fund

X5 = Educational level

X7 = family size

In order to analyze the variation in the significance of factors influencing the magnitude of indebtedness, region wise analysis has also been done and it has presented in the table-5. The estimated of regression coefficient suggested that the variation in the magnitude of indebtedness among the two regions of the farm households in the study area explained size of the family, ratio of credit from institutional and non-institutional sources, income from subsidiary occupation, expenditure on unproductive purpose, educational status and farm size.

The regression coefficients for family size in all the selected region irrigated and dryland region are positive and non significance. The regression coefficient for ratio of credit from non institutional sources and expenditure on unproductive purpose are found to be positive and non significance. The income from subsidiary occupation is found to be negative in dryland region in case of irrigated farm marginal and small farm households are also found to be negative signs, relationship with indebtedness and educational levels has a negative signs. There variables are significant at one per cent level of probability dryland regions. The educational level of the farm households has inverse relationship with indebtedness and also the farm size. The variation of expenditure on unproductive bears a direct relationship with indebtedness implying an expenditure on unproductive purpose it is found to be high in dryland regions. This indicates that the capacity of the farmers to taken loans increases with increasing the farm size. The values of R square are of the order of 0.68 and 0.80 in the both dry and irrigated regions respectively.

SUGGESTIONS

Keep the emerging challenges in view the present study made the following suggestions for improving the distressed situation of farmers and farming in dryland agriculture

- Physical resource constrains of dryland farms like small size, scarcity of finance and low creditworthiness high risk in returns, it is suggested to encourage collective farming (either co- operative joint farming or informal group farming)
- The shift in policy to focus on dryland farming through technology, extinction, price, and other intensives.
- There is a need to emphasis rural economic diversification to more value-added activities and non-agriculture activities.

Table-5: Factors Determining Indebtedness of farm households in the study area

Factors	**Marginal**	**Small**	**Semi-Medium**	**Medium and Large**	**Total**
	Dryland				

Family size	0.8926 (1.58)	0.732** (1.32)	0.6332** (1.01)	0.9156* 1.86)	0.8326** (2.01)
Credit	0.853* (1.88)	0.7314* (1.99)	0.536** (1.87)	0.966** (4.10)	0.8774* (2.12)
Income	-0.1763* (2.25)	-0.5393* (3.23)	-0.578* (3.03)	0.356* (2.75)	-0.653* (2.00)
Expenditure on unproductive purpose	0.703** (1.02)	0.615** (2.05)	1.532*** (2.86)	1.895** (3.02)	0.981** (2.39)
Education	-0.5652* (3.02)	-0.9562* (2.85)	-1.236* (3.58)	-0.0378** (1.05)	-0.4532* (2.98)
Farm size	0.2782** (0.94)	0.5563** (1.55)	0.783* (1.58)	0.795* (1.60)	0.5982** (1.458)
R2	**0.69**	**0.75**	**0.74**	**0.69**	**0.68**
	Irrigated				
Family size	0.8514 (1.34)	0.710** (1.19)	0.5220*** (1.10)	0.498* (1.92)	0.786* (2.00)
Credit	0.729* (1.90)	0.614* (1.80	0.869*** (1.95)	0.967* (4.10)	0.8867* (2.09)
Income	-0.504* (3.24)	-0.6822** (1.04)	0.3016** (4.23)	0.215** (1.80)	0.012* (1.18)
Expenditure on unproductive purpose	1.218** (1.05)	0.5525** (1.03)	0.3974* (2.27)	0.121* (1.50)	0.653* (1.25)
Education	0.1839 (2.96)	- 1.576* (3.12)	-0.3507 (2.48)	0.190 (2.45)	-0.2589* (3.04)
Farm size	0.1743*** (0.94)	-0.4322 (1.20)	0.7833** (1.34)	0.2303* (0.58)	0.2312** (2.96)
R2	**0.72**	**0.74**	**0.89**	**0.92**	**0.80**

Source: Primary Data

Note: Figures in Parentheses indicate t- values

*Significant at one per cent

** Significant at five per cent

*** Significant at ten per cent

- Provision of irrigation facilities through watershed and micro irrigation system will improve farm income and farm labour employment through improvement in the cropping intensity.
- National Rural Employment Programme in the dryland regions could be dedicated to improve the watershed areas.
- To effectively implementation of crop insurance scheme in case of crop failure due to floods or droughts and credit of premium amount in time or amount should be paid in the same crop season.
- Setting up of an 'Agri Risk Fund' which could help in mitigating risks of the lending banks and the hardships of the farmers.
- Implementation debt weaving scheme is major constrain to increasing the debts. The farmers want to waves the debt amount at one time. There is a problem in the wave amount at deferent phases. Majority of the farmers said that even interest of credit is not credited to the accounts. So there is need to credit the debt amount at season starts.
- There is need to undertake a significant shift in Government investment from irrigated areas to rainfed areas, with a major emphasis on aforestation and soil conservation projects organised on watershed basis through MGNREGS .
- Seed banks must be established with government support in order to help farmers adopt contingent strategies whenever.
- There is need to strengthening the policies of Price support and procurement mechanism for crops grown not only rainfed area but also irrigated conditions.
- Government should avail insurance policies that should be covering all the farmers in dryland regions. The bankers should bear the burden of payment of insurance premium instead of farmers.

Conclusion

The empirical data clearly shows that the indebtedness among farm households is the indication of distress in dryland and irrigated farm households. Out of 300 farm households, 226 (75 per cent) are dryland farm households and the remaining 25 per cent (74) are irrigated farm households. The indebtedness is higher by 27.51 per cent in dryland cultivation .The prevalence of indebtedness is increasing with the increasing farming category among the both irrigated and dryland farm households: except among medium and large farms in dryland cultivation. The percentage of indebtedness of all the farm sizes is higher in dryland farming than that of irrigated farming. And also shows a slight variation between dryland

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