

LAND DYNAMICS, CROP PRODUCTION AND PEASANT LIVELIHOOD IN TELUGU STATES

G.Gangadhara Rao*

Farm output of India occupies second place in the world, though peasant finds vagaries in his career. There has been decline in the share of agriculture in total gross domestic product (GDP) due to economic growth in its counter parts. On one side, farmer suicides appear and on the other, the need of development of agriculture is to be taken place. Under changed conditions of globalization, farmer has to play a crucial role as entrepreneur and worker during pre and post cultivation activities. Though Indian farming is way of life for ages, modern technology has changed the structure of cultivation across India as well as in world. The state of the peasant is to be reckoned to accomplish successfully food security to nation.

Keywords: *Group Cropped Are, Irrigated Area, Food Grains.*

INTRODUCTION

Examined the state of the farmer at state level using 59th round of National Sample Survey (NSS) Narayanamurthy, (2006) and estimated the financial conditions of the farmer and emphasized the poor conditions of the farmer across India. Henry Bernstein (2001) estimated the role of peasantry in India and Brazil. He opposed the view of Eric Hobsbawm and, articulated that the peasantry could move across nation and cities and play their role in India. Ramesh Chand, P A Lakshmi Prasanna, Aruna Singh (2011) estimated the better productivity in agriculture from marginal and small farmers even under conditions of advanced technology, which is often said to be a better choice to large farmers. They argued that these groups are with lower per capita productivity, which is to be changed through off-farm employment. Further, they examined the insufficient incomes for livelihood for the marginal and small farmer size groups and, this could be changed by generation of off-employment in the villages for sustaining livelihood to these farm size groups. Arun Chaturvedi, N G Patil, S N Goswami (2011) studied the falling per capita availability of land in India. They pointed out the consequent socio-economic implications of current land use and management strategies in Uttar Pradesh. It is argued for judicious combination of physical, economic and institutional factors along with investment in non-farm sector to generate employment. Based on the available literature, there is barely inter district analysis in Telugu States. Therefore, an attempt is made in this paper to estimate the state of the peasant against the land use pattern at district level in Andhra Pradesh (A.P.) and Telangana for the period 2011-01.

METHODOLOGY

It is tried to estimate the state of peasant at disaggregated level in Telugu states. To achieve this end, spacial and temporal analysis has been made, since the existing available studies or surveys have hardly made disaggregated analysis at district level. NSS report estimated, through its 70th Round Survey (2013), the state of the farmer at state level. This data could barely be compared with the 59th Round data. The analysis of land use pattern is for the period 2001-11, as the census data of

* Director, Agro Economic Research Centre, Andhra University, Visakhapatnam, Mobile:09441758499

2001 and 2011 are taken for the estimation of farmers district wise in the Telugu states. Only simple percentages and per capita land use and value of production of selected major crops are computed in the analysis to know the state of the farmer and his level of value of produce of the selected crops in the study area. The harvest prices of the crops are taken to estimate the value of the crop production for different crops at district level. It is estimated the per peasant value of produce and gross district domestic product of agriculture only and it is not taken the produce of allied activities of agriculture to discern the crop value of farmer in study districts.

RESULTS AND DISCUSSION

State of Peasant in A.P., Telangana and all India

It is observed the share of agricultural households in rural households is at lowest level in A.P. (37%) compared to Telangana (49%) and all-India (53%) (table 1). It shows much shift of farmers from agriculture to non-farm activities in A.P. When compared to all-India, Telangana also informs a better transfer of peasant to other avenues. Out of the agricultural households, the engaged for cultivation is the highest for Telangana (97%), while all India and A.P. show 93% and 90% in that order. It indicates that the peasant depends much on cultivation and the occupational shift is at lower level in Telangana. In case of cultivation as a major source of income, it is found that A.P. displays lowest share compared to its counterparts with 54%, whereas all India reports much. Further, if it is examined, A.P. stands as the first one in irrigation of agriculture with 0.90 ha per household as a major source of cultivation, while it lags behind Telangana for un-irrigated cultivation. Telangana reports larger extent of un-irrigated cultivation than that of A.P. and all India as a major source. Both A.P. and Telangana showed higher extent for average total area per household and it could be concluded that the available size of land for cultivation as a major source is high in both states compared to all India. When it is observed, the lowest monthly income is appeared for a farmer with Rs 2301 in A.P. and it is because of the highest expenses for monthly crop production and further, as per 70th round of National Sample Survey (NSS). However, in both states, the expenses are high for crop production compared to all India. Even though there are high expenses in Telangana, it shows higher monthly net income to the peasant compared to A.P. and all India. Thus, the farmer is in better income level in Telangana. With this backdrop, it is analyzed the district level conditions of peasant in A.P. and Telangana in the coming pages of this paper.

Table 1- State of Peasant in Andhra Pradesh, Telangana and all-India: 2013

Sl. No.	Variable	Andhra Pradesh	Telangana	all-India
1	No of Agricultural households(hhs) (00) engaged in crop production- June 2013	31747(37)	24397(49)	829485(53)
2	No. of rural hhs (00) 2012-13	86763	49309	1561442
3	No. per 1000 hhs engaged in cultivation 2012-13	903	974	926
4	Per 1000 distribution of hhs cultivations as major source of income 2012-13	542	569	711
5	Agricultural hhs Estd. Reporting crop production as major (00) June 2013	19481	14459	641135
6	Average per household reporting cultivation of crop as major			
	i) Irrigated in ha	0.903	0.606	0.621
	ii) Un-irrigated in ha	0.289	0.628	0.161
	iii) Total in ha	1.193	1.235	0.782
7	Monthly net income from cultivation per household in Rs.	2301	4399	3350
8	Monthly total Expenses per household in Rs.	6191	4267	2192
9	Monthly total Value of output per household in Rs.	8482	8666	5542

Source: National Sample Survey Organization, Government of India, 70th Round, 2013

DISTRICT WISE DEMOGRAPHIC CHANGE OF CULTIVATORS IN A.P. & TELANGANA

The share of cultivators range between 4% to 14% among 13 districts in A.P in 2011. The higher share of cultivators reported in Ananthapur (14%), Chittoor (14%) and Visakhapatnam (14%) by 2011 followed by YSR Cuddapah and Vizianagaram with 12% and 11% in that order. Agriculturally developed districts, viz., East and West Godavari, Krishna and SPS Nellore districts show the bottom level of cultivator share in rural population. It divulges the shift of peasants to non-farm activities, and indicates the diversification of employment in these districts. There are seven districts with more representation of cultivators than that of state level (9%). Interestingly, the share of peasants rapidly declined in between 2011-2001. The highest decrease appeared in North Coastal Andhra (NCA) (Srikakulam, Visakhapatnam and Vizianagaram) and Ananthapur districts. The share of cultivators exists at bottom level in agriculturally developed districts, whereas YSR Cuddapah, Ananthapur, Chittoor and Visakhapatnam still divulge larger dependence of rural people on cultivation. All the Rayalaseema districts (Ananthapur, Chittoor, Kurnool and YSR Cuddapah) show big shares of farmers over rural population compared to other districts, while South Coastal Andhra (SCA) districts (East Godavari, West Godavari and Krishna) report small shares. It shows a visible difference over cultivation dependence across the districts in A.P. during 2011-01 (table 2).

Tabel 2- Demographic Change of Cultivators in A.P. & Telangana: 2011-01

S. No	District	Share of cultivators over 2011 population	Share of cultivators over 2001 population	Change in Cultivators over population 2011-01	Change of cultivators 2011-01	Share of cultivators over workers 2011	Share of cultivators over workers 2001	Change in share of cultivators Over workers 2011-01
Andhra Pradesh								
1	Srikakulam	7	12	-5	-39	14	24	-10
2	Vizianagaram	11	18	-7	-37	21	32	-11
3	Visakhapatnam	14	19	-5	-27	26	38	-12
4	East Godavari	4	6	-2	-28	9	14	-5
5	West Godavari	5	7	-2	-27	10	14	-4
6	Krishna	5	7	-2	-32	10	15	-5
7	Guntur	9	12	-3	-24	17	22	-5
8	Prakasam	10	14	-4	-27	19	27	-8
9	SPS Nellore	7	10	-3	-25	15	21	-6
10	Chittoor	14	18	-4	-19	28	35	-7
11	YSR Cudapah	12	14	-2	-18	24	29	-5
12	Ananthapur	14	19	-5	-23	25	36	-11
13	Kurnool	10	14	-4	-21	19	26	-7
	A.P.	9	13	-4	-26	18	19	-1
Telangana								
1	Adilabad	18	30	-12	6	34	36	-2
2	Nizamabad	14	16	-2	-13	26	31	-5
3	Karimnagar	12	15	-3	-18	23	29	-6
4	Medak	15	17	-2	-11	29	33	-4
5	Ranga Reddy	16	17	-1	-10	32	34	-2
6	Warangal	15	17	-2	-14	29	33	-4
7	Mahabubnagar	16	18	-2	1	30	32	-2
8	Nalgonda	11	14	-3	-21	21	28	-7
9	Khammam	10	14	-4	-22	19	26	-7
	Telangana	15	14	-1	0.16	27	28	-1

Source: Census of India, 2011 and 2001, Government of India, New Delhi.

The earlier mentioned could be examined through the shift of cultivators during 2011-01. All the districts report decrease of cultivators during 2011-01. At state level, it is -26% and at district level, it ranges between -19% to -39%. This indicates a shift of cultivators becoming possible when the agricultural development taking place in the region/district in question. In Telangana, the share of cultivators is 15% in rural population, which is higher than in A.P. (9%) in 2011. Still, peasants in Telangana are much dependent on cultivation for livelihood compared to A.P. Adilabad, Rangareddy, Mahaboobnagar, Warangal and Medak districts report high share in rural population in 2011, while other districts display a little lower level. All the districts in Telangana have more than one seventh of rural population engaged as cultivators in 2001. Adilabad district stands with 30% share of cultivators followed by Mahaboobnagar district in 2001.

It could be observed that all the districts give uniform higher share of peasants in rural population. Much dependence of rural population appears in Telangana compared to A.P. as a whole. The decline in share of cultivators reported the highest in Adilabad district and the other districts display the share between 4% to 1%. At state level, one percent decline took place in Telangana and it was low against its counterpart (4%). The rapid shift appeared in A.P. for cultivators than that of Telangana. It is clear that the withdrawal of peasant has been rapid and wide in A.P. compared to Telangana. The shift of cultivators is hardly there in Telangana (0.16%) during 2011-01. However, at district level, except Adilabad and Mahaboobnagar all the districts reported shift of cultivators during 2011-01 and the shift ranges from 22% to 10% among these districts. The higher shift of cultivators demonstrated by Khammam (22%) Nalgonda (21%) and Karimnagar (18%) districts. The withdrawal of cultivators from cultivation had been slow in Telangana compared to A.P. in 2011-01. Adilabad and Mahaboobnagar districts reported 6% and 1% acceleration of cultivators and it indicates the predominance of agriculture in these two districts.

Districtwise Share of Cultivators in Rural Workforce in A.P. & Telangana

A.P. has 18% of cultivators in rural work force in 2011 and as many as seven districts reported higher than state level at the same point of time. Chittoor (28%), Visakhapatnam (26%), Ananthapur (25%), Cuddapah (24%) and Vizianagaram (21%) districts informed higher share of cultivators in rural work force and conversely, SCA districts reported lower level of cultivators in rural work force. In 2001, more than one third of rural work force engaged as cultivators in Visakhapatnam (38%) and Ananthapur (32%) districts. Except SCA districts, all the remaining had more than one fifth of rural workforce as cultivators. This scenario was changed with lot of shift in the peasant community from agriculture to non-farm activities within the location or elsewhere. The shift of rural workforce from agriculture to other avenues is very much accelerative and wide during 2011-01. The decline of cultivators in rural work force is high in Visakhapatnam (12%) Ananthapur (11%) and Vizianagaram (11%) districts, though these districts are less developed agriculturally. Even after decline of cultivators in these districts, still these report one-fifth of rural workforce in these districts. Out of all the 13 districts of A.P., share of cultivators appears very low in agriculturally advanced districts in the study period (table 2).

Telangana reports one-fifth of cultivators in rural workforce in 2011. Adilabad (34%) and Ranga Reddy (32%) districts account one-third of cultivators in rural work force in 2011. Still as many as six districts report one-fourth of rural workforce with cultivators in 2011 and Khammam (19%) and Nalgonda (21%) report lower level of cultivators. Compared to A.P. (18%), Telangana (26%) shows much share of cultivators in rural work force in 2011. Telangana is observed that share of cultivators in rural workforce stands as 28% in 2001 and there was a one per cent decline in between 2011 and 2001. More than one-third of the rural workforce engaged as cultivators in six districts.

Only Khammam and Nalgonda districts explain lower level share of cultivators with 26% and 28%, respectively. Thus, still Telangana shows much dependence of rural workforce as cultivators. The decline of workforce reported between 7% to 2% in different districts during 2011-01 and it was high in Khammam (7%), Nalgonda (7%) and Karimnagar (6%) districts. The share of cultivators in rural population and workforce is very low in agriculturally developed districts in A.P. and the analogous trend does not appear in Telangana.

Districtwise Per Cultivator Area and Production in A.P & Telangana

A.P. reports much change in net sown area (NSA) compared to Telangana and it increased from 1.49 ha to 2.05 ha, while it was low in both points of time in Telangana. At district level in A.P., Visakhapatnam reports very low level of NSA followed by Chittoor and Vizianagaram districts. On the other side, SCA and Kurnool districts exhibit higher NSA. In Telangana, Ranga Reddy district reported decline of NSA per peasant in the study period and this could be ascribed to effect of urbanization by Hyderabad city. Medak and Nizambad districts show sluggishness in the rise of NSA to the farmer. Khammam, Nalgonda and Adilabad districts inform a good level of NSA among Teangana districts. For gross cropped area (GCA), A.P. has better edge than in Telangana during 2011-01. Among districts of A.P., GCA shows nearly similar picture of NSA. A good level of GCA was reported per farmer in SCA, Guntur and Kurnool districts. The other districts in A.P. do not show much change of cultivable land to farmers. Chittoor and Visakhapatnam districts reported very low level of GCA compared to other districts in A.P. Among Telangana districts, Karimnagar displayed much rise in GCA during 2011-01 followed by Nizamabad. The districts, viz. Khammam, Nalgonda, Karaminagar and Nizambad indicate higher level GCA, while other districts showed very low increase in GCA per farmer during 2011-01 (table 3).

The same districts appeared in GCA during 2011-01. It is tried to estimate the area for food grains and its production per cultivator in the study area. It could be estimated the production of the cultivators across districts. It will enable to understand the state of the farmer in the society. Both A.P. and Telangana reported increase in area for cereals and Millets, whereas it is high in A.P. per cultivator. It is observed that there is decline in area for cereals and millets for Chittoor district from all districts of A.P. The delta districts like SCA and SPS Nellore districts have much area per cultivator, while other districts lag behind them for cereals and millets. Srikakulam and YSR Cuddaph districts inform decline in per cultivator production of cereals and millets, despite these have increasing trend in other variables, as discussed earlier. Among Telangana districts, Karimnagar, Nalgonda, Khammam and Nizambad have shown higher area per cultivator for cereals and millets. Two districts, viz. Mahaboobnagar and Ranga Reddy districts show decline of area per cultivator. In Telangana, Karimnagar district displays the highest produce per peasant of cereals and millets out of all districts in 2011-01 and Nizambad district comes next to it. All the other districts report increase of the produce per cultivator except Adilabad district, which has shown decline of the produce per cultivator.

Total food grains per cultivator are examined to know the state of the farmer at district level in Telugu states. A.P. has better situation for the farmer rather than in Telangana. It is observed that delta districts from A.P. have better position in the food grain production and the peasant has higher shares of food grains from these districts, while Chittoor district has standstill position for the farmer during study period. The other districts, viz. Ananthapur and Visakhapatnam are vulnerable to have a better position to peasant in the area of food grains. Among Telagana districts, Khammam, Karimnagar and Nizambad are in improved state for the peasant, while Mahaboobnagar and Ranga Reddy districts report decline of the area per farmer for the area in food grains. In A.P., West Godavari district

shows the highest per cultivator produce of cereals and millets during 2011-01 followed by East Godavari and Guntur districts. In case of total food grains per farmer, A.P. has augmented condition than in Telangana. Across districts in A.P., the analogous trend of cereals and millets is observed for all the districts. In between 2011-01, there was much increase of the per peasant food grains production in the delta districts. In Telangana, Nizambad, Khammam, Nalgonda and Karimnagar districts demonstrated more than two times increase of per peasant food grains production. It shows the rapid change of the condition of the farmer in terms of income and standard of living in these districts. Adilabad and Ranga Reddy districts are evident with decline in per peasant food grains production during 2011-01. In case of Ranga Reddy district, urbanization impact may be causative to certain extent, whereas for Adilabad district, it is to be probed over the contributory factors.

Table 3 - District wise Per Cultivator Area and Production in A.P. & Telangana: 2001-11

Sl. No.	District	Net Sown Area in ha		Gross Cropped Area in ha		Cereals & Millets area in ha		Total food grains area in ha		Cereals & Millets Produce in Qtl.		Total Food Grains Produce in Qtl.	
		2001	2011	2001	2011	2001	2011	2001	2011	2001	2011	2001	2011
1	Srikakulam	1.12	1.99	1.52	2.67	0.71	1.39	1.03	1.90	1.54	1.49	1.70	1.78
2	Vizianagaram	0.94	1.38	1.31	1.82	0.40	0.76	0.59	1.02	0.76	2.04	0.84	2.14
3	Visakhapatnam	0.72	0.96	0.92	1.16	0.40	0.54	0.46	0.62	0.54	0.85	0.58	0.89
4	East Godavari	1.92	2.73	3.44	4.14	1.85	2.72	2.46	3.10	6.34	8.87	6.45	8.94
5	West Godavari	2.19	3.16	3.18	4.66	2.10	3.36	2.16	3.43	7.63	12.06	7.66	12.09
6	Krishna	2.36	3.64	3.31	5.18	1.71	2.67	2.46	3.71	5.38	8.87	6.03	9.50
7	Guntur	1.63	2.19	2.18	2.85	0.85	1.43	1.42	1.86	3.01	6.14	3.43	6.44
8	Prakasam	1.45	2.22	1.54	2.32	0.47	0.70	0.89	1.47	1.58	2.36	1.95	2.98
9	SPS Nellore	1.67	2.38	1.73	2.83	1.01	1.72	1.28	2.08	3.37	6.40	3.56	6.62
10	Chittoor	0.80	0.83	0.90	0.96	0.21	0.18	0.23	0.23	0.47	0.50	0.47	0.52
11	Y.S.R.Cuddapah	1.38	1.54	1.53	1.89	0.30	0.36	0.52	0.80	0.73	0.71	0.96	1.09
12	Anantapur	2.00	2.61	2.08	2.77	0.20	0.24	0.35	0.65	0.48	0.70	0.60	0.92
13	Kurnool	2.14	2.90	2.39	3.19	0.55	0.77	0.96	1.82	1.02	2.16	1.40	3.19
14	A.P.	1.49	2.05	1.84	2.51	0.67	1.00	0.95	1.43	1.96	3.15	2.16	3.45
1	Mahabubnagar	1.49	1.54	1.64	1.72	0.69	0.60	0.93	0.92	0.98	1.57	1.04	1.74
2	Rangareddy	1.02	0.95	1.10	1.06	0.48	0.42	0.74	0.70	0.82	0.88	0.94	0.97
3	Medak	1.16	1.39	1.39	1.74	0.74	0.83	1.08	1.23	1.48	2.65	1.66	2.98
4	Nizamabad	0.79	1.24	1.17	2.07	0.78	1.16	0.90	1.39	2.08	4.51	2.12	4.77
5	Adilabad	1.55	1.65	1.63	1.79	0.65	0.44	0.92	0.68	1.22	1.05	1.33	1.21
6	Karimnagar	0.85	1.51	1.22	2.22	0.78	1.35	0.88	1.43	2.60	5.09	2.63	5.13
7	Warangal	1.07	1.35	1.30	1.71	0.51	0.87	0.64	1.01	1.43	2.87	1.50	2.93
8	Khammam	1.44	2.07	1.52	2.34	0.60	1.16	0.81	1.38	1.60	4.18	1.69	4.30
9	Nalgonda	1.21	1.81	1.45	2.23	0.62	1.31	0.82	1.58	1.52	4.21	1.59	4.35
10	Telangana	1.33	1.50	1.57	1.86	0.65	0.88	0.86	1.12	1.53	2.87	1.61	3.02

Source: Statistical Abstract of A.P., 2001 & 2011. Directorate of Economics & Statistics, Hyderabad, Government of A.P.

Table 4 - District wise Per Cultivator Irrigated Area for Selected Crops in A.P. & Telangana: 2001-11
(ha)

S. No	District	Net Irrigated area		Gross Irrigated area		Cereals & Millets		Total Food Grains		Oilseeds		Total Food Crops		Total Non-Food Crops	
		2001	2011	2001	2011	2001	2011	2001	2011	2001	2011	2001	2011	2001	2011
1	Srikakulam	0.63	1.19	0.67	1.37	0.64	1.09	0.64	1.09	0.03	0.06	0.69	1.24	0.03	0.06
2	Vizianagaram	0.35	0.71	0.43	0.86	0.38	0.60	0.38	0.60	0.02	0.03	0.47	0.79	0.03	0.04
3	Visakhapatnam	0.21	0.38	0.30	0.47	0.21	0.23	0.21	0.23	0.01	0.01	0.35	0.42	0.01	0.01
4	East Godavari	1.23	1.84	2.09	2.83	1.84	2.51	1.84	2.51	0.09	0.16	2.06	2.94	0.11	0.19
5	West Godavari	1.64	2.54	2.76	4.01	2.28	3.09	2.28	3.10	0.14	0.31	2.67	3.65	0.26	0.52
6	Krishna	1.43	2.30	1.95	2.67	1.94	2.67	1.94	2.67	0.04	0.05	2.16	3.06	0.06	0.10
7	Guntur	0.96	1.56	1.01	1.81	0.81	1.28	0.81	1.28	0.00	0.00	0.94	1.54	0.06	0.09
8	Prakasam	0.55	1.18	0.57	0.89	0.40	0.52	0.41	0.52	0.03	0.07	0.48	0.67	0.07	0.14
9	S.P.S.Nellore	1.14	1.67	1.29	2.12	1.03	1.61	1.03	1.61	0.10	0.08	1.23	1.89	0.15	0.12
10	Chittoor	0.33	0.34	0.43	0.45	0.19	0.14	0.19	0.14	0.08	0.07	0.34	0.35	0.10	0.10
11	YSR Cuddapah	0.55	0.70	0.65	0.86	0.27	0.29	0.27	0.30	0.19	0.24	0.38	0.50	0.24	0.30
12	Anantapur	0.27	0.35	0.34	0.43	0.14	0.35	0.15	0.16	0.10	0.11	0.21	0.25	0.13	0.12
13	Kurnool	0.43	0.88	0.54	0.99	0.26	0.21	0.26	0.50	0.45	0.17	0.33	0.64	0.22	0.21
14	A.P.	0.63	1.00	0.82	1.22	0.62	0.84	0.62	0.84	0.10	0.10	0.75	1.06	0.11	0.14
1	Mahabubnagar	0.30	0.46	0.38	0.59	0.24	0.28	0.24	0.28	0.09	0.15	0.26	0.33	0.11	0.17
2	Rangareddy	0.26	0.31	0.32	0.40	0.19	0.16	0.19	0.16	0.02	0.03	0.29	0.28	0.04	0.05
3	Medak	0.34	0.46	0.48	0.70	0.28	0.34	0.29	0.34	0.02	0.04	0.43	0.56	0.03	0.04
4	Nizamabad	0.54	0.78	0.85	1.46	0.60	0.77	0.60	0.78	0.06	0.04	0.77	0.93	0.06	0.16
5	Adilabad	0.22	0.23	0.28	0.31	0.19	0.20	0.19	0.22	0.02	0.00	0.22	0.25	0.03	0.04
6	Karimnagar	0.61	1.01	0.90	1.67	0.67	1.11	0.67	1.13	0.06	0.06	0.76	1.28	0.12	0.20
7	Warangal	0.66	0.86	0.78	1.14	0.40	0.59	0.40	0.60	0.08	0.07	0.49	0.73	0.23	0.33
8	Khammam	0.55	0.93	0.59	1.10	0.51	0.74	0.51	0.74	0.03	0.04	0.63	0.94	0.10	0.13
9	Nalgonda	0.48	0.94	0.67	1.29	0.65	1.03	0.67	1.04	0.04	0.06	0.72	1.21	0.04	0.06
10	Telangana	0.50	0.65	0.66	0.93	0.41	0.56	0.42	0.56	0.05	0.06	0.50	0.69	0.09	0.14

Source: Season and Crop Report, Directorate of Economics and Statistics, A.P. 2011-12.

District wise Per Cultivator Irrigated Area for Selected Crops in A.P. & Telangana

Irrigation of cultivable land changes the economic conditions of the area in question. It brings out wholesome shift of the incomes and culture not only for farmers but also for the whole people living in that area. It is presented district wise irrigated area for selected variables for 2011-01 in table 4. The net irrigated area (NIA) is at high in A.P. compared to Telangana in 2011-01. The NIA is much available to the farmers in West Godavari, Krishna and SPS Nellore districts. There is sharp increase of NIA in Srikakulam district than any other district in A.P. during 2011-01. NIA is lowest in Chittoor, Ananthapur and Visakhapatnam districts in A.P. in the study period. Among Telangana districts, Karimnagar district reports much increase in NIA in 2011-01 and the others namely, Nalgonda, Khammam and Warangal districts show higher NIA in Telangana. However, the other remaining districts report at low level of NIA. It shows that the farmers are given with limited land development in these districts. It is found that the A.P. has more gross irrigated area (GIA) than that of Telangana per cultivator during 2011-01. Across districts in A.P. and Telangana, the NIA picture replicates to gross irrigated area (GIA). It is observed that the irrigated area is at larger extent for cereals and millets in A.P. compared to Telangana. In A.P., Chittoor and Kurnool districts showed decline of irrigated area under cereals and millets during 2011-01, while all other districts reported increase in A.P. West Godavari district displayed the highest area under cereals and millets in 2011-01 out of all districts in A.P. Other delta districts inform the higher level of irrigated area for cereals and millets. The districts viz. Visakhapatnam and Vizianagaram from NCA and YSR Cuddapah and Ananthapur from Rayalaseema showed meager area under cereals and millets. In Telangana, Karimnagar and Nalgonda inform rapid rise in per cultivator-irrigated area under cereals and millets and these crossed one-hectare, whereas all other districts fall below one hectare. Nizambad and Khammam districts indicated high amount of irrigated area in Telangana. Adilabad and Ranga Reddy districts reported the lower level of irrigated area under cereals and millets. It is estimated the available land under irrigation for food grains production. A.P. shows higher area per cultivator than for Telangana under food grains. SCA districts reported large extent of area per cultivator than any other district. Rayalaseema districts, except Kurnool, presented very lower level of irrigated area for food grains and Visakhapatnam from NCA also showed little extent per farmer. It divulges the low income base of the farmers in these districts and the same could be discussed latter. From Telangana, it is noticed that only two districts namely, Karimnagar and Nalgonda surpassed one hectare and the remaining dropped below one hectare for food grains under irrigated area. Ranga Reddy and Adilabad districts demonstrate very small area.

In case of irrigation, oil seeds report stagnancy in A.P. and near stagnancy in Telangana. Among districts in A.P., West Godavari, YSR Cuddapah, Kurnool and East Godavari reported the cultivation of oil seed under irrigation. No other districts fall above 0.10 hectare per cultivator and further, Guntur district represents hardly any oil seed cultivation under irrigation. In a similar way, the districts from Telangana showed meager amount of cultivation under irrigation and it does not contribute much to the incomes of the cultivator. Area under irrigation for food grains is higher in A.P. compared to Telangana. All the SCA districts in A.P. demonstrate a better per peasant food crops area under irrigation, when Rayalaseema and NCA districts except Srikakulam exhibit short of other districts.

Table - 5
Change in Agricultural Gross Domestic Product and Value of Selected Crops per Peasant in A.P. and Telangana: 2011-01

Sl. No	Name of district/State	Agricultural Gross Domestic Product per peasant (in 000)		% Change	Major crop Source for Income to Peasant	Value of Paddy in Rs		% Change	Value of Chillies in Rs		% Change	Value of Groundnut in Rs		% Change	Value of Sugarcane in Rs.		% Change	Value of Cotton in Rs.		% Change
		2001	2011			2001	2011		2001	2011		2001	2011		2001	2011		2001	2011	
1	Srikakulam	26	145	458	Paddy	772	1202	55	86	498	56	111	547	41	184	292	59	25	160	540
2	Vizianagaram	20	160	700	Paddy	339	1631	381	39	52	33	137	464	239	201	1019	407	184	179	-3
3	Visakhapatnam	19	140	637	Sugarcane	193	695	260	56	89	58	50	59	18	454	1754	286	9	29	222
4	East Godavari	98	606	518	Paddy	3374	9547	183	53	110	107	6	16	167	544	2557	370	114	477	318
5	West Godavari	107	789	637	Paddy	3771	10515	179	138	204	48	46	269	485	1355	4975	27	70	217	210
6	Krishna	98	727	641	Paddy	2684	8626	221	436	1112	155	80	231	189	535	3552	564	635	2994	371
7	Guntur	66	319	383	Paddy	1724	3041	76	1259	3293	161	44	217	383	36	54	50	1535	4909	220
8	Prakasam	37	280	656	Paddy	797	1950	145	259	1179	355	34	218	541	4	19	375	301	1503	399
9	S.P.S.Nellore	41	324	690	Paddy	1737	6484	273	87	110	26	145	671	363	291	762	162	147	256	74
10	Chittoor	26	135	419	Sugarcane	248	411	65	29	69	138	453	1592	251	546	1172	115	0	0	0
11	YSR Cuddapah	41	196	378	Paddy	447	592	32	90	44	-51	364	2450	573	19	70	268	123	639	419
12	Anantapur	31	131	323	groundnut	221	479	117	44	134	204	856	4052	373	7	11	57	25	29	16
13	Kurnool	45	219	387	groundnut	394	1506	282	190	609	220	738	1776	141	1	120	11900	407	1422	249
14	A.P	44	267	507	Paddy	1018	2597	155	250	696	178	289	1254	334	270	897	232	272	877	222
1	Mahabubnagar	20	116	480	Paddy	336	1119	233	62	354	471	218	1735	696	0	62	6200	239	2160	804
2	Rangareddy	19	162	752	Paddy	226	570	152	52	96	85	39	175	349	23	85	270	188	855	355
3	Medak	22	175	695	Sugarcane	403	1578	291	54	34	-37	25	23	-8	451	966	114	109	1356	1144
4	Nizamabad	32	179	459	Paddy	708	3149	345	54	157	191	49	45	-8	318	517	63	90	880	877
5	Adilabad	18	117	550	cotton	271	739	173	35	89	154	18	42	133	0	0	0	1654	7098	329
6	Karimnagar	36	187	419	Paddy	932	4153	345	117	127	8	99	187	89	26	74	184	410	5060	1134
7	Warangal	31	147	374	Cotton	690	2318	236	303	878	190	130	379	191	0	0	0	1179	5700	383
8	Khammam	39	224	474	Cotton	727	3490	380	705	2612	270	45	234	420	212	293	38	1319	6558	397
9	Nalgonda	27	197	630	Paddy	853	4448	421	130	258	81	91	275	202	1	22	2100	456	3554	679
10	Telangana	27	160	264	Cotton	571	2273	298	157	471	200	92	450	389	119	214	80	589	3662	521

Source: 1) Statistical Abstract of A.P., Hyderabad, 2) Census of India, 2001 and 2011, Government of India, New Delhi.

All the districts inform the increase of the area under total food crops in A.P. under irrigation. In Telangana, Nalgonda and Karimnagar districts reported the highest per peasant area for food crops under irrigation. Due to canal irrigation of Nagarjunasagar project, the farmers from Nalgonda district got this level of irrigation and in case of Karimnagar, the voluminous use of tube well irrigation made it possible to have 1.28 ha by the farmer. The lowest appeared in Adilabad and Ranga Reddy districts. All the districts inform the increase of per cultivator area under irrigation for food crops. For non-food crops, A.P. and Telangana were in similar level by 2011, though Telangana was less than that of A.P. in 2001. It indicates the rise of non-food crops production under irrigation during 2011-01. SCA districts display higher area per peasant for non-food crops in A.P. In Rayalaseema, Ananthapur and Kurnool districts show little decline during 2011-01, while YSR Cuddapah and Chittoor explain increase and stagnancy, respectively. Ananthapur district validates larger area compared to NCA districts. In Telangana, all the districts show rise in per peasant non-food cropped area under irrigation. Warangal and Karimnagar report a good level of non-food cropped area per farmer compared to other districts in Telangana (table 4).

Change in Agricultural Gross District Domestic Product and Value of Produce of Selected Crops per Peasant in A.P. and Telangana

At state level, A.P. has more than two and a half times increase in state agriculture gross district domestic product (SAGDDP) per farmer and it is higher than that of Telangana. Among districts in A.P., as many as six districts reported more than that of the state level. Rayalaseema and NCA districts inform the below state level of per peasant of SAGDDP. How much the land use pattern is strong and resourceful, that much the SAGDDP appears in the study area. SCA districts display the highest levels of SAGDDP per peasant. In 2001, NCA districts showed the lowest SAGDDP per farmer, whereas Rayalaseema districts appeared the lowest SAGDDP districts in A.P. in 2011, except Kurnool and this was very much significant change at regional level in A.P. In case of Telangana, Khammam, Nalgonda and Karimnagar districts continue higher SAGDDP per peasant during 2011-01, which is high than for state level, while Adilabad and Mahabubnagar districts continue the lowest plane. As many as five districts in Telangana have more than SAGDDP of state level. Major source of crop for production to farmer differs in between A.P. and Telangana, as A.P. with paddy and Telangana with cotton during 2011-01. In A.P., the major cereal crop paddy dominates in many districts, while Visakhapatnam, Guntur and Rayalaseema districts display disagreement with state picture. Due to lack of irrigation, Rayalaseema districts report the non-cereal crops, like groundnut and sugarcane, whereas Visakhapatnam accounts sugarcane during study period. Guntur district also shifted from paddy to cotton in generating major source of production to the farmer. In Telangana, half of the districts report paddy and the remaining show cotton in 2001. This scene shifted to cotton in many districts by 2011 and thus, Telangana exhibits a different situation compared to A.P. for major source of crop produce. Mahabubnagar, Ranga reddy and Karimnagar districts shifted from paddy to cotton during 2011-01 and it indicates the commercialization of agriculture to achieve the higher incomes to the farmer (table 5).

In the value of production, paddy value surpasses all the selected crops in A.P. and Telangana has shown higher change compared to A.P. during 2011-01 with nearly three times increase in the value of production. Telangana explicates lower level of per peasant value either in 2011 or in 2001 with its counterpart. It indicates the sharp change in the production and yield levels

in Telangana from lower base to higher base, since it has changed in the production of paddy. Within A.P., Vizianagaram district reported the highest change in production of paddy out of all districts during 2011-01 followed by SPS Nellore. The least change appeared in YSR Cuddaph district and Chittoor district follows it. Delta districts show the highest per peasant value of paddy during 2011-01. In the value of paddy per farmer, Rayalaseema districts except Kurnool exhibit the poor performance in both points of time. Vizianagaram and Srikakulam from NCA districts report a sea change in the value of production of paddy per farmer. In Telangana, Nalgonda, Khammam, Karimnagar and Nizambad districts notify the good level of change compared to other districts. Adilabad and Ranga Reddy districts report very quite low level of change in the value of paddy. Nalgonda, Karimnagar, Khammam and Nizamabad districts have displayed good production value to the farmers, while other districts point to lower levels (Ranga Reddy, Adilabad and Medak).

For the value of Chillies production, Telangana shows much increase in 2011-01, despite A.P. reports much income per farmer in both points of time. Across A.P., Guntur district informs more produce through chillies followed by Krishna district during 2011-01, while Prakasam district shows sharp change out of all districts. Kurnool and Srikakulam districts report higher produce through chillies out of all the other remaining districts, whereas YSR Cuddaph bear out decline in produce from chillies out of all districts. Khammam, Warangal and Mahabubnagar districts inform the higher produce levels compared to other districts in 2011 and further, Mahabubnagar district explains the highest increase in produce through chillies during 2011-01. Medak district shows decline and Karimnagar points out the lowest increase in produce per farmer.

Value of production of groundnut per peasant is higher in A.P. in 2011-01 compared to Telangana, despite the sharp change took place in Telangana with 389%. Among districts of A.P., YSR Cuddaph district shows the highest increase of incomes to farmer out of all districts followed by Prakasam and West Godavari districts. All the Rayalaseema districts inform the higher source of income through groundnut than other districts in A.P. and SPS Nellore, Srikakulam and Vizianagaram districts show the good level of produce through groundnut and the remaining districts do not show considerable produce from groundnut to the farmer. Groundnut is the second major source of produce to the farmer in Mahabubnagar in Telangana and there is much increase in produce of the farmers in study period and Warangal and Nalgonda districts show considerable produce from groundnut. No other district informs any reliable produce to the farmer from groundnut in Telangana during 2011-01. In A.P., Kurnool district reports the highest change from nearly zero level to a new production level to the farmer from sugarcane. Krishna and Vizianagaram districts exhibit a great deal of shift in production to the farmer in 2011-01. Delta districts are the best contributors to production of the farmer through sugarcane followed by Visakhapatnam and Chittoor districts. All other districts contribute very little production to the farmer in A.P. Across Telangana, Medak district is the highest in produce per peasant and Nizambad goes behind it. All the other districts inform very low level or zero base of production of sugarcane and its production is much limited in Telangana.

Cotton has become very important cash crop in both states by 2011. However, in the generation of production as major source, cotton is in higher place in Telangana in both periods of time. Though the increase of per cultivator value of cotton produce is high in A.P., the per peasant production is at much higher level in Telangana during 2011-01 and it discloses the significance of cotton crop

as a major source of production across Telangana. Among the districts of A.P., Srikakulam district informs ample of acceleration in production per peasant out of all districts; however, it shows per farmer produce at very low level in both points of time. Guntur, Krishna and Prakasam districts report lofty production level per peasant compared to all other districts in 2011. Kurnool district shows good production to the farmer rather than all other districts of Rayalaseema. Chittoor district exists at zero level for cotton produce during 2011-01. NCA districts also have modest production from cotton crop to the peasant during the study period. In Telangana, Adilabad, Khammam, Warangal, Karimnagar and Nalgonda districts show cotton as a major source of production to the farmer in study period. Medak and Karimnagar districts have shown ten times increase of the value of produce per farmer in 2011-01. All the districts have demonstrated the importance of cotton for the improved state of the farmer in Telangana. Mahabubnagar and Medak districts inform crop produce at higher level and cotton is the major source of production to farmer, as earlier referred for Mahabubnagar. It could be inferred that cereal crop-paddy is the mainstay in A.P. and cotton and paddy are major sources for good generation of production to the peasant in Telangana during 2011-01. Based on land resource and its use, the level of production and the development of agriculture are taken place in the districts of both states. Irrigation has become the major pulling factor to the productivity in cultivation and in the increase of livelihood of the peasant in both states.

CONCLUSIONS

Though the expenses are high in cultivation in Telugu states compared to all India, Telangana has a healthier situation for the peasant, having with squat expenses with more net income from cultivation. The decline of farmers is steep in delta districts than in other districts in A.P. during 2011-01, while the withdrawal of farmers from cultivation is low in Telangana compared to A.P. It is found that there is clear shift of peasant production levels with disparities across NCA, SCA, and Rayalaseema districts in A.P., whereas in Telangana, between Karimnagar, Nalgonda, Khammam and Nizambad, and Adilabad, Mahabubnagar and Medak districts. It is estimated a great deal of deviations in land use among the districts in both states and thereby the existence of production divergence has taken in both states.

A well off condition appears to farmer in irrigated districts and the SADDP is the highest per peasant only in those districts and it increased many times during 2011-01. However, paddy is major source of production for the farmer in A.P., in 2011-01, while in Telangana, cotton has become the major source of production by 2011 and it indicates the shift of crop dependence of peasant towards cash crop-cotton. There is much acceleration coupled with large departure across regions in the production of peasants through land use budge in 2011-01, as the SADDP per capita reveals the visible skewness among the districts in A.P. and Telangana with palpable diversity in land use dynamics. The decline of farmers in workforce did not make any impact on the land use and crop production in both states. Though there is much withdrawal of peasant community from cultivation, it has hardly given impact on crop production, rather with increased production level of the existing farmers in A.P. and Telangana. However, in case of Telangana, there appears certain link between level of farmers and production. The land resources and its use have proved to be dominant factors in crop production and, consequently peasant has become much entrepreneurial and productive in the cultivation to be in better state for himself in the study area.

References

- Arun Chaturvedi, Patil N G, and Goswami S N (2011), “Reorienting Land Use Strategies for Socio-economic Development in Uttar Pradesh “Economic & Political Weekly Supplement, June 25, vol xlvI nos 26 & 27, pp.169-73,
- Census of India (2011, 2001), Primary Census Abstract of A.P., Government of India, New Delhi,
- Henry Bernstein (2001), “The Peasantry’ in Global Capitalism: Who, Where and Why?” *Social Register*, Vol.37, pp.25-59,
- Key Indicators of Situation of Agricultural Households in India, (2013), NSS 70th Round, Government of India,
- Ministry of Statistics and Programme Implementation,
- Narayanamoorthy, A. (2006), “ State of India’s Farmers”, *Economic and Political Weekly*, Vol. 41, No. 6, Feb. 11-17, pp. 471-473,
- Ramesh Chand, Lakshmi Prasanna P A, Aruna Singh (2011) “Farm Size and Productivity: Understanding the Strengths of Smallholders and Improving Their Livelihoods”, *Economic & Political Weekly Supplement*, Vol xlvI Nos 26 & 27 June 25, pp.5-11,
- Season and Crop Reports (2011, 12 and 2001), Directorate of Economics and Statistics, Hyderabad, Government of Andhra Pradesh,
- Situation Assessment Survey of Farmers (2003), National Sample Survey Organisation, Ministry of Statistics and Programme Implementation, Government of India,
- Statistical Abstract of Andhra Pradesh (2011 and 2001), Directorate of Economics and Statistics, Hyderabad, Government of Andhra Pradesh.