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FOOD PRODUCTION POTENTIAL OF PAIDIPALLI

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INTRODUCTION

Self-sufficiency in foodgrains is one of the primary objectives of planning in India. The Five-Year Plans have always given a high priority for the development of agriculture not because of any narrow ideology of autarchy, but because of the different factors pressing for the formulation of such a policy in the contemporary situation. Agricultural production has to be increased to the highest levels possible through various measures, while adequate expansion of food production is indispensable for several reasons.

Village surveys of food production potential can be very helpful in evaluating the possibilities and limitations of agricultural expansion. They provide the best opportunity for the examination of the multifarious aspects of agricultural production in a realistic and constructive manner. Knowledge gained in such studies may throw light on the problems of realising national self-sufficiency in foodgrains and facilitate the formulation of planning from the bottom, which is an important requisite of democratic planning.

The Sri Venkateswara University College Planning Forum conducted the present enquiry into the food production potential of Paidipalli Village and also agricultural indebtedness of farmers in November 1960 along with a *Shramadan* camp to form an earthen road. Both teachers and students participated in the social work along with the villagers, achieving a laudable success.

The economic investigation was spread over three days. Data were collected from farmers through schedules with the help of student investigators, who were given necessary training to fill these schedules. Twenty-seven students, four research scholars and four staff members organised into eight batches, each under one supervisor, worked day and night and covered all the farming families.

LOCATION OF THE PAIDIPALLI VILLAGE

Paidipalli is a village of normal size with a population of 980 in November, 1960 and is approximately equal to the average size of villages in Andhra Pradesh. It is situated in the Chandragiri Taluka of the Chittoor district at a distance of six miles north-west of Tirupati, the leading place of pilgrimage and a growing educational centre, or five miles to the eastern side of Chandragiri Town, the headquarters of the Taluka and the Developmental Block. Although the village is quite close to these two towns, it is inaccessible and a bit remote, as there is no road connecting the village with the Tirupati-Chittoor main road. It has only a narrow, undulating and heavily encroached earthen track of 2½ miles long, linking the main road at Mallavaram village between Tirupati and Chandragiri towns and it is not useful for regular traffic through all the seasons. The village has too many factions to be able to co-operate for developing the track and transforming it into a pucca road.

Paidipalli is comparatively well placed in regard to rainfall and water resources. It is situated in plains in the eastern parts of the Chittoor district and obtains a higher rainfall than the western upland talukas of the district. The region normally receives an annual rainfall of about 34 inches, mostly from the south-west monsoon from June to September and north-east monsoon from October to December.[1] While this moderate rainfall is adequate to raise good crops, Paidipalli has two valuable sources for perennial and secure water supply during the year. The flow and seepage in the Swarnamukhi river, which surrounds the village on eastern and western sides and the spring channel, Bachinikalva Kassim, which runs on the western side, augment supply of water in wells and tanks. Paidipalli has therefore lesser incidence of droughts, which are more frequent in the district. Even in the case of continued adverse seasonable conditions for four years, ultimately culminating in the well-known district-wide[2] famine of 1949-50, Paidipalli escaped with a drought only towards the close of the famine period.

The soils of the village comprise mostly of red and sandy loams which are fairly fertile and give good yields. They also facilitate the reaping of long-standing and exhausting crops, while the hotter climate characteristic of the plains, is conducive to the growth of wet crops like paddy and sugarcane.

Paidipalli forms a part of the National Extension Service Block, Chandragiri, since April, 1956. It has an elementary school and a panchayat board. But no separate co-operative society for credit facilities is yet started. Electricity is available both for agricultural and domestic consumption since the last few years now. By virtue of nearness to urban centres, it has scope for urban services and supplies.

Unfortunately, the survey work faced an intractable problem, which is to be traced to the land tenure system. Paidipalli is an "*Inamdar*" village, whose lands are not completely settled yet, excepting the ryotwari area. It appears that the ryots do not possess ownership rights for all the land they are tilling. On account of the pending dispute between the *Inamdar* and cultivators in the district court of Chittoor, this enquiry gave rise to strong suspicion and fear. But personal persuasion and the favourable impression which *Shramadan* work created, facilitated the collection of technical data relating to the cultivation of crops in 'owned' lands, for which there is no dispute, or fear of ownership rights. Moreover, correct records of the total cultivated area are not available even with the Revenue Department for want of a complete settlement of the village lands. Consequently, it has not been possible to estimate food production and its potentialities from an aggregate point of view. Nevertheless, knowledge gained from on-the-spot enquiry of the village and its agriculture proved very valuable for proper evaluation and interpretation of the technical data gathered, without losing sight of realities of the situation at Paidipalli.

SOCIO-ECONOMIC COMPOSITION

The population in the village is divided into four occupational categories, namely, those who earn their livelihood mainly from (*i*) farming, (*ii*) agricultural labour, (*iii*) animal husbandry and (*iv*) from other sources. Out of 159 families

1. Statistical Atlas of Andhra Pradesh 1950-51, pp. 550 and 581.
2. *Ibid.*, p. 550.

in the village, 110 families or 69.2 per cent of the total have farming as their chief source of livelihood, while 27 families or nearly 17 per cent of the total earn their livelihood from agricultural labour, 4 families or 2.5 per cent of the total from dairying and animal husbandry and the rest (18 families or 11.3 per cent) earn their livelihood by other means. On the whole, 89 per cent of the total families subsist on agriculture. The four divisions into which the population is grouped are indeed four clusters of houses rather huts in four spots of the village. The main village consists of a number of castes of whom the leading agricultural castes are Balija, Reddi and Yadava who own most of the cultivated land. Pambalapalli, Harijanwada and Madigapalli are the individual caste divisions of the village located in separate places. Although there are a large number of cultivating families among the Pambala and Mala castes, most of them possess only a few cents usually less than an acre. Because of their small holdings they are mostly dependent on agricultural wage income for their livelihood.

While the village has a few artisan families engaged in traditional occupations such as of washerman, barber, basket-maker and trader, occupations of goldsmith, carpenter, potter or '*vaidya*' are missing and for whose services it is dependent on neighbouring villages. Hence, Paidipalli lacks traditional self-sufficiency even in the restricted sense of the concept.

The proportion of cultivators is quite predominant. A cultivating family is defined as a family cultivating some land, owned or leased, obtaining a significant part of its livelihood therefrom. Accordingly, 110 cultivating families or 69 per cent of the total accounted for approximately two-thirds of the aggregate households in the village. But, most of them constitute small owners. Actually 93 out of 110 families owned less than four acres. The total land owned by the cultivators appears to be only 237.35 acres amounting to an average family holding of 2.15 acres with an average family size of 6.2 persons resulting in a very low per capita of 0.37 acre. This is an index not only of heavy pressure of population on land but also accounts for the grinding poverty of the farmer. In fact only four families possess pucca houses, the rest live in thatched huts. The approximate value of properties comprising of assets like land owned, buildings, livestock, agricultural equipment and jewellery works out to be only Rs. 5,028 per family. Almost all the farming families excepting two are only petty farmers, either by income or property standards. The two leading ryots of the village, who belong to the Reddi caste, have 20 to 30 acres each under their 'possession,' that too under undivided joint-family ownership. Hence there is hardly any danger of ceiling legislation on land holdings touching the village. As regards the *Inamdar,* his rights are disputed and the outcome of the case is awaited.

The farming population is quite illiterate. The percentage of literacy was only 2.4 in 1951, it had increased to 10.2 by November 1960. The increase in literacy has occurred among the younger generation and the position regarding the elders remained unchanged. Thus poverty and ignorance dominate at Paidipalli.

EXTENSIVE CULTIVATION

Given the natural environment, agricultural output varies broadly in proportion to the area cultivated and its yield per acre, that is on extensive cultivation

Table I reveals the pattern of land utilisation of Paidipalli during the year 1959-60.

TABLE I—PATTERN OF LAND UTILISATION

	Description	Acres and cents
1.	Geographical area	636.83
2.	Net area sown	426.83
3.	Net area sown more than once	77.84
4.	Total cropped area	504.67
5.	Current fallows	40.00
6.	Area under gardens and trees	20.00
7.	Barren and uncultivable land	150.00

Source: Block Development Office and Revenue Department, Chandragiri.

It is obvious from the table that the scope for expansion of extensive cultivation is rather meagre. Excepting the barren and uncultivable land, the rest of the geographical area is under agricultural use of one sort or other. There is neither culturable waste nor pastures that can be brought under cultivation. The area under current fallows and about ten acres under trees are amenable for regular and intensive cultivation with appropriate efforts.

The per capita cultivated area among the farming families including the ten acres belonging to other villages, worked out to be only 0.71 acre as against the per capita owned land of 0.37 acre, noted earlier. Even the entire geographical area fails to assure one acre per head of farm families. The pressure of population on land is enormous and it cannot be solved without a substantial emigration from the village to afford a reasonable minimum standard of living for each person under the existing circumstances.

Indeed the land hunger was very great. Farmers and agricultural labourers might have attempted the cultivation of the barren land but for the obstacles such as the insecurity of land tenure system, the inaccessibility of the area located on the southern side of the village, heavy outlay required for reclamation and the prospect of meagre returns in the immediate future. With the best of efforts it may be possible to reclaim an area of about 60 acres, which constitutes approximately 12 per cent of the current agricultural area.

IRRIGATION FACILITIES

The village possesses good irrigation potential. But the acreage under dry cultivation is greater than that under wet cultivation. Out of the net sown area of about 426 acres during 1959-60, 148 acres constituted wet lands, the rest of the acreage about 278 comprised of dry cultivation out of which 53 acres were partially irrigated. This intermediary category of cultivation varies depending on circumstances. On the whole, the wet plus partially irrigated area and dry cultivation are in the ratio of 8:9 during 1959-60.

The sources of irrigation are wells, tanks and spring channels. There were 3 tanks, 2 spring channels and 34 wells in November, 1960 to provide water to agricultural lands. Expansion of irrigation facilities is of prime importance not only to increase cultivation of wet crops but also for the raising of farm productivity and expansion of area under double cropping at Paidipalli. Well irrigation is the leading source and has a great potentiality for expansion. For, it supplements other sources of irrigation, provides adequate water and affords better security—all these at a decreasing cost due to electrification. It is responsible for the raising of most valuable wet crops like paddy and sugarcane. All the sugarcane growers and 41 out of 75 paddy growers with bigger farms are dependent on it. Electrification has cheapened the well irrigation to a great extent recently. A good well with a pipe of 3″/2-1/2″ with 5 H.P. engine irrigates 5 acres under two crops, while a well with bullock power can hardly irrigate 2 acres with the same amount of advantage. Already 20 wells out of 34 used power. Others are anxious to take to electricity. New wells are likely to spring up if financial help is readily available—especially through medium-term loans.

There are a few inhibiting forces for the quick expansion of well irrigation, such as the enormous delay and widely prevalent bribery in getting electric connections. It took three years to get a transformer and one more year to obtain the first connection for the village. An ordinary ryot has to pay about Rs. 25 to 100 for private gratification to get a connection. Moreover, some ryots complained about the heavy burden of initial deposit for the connections and the higher rate per unit of electricity for agricultural consumption in relation to neighbouring States like Mysore. The legitimate grievances must be removed.

Another serious complaint made is that the water supply is decreasing in wells at Paidipalli, on account of heavy off-take of water from the upper reaches of Swarnamukhi river, in particular by the Tirupati Municipality on account of the opening of the Sri Venkateswara University, affecting the flow of subsoil water adversely. This matter needs scientific investigation.

The acreage irrigated by tanks and spring channels can be stabilised and expanded if proper steps are taken for renovation and removal of silt in tanks and the spring channels. But there is very little initiative and co-operation on account of personal and group factions in spite of the scope to get aid from the Block Development authorities. This situation is partly responsible for putting greater emphasis on wells on the part of individuals.

The greatest opportunity for increasing irrigation lies in utilising the water of Swarnamukhi river through an appropriate scheme. A "Lift Irrigation Co-operative Society" can be started to take necessary steps for construction of an irrigation project to establish electric pumpsets, which can easily supply water for 150 to 200 acres. This would open up a new era of prosperity by facilitating conversion of dry crops and dry cultivation into wet cultivation of paddy and sugarcane, which fetch greater income. Moreover, the expanded facilities for irrigation would further facilitate not only intensive application of organic and chemical fertilizers but also double cropping — all contributing to the increase of crop output. Thus irrigation plays a crucial role in opening up new possibilities of agricultural expansion for the village.

Unfortunately, the present conditions are not ripe for any such co-operative enterprise. The farmers have not been in a position to take steps even to raise an earthen bund of 200 yards for the last three years to avert floods from the river, which submerged and damaged 120 acres of cultivated area at the time of this survey. Thus the river is proving to be liability instead of a great asset. The irrigation scheme deserves to be taken up either by the *Zilla Parishad* or the Block *Samithi* incurring the necessary cost.

CROP PATTERN

Although wet cultivation is less than the area under dry cultivation, it is of greater significance from the income point of view of the village. Table II gives the pattern of leading crops during 1959-60.

TABLE II—CROP PATTERN: 1959-60

Crops	Acres and cents	Remarks
I. Wet Cultivation		
1. Paddy	117.60	Food crop
2. Sugarcane	15.86	Cash crop
3. Others	14.63	Food and cash crops
II. Dry Cultivation		
4. Groundnut	172.35	Cash crop
5. *Kambu*	47.31	Food crop
6. *Jingelly*	43.21	Cash crop — A small proportion of the land is partially irrigated.
7. *Ragi*	20.51	Food crop
8. Others	73.20	Food and cash crops
Total cropped area	504.67	Net area sown: 426.83 acres

Source: Block Development Office and Revenue Department, Chandragiri.

The leading crops in terms of acreage are groundnut, paddy, *kambu*, *jingelly*, *ragi* and sugarcane. But the area under the different dry crops shows substantial variation from year to year although groundnut retains its primary place in acreage. Area under paddy is the most stable one showing steady expansion. Sugarcane shows fluctuations depending on its price and the price-level of jaggery for which it is mostly used.

A reclassification of the above cropped area into food and non-food crops indicate that the total acreage under food crops is smaller than the commercial crops, as they are 190.42 and 314.25 acres respectively. The difference is great. Food crops account for only 38 per cent of the cropped area. If only the irrigation facilities were to be harnessed, 80 per cent of the net area sown could have been easily brought under food crops, in particular paddy cultivation under the present circumstances.

It is noteworthy that about 60 families belonging to lower castes in the village utilise groundnuts in one form or other as a substitute for one meal in a day for about 3 months in a year. Thus poverty has converted a commercial crop into a food crop to a considerable extent.

FARM PRODUCTIVITY

Farm productivity depends not a little on the managerial skill, conscious effort and appropriate resource use on the part of the cultivator, although a wide range of factors determine the actual level obtained. Personal knowledge of agriculture in the advanced villages of Krishna Delta area reveals that farm yields, other things being equal, show remarkable variations depending on the subjective factor, namely the personal care and ability of the farmer to manage lands on business principles. Where this business outlook is developed, the level of productivity is higher by a considerable extent. Farm yields are a matter of daily discussion and concern among the cultivators of those advanced villages. Where this consciousness about practical action is absent, or negligible, farm yields may tend to be lower and lag behind for want of proper agricultural environment to provoke necessary action on the part of every farmer. The role of demonstration effect in production practices must not be under-estimated. An attempt is made to assess the possibility of increasing farm yields of Paidipalli on the basis of existing conditions, felt-needs and reactions of peasant proprietors, who are in a way good judges of their own situation from an empirical point of view.

At the outset, it is to be noted that a good proportion of farmers are too ignorant and innocent to give a reply to the question dealing with the potentialities of increasing farm yields as Table III reveals.

TABLE III—OPINION RESPONSE TO THE QUESTION ON PRODUCTIVITY

Crop	Number of producers	Producers responding	Producers not responding	Percentage of non-response
Paddy	75	57	18	24
Sugarcane	16	13	3	19
Groundnut	67	37	30	45
Ragi	9	4	5	56
Other crops	32	14	18	56
Total	199	125	74	37

About one-third of the farm producers do not appear to have any conception of farm management for better yields. Among the rest, the response of the growers of valuable wet crops, paddy and sugarcane, is greater indicating better consciousness of the problem and probably better possibilities. The group

'other crops' represent jowar, bajra, *jingelly*, red-gram, horsegram, etc., which are mostly reaped as a second crop with lower yields in quantity. Table IV reveals the pattern of application of manures and the average acre yields obtained under different crops during 1959-60.

TABLE IV—FARM MANURES AND YIELDS

Crop	Cultivation	Manures used per acre				Average yield per acre in:		Remarks
		Natural (cart-loads)	Green (cart-loads)	Oilcake (bags)	Chemical (bags)	bags	lbs.	
Paddy ..	.. Wet	7	1.1	0.25	0.18	13.8	2,263	
Sugarcane	.. Wet	6	—	1.20	0.4	14.3	3,432	Jaggery. Cane yield is about 35 tons per acre.
Groundnut	.. Dry	6	—	—	0.01	8.4	1,344	Only two acres under wet cultivation.
Ragi ..	.. Wet	5.5	—	0.80	—	8.0	1,840	Dry crop irrigated.
Other crops	.. Wet and dry	2.5	—	—	—	3.1	682	About half of the acreage under wet cultivation.

Large application of fertilizers obtains in the case of paddy and sugarcane, which are usually the more profitable crops. The average rate of farmyard manure, which is the principal fertilizer, is about 6 cart-loads per acre and this is on a comparable level to the agricultural conditions in the Krishna Delta. But the cart-load is smaller and it constitutes one-half or at the most two-thirds the cart-load of the Delta area. Use of green leaf manure at the rate of about one cart-load per acre is a notable feature in the case of paddy cultivation. Oil cake is of some importance as a manure. But the utilisation of chemical fertilizers is very low, rather negligible by the Delta standards. This source of raising productivity is not exploited largely due to the lack of appreciation of its value and partly due to financial and administrative difficulties of obtaining supplies. It is interesting to note that while it takes three months to secure these fertilizers, sometimes the right type of manure may not be available. Normally the village needs urea, sulphur ammonium and sulphate nitrate ; the co-operative society at Tondavada last year supplied nitrate, super-phosphates and calcium ammonium. On the whole there is good scope to raise farm productivity through a better utilisation of fertilizers as against the present yields of the main crops, which are on a moderate level neither high nor low.

Table V presents the actual pattern of farm yields of the two leading crops, paddy and groundnut, realised by different cultivators during 1959-60 and also gives the analysis of replies of those farmers about expected yields on the basis of possible steps to improve productivity of the crops.

TABLE V—ANALYSIS OF FARM PRODUCERS BY ACTUAL AND POTENTIAL YIELDS PER ACRE

Yield per acre in bags	Paddy		Groundnut		Remarks
	No. of producers		No. of producers		
	Actual pattern	Potential pattern	Actual pattern	Potential pattern	
0—4	0	0	2	1	The higher levels of actual yield show the possible productivity in the village to be aspired by the other cultivators.
4—8	9	2	21	12	
8—12	33	10	35	27	
12—16	22	23	7	19	Bag=164 lbs. paddy and 160 lbs. groundnut.
16—20	9	11	0	1	
20—24	2	11	2	7	
24—28	0	7	0	0	
28—32	0	11	0	0	
Total	75	75	67	67	

Although the actual average yield of groundnut per acre is lower than that of paddy as Table IV shows, the modal yield is the same for the two crops, that is 10 bags. But there is a significant concentration of producers at the next lower level below the modal value in the case of groundnut and at the next upper level above the modal value in the case of paddy as the patterns of actual yield show. The patterns of potential productivity of the two crops do not appear to be utopian in relation to the actual level of yields prevailing. In the case of groundnut there is no change in modal value, but for a shift in the surrounding frequencies, while the potential pattern of paddy shows a greater degree of shift to higher levels. The significance of the potential pattern of yields for the two crops is specified in Table VI along with the other crops.

TABLE VI—PRODUCERS AND THEIR ACTUAL AND POTENTIAL PER ACRE YIELDS

Crop*	No. of producers	Actual yield per acre	Expected yield per acre	Percentage increase of expected yield	No. of producers on steps to increase yield			
					Chemical Fertilizers	Irrigation Fertilizers	Financial help	Others (oil-cake)
Paddy (bags)	75	13	17.6	35	30	27	19	8
Sugarcane† (bags)	16	13	15.0	15	6	5	2	1
Groundnut (bags)	67	9.1	11.3	24	25	16	1	4
Ragi (bags)	9	8	10	25	3	3	1	0
Other crops (bags)	32	3.6	4.6	28	9	9	0	1
Total	199	—	—	—	64	51	23	12

* Bag=164 lbs. paddy, 160 lbs. groundnut, 230 lbs. *ragi*, 220 lbs. other grains and 240 lbs. jaggery in the case of sugarcane.

† Yield of sugarcane is indicated in terms of jaggery realised.

First of all, the actual yield per acre in Table VI must not be misunderstood in relation to the average yield per acre in the previous table, which is calculated by dividing the aggregate output by its acreage. Here, on the basis of the yield obtained by individual farmer from his cultivated land, per acre yield is obtained and then an average of all the farmers cultivating the concerned crop is extracted. This procedure is followed to facilitate comparison of actual yield with the expected yield given by producers in schedules in terms of potential output per acre.

The expected increase in yields of the different crops varies from 15 per cent to 35 per cent, or approximately from one-seventh to one-third of the existing yields. The highest potentiality lies with paddy as compared to the lowest of sugarcane. The rest of the crops are on same level, more or less, about 25 per cent. In the case of the group represented by other crops, higher potentiality prevails with crops of first order, like Bajra.

The steps contemplated by about the two-thirds of the farmers to increase yields, appear to be realistic and practicable. As the present utilisation of chemical fertilizers is negligible, it received greatest emphasis in general, followed by irrigational facilities, which have good possibility for expansion as noted earlier. Financial help is no less an important requisite for the poor farmers of Paidipalli. If only productivity consciousness of small farmers were to be acute enough to spur them into immediate action, the need for monetary resources might have received greatest stress. In fine, a large proportion of producers appear to have a satisfactory conception of the problem of increasing productivity and it may be deemed to be largely the impact and educational influence of community development programme. But competitive spirit in action to increase yields is conspicuous by its absence. Hence, it may be a long way off to achieve the production potentialities. There is always a slip between the cup and the lip.

IMPROVED METHODS OF CULTIVATION

The prime problem of small cultivator is to raise exceedingly good crops in petty holdings. Unless larger crops are raised, any developing country cannot progress and the poverty of farmer cannot be checked. Adoption of various methods of improved cultivation such as selection of soil, cropping practices, preparation of land, use of good seeds, protection from pests, appropriate utilisation of manure, provision of irrigation and use of better implements are pre-requisites for efficient farming and higher productivity. The problem of manure and irrigation have been dealt with already.

The broad pattern of cropping is appropriate to the soil composition at Paidipalli. As groundnut thrives in loamy and sandy soils, rightly Paidipalli is having the largest percentage of its cultivated area under this crop with the 'spreading' as well as the 'erect' types. If only irrigation facilities are provided for the '*Rabi*' crop during dry months, yield can go up considerably. Similarly, the next important crop in acreage is paddy, which is also in need of better and secure water supply to raise yield further. The important strains of paddy cultivated are '*Ranisamba*,' '*Molakulukulu*' and G. B. 24. Green leaf collected is used as manure in paddy cultivation, but not the '*dhaincha*' type of green manure which can further supplement the resource. Japanese cultivation is not popular and its advantages

are doubted. Sugarcane is used for the manufacture of jaggery, the most important agro-industry that is now experiencing slump conditions. But the acreage under sugarcane may not be completely shifted to paddy as there is consumption demand in the neighbouring urban areas.

The pending civil dispute about the land tenure system, which constitutes an index of land hunger among farmers, is a source of great worry and stumbling block for taking a few steps of permanent and semi-permanent nature to improve cultivation on the part of a number of ryots. Probably this is one of the causes dampening enthusiasm for any co-operative action required to improve those lands. Hence, there is a pressing need for Government to apply the Abolition of *Inamdars* Act to the village and survey lands and settle titles of ownership giving ryotwari *pattas* at the earliest possible time.

It is also necessary for the Revenue Department for the proper administration of its duties. The total cropped area given by the Revenue officials appear to be a serious under-estimate as double cropping is usual in wet lands under paddy, while there is also some double cropping and mixed cropping in the case of dry land cultivation. Crop reporting does not seem to bear good relationship to the annual shifts of land under different crops, as the knowledge gained in the course of the present survey indicated. Moreover, a comprehensive survey record of agricultural lands is not yet available for the village.

The prospect of shifting land from non-food crops to food crops is not significant. Even on the assumption of increased prices for foodgrains, 90 farmers out of 110 replied in the negative to favour any such change. For, this shift is not possible of accomplishment on any large scale unless there are irrigation facilities to convert the dry lands under groundnut cultivation into wet cultivation of paddy, which only can give better returns from an economic point of view.

While there is acute land hunger, the desire for intensive effort and the outlook for the utilisation of improved practices are not at all conspicuous. The farmers have not yet realised the importance of treating paddy seed to facilitate vigorous growth of the crop or taking steps to destroy pests that infested the paddy seedlings. The same type of indifference prevails in the sphere of animal husbandry. It is not possible to list all the aspects of farming, where there is scope for the application of modern techniques. As agriculture is a science and an art of cultivation, it postulates business outlook to reap all the possibilities of its improvement. Unfortunately, the farmers in general are following traditional methods. They are too conservative in outlook and attitudes. Progressive outlook has not yet taken root except in the sphere of electrification for well-irrigation.

The administration of community development programme since April, 1956 could not succeed in breaking up the traditional type of approach of cultivator to the problem of his farming, excepting in the field of education to which attention has been drawn elsewhere. The farmer is not yet in a position to translate the little knowledge he has gained into practice by availing of the extension services. Hence, there is no wonder that competitive spirit to increase farm yields is conspicuous by its absence.

There is neither initiative nor co-operative spirit to look after pressing felt-needs. Even when the Block Developmental authorities offered 75 per cent of the cost of construction of a public well for drinking water in the village, there was no response or reply from the villagers. Consequently the scheme could not materialise. Similarly nothing is done to improve the dilapidated school building which does not give any protection against rains. The case of link road has been mentioned at the beginning itself. The village does not have even a credit co-operative society. About 40 villagers are members of the Tondavada co-operative society.

Thus, poverty coupled with ignorance combined with factions inhibit forces of progress and perpetuate stagnation. Community development as a technique of social progress has not only to educate people but also to inject practical business outlook among villagers. Farm productivity programming must be the pivot of administration of such community developmental effort.

CONCLUSION

Under the present circumstances, scope for the increase of food production either by extensive cultivation or by the shift of land from commercial crops to food crops is limited at Paidipalli.

But great potentialities of food production lie in the irrigation resources, better utilisation of manures, in particular chemical fertilizers, and the adoption of improved cultural practices. Expansion of irrigation facilities is of crucial importance not only to bring the dry lands under commercial crops into wet cultivation of paddy, but also to raise farm productivity. Irrigated land possesses better capacity to absorb fertilizers of different types to give higher yields per acre. Various methods of improved cultivation constitute pre-requisites for the development of efficient farming and the expansion of productivity of small farms.

Most of the farmers of Paidipalli seem to possess a satisfactory conception of the problem of increasing farm output by intensive cultivation. What is now required is the necessary business outlook to translate their ideas into practice to realise the fruits of better farming. Progressive outlook in action is obvious in the electrification of well irrigation. It must spread to all the other spheres and facets of agriculture. Inhibiting forces, such as the land tenure system, ignorance, illiteracy, factions and conservative outlook are to be tackled for the blossoming of the progressive and practical outlook required. Productivity consciousness among farmers must be developed by specific programming under the community development administration.