

Issues of Agricultural Development in Manipur

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Abstract

The present article seeks to examine the problems of agricultural development in Manipur by using selective parameters—distribution of workers, area under cultivation, production of crops, land utilisation, land holdings, etc. It also attempts to address the long-term issues associated with the agriculture in Manipur. Findings of the study reveal that some major problems being faced by paddy growers are lack of irrigation water, poor infrastructures, high cost of inputs, lack of processing facilities, lack of credit facilities, delay in supply of improved rice varieties, scarcity of labour during peak periods, diversion of farmers from rice cultivation, involvement of middlemen and distress sales. Apart from this, general Strike, blockade and public curfew are regular phenomena of the State and these are affecting the agricultural production in the State during Kharif season. The study suggested that the traditional based agriculture of Manipur can be transformed into a modern based agriculture by adopting science-based technology, making efficient pricing system within agriculture, providing economic incentives, prioritizing agriculture, reducing general strikes and bandhs, utilizing manpower optimally, making communication and disseminating knowledge among farmers, providing good infrastructural transport, making a congenial social institutions and financial inclusion. Modernisation of agriculture will accelerate the pace of economic development by enhancing economic growth and reduction of poverty.

Key Words: Development, Cultivation, Crops, Farmers, Pricing and Infrastructure

I Introduction

Various studies on agriculture indicate that underdeveloped economies are often characterized by substantially underutilized manpower, and dependence of a major proportion of the population on agriculture¹. Combined with the inhibiting socio-economic factors, problems of

¹P. N. Radhakrishnan (1969)

agricultural development in these countries is complex and formidable and agricultural development programmes are closely related to development in other sectors of the economy. W. Arthur Lewis (1954) showed how agricultural development ignites economic growth and poverty reduction at larger scales. Mellor (2017) argues that small commercial farmers are the key engines of economic growth and poverty reduction. Traditional agriculture could be transformed rapidly into a modern sector through the adoption of science-based technology, thereby making a large contribution to overall growth (Schultz, 1964) and (Hayami & Ruttan, 1971). Schultz believes that the lack of economic incentives, lack of competitive farm input prices, and priorities given to industrialization are the principal reasons for agricultural backwardness in the less developed countries (Ralph d'Arge, 1969). He suggested three remedies: (i) an efficient system of pricing within the agriculture sector, (ii) a need for supplies of "high payoff agricultural inputs," and (iii) the development of sources of supply for these inputs. Thus, agriculture plays an important role in accelerating the pace of economic development in which systematic agricultural marketing is vital in the development process.

II

Objectives and Methodology

The present article seeks to examine the problems of agricultural development in Manipur by using selective parameters –distribution of workers, area under cultivation, production of crops, land utilisation, land holdings, etc. It also attempts to address the long-term issues associated with agriculture in Manipur. The data for the present study have been generated mainly from secondary sources. Some primary data are also collected by interviewing members of farmers' associations, stakeholders and concerned government officials. This gives us qualitative information for the study. The study also uses data from different other sources like Economic Surveys, Directorate of Economics & Statistics, (Government of Manipur), Reports, Books, Articles, Journals, Seminar Papers, Conference Papers, Working Papers, PhD Thesis, Annual Reports of Agricultural Department, Newspapers etc. Further, a wide range of literature has been reviewed for the current study. The present study is organised into six sections. Section I presents introduction of the study. Section II provides objectives and methodology. Section III gives the profile of agriculture. Section IV presents problems of agriculture in development. Section V provides findings and conclusion of the study.

III

Profile of Agriculture

It is said that Manipur lives in villages. The rural population constitutes about 70.79 percent of the total population according to census data (2011). Agriculture plays a vital role in the economy of Manipur by contributing a major share to the State Domestic Product (SDP) and more than half of the total workers in Manipur are being engaged as cultivators and agricultural labourers. Performance of agriculture in Manipur mainly depends on the monsoon. Rice is the staple food of the people and it is widely grown in both hill and plain

areas of the State. Cultivation is generally practised in the valley districts while terrace cultivation is practised in some pockets of the hills (where jhuming or shifting cultivation is widely adopted in most of the hills). According to Economic Survey of Manipur (2020-21), Manipur is a suitable place for the development of horticulture and there is need to develop horticultural marketing for the promotion of healthy growth of horticulture in Manipur. There is great potential for bringing more land under fruit cultivation in the hill area and the soil conditions are conducive to production of citrus fruits, banana, guava, peaches, apricot, papaya etc in the valley. Moreover, there is sufficient scope for cultivation of pineapples in the hills of Manipur. The major fruits grown in the State are pineapple, orange, lemon, banana, guava, peaches etc., and very recently, apples are also grown in the hills of Manipur.

In Manipur, the workers are broadly classified in two categories viz. (1) Main Workers and (2) Marginal Workers. Main workers are those who worked for a major period of the year (183 days or more) and the marginal workers are those who worked for less than 183 days in a year.

Table 1 presents the workers and non-workers of Manipur during the census year 1991, 2001 and 2011. It may be observed from the table that the percentage of main workers to total population of Manipur decreased from 38.55 percent in 1991 to 30.43 in 2001 and then slightly increased to 34.11 percent in 2011. In terms of main female workers to total population, the percentage also dropped from 33 percent in 1991 to 21.39 percent in 2001 and then increased to 25 percent in 2011. It may particularly be noted here from the table that the number of female marginal workers increased sharply from 56,663 in 1991 to 1, 88,860 in 2001 and then to 2, 06,174 in 2011 respectively showing a percentage increase from 6.31 percent to 17.63 percent and thereafter it marginally dropped to 14.55 percent in the corresponding years. Thus, it may be observed from the table that as the number of population increases, the number of total workers also increase in the same direction accompanied by a sharp rise in the number of marginal workers. It is also evident that the proportion of marginal workers rose from 3.63 percent in 1991 to 13.19 in 2001 and then fell to 11.57 percent in 2011. The percentage of total workers increased from 42.8 percent in 1991 to 43.62 percent to 2001 and slightly rose to 45.68 percent in 2011 respectively. The percentage of non-workers to total workers in Manipur decreased from 58 percent in 1991 to 56.38 in 2001 and marginally fell to 54 percent during 2011 respectively.

Table 2 presents data on the distribution of workers in Manipur by category. It may be observed from the table that total workers recorded 13, 04,610 in 2011 in which cultivators and agricultural workers accounted for 5, 74,031 and 1, 14,918 respectively. Household industry and other workers recorded a figure of 91,356 and 5, 2, 4305 respectively. It may be mentioned here that the number of cultivators remain very high in the State. Table 3 presents information on the area under cultivation of crops in Manipur. It may be observed from the data that the areas brought under cultivation for paddy production is found to be high as compared to pulses and oilseeds. The areas brought under cultivation for the production of paddy increased from 2, 12, 400 ha in 2000-01 to 2, 36,710 in 2017-18 respectively. Mention may be made here that the production of rice had been fluctuated over a period of 18 years starting from 2000 to 2018.

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Table 1: Distribution of Workers and Non-Workers of Manipur

Category	1991	(% to Total)	2001	(% to Total)	2011	(% to total)
Main Workers:						
Male	4, 14,812	44.21	4, 30,227	39.27	6, 15,135	42.76
Female	2, 93,471	32.65	2, 29,137	21.39	3, 59,028	25.33
Person	7, 08,283	38.55	6, 59,364	30.43	9, 74, 163	34.11
Marginal Workers:						
Male	9,958	1.06	96,989	8.85	1, 24,273	8.64
Female	56,663	6.31	1, 88,860	17.63	2, 06,174	14.55
Person	66,621	3.63	2, 85,849	13.19	3, 30,447	11.57
Total Workers:						
Male	4, 24,770	45.27	5, 27,216	48.12	7, 39,408	51.40
Female	3, 50,134	38.96	4, 17,997	39.02	5, 65,202	39.88
Person	7, 74,904	42.18	9, 45,213	43.62	13, 04,610	45.68
Non-Workers:						
Male	5, 13,589	54.73	5, 68,418	51.88	6, 99,178	48.60
Female	5, 48,656	61.40	6, 53,157	60.98	8, 52,006	60.12
Person	10, 62,245	57.82	12, 21,575	56.38	15, 51,184	54.32
Total Population:						
Male	9, 38,359	100.00	10, 95,634	100.00	14, 38,586	100.00
Female	8, 98,790	100.00	10, 71,154	100.00	14, 17,208	100.00
Person	18, 37,149	100.00	21, 66,788	100.00	28, 55,794	100.00

Source: Economic Survey of Manipur, 2021

Table No 2: Distribution of Workers in Manipur by Category (2011)

Cultivators	5, 74,031
Agricultural Workers	1, 14,918
Household Industry	91,356
Other Workers	5, 2, 4305
Total Workers	13, 04,610

Source: Economic Survey of Manipur 2021

Table 3: Area under Cultivation of Crops in Manipur (Area in '000 ha)

Sl. No	Year	Paddy	Pulses	Oilseeds	Net Area
1	2000-01	212.40	22.18	22.75	221.60
2	2001-02	207.71	20.12	22.94	219.95
3	2002-03	169.99	22.32	23.55	188.14
4	2003-04	209.50	22.75	25.37	222.50
5	2004-05	209.50	23.00	27.60	224.26
6	2005-06	198.19	26.04	27.91	221.86
7	2006-07	209.85	24.54	33.06	229.22
8	2007-08	210.66	25.00	33.60	230.03
9	2008-09	210.99	26.00	34.20	231.03
10	2009-10	113.89	50.19	57.04	131.40
11	2010-11	212.68	26.97	34.50	231.19
12	2011-12	223.67	28.50	35.90	234.00
13	2012-13	122.69	30.30	44.10	136.28
14	2013-14	222.80	30.22	36.69	233.74
15	2014-15	224.38	30.22	36.69	233.62
16	2015-16	237.00	30.92	37.48	234.12
17	2016-17	244.00	31.05	37.61	234.14
18	2017-18	236.71	31.12	37.67	226.18

Source: Compiled from Department of Agriculture, State Government of Manipur for various years

Table 4 presents data on the production of paddy, oilseeds and pulses in Manipur. The production of paddy had risen in most of the years except dropping in 2002-03, 2005-06, 2009-10 and 2012-13. It may be observed that the increase in the areas brought under cultivation for pulses and oilseed in 2009-10 is associated with rise in the production for both the crops during the corresponding period. However, the production of both the crops had remained stagnant at 24000 MT to 27000 MT on average in most of the years (during 18 years). Distribution of operational holdings or agricultural is generally classified into marginal, small, small and medium, medium and large.

Table 5 above presents data on the distribution of operational holdings in respect of Manipur State. It may be observed from the table that the average size of operationalised holding for small farmers cultivating (1-2) hectare which was 1.29 ha in 2010-11 marginally dropped to 0.52 ha in 2015-16. This tells us that small farmers possess negligible amount of land in Manipur. The average sizes of operationalised holdings for small and medium farmers cultivating (2-4) ha were found at 2.48 ha in 2010-11 and 2015-16 respectively (See Table 5). While the average size of holding for medium farmers was 4.89 ha in 2010-11, the average size for large farmers was found at 11.00 ha in the corresponding period.

Table 4: Data on Production ('000 Mt) for Paddy, Oilseeds & Pulses in Manipur

Sl. No	Year	Paddy	Oilseeds	Pulses
1	2000-01	477.20	15.20	16.45
2	2001-02	439.00	14.92	15.19
3	2002-03	355.86	18.65	15.95
4	2003-04	474.21	20.95	18.32
5	2004-05	456.95	22.47	17.60
6	2005-06	393.35	22.43	20.63
7	2006-07	418.36	29.12	19.86
8	2007-08	515.96	25.08	21.35
9	2008-09	518.25	26.15	22.75
10	2009-10	265.09	44.26	43.21
11	2010-11	480.24	26.69	24.20
12	2011-12	591.00	28.40	26.85
13	2012-13	257.58	36.71	28.35
14	2013-14	597.67	30.83	28.44
15	2014-15	501.98	31.68	28.75
16	2015-16	508.14	31.78	29.44
17	2016-17	645.60	32.21	29.88
18	2017-18	607.82	32.78	30.02

Source: Compiled from Department of Agriculture, State Government of Manipur for various years

Table 5: Distribution of Operational Holdings in respect of Manipur State

Size of Holding	Category of Farmer	No. of Operational Operational holding ('000)		Area Operated ('000)		Average Size of Operationalised Holding (ha)	
		2010-11	2015-16	2010-11	2015-16	2010-11	2015-16
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)
Below 1	Marginal	77.00	77.00	40.00	40.00	0.53	0.52
1-2	Small	49.00	49.00	63.00	63.00	1.29	1.28
2-4	Small & Medium	22.00	22.00	15.00	15.00	2.48	2.48
4-10	Medium	3.00	3.00	13.00	13.00	4.89	
10 & above	Large	Negligible	Negligible	Negligible	Negligible	11.09	11.00
All holdings		151.00	151.00	172.00	172.00	1.14	1.14

Source: Economic Survey Manipur 2020-21

Table 6: Land Utilisation Statistics in Manipur (Area in '000)

Sl. No	Particulars	2012-13		2013-14		2014-15	
		Manipur	All India	Manipur	All India	Manipur	All India
	Reporting Area for Land Utilisation Statistics (Item 1-2)	2,086	305.94	2111	307796	2111	307818
1	Forests	1742	70.01	1699	71828	1699	71794
2	Not available for cultivation	27	43.74	27	43860	27	43880
3	Permanent pastures and other grazing land	1	10.24	1	10258	1	10258
4	Land under misc. tree crops & groves	6	3.16	6	3187	6	3104
	(not included in net area sown)						
5	Culturable waste land	1	12.56	5	12388	1	12469
6	Fallow lands	(-)	24.28	0	24848	0	26182
6.1	Fallow land other than current fallows	(a)	11.00	0	10694	0	11092
6.2	Current fallows	(a)	15.82	0	14154	0	15091
	Net Area sown	309	139.93	377	141428	383	140130
7							
8	Area sown more than once	0	54.47	0	59431	0	58230
9	Total cropped area (7+8)	309	194.4	377	200859	383	198360

Source: Department of Agriculture and Co-operation, Ministry of Agriculture and Farmers Welfare, Govt. of India, p.242, Note: - (a) Below 500 hectares; (Cited in Economic Survey Manipur 2020-211)

Thus, the average size of agricultural holdings is very small and it has become smaller in the following years. Almost all the legally settled agricultural holdings in Manipur are located in Manipur valley². There are practically no such holdings in the hill areas of Manipur except in few small valley pockets in the hill districts. Agricultural census covers only such settled holdings. The basic components of the strategy for agricultural self-sufficiency are (i) Extension of the area under cultivation by reclaiming new land; (ii) Increasing the productive capacity of the existing areas by application of modern inputs; (iii) Changing the cropping pattern by substituting the existing low value crops by high value crops and by inter-cropping i.e. by growing more than one crop simultaneously on the same land, and (iv) Extending farming activities to emerging areas such as poultry, piggery, diary, fishery etc³.

Table 6 above provides information on the land utilisation statistics of Manipur. It may be observed from the table that as per Reporting Area for Land Utilisation Statistics, out of the total areas of 21, 11, 000 ha in Manipur, forest constituted 16, 99, 000 ha in 2014-16.. The net sown shown accounted for 3, 83,000 ha in Manipur in 2014-05. There is great potential for extension of the area under cultivation by reclaiming new land in Manipur.

IV

Problems of Agriculture in Development

Major problems faced by most of the paddy growers include lack of irrigation water, diseases and pest, poor infrastructures, high cost of inputs and availability of credits (Thanh and Singh, 2006)¹. Lack of processing facilities, poor extension contact, lack of credit facilities, high cost of agro-inputs, delay in supply of improved rice varieties and lack of inorganic fertilizer are great problems being faced by farmers (Emodi, 2012). High temperature during crop production, scarcity of labour during peak periods, diversion of farmers from rice cultivation, involvement of middlemen and distress sale were also found important production constraints faced by rice cultivation farmers (Affia Phenica et al., 2018). Lakshmichand (2017) studied terraced rice field in Ukhrul district of Manipur. According to his findings, agriculture is the mainstay of nearly 72 percent of the entire population of 1, 83,998 people of Ukhrul district. An area of 22,000 hectare of the district has been brought under cultivation and agriculture is basically (upland and rain-fed) carried out under both permanent (settled) and shifting cultivation. Rice is the principal and staple crop of the district and it occupies the major average share of 16,490 hectare producing 38,590 tonnes with an average yield of 2,340 Kg/ha during the Kharif season (2011-2012) (Statistical Yearbook Ukhrul District 2014)². The average yield of rice in Ukhrul is comparatively low as compare to that of valley districts. Manipur has been one of the most predominantly agricultural States in India (Singh, M. Iboton (2014). Even after six decades of planned development which brought about a lot of structural changes in Indian economy, Manipur still remains agriculture-dominated. According to findings of this study, nearly one half of the total workers earning their livelihoods from agricultural activities received only a little above one-fifth of the income earned by all the workers in the State. A study by Khaidem, M.S (2008) pointed out that inherent weaknesses such as lack of logistic support coupled with technology, lack of awareness and poor marketing linkages and credit support are the key problems of agricultural development in Manipur. The study highlighted the urgent need for creation of market yards, collection centres, and storages/warehouses at a centralised place. There is not yet any organised Agricultural Produces Market Committee (APMC) in Manipur. Therefore, there is a felt need for the enactment of Agriculture Market Act. Ram (2012) who studied on the agricultural policy in Manipur identified some of the main problems of agricultural development in Manipur. The main problems are (i) General Strike, blockade, public curfew etc., are regular phenomenon during Kharif season., (ii) Negligence of the people about the time and value of cultivable land, (iii) Slow action of the government, (iv) Changing livelihood system of the farmers' family, (v) Failure of market competition, (vi) Decreasing farmers' income, (vii) Scarcity of input water for rice crop, (viii) All farms are without any crop for about 7 months (from January to July), (ix) Shortage of agricultural labour during peak seasons and (x) No marketing channel of the marketable surplus of rice, potato, ginger, tomato, cabbage, pineapple, orange and cauliflower during harvesting season. A study in

¹ Cited in Thangjam Bidyapati and KK Jha (2020)

² Cited in Lakshmichand (2017)

Imphal East district of Manipur by N. Sarat (2017) found that agriculture is the main occupation of the district and crop production is important activity, which provides livelihood-cum employment opportunities to more than 80 percent of the rural population. The most important predominant crop of the district is paddy. Every rural household grows paddy crop as main source of income³. However, erratic rainfall, absence of irrigation, lack of infrastructure/asset, lack of farm mechanisation, lack of arrangement for procurement, lack of stocking and distribution of HYV Seeds, Fertilizers, Pesticides, coupled with lack of awareness on modern technologies of crop production have hampered the production and productivity. Further, lack of transport and no arrangement for redressal in the post-harvest anxiety and insufficient extension service are also responsible for inadequate production of food grains. Findings also show that insufficient credit flow/support from the financial institutions to the needed farmers is also a major contributing factor for low performance in agriculture. Agricultural production is highly sensitive to climate change and weather variability. Extreme weather events such as droughts, floods, tropical cyclones, heavy precipitation events, heat and cold waves give significant negative impacts on agricultural production and livelihood of the farmers as agriculture forms the backbone of State economy. The main source of water for agriculture is rain water. The productivity of agriculture is largely dependent in the rainfall because the irrigation system in Manipur is not fully developed. There is a yawning gap between requirements and production in 2004-05 and the shortage varied between 8.33 percent of the production in the 2004-05 (which had bumper harvest both in cereals and pulses) and 34.66 percent of the production in 2002-03 (Singh, M. Iboton, 2014). The two years were the best and worst years respectively during the period nine years under study. On average production of food grains in Manipur fell short of the requirement by 25 percent. The growth of agricultural production must be faster than the growth of demand for food. According to a study by the MSFAP (2011), it is found that marketing of agricultural commodities in Manipur has not been systematically organized till date and innumerable farm produces have not even crossed the State's boundary due to its strategic geographical location. Maximum benefits of the farmers and entrepreneurs have been deprived off by the middleman/brokers etc. This is mainly because of non-existence of Regulated Market. The study pointed out that till now Agricultural Produce Market Committees have not been established in the State and the middlemen enjoy the cream at the cost of ignorant, illiteracy etc., of the poor farmers. A small part of the price paid by buyers reach the farmers while the middlemen enjoy the maximum benefits. Radhacharan (2017) studied agriculture in Churachandpur district of Manipur. According to his findings, nearly 70 percent of the total populations inhabiting Churachandpur district are farmers and majority of which are engaged in upland farming including jhum cultivation, while a few 10 percent in low land agriculture and other allied activities. Wide range of cultivated cereals, pulses, oilseed and vegetables and a number of bush and forest meat and plant produces have been the thriving source of food and economy of the predominantly Chin Mizo-group of ethnic population. His study shows that scope of agriculture and its allied activities have been recently focused and collectively bridging the wide chasm between scientists and farmers. Most of the Rabi field crops are cultivated under rain-fed condition in Manipur due to lack of irrigation facility and hence crops are totally dependent on the residual/conserved moisture in the soil (Tomba, 2017). Rapeseed and Mustard is usually cultivated by farmers of Manipur under zero tillage condition using farm saved seed of local mustard after the harvest of rice crop when there is sufficient soil moisture. Farmers are handicapped mainly in securing a fair and reasonable price for their produces communication (MSFAP, 2011). The reasons are many i.e. lack of market news and information coupled with inadequate credit support

³ The other important Agricultural crops are Maize, Beans, Pulses, Potatoes, Mustard and Chilly etc. Farmers started growing of Wheat crop in recent years.

ungraded produce, no AGMARK Laboratory, inadequate storage and warehousing facility etc. consequently the farmer may dispose of his surplus produces by many ways. The first and the most common method is to sell away his surplus produce to the village money-lender-cum-trader, who may buy it either on his own or as an agent of a bigger merchant of the neighbouring *Mandi* town. With the enactment of Agricultural Produce Markets Regulation (APMR) Act in 1960s the regulation of agricultural marketing practices commenced and it acted as a conduit since then for a gradual transformation from a monopoly (executed by local traders) to Oligopolies (farmer-traders built in relationship)⁴. Policy of food production and policy of marketing infrastructure should always go together⁵. Manipur is most underdeveloped in terms of marketing infrastructure. The absence of collection centres, wholesale market, cold storage, warehouses and testing lab remains is hurdle to agricultural marketing. Thangjam Bidyapati and KK Jha (2020) studied on sustainable rice production and constraints faced by farmers in two districts of Manipur by selecting 160 respondents. Findings of the study identified major constraints faced by the farmers. The constraints are (i) high cost of inputs, (ii) lack of agricultural credit facility, (iii) lack of knowledge about input management, (iv) unavailability of required inputs in time, (v) lack of information about government schemes, (vi) lack of irrigation facilities, (vii) non-availability of water storage tank, (viii) lack of awareness about rainwater harvesting techniques, (ix) perceived increase in temperature, (x) increased risk of diseases and pests due to climate change, (xi) irregular rainfall and rising temperature reducing crop yield, (xii) sale of agricultural product through middleman and (xiii) non-availability of direct market facilities. Another study by in Tamenglong district Rajen Meetei (2017) found that paddy is the main crop of the district and nearly 71 percent of the net area sown is covered. Most of the land of this district is hilly except a few pockets of flat lands in the river valleys⁶. Hence, Jhum method is the main method of cultivation on the hill slopes. Other principal crops are maize, black gram, soybean, bean, pea, mustard, cabbage, cauliflower, potato etc. The commercial crops like chilli, king chilli, turmeric, ginger, tomato are grown mostly under rain-fed and very small area of pea, cabbage, cauliflower and tomato are grown under irrigation at the river valley areas. Major horticultural crops of district are orange, banana, lemon, passion fruit, pineapple and sugarcane. The total area under food grains accounted for 35740.4 ha out of which 33190 ha and 2550.4 ha have been recorded under Kharif crop under Rabi Crops respectively. Mixed cropping is a well-established practice in Jhum cultivation and mono-cropping on terrace cultivation in the district. Singha K and Mishra S (2015) studied on the sustainability of rice cultivation to measure overall sustainability of rice farmer by interviewing 152 rice farmers in two districts of Manipur, The study finds that the level of crop's yield is found to be much higher than that of the national level but its demand in the State is much higher than the supply. Rice cultivation in Manipur has not been very impressive despite its favourable agro-climatic condition. Of the different dimensions/institutions that influenced rice farming sustainability the most has been the social institution, followed by the economic institution. The institution of technology has been very negligible role on rice farming sustainability in Manipur. It has been rightly pointed out in the study by Ram (2012) that the strategy regarding agricultural development in Manipur will basically involve stabilization of production performance, soil and water conservation, efficient water management, integrated development of crops, and livestock, efficient management of credit and input supply, and above all are the basic components of new strategy relating to agribusiness activities

⁴ Singh, P. Naveen (2021), "Farm Acts Need of the Hour". The Sangai Express, Imphal, January 2021.

⁵ Singh, N. Mohendro (2021).

⁶ There are three cropping seasons in Tamenglong district namely, summer (March to May), Kharif (June to September) and Rabi (October to March) with a little variation in these periods.

development. It will require sustained efforts on the part of planners and farmers. To bring about increase in agricultural production and productivity, specific attention will have to be given to the following programmes: (i) soil and water conservation, (ii) water management, (iii) cropping pattern, (iv) input supply system, (v) institutional support, (vi) incentive price and (vii) agro-industries. A report by Yadav and Shalendra (2018) which was based on the study in Imphal East of Manipur found that despite the sizable area and share in overall farmer income, the average farm productivity and returns to pineapple growers has remained low. This is due to six factors. They are: (i) Small and marginal landholdings. (ii) Difficulty in evacuating produce from the hilly slopes due to lack of appropriate infrastructure leading to loss of the produce at the field itself, (iii) Lack of farm proximate post-harvest infrastructure leading to no primary processing in the form of sorting, grading or even appropriate packing, (iv) Poor road infrastructure (especially in the production areas) and lack of adequate transport vehicle to transport the produce to markets, (v) Lack of appropriate marketing infrastructure (in terms of display, storage of surplus produce, ripening) to sell the produce and, (vi) Absence of farmer producer groups/companies/cooperative structures.

V

Findings and Conclusion

Agriculture plays an important role in accelerating the pace of economic development in which a systematic agricultural marketing is an important dimension of development process. It plays a vital dynamic role in the economy of Manipur by contributing a major share to the State Domestic Product (SDP) with major chunk of the total workers in the State being engaged as cultivators and agricultural labourers. As the number of population increases, the number of total workers also increases in the same direction accompanied by a sharp rise in the number of marginal worker. Findings of the show that areas brought under cultivation for paddy production have been significantly expanded and it is accompanied by a rise in the production (with the exception of some fluctuations) as compared to pulses and oilseed. Agricultural holding is generally classified into four groups; (i) marginal, (ii) small, (iii) small and medium and (iv) medium and large. The study finds that a large area of cultivable areas in Manipur is concentrated to a category of big farmers. This indicates that there is great potential for extension of the area under cultivation by reclaiming new land in Manipur and redistribution of agricultural land. Major problems being faced by most of the paddy growers are lack of irrigation water, poor infrastructures, high cost of inputs, lack of processing facilities, lack of credit facilities, delay in supply of improved rice varieties, scarcity of labour during peak periods, diversion of farmers from rice cultivation, involvement of middlemen and distress sales. General strike, blockade and public curfew are regular phenomena of Manipur State and these are affecting the agricultural production in the State during Kharif season. Time and value needs to be considered in agricultural production. Negligence of the people about the time and value of cultivable land, changes of livelihood (system among the family of farmers), failure of market competition, decrease farmers' income, lack of agricultural labour (during peak seasons) and lack of marketing channel for the marketable surplus are great problems of agriculture development in Manipur. There is an urgent need for creation of market yards, collection centres, and storages/warehouses at a centralised place. The study also finds that lack of transport and no arrangement for redressal in the post-harvest anxiety are two important factors being faced by farmers. There is a yawning gap between the requirements and agricultural production in the State. It has been estimated that

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Manipur has fallen short of production with the requirements of food grains by about 25 percent on the average. Therefore, in order to fill this gap, the growth of agricultural production must be made faster than the growth of demand for food in Manipur. This will be possible only by redistribution of agricultural holdings or (land reforms), provision of credit facility, efficient marketing system, faster dissemination of information, creation of adequate transportation infrastructure, grievance redressal mechanism, minimising general strike and blockade, low cost of inputs, provision of processing facilities, creation of warehouses and storages, quick supply of improved rice varieties, available of labours during peak periods and removal of middlemen and distress sales. The problems of agricultural production arise in any place when we cannot produce surplus. For example, a State is said to be self-sufficient in food if it produces sufficient food grains to feed its population¹⁰. However, with the growth of economy and improvement in the life style, the composition of food has undergone significant changes. For instance, the standard food items in a modern society may consist of cereal, fruits, vegetable, meat, fish and other items. Along this line, a State may have surplus production in food grains, but it may lack fruits and vegetables. Another State may suffer from shortages of fruits and vegetables. Another State may get surplus production of meat, fish, milk but it may suffer from the shortage of cereals. So, we can think about a comparative advantage in the production of one good. This means that if we want to achieve self-sufficiency in food, we should be able to produce more and import deficit items by selling away the surplus produce it can produce. This will be the part of a solution in modern agriculture system.

Table 7: Revenue Expenditure of State Government of Manipur (Rs. in lakhs)

Developmental Expenditure	2017-18	2018-19	2019-20 (RE)	2020-21 (BE)
A. Economic Services	(i)	(ii)	(iii)	(iv)
(i). Agriculture & Allied Activities	47128.17	54900.44	87511.68	111266.45
(ii). Rural Development & Special Area Programme	105481.27	103128.05	209864.62	298498.2
(iii). Irrigation & flood control	8975.42	6626.18	9258.69	10921.54
(iv). Energy	56563.64	54338.94	42622.1	35757.17
(v). Industry & Minerals	8030.81	8273.94	19803.43	21730.93
(vi). Transport	9879.18	11256.56	10875.7	12177.83
(vii). Science, Technology & Environment	4400.85	4371.83	5671.1	5818.71
(viii). General Economic Services (including Compensation assignment to Local Bodies & PRIs)	63311.22	67754.5	66825.85	70134.82
Sub-Total (A)	303770.56	310650.44	452433.17	566305.65

Source: Economic Survey Manipur 2020-21, (RE=Revised Estimate; BE=Budget Estimate)

Table 7 above shows that agriculture and allied activities increased from Rs. 47,128.17 lakhs in 2017-18 to 1, 11,266.45 lakhs in 2020-21. The proportion of expenditure on agriculture and allied activities to total development expenditure has been calculated at 20 percent in 2020-21. Revenue expenditure on rural development and special area programmes which was Rs. 1, 05, 481.27 lakhs in 2018-18 increased to Rs. 2, 98, 498.2 lakhs in 2020-21 with a percentage change of 183 percent. The proportion of expenditure on rural development and special area programmes to total development expenditure has been calculated at 52.7 percent in 2020-21. This indicates that there is great potential to increase the revenue expenditure on agriculture and allied activities in Manipur.

It may be concluded here that the traditional based agriculture of Manipur can be transformed into a modern based agriculture by adopting science-based technology, making efficient pricing system within agriculture, increasing areas under cultivation, providing economic incentives, prioritising agriculture, reducing general strikes and bandhs, utilising manpower optimally, making communication and disseminating knowledge among farmers, increasing the expenditure on agriculture and allied activities, providing good infrastructural transport, making a congenial social institutions and financial inclusion. Modernisation of agriculture will accelerate the pace of economic development by enhancing economic growth and reduction of poverty

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