

WOMEN OF MANIPUR WITH REFERENCE TO THE RURAL AGRICULTURAL SYSTEM

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ABSTRACT

The principal aim of this paper is to present the descriptive metaphors of women in agricultural development in Manipur graphically using some selected parameters viz., per cent of areas under cultivation and production of crops, districts wise distribution of population of female, distribution of female worker, land utilization for Thoubal and Imphal East districts, job profile wise women work share in rural, educational level wise proportion of women engaged in workforce in rural based on the Economic Survey of Manipur (2020-21) and other secondary data sources. We also measured the Work Participant Rate (WPR) equivalent to Women Labour Force Participation Rate (LFPR) from the databases of women as per the methodology applied by Biswas and Banu (2020). The authors suggested for modifying the prevailing agricultural system, cultural norms and views against the rural women, and new policies for women based on active participation in cooperative organizations, important decision-making, make accessible to modern digital technology, data based on their needs of assessment, effective extension services, capacity building of small-scale farmers rather than large-scale farmers, effective study on the exact content, structure, future scopes, market feasibility, and context of training for economic growth and development of Manipur.

(Keywords: Agriculture development women, generation gaps, work participant rate (WPR), women in technology, economic growth and development)

INTRODUCTION

The index of economic growth of the nation, which is closely related to empowerment of women (Sraboni *et al.*, 2014), is often referred as a process and eventually resulted in a sustained increased in capita⁻¹ income (Gherghina *et al.*, 2020). Such transformation can only be achieved if we utilized the human resources regionally in an equilibrium state through an open innovative dynamics intervention (Saleh *et al.*, 2020) to its optimum level indicating the need for equal participation of both men and women in the economic activities of the society (Ashagidigbi *et al.*, 2022). In many country, woman in agriculture sector undergoes many facets of litmus tests say; traditional ethos, social bonding, and monetary income gaps and biases in workforces in view of wages and gender perspectives (Paula *et al.*, 2020, De Pablo *et al.*, 2022, and Clark *et al.*, 2023). When it comes to Manipur State, our rural women play a gigantic role be it inherited traditional domestic role to hardship farming sectors (Goli *et al.*, 2022, Kamei, 2022). Without them, driving force for the elevation of economy in our state will be collapsed drastically (Biswas and Banu, 2023). So, this

majestic role of rural women in the development of agricultural and allied sectors must be recognised by prioritizing them in distributing the schemes and any policies (Ashagidigbi *et al.*, 2022) as majority of agricultural workforce are being forerunner by the female worker thereby resulting in overall improvement of farming quality and efficiency of the works (Rasheed *et al.*, 2020).

In country like India, women living in rural life can be considered absolutely as “farmer” (Sims *et al.*, 2021) and despite their immense contribution and productive role in all agricultural, horticultural (Mehta *et al.*, 2022, Moromi *et al.*, 2022), fisheries, animal husbandry and dairy farming operations (Tangjang *et al.*, 2009, Sahoo and Rocky, 2015, Agarkar *et al.*, 2023, Rasheed *et al.*, 2022), our society often being paid less attention to the recognition of rural female worker in their work ecosystem (Basu *et al.*, 2021, Reddy *et al.*, 2021, Rasheed *et al.*, 2020) which are not only due to traditional social discipline but also respond to various factors which are illustrated briefly here in the last part of our study (figure 11), and therefore, this study leads us to pay attention not just to the inherited organisation of our society but also to address the present contextual conditions

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in agricultural systems and its constructive measures of these rural female workers in our state for their empowerment.

MATERIALS AND METHODS

In this study, findings were presented quantitative databases in relevant plain statistically figures being collected from the secondary sources. Based on the collected database of Economic Survey of Manipur (2021) and other secondary data sources, relevant statistical plain analysis have been measured for the empirical results in the form of graphical illustration for the production of crops during 2002 to 2020 were presented in per cent, quantitative data on the district-wise male-female population (recalculated in per cent from the data obtained), percentage of women's literacy rate in comparison with men's literacy rate, operational holdings for small and medium farmers, job profile wise women work share in rural, educational level wise proportion of women engaged in workforce in rural were illustrated based on economic survey of 2021 reports. We also measured the Work Participant Rate (WPR) which is equivalent to Women Labour Force Participation Rate (LFPR) for the women as per the methodology applied by Biswas and Banu (2023) as below:

Work Participation Rate (WPR) = $\frac{\text{Total working women}}{\text{Total women}} \times 100$

RESULTS AND DISCUSSION

Reports from the 2011 census said that the rural population constitutes about 70.79 per cent of the total population in Manipur. Agriculture being the main steering engine, the state's economy is contributing by this sector as giant share to the State Domestic product (SDP) by the grace of more than half of the total workers comprising in this regions (about 22% of the population) are engaged as cultivators and agricultural labourers (Thingbaijam *et al.*, 2019). To date, performance of agriculture in Manipur mainly depends on the blessing of seasonal monsoon (Laitonjam *et al.*, 2018). In this, rice is our staple food and which is widely cultivated in both hill and plain areas of the state (Pinky and Sit, 2023). Cultivation is generally practiced in the main district while terrace cultivation is natural in semi-high-altitudes in the hill zones (Ninan, 1992). Only 7.24 % of the total geographical area of the state is the size of cultivated area, and of this total cultivated area, 56.88% is restricted to the valley regions (Singh and Devi, 2016). From the commencing of seed sowing and till harvesting, our women folks took part a major role in this agricultural venture (Biswas and Banu, 2023).

In our present study, data extraction and interaction with the female farmers were being done to study their issues since the last year 2022 and also from the some selected department and according to recent database of economic survey 2021, we observed that rice production in our state

was 3.85 lakhs tonnes. In case of average annual fruit and vegetable production for the base year 2020 were reported to be about 4.56 lakh MT and 3.56 lakhs MT respectively for our state Manipur. For the other cereal crops like maize, we obtained that for the year 2020 was 4.94 thousand tonnes for our state. From the census data of 2019, we obtained from their data that our state's livestock production were 7.72 lakhs in our region. For the production of milk during the year 2020, we obtained 90.93 thousand tonnes for our state. The data obtained for the eggs production in the year recent 2020 was about 1081.84 lakhs in our state. In the meat production of state, we obtained from the finding that it was around 20.54 thousand tonnes for the year 2020. The main food item fishes of our state was found to be 32.52 thousand tonnes in our state during the study of ours for the year 2020. Others, allied agriculture say mulberry production obtained to be 1226.37 MT production during the year 2020 in our finding study. We also obtained the data finding that Eri, Tasar and Muga production for the year 2020 were 434.32 MT, 156.20 lakhs number and 8644 lakh number respectively during the study. And, in context of our study, quantitative data on the district-wise absolute growth of female population based on the latest data finding of 2021 (Figure 1) were highest in Imphal West having 50.77% and lowest was observed in Tamenglong having 48.55%. Sex ratio based on the recent data report of 2021, we observed that highest sex ratio (figure 2) was found to be in Imphal west (101.3%) and lowest in Chandel district (93.3%). In our finding, female literacy rate (figure 3) was observed highest in Imphal West (80.17%) and lowest rate was found in Senapati (57.67%). However, contrary to this finding, we observed differences in literate population rate (Figure 12a and b) distributed in rural was obtained highest in Senapati (20%) and lowest rate 6% each for Tamenglong and Chandel, so this is a quite differences in our finding for the rural status for literacy. We also obtained from the finding that rural population share (figure 12 a and b) was highest in Senapati (23.33%) and lowest share was observed in Tamenglong (6.00%). In one interesting finding of our study was that education level wise proportion of our rural women engaged in work force (figure 5) based on 2020 base year were observed 30.3% for those female who were literate but below matric and secondary level, 51.57% for those female who were having technical diploma or certificate but not equal to degree level, 47.46% for those female having matric and secondary but below graduate level, 58.11% for those female having graduate and below other than technical degree level, 55.25% for those female having technical degree or diploma equal to degree or PG degree. These descriptive findings gave an important data on concise educational status of the rural female in our state which is very useful for the further analysis on intervention programme on agriculture for them in future from the founding data obtained in our study. In another graphical figure 6 depicted that, job profile wise women work share in rural Manipur for the year 2020 was observed in our study a categorical analysis as 37.57%, 45.65 and 33.37% for high job profile,

mid job profile and low job profile respectively. We also observed that from the calculation of WPR adapted from the data base year of economic survey 2021 based on the methodology applied by Biswas and Banu (2023) were found to be 25.33% and 14.55% for main women worker and female marginal worker respectively. In the economic survey of 2021, we observed that distribution of total female worker were 39.88%, and for female non worker were 60.12% and eventually measured from the total female population of 14,17,208 from the base year 2021. Contrary to this, and in correlation to women in workforce in work participation, Heikkilä *et al.* (2021), suggested that women spend fewer years in paid work across the life course than men, highlighting the need for continued efforts to close the gender gap in work participation. In relevant to this data, Elouardighi *et al.* (2023) suggested that our policymakers should increase women's financial inclusion through digital channels and their education system through intervention programme to literate them and to improve their participation in the agricultural business. In context of gender based workforce, Theeuwens *et al.* (2021), suggested that grouping in small-scale cooperatives will offer female farmers an opportunity to overcome gender inequality and to become economically emancipated.

In another finding which is a different story in this study, figure 7 illustrated the data on the production of paddy, oilseeds, and pulses in Manipur as production of paddy had risen in most of the years except during 2002-03, 2005-06, 2009-10, 2012-13, 2018-19, and 2019-20. From this findings, the declined in the production of paddy in 2018-19 and 2019-20 were mostly associated with the outbreak of recent pandemic. Coming to the finding of area of such crops, it may be observed that the increase in the areas brought under cultivation for pulses and oilseed in 2009-10 were associated with the rise of the production for both crops during the corresponding period. However, during the year of 20 years, on an average, the production of pulses and oilseed had remained inert at 24000 MT to 27000 MT (Figure 8). In another finding for land holding, here in the Table 1, the data on the distribution of operational holdings in respect of Manipur state were presented. For the average size of operationalised holding for small farmers as based on the Economic Survey Manipur 2021, we observed 1.29 ha in 2010-11 which was marginally dropped to 0.52 ha in 2015-16. For the average sizes of operational holdings for small and medium farmers, we observed from the secondary data of Economic Survey Manipur 2020-21, were found to be at 2.48 ha in 2010-11 and 2015-16 respectively. 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. Ramilan *et al.* (2022), suggested that household resilience was strengthened by

the possession of livestock, crop diversification and access to irrigation. Low resilience is predominantly caused by low household assets. Again in the Table 2, the information on the land utilisation statistics of Manipur were presented. It may observed from the Table 2 that as per reporting area of Land Utilisation Statistics, out of the total areas of 21,11,000 ha in Manipur, forest constituted 16,99,000 ha in 2014-16. Land and forest area survey and utilization data are one of the riskiest jobs in Manipur, as due to the prevailing crisis, and also leads to the restriction in land and forest data extraction in hills area may be due to the traditional customary restriction and thus land record and utilization data obtaining from hill area will be a trickiest jobs being to be happened in this region because land ownership in hills are under the jurisdiction of customary law, many of them are landless as in hills there is a system of one land ownership under the direction of village chief and thus most of the farmer's land record could be a difficulty to obtained and even the state official are restricted to obtain the data from such jurisdiction without the permission of hill chief as within these hill jurisdiction, and therefore, due to prevailing immigrants issue and narco-terrorism crisis occurring in the hill areas, the present official of our state has in the position to put a hold for the land survey and trespassing in the hill zones for the time being. In this conflict situation, our finding on this area is weaken to provide the latest data. However, land is an unchangeable for long period, 6-7 years back record on this area stood and remained as same before, so, and we could possibly justify to process the baseline data on the recent publication of 2020-2021 of our state's economic survey report and other finding from 2019 here. Having justification on this, for the female worker engaged in farming based on the data finding which was published in the year 2019, we observed that land and land utilization for Thoubal district was found for Net cropped area as 0.66 and for intensity of cropping was 156.07%; and for the Imphal East district, Net cropped area and cropping intensity were 0.70 and 149.29% respectively (Figure 4 and 9). According to Mishra *et al.* (2020), land use change could be another solution to mitigate climate change by converting the forest to plantations with profitable cash crops such as horticultural-silvi-cultural (Anonymous, 2023, Mehta *et al.*, 2022) thus rural forest women dwellers can be useful from the forest in sustainable way without impacting the natural ecosystem. Land is perhaps the most important economic asset (Fanelli, 2022), so every rural women should encourage to get involved in the modern agri-business market, and should have the coextensive share of farming right and cultivation liberty by their own land and to sustain their own livelihood with the help of cooperate governance, cooperative, extension worker, and above all modification of prevailing culture, policies and law.

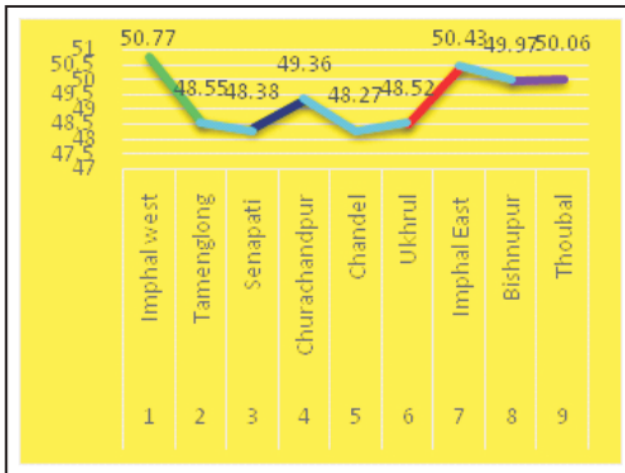


Figure 1

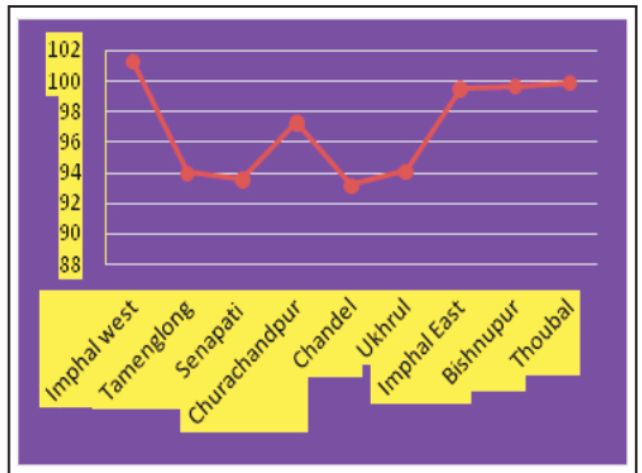


Figure 2

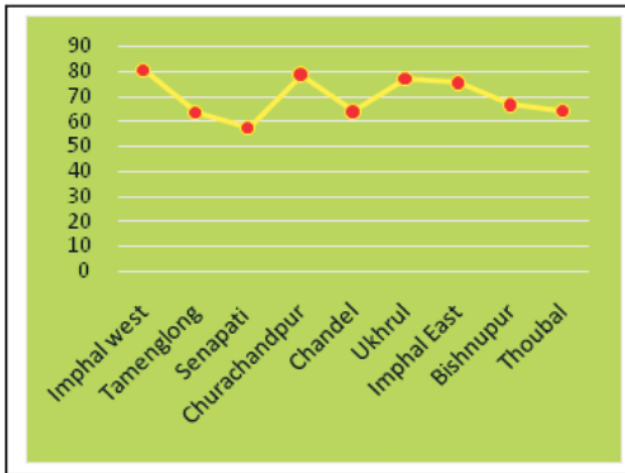


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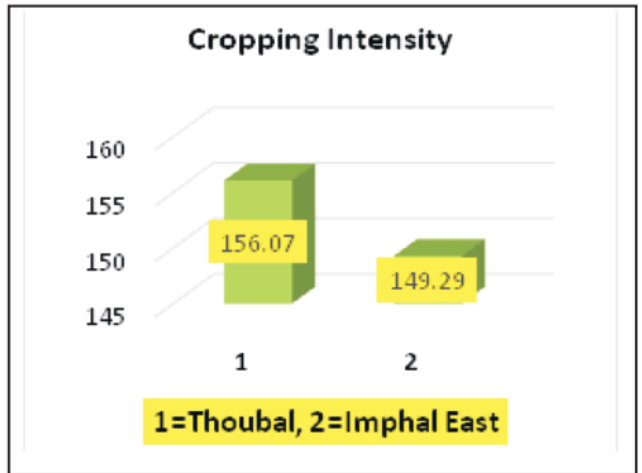


Figure 4

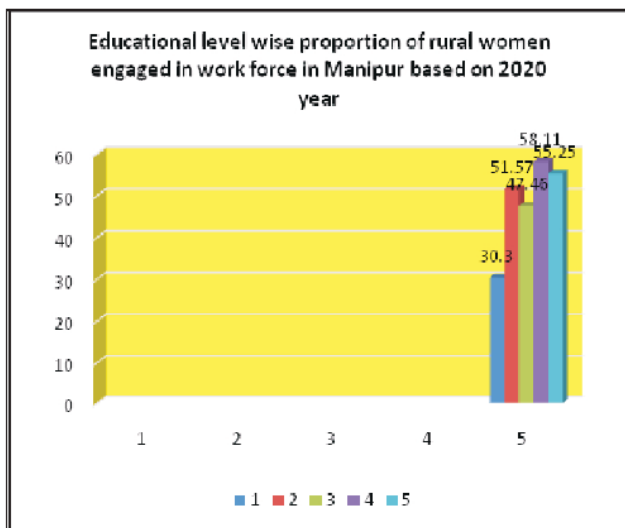


Figure 5

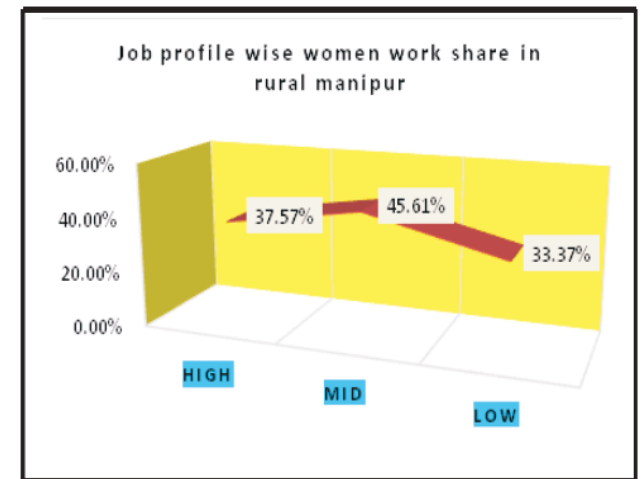


Figure 6

Figure 1 Processed graphically from the district wise absolute growth of total female population of Manipur based on latest report of economic survey 2021 and recalculated the female population in percent from the data source. Figure 2: Sex ratio (female 1000⁻¹ male). Figure 3: District wise female literate population of Manipur. Figure 4: Processed data on Land and Land Utilization based on data finding published in 2019 for Thoubal and Imphal East district (Female managed farming and Cropping Intensity)

Figure 5: Processed data on educational level wise proportion of rural women engaged in work force in Manipur based on the finding report published in 2023 year. Figure 6: Adapted data on Job profile wise women work share in rural Manipur based on based on the finding report published in 2023 year

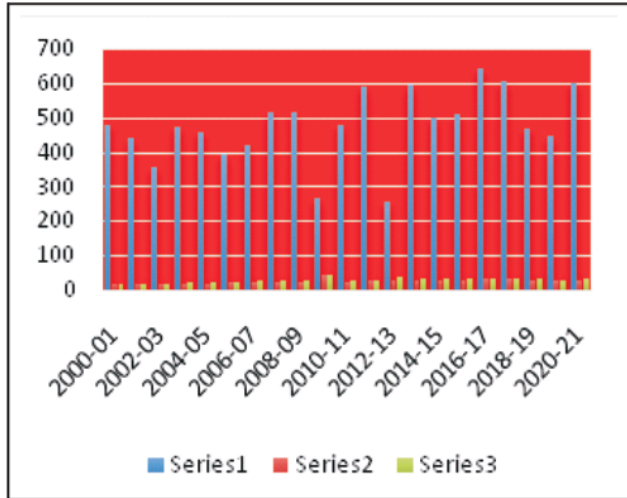


Figure 7

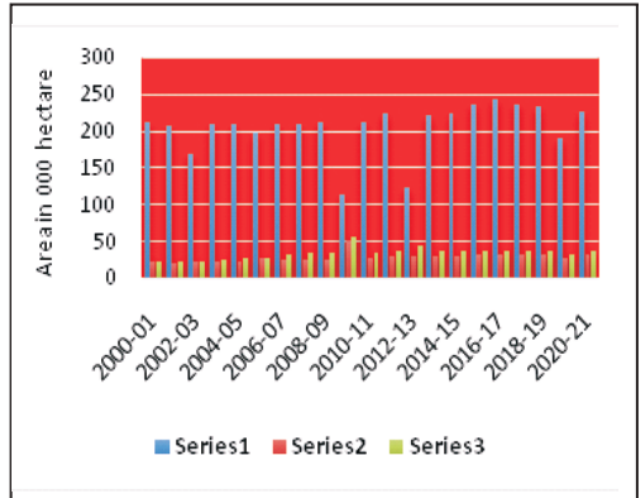


Figure 8

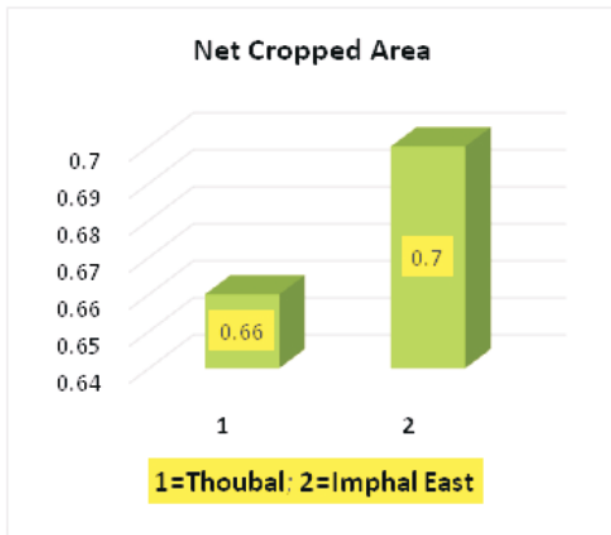


Figure 9

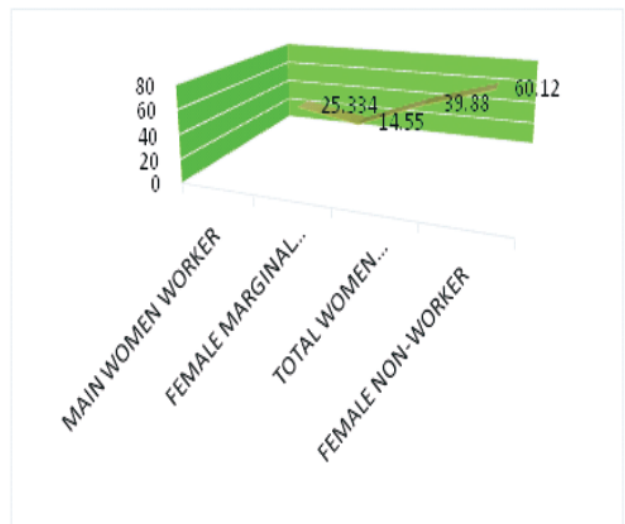


Figure 10

Figure 7: Data on production ('000 Mt) for Paddy (series1), Oilseeds (series2) and Pulses (series3) in Manipur. Figure 8: Area under cultivation of crops (series1= Paddy, series2= Oilseeds and series3= Pulses) in Manipur (Area in '000 ha). Figure 9: Processed data on Land and Land Utilization based on data finding published in 2019 for Thoubal and Imphal East district (Female managed farming and Net Cropped Area). Figure 10: Work Participant Rate (WPR) for main women worker and female marginal worker calculated from the data of total women employed and female non-worker adapted from the data base of economic survey Manipur 2021

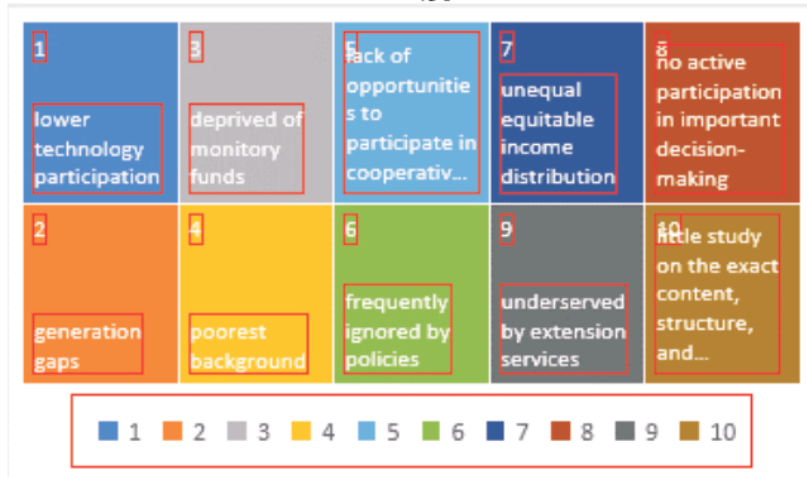


Figure 11: Some problems of rural Women in Manipur: 1) lower technology participation, (2) generation gaps, (3) deprived of monitory funds, (4) poorest background, (5) lack of opportunities to participate in cooperative organization, (6) frequently ignored by policies, (7) unequal equitable income distribution, (8) no active participation in important decision making, (9) underserved by extension services, and (10) little study on the exact content, context of training and extension work.

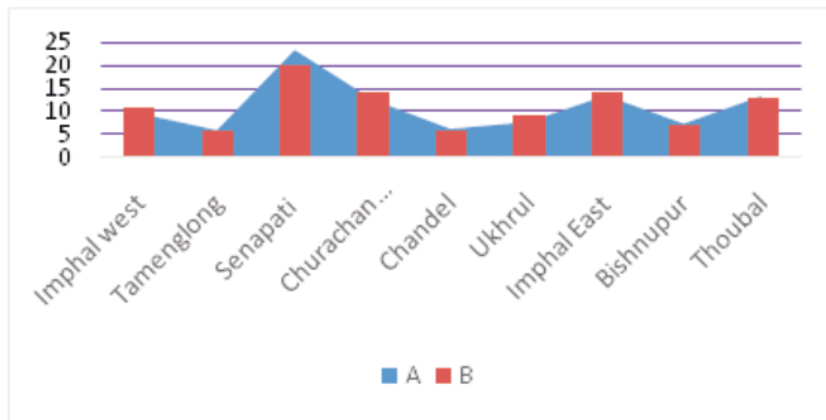


Figure 12 a and b: Distribution of literate population (b) in rural and rural population (a) in Manipur

Conclusion and way forwards

In agricultural sectors, female farmers are currently less aware of their economic rights in rural India than male farmers, and improper women’s education system in rural corners, policy propaganda, domestic burden and child nursing and economic and social underdevelopment hinder their awareness of women’s rights. In this context, the status of women in agriculture was analysed here in a quantitative way, highlighting the growing relative workforce presence of women in the agricultural sector, and from a different perspective, which examines the opportunities that the new agri-sectors scenarios offer the female workforce to enhance quality progress in economy. In our study, due to the meagre permissible latest data to be reproduced on areas under cultivation and production of crops, districts wise distribution of population between male and female, distribution of workers between male and female, land utilization (Table 1), distribution of land holdings (Table 2), land under irrigation from the government department and other secondary sources we were not able to reproduce all those here. Meanwhile, women’s activities involved from multi-facets role in all aspects of life from domestic work to

from the various respondents we encountered during the investigation as empirical data clearly showed that rural women in our state have significantly lower technology participation rates due to generation gaps; deprived of monitory funds due to poorest background and also entrenched of socio-cultural attitudes about the role of rural women in modern agricultural market sectors. However, despite their noted role in economic growth by our women, women still lack opportunities to participate in concern sector related cooperative organizations, and they are also frequently ignored by policies in agricultural farming, modern technology, extension services etc. According to Antonio (2014), if our women are engaged more with digital technology and cooperative organization, and the better they get involved in education, better more they would become likely to get engaged in activities that benefit themselves, their families, and their farming communities. However, in reality, rural women are deprived of modern education, inaccessible to digital technology, equitable income distribution, and active participation in important decision-making as a results women farmers also lack access to have scientific training and are frequently underserved by extension services.

agricultural labourers. Taking a similar vein, Yan *et al.* (2022), proposed that policy suggestions should be ensured for women's educational rights, promote the adjustment of the industrial structure and of policy propaganda, and balance regional economic and social development. Fanelli (2022), also suggested that every women, the same as men, can be considered "productive resources" and play an important role in the agriculture sector in areas such as crop and livestock production, and same can be applied in our state Manipur too.

However, we were able to put some light on foundation by taking the baseline years secondary data for future reference, so our co-workers suggested to do on further research on this area from the founding baseline data illustrated so that future scholar, private stakeholders, researcher and policies maker could able to do a better jobs than these for a reference purposes with reference to women and agricultural systems. Taking aside all these quantitative finding illustrated here for a while, we summarized the some few issues of women in agricultural sectors also (figure 11)

According to Goli *et al.* (2022), special measures are needed to provide extension training for women farmers by developing a training programs based on the data obtained from the needs assessment. In this regard, it is necessary also to pay attention to gender justice and the participation of women farmers in the development and planning of extension programs. However, there has been little study on the exact content, structure, and context of training and extension programming for women farmers that could successfully address their requirements. Experts in extension services according to Goliet *al.* (2022), Heikkila *et al.* (2021) suggested that to make public extension services more effective, public extension agents should particularly focus on the capacity building of small-scale farmers rather than large-scale farmers. Moreover, there is a need to broaden the scope of public extension services from simple crop protection measures to a set of comprehensive sustainable agricultural practices for increasing agricultural productivity, resource-use efficiency, as well as resilience toward adverse impacts of prevailing challenges.

Table 1. Distribution of operational holdings in respect of Manipur state

Size of of Holding	Category Farmer	No. of Holding (*000) 2010-11	Operational		Area Operated (*000)		Average size of Operationalised Holding (ha)	
			2015-16	2010-11	2015-16	2010-11	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	

Data reports extracted from the Department of Agriculture and Co-operation, Ministry of Agriculture and farmers welfare, Govt. of India. Note: - (a) Below 500 hectares as adapted from Economic Survey of Manipur 2021

Table 2. Land Utilisation Statistics in Manipur

Sl. No	Particulars	2012-13	2013-14	2014-15
	Reporting Area for Land Utilisation Statistics (Item 1-2)	2,086	2111	2111
1	Forests	1742	1699	1699
2	Not available for cultivation	27	27	27
3	Permanent pastures and other grazing lands	1	1	1
4	Land under misc. tree crops and groves.	6	6	6
5	Culturable Wasteland	1	5	1
6	Fallow Lands	(-)	0	0
6.1	Fallow lands other than current fallows	(a)	0	0
6.2	Current Fallows	(a)	0	0
7	Net Sown Area	309	377	383
8	Area sown more than once	0	0	0
9	Total Cropped area (7+8)	309	377	383

Data source extracted from the Department of Agriculture and Co-operation, Ministry of Agriculture and farmers welfare, Govt. of India. Note: - (a) Below 500 hectares; adapted from Economic Survey of Manipur 2021

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