

Impact of Agricultural Credit on Socio-Economic Condition of Small and Marginal Farmer in Uttar Pradesh

Summary of Thesis

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Agriculture is the backbone of state economy. It provides employment of two-third of the population and contributes major share in the national income. It also plays a significant role to reduce poverty, increasing income, generating employment, government revenue, and to improve food security in the economy. However, agriculture sector is facing several problems such as small size of land holdings, low productivity, and lack of irrigation facility, lack of agricultural inputs, lack of credit facility, indebtedness, floods, drought, and poor technology. The state has launched several programs and policies to improve the conditions of small and marginal farmers as well as agriculture sector. Therefore, this effort made a lot of progress in agriculture sector since independence in terms of growth of production, productivity, area under crops, and improves the socio-economic conditions of small and marginal farmers. But still, it is facing regional disparities in production, productivity and flow of agricultural credit at state level. Agricultural credit is one of the very important remedies to remove the several problems of agriculture sector. It is found that the facility of the agricultural credit is not sufficient to increase the growth of the agriculture sector and improve the conditions of small and marginal farmers at state level.

The performance of agriculture sector depends on credit and capital formation. Credit plays very important role to improve the socio-economic conditions of farmers and purchase inputs like fertilizers, high yielding varieties seeds, pesticides, land improvement, raising productivity, income, employment, to build farm structures, soil fertility, decrease the regional disparities, solve the problem of the food security, development of the irrigation facilities, water management, land development, saving and improve the standard of the living of the small and marginal farmers in the state. It also useful to drive day to day consumption, paying for medical, educational, social and religious purposes, for enhancing economic activities, support to farmers for better protection as well as making balance in the economy. Hence, an attempt is made here to study the 'the impact of agricultural credit on socio-economic conditions of small and marginal farmers in Uttar Pradesh with the following objectives

- To study the impact of agriculture credit on socio-economic conditions of small and marginal farmers in terms of production, employment, income, consumption, education, poverty and equality in U.P.

- To study the performance of agriculture credit market and suggest to effective delivery mechanism of agriculture credit for the development of agriculture in U.P.

The following hypotheses are tested with the primary data in two regions of Uttar Pradesh.

- The positive impact of agricultural credit on socio-economic conditions of small and marginal farmers is negligible.
- Agricultural credit is responsible for structural changes in rural economy in form of losing their assets and occupational changes and migration of small and marginal farmers in U.P.

The study is based on primary survey. The survey has been conducted in two districts namely Jhansi and Bulandshahr in Uttar Pradesh. To analyse the impact of the agriculture credit, we have taken 300 samples of small and marginal farmers in which 50 (General), 100 (OBC), and 150 (SC) category farmers from two regions of Uttar Pradesh. We have taken 25 (General), 50 (OBC) and 75 (SC) small and marginal household farmers from Garhmanu village of Jhansi district of Bundelkhand region. Similarly, we have taken 25 (General), 50 (OBC) and 75 (SC) small and marginal farmers from Pipala village of Bulandshahr district of western region. We have taken only small and marginal households who have taken agricultural credit from formal and informal sources in both the regions. A purposive sampling method is used to select data of small and marginal farmers of agricultural beneficiaries.

Several developmental theories have highlighted the significance of credit/capital for agricultural development. The interlinkage of theoretical approaches are very crucial to improve the growth of agriculture and raise socio-economic conditions of the farmers. Institutional or formal sources consist of cooperatives, commercial banks, and regional rural banks. Non-institutional or informal sources include moneylenders, landlords, traders, friends, and relatives. These two sources have been providing agricultural credit for increasing productivity of agriculture and improve the standard of living of the farmers. But still our agriculture is backward, faces several institutional and non-institutional problems. It is clear in various approaches of agricultural credit. It is found that tenancy contracts are interlocked with

transactions in other market like credit, labour and marketing of crop produce. In the agriculture sector, the mode of production is feudalistic and capitalistic. In the feudalistic mode of production, there is social relationship between lenders and tenants but in capitalistic mode of the production there is bondage between lenders and tenants. The implication of interlinking of factor markets and its impacts on farm economy are viewed differently by neoclassical and the Marxist. Neoclassical said that interlinking factors increase the efficiency in the economy but Marxists has noted that such interlinking of markets increases the exploitative power. On the other hand, tenancy play an important role in a credit system of the landlord providing production loans to the resources poor tenants to undertake cultivation has been emphasized by many starting from classical writers like smith and neoclassical writers Marshal, Braverman and Stiglitz (1982) and Marx (1974). A tenants receiving consumption loan from the landowner at times of need thus tenancy acting as an insurance against hunger has been depicted by Scott (1976). There are several other theories such as Interlinking between labour and Credit, Interlinkage between Credit and Produce, Risk and Uncertainty Theory of Agriculture Credit, Business vs. Social and Moral Theory of Agricultural Finance. Theories of agricultural credit and linked with agriculture development is very important. The implications of credit on agricultural development need to be strengthening in the state. The Government of India made several committees, commissions, Acts, programmes and policies to increase the flow of credit and reduce the exploitative nature of the moneylenders. But, these efforts are not sufficient to prevent exploitative nature of the moneylenders. On the other hand, the recommendations of the committees, government policy and programmes are modelled such a way which can provide maximum social justice, equality and benefits among small and marginal framers.

Agriculture sector is one of the major GDP contributors in the state economy. However, agriculture sector is facing drastic changes like cropping pattern, farming system, commercialization of crops, and size of the land, technology utilization and labour relations in rural areas. Agriculture sector has been facing several constraints such as decreasing holding size, increasing fragmented land, increasing number of small and marginal farmers, lack of improved quality seeds, low seed replacement rate and non-availability of seeds and lack of finance. It is clear that 69 per cent of the available land in Uttar Pradesh has been allocated to the agriculture. There is huge

possibility of agricultural development through increase in net area sown and intensity. There is also huge scope of multiple cropping to increase agricultural productivity at state level. It is clear that majority of farmers in Uttar Pradesh are small and marginal farmers. The number of marginal holdings was 66.83 per cent in 1970-71 controlling 21.08 per cent of area and further the number of marginal holdings increased to 79.23 per cent in 2010-11 controlling 39.27 per cent of area at state level. With regards to small holdings, the number was at 17.19 per cent in 1970-71 controlling 20.39 per cent of area and become 13.14 per cent in 2010-11 controlling 24.57 per cent of area in the state. On the other hand, the average size of land holdings was 1.16 in 1970-71 and decreased to 0.75 per cent in 2010-11. It is found that the average size of the land holdings has been continuously decreasing during the study period at state level.

Diversification of crops from food grains to non-food grains are increasing in Uttar Pradesh. As results, contract and corporate farming are emerging due to the higher profitability of non- food grains at state level. It is found that the average productivity (yield) of the commercial crops is sharply increasing while average productivity of sugarcane and potatos are also increasing during 1950-51 to 2010-11. On the other hand, use of nitrogenous and potasic fertilisers has gone down while phosphatic fertilizers has increased respectively during the period same period at state level.

The regression result shows that the impact of productivity of food grain was positive and significant impact on net state domestic while the impact of food grains productivity was positive and significant impact on food grains production during the study period at national level. On the other hand, it is also found that net area irrigated and cropping intensity had positive and significant impact on NSDP whereas agricultural expenditure had very negligible positive impact on NSDP. Similarly, net area irrigated and cropping intensity had positive and significant impact on production of food grains whereas agricultural expenditure had negative and insignificant impact on production of food grains during the study period at state level. Overall from the regression results, it is observed that agricultural expenditure at the farmer's level and government level are very low which would affect the growth of food grain production and productivity at state level. There is need to increase agricultural

expenditure, intensification of land use, improved irrigation facilities and availability of financial services at state level.

Uttar Pradesh is most populous state of India. Majority of the people are dependent on agriculture sector for their livelihood. It is found that the growth of agriculture sector was not impressive during independence at state level. Green revolution brought a new direction in agriculture sector at state level. The cultivation of high yielding varieties of seeds at recommended dosages of fertilizers increased the productivity of agricultural crops in the state. However, the number and area of small and marginal farmers are increasing. They are suffering from small size of land holdings, low productivity, low value of output, low income, low consumption pattern, lack of inputs, inadequate credit, lack of irrigation facility, and indebtedness. The small and marginal holding has become very complex for agriculture at state level.

Agriculture credit plays an important role in improving agriculture production, productivity and mitigating the distress conditions of small and marginal farmers. The total agriculture credit disbursement by the institutional agencies was Rs. 6,442 crores in 2002-03 and increased to Rs. 56,219 crores in 2013-14. The short term and long term credit was Rs. 3,636 crores, and Rs.2,806 crores and increased to Rs. 41,375 crores, and Rs.14,844 crores in 2013-14. The share of short term and long term credit was 56.4 per cent, 43.6 per cent in 2002-03 and become 73.6 per cent, 26.4 per cent in 2013-14 in the state. On the other hand, compound annual growth rate (CAGR) for short term and long term credit was 22 per cent and 15 per cent during last 12 years. The share of agriculture credit to agriculture GDP was 15.62 per cent and increased to 60 per cent in 2013-14 per cent in Uttar Pradesh. It is found that out of 27 public sector banks, ten public sector banks had more than 93 per cent share of direct and 91 per cent share of indirect agricultural credit in 2015 in Uttar Pradesh. On the other hand, out of 27 public sector banks, three public sector banks had more than 53 per cent share of direct agricultural credit in the state. It is clear that very few public sector banks are dominant to provide agriculture credit in rural areas of the state. It is also found that out of 11 private sector banks only 5 banks had more than 94 per cent share of total agricultural credit in Uttar Pradesh. The regression result shows that the effect of agricultural credit is positive and significant impact on net state domestic

product and the effect of agricultural credit on yield of food grains is positive and significant during the study period.

The performance of public and private banks was not significant during the study period at state level. It is found that out of 27 public sector banks, three public sector banks had more than 51 per cent share of agricultural credit. The share of others public sector banks to flow the direct and indirect credit was not impressive during the year at state level. On the other hand, it is noticed that out of 11 private sector banks only 5 banks had more than 94 per cent share of total agricultural credit. Private sector banks opened the bank branches to provide agriculture credit and agriculture development. But the performance of the private sectors banks to provide agricultural credit is not satisfactory at state level.

It is found that the share of direct agricultural credit flow by cooperatives banks was 7.52 per cent while indirect credit was negligible in 2015 at state level. With regards to public sector banks, the share of direct and indirect agricultural credit was 65.20 per cent and 92.5 per cent in 2015. On the other hand, the share private sector bank in term of direct and indirect was 2.95 per cent and 3.3 per cent in 2015 at state level. The share of direct agricultural credit by regional rural banks was 24.2 per cent, followed by 4.2 per cent for indirect in 2015. Regarding the share of total agricultural credit by cooperatives banks, public sector banks, private sector banks and regional rural banks was 6.65 per cent, 68.30 per cent, 3.0 per cent, and 22.04 per cent during 2015 at state level.

The average amount of outstanding loan per agricultural household was Rs.47,000 in 2013. It is found that Andhra Pradesh had the highest share of indebted agricultural households in the country i.e. 92.9 per cent, followed by 89.1 per cent in Telangana, 82.5 per cent in Tamil Nadu in the year 2013. On the other hand, the percentage of indebted households was 37.2 per cent in Chhattisgarh, followed by 28.9 per cent in Jharkhand, 17.5 per cent in Assam during the same year. The average amount of outstanding loan was highest i.e. Rs. 2, 13,600 in Kerala, followed by Rs. 1, 23,400 in Andhra Pradesh, Rs. 1, 19,500 in Punjab, Rs. 10, 200 in Chhattisgarh, around Rs. 5, 700 in Jharkhand, and Rs. 3, 400 in Assam in the year 2013. With regards to Uttar Pradesh, the share of indebted agricultural households was 43.8 per

cent and the average amount of outstanding loan among all classes was Rs.27, 300 in 2013.

The regression results show that net irrigated area had positive and significant impact on NSDP whereas agricultural credit had negative but significant impact on NSDP during the study period at state level. On the other hand, consumption of fertilisers had negative and insignificant impact on NSDP during same period in the state. On the other hand, NIA had positive and significant impact whereas agricultural credit had negative but significant impact on production of foodgrain during the study period. Consumption of fertilisers had positive and insignificant impact on production of food grain during the study period. Regarding productivity of foodgrain, NIA had positive and significant impact while FERC had positive but insignificant impact during the study period. Agricultural credit had negative but significant impact on productivity of food grain during the study period at state level.

The impact of agricultural credit on socio-economic conditions of small and marginal farmers in Uttar Pradesh are analysed with the help of primary data. It is found that around 3 (12 per cent), 8(32 per cent) and 14(56 per cent) General farmers are living in Kuchha house, semi-pucca house and pucca house whereas 5(10 per cent), 17(34 per cent) and 28(56 per cent) OBC farmers are living kuccha house, semi-pucca house and pucca house respectively. Similarly, 43(57.33 per cent), 23(30.67 per cent) and 9(12 per cent) SC farmers are living in kuccha house, semi-pucca house and pucca house in the village of Bundelkhand region. On the other hand, 3(12per cent), 4(16 per cent) and 18(72per cent) General farmers are living in kuccha house, semi-pucca house and pucca house whereas 8(16 per cent), 11(22 per cent) and 31(62per cent) OBC farmers are living kuccha house, semi-pucca house and pucca house respectively. In the same way, 15(20per cent), 23(30.67 per cent) and 37(49.33per cent) SC farmers are living in kuccha house, semi-pucca house and pucca house in the village of western region. It is noticed that there is widespread variations in term of accessing house facility among social groups in Uttar Pradesh.

It is found that most of the farmers are used hand pump facility for drinking water during the study period in both the regions at state level. In case of General category farmers, almost 22(88 per cent) used hand pump and 3(12 per cent) used others source for drinking water whereas the used Well for drinking water was

negligible during the study period in Bundelkhand region. Similarly, 2(4 per cent), 40(80 per cent) and 8(16 per cent) OBC farmers have been used Well, Hand pump, and others sources of drinking water whereas 20(26.67 per cent), 40(53.33 per cent) and 15(20 per cent) SC farmers have been used well, Hand pump and others sources of drinking water in Bundelkhand region. On the other hand, the percentage of General farmers used hand pump was 23(92 per cent) whereas 2(8 per cent) used 'others' sources for drinking water. Similarly, 45(90 per cent) and 5(10 per cent) OBC farmers have been used hand pump and 'others' sources for drinking water whereas 72(96 per cent), 3(4 per cent) SC farmers used hand pump and 'others' sources for drinking water in western region.

Sanitation facility is very vital among social groups in both the regions. However, it found that majority of farmers are using open field for sanitation. The condition of the SC farmers is not satisfactory in term of having good toilet facility. Western region is highly developed in term of having good sanitations facility compared to Bundelkhand region. In case of consumption of electricity, schedule cast farmers are the most vulnerable for accessing the facility of electricity in both regions. Majority of SC farmers are living without power connection. Considering the source of cooking food, it is observed that majority of the farmers are using wood for cooking food items and the use of LPG for cooking food items is negligible among all categories of farmers in both villages. With regards to the level of education, it is found that General and OBC farmers are more literate compared to schedule cast farmers in both regions. Western region has good academic infrastructure compared to the Bundelkhand region. On the other hand, there is extensive variations in occupational distribution among small and marginal farmers. Majority of the farmers are unemployed due to lack of job opportunities in Bundelkhand region. Small and marginal farmers are losing their assets and migrating to urban areas for better job opportunities in both the regions.

There is unequal distribution of land among the social groups at state level. Schedule caste (SC) is most vulnerable groups having land compared to General and OBC farmers. Obviously, land is basic economic asset but most of the SC farmers are suffering from unavailability of land in both regions. The incidence of land leasing is found very high in SC category farmers compared to General and OBC in both regions. With regards to livestock, majority of the farmers having cow and Buffalo,

but Goat/Sheep, Pigs and Hen/Duck is kept by a few farmers in both the regions. Western region have highest number of all types of livestock compared to Bundelkhand region.

Irrigation development is not significant in both regions of Uttar Pradesh. However, western region is more prosperous in term of having irrigation facility. The farmers of Bundelkhand region are suffering from lack of electricity, lack of irrigation inputs, lack of modern technology, insignificant research and development, and lack developmental irrigation policies. It is found that majority farmers of Bundelkhand region are using diesel motor while farmers of western region are using electric motor for irrigation purpose. As results, farmers of Bundelkhand region are expending more on irrigation compared to western region farmers.

Credit plays very important role in the development of state economy. The growth of agriculture sector depends on the accessibility and availability of agricultural credit. It is found that the flow of agricultural credit in General farmers was 80.94 per cent from commercial banks, followed by 17.32 per cent from money lenders and 1.73 per cent from relative while the share of co-operative banks and friends was stagnant during the study period in Bundelkhand region. With regards to OBC farmers, the share of agricultural credit was 4.50 per cent from co-operative banks, followed by 84 per cent from commercial bank, 10.57 per cent from money lenders, 0.67 per cent from friends and 0.27 per cent from relatives. In case of SC farmers, the percentage of credit disbursement was 0.55 per cent by cooperative banks, 71 per cent from commercial banks, around 21 per cent from money lenders, 4.13 per cent by friends, and 3.47 per cent from relatives during the study period in Bundelkhand region.

The flow of agricultural credit among General farmers was 2.36 per cent from co-operative banks, followed by 84.12 per cent by commercial banks, 3.72 per cent from money lenders, 7.14 per cent by friends and 2.66 per cent from relatives during the study period in the western region. Regarding OBC farmers, the share of agricultural credit disbursed by co-operative banks was 3.31 per cent, followed by 88 per cent from commercial bank, 5.49 per cent by money lenders, 0.92 per cent from friends and 2.44 per cent by relatives in the same region. In case of SC farmers, the flow of agricultural credit was 0.53 per cent from cooperative banks, around 76 per

cent from commercial banks, 21.55 per cent by money lenders, 1.54 per cent from friends and 0.42 per cent by relative during the study period in western region. It is observed that Schedule cast farmers are highly deprived to take credit from formal sources compared to General and OBC farmers in both the regions. There is extensive variation among social groups in term of agricultural credit disbursed by formal and informal sources during the study period in both the regions. However, the farmers of western regions are highly advantageous in term of accessing agricultural credit in western region.

The flow of agricultural credit by co-operative banks was 90.91 per cent in OBC, 9.09 per cent SC farmers while negligible in General farmers during the study period in Bundelkhand region. With regards to commercial banks, the flow of agricultural credit was 37.19 per cent in General, followed by 37.17 per cent in OBC and 25.63 per cent in SC farmers in the same region. Considering moneylenders, the share of General category farmers was 39.49 per cent, followed by 23.20 per cent in OBC and 37.31 per cent in SC farmers during the study period. In case of friends, the flow of agricultural credit was 16.67 per cent in OBC and followed by 83.33 per cent in SC category farmers while negligible in General farmers in Bundelkhand region. Similarly, the share agricultural credit disbursed by relatives was 36.70 per cent in General, followed by 5.50 per cent in OBC and 57.80 per cent in SC during the study period in Bundelkhand region.

With regards to western region, the share of credit flow by co-operative banks in General, OBC and SC farmers was 23.05 per cent, 62.54 per cent and 14.41 per cent during the study period. Considering commercial banks, the flow of credit in General, OBC and SC farmers was 18.04 per cent, 36.44 per cent and 45.52 per cent during the same period while the share of moneylenders was 5 per cent in general, followed by 14.25 per cent in OBC and 80.76 per cent in SC category farmers. Considering friends, the share of agricultural credit in General category farmers has accounted 54.02 per cent, followed by 13.39 per cent in OBC and 32.59 per cent in SC farmers. The percentage of agricultural credit disbursed by relatives was 31.03 per cent in General, followed by 55.17 per cent in OBC and 13.79 per cent SC category farmers during the study period in the western region. Overall from the analysis, it is observed that the flow of agricultural credit was highly impressive in General and OBC farmers while SC category farmers was most vulnerable in term of credit in both

the regions of Uttar Pradesh. The state should explore the effective mechanism to increase the availability of credit as well as to reduce the regional inequalities among social groups at state level.

During the study period, it is found that the ability to repay agricultural credit of the SC farmers are more worst compared to General and OBC farmers in both the regions. Majority of the farmers are agree that harvest failure and low productivity are the main cause not to repay the agricultural credit in both regions. Farmers of Bundelkhand region are highly suffering from harvest failure and low productivity compared to western region farmers. Banks also follow discrimination with the poor or SC farmers in sanctioning credit in both regions.

Agricultural credit has positive but minor impact on agricultural production among social groups during the study period in both the regions. The schedule cast farmers are not getting so much benefit of agricultural credit compared to General and OBC farmers due to small size of land holdings, lack of financial assistance, lack of technical knowledge, poor economic background, and lack of agricultural equipment's in both the regions.

Agricultural credit increased net average annual agricultural income around 27.58 per cent in General, followed by 12.35 per cent in OBC and 13.47 per cent in SC farmers during the study period in Bundelkhand region while 2.58 per cent in General, 6.16 per cent in OBC and 2.13 per cent in SC farmers during the study period in western region. On the other hand agricultural credit had positive impact on average annual agricultural cost i.e. 3.07 per cent in General, followed by 0.94 per cent in OBC, and 2.72 per cent in SC farmers in Bundelkhand region whereas 2.43 per cent in General, followed by 1.92 per cent in OBC and 2.19 per cent in SC farmers during the study period in western region

The impact of agricultural credit on total average consumption was 0.93 per cent in General, followed by -18.24 per cent in OBC, and -11.27 per cent in SC farmers during the study period in Bundelkhand region. Considering western region, the impact of agricultural credit on consumption was -13.43 per cent in General, followed by -6.82 per cent in OBC, and -10 per cent in SC during the same period in western region. On the other hand, the impact of agricultural credit was marginal on education expenditure i.e. 2.77 per cent in General and 0.47 per cent in OBC farmers

in Bundelkhand region while agricultural credit has no effect on schedule cast farmers in the same region. Regarding western region, agricultural credit has negative impact on educational expenditure among social group's i.e. - 4.18 per cent in General and - 2.96 per cent in SC farmers whereas it has marginal positive impact on OBC farmers i.e. 1.67 per cent during the study period in western region

Agricultural credit increased health expenditure i.e. 7.98 per cent in General, followed by 1.01 per cent in OBC whereas decreased -0.35 per cent in SC farmers in the region of Bundelkhand. On the other hand, the farmers of western region are negatively affected by agricultural credit. Agricultural credit has decreased health expenditure i.e. -1.70 per cent in General, followed by -2.84 per cent in OBC and - 0.19 per cent in SC farmers in the western region. On the other hand, the percentage of poverty was 86.55 per cent in General, followed by 88.76 per cent in OBC and 93.78 per cent in SC category farmers before taking agricultural credit and become 85.35 per cent in General, 87.25 per cent in OBC and 95.89 per cent in SC farmers after taking agricultural credit during the study period in Bundelkhand region. On the other hand, the percentage of poverty was 84.54 per cent in General, followed by 83.34 per cent in OBC and 87.19 per cent in SC category farmers before taking agricultural credit and become 84.39 per cent in General, 83 per cent in OBC and 91.36 per cent in SC category farmers after taking agricultural credit during the study period in western region. Overall from analysis, it is observed that the impact of agricultural credit in term of production, income, expenditure, consumption, education, health, poverty, and equality was negligible among small and marginal farmers during the study period in the state of Uttar Pradesh.

Small and marginal farmers are suffering from low productivity, low income, low saving, lack of credit facility, indebtedness, regional inequity, and other socio-economic constraints in the state. It is noticed that there is various socio-economic disparities among social groups such as General, OBC, and SC. It is found that schedule cast farmers are more deprived groups to take the advantage of programs and policies in the both regions. Schedule cast farmers are converting into Christian religion due to poverty and poor socio-economic background in Bundelkhand region. Dalit farmers are more social and economically depressed in both the regions.

The performances of agriculture differ in both the regions. It is found that wheat and till is the main agricultural crops in Bundelkhand region. Farmers are suffering from heavily drought situation from many years. On the other hand, the farmers of western region are more rich and innovative. They are growing several crops such as wheat, rice, and sugarcane. It is observed that farmers are suffering from unavailability of own resources for irrigation purpose. Most of the farmers are using rental inputs for irrigation purpose.

Institutional agricultural credit agencies play very important role to improve the socio-economic conditions of the farmers. However, the flow of agricultural credit by co-operative banks, commercial banks, and regional rural banks is very poor among small and marginal farmers in both regions. The performance of cooperative banks and regional rural banks is negligible in both regions. Due to the insignificant performance of institutional agencies, farmers are taking agricultural credit from non-institutional credit agencies. They charge very high rate of interest. As results, farmers fails to repay the credit and engrossed indebtedness and further sell their land and become landless or migrate to urban areas for better livelihood. On the other hand, Institutional credit agencies are facing several problems at state level. Co-operatives banks, commercial banks, and regional rural banks are facing high cost and risky rural lending. Majority of the small and marginal farmers depend on non-institutional source of agricultural credit. Due to indebtedness and malpractices of non-institutional sources, farmers are suiciding in the state.

The state has launched several programmes and policies to increase the agricultural production and productivity. But, these programmes and policies are unable to increase the agricultural growth significantly at state level. Therefore, the state should focus in the area of changing cropping pattern, better irrigation facilities, providing bio-fertilisers, better infrastructure facilities, crop insurance facility, price stability, modern techniques to farmers, extension of technology and more government expenditure on agriculture, rural development and flood control, and promote public-private sector partnerships to increase the growth of agriculture sector among small and marginal farmers in Uttar Pradesh.

The government should be focused on soil health, water conservation management and pest management. The production model should be diversified to

crops, livestock, fisheries, poultry and agro forestry; homestead gardens supported by nurseries. Farm ponds, fertilizer trees and biogas plants must be promoted in all semi-arid rain-fed areas at state level.

There is need develop area specific strategies for improving agricultural growth and need to implement new policies and programmes to boost the productivity. The government of the state must implement appropriate land laws, Irrigation policy and seed policy to boost agricultural productivity and agro-processing. There is also need to encourage private participation through contract and corporate farming at state level.

The state should be adopted pro-poor policy, basically small and marginal farms oriented agricultural growth policy since small and marginal farms are predominant in the state and farm sizes are decreasing. The productivity of small holder's agriculture is the key for promoting agricultural growth. It is crucial to expand small holder access to finance, risk management strategies, inputs, services and extension and increase investment in rural infrastructure at states level.

People participation should be ensured in formulating policies and programs. On the other hand, the government should concern on dry land farming, organic farming, farming system, irrigation facilities, use of organic fertilizers, subsidy in agriculture, storage and marketing facility, climatic variability, skill development and agricultural research institutions. The focus of agriculture research should be viability of agriculture, especially for small and marginal farmers. There is a need to promote mixed farming among small and marginal farmers to increase standard of living and income in the state of Uttar Pradesh.

Agricultural credit market such as institutional and non-institutional are very popular at state level. However, the delivery mechanism of agricultural credit for the development of agriculture is very poor and exploitive in nature. The effective delivery mechanism of agricultural credit is to develop innovations in agricultural credit markets, increase financial literacy among farmers, and training to the farmers regarding formalities of financial institutions.

The flow of credit should be very simple so that less-educated and illiterate farmers can access institutional credit. Minimum interest rate should be charged

among the farmers. The subsidies should be directed for capacity building to poor farmers. On the other hand, there is need to strengthen banking network, restructure the cooperative banks and regional rural banks at state level. The government should not make a uniform credit policy. It should be flexible and decentralized based on the local socio-economic conditions of the farmers. There is also need to reduce transaction cost for input supplies.