CHAPTER VIII
CONCLUSION, PROBLEM AND SUGGESTION

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CHAPTER –VIII
CONCLUSION, PROBLEMS & SUGGESTION

8.1 Introduction:-

Previous, chapter seven was related to case studies of selected villages in Jamner Tahsil. These villages were selected from every circle some factors or livestock, Irrigation, Implements, crops, General land use, Irrigated land use, agricultural land use and problems of selected villages had been discussed from 1980-81 to 2010-11. Agricultural area of the study region also discussed deeply in previous seventh chapter.

The present chapter is related to sum up the major conclusion of the study Investigation (presented in second to last seventh) chapter to get augmented with the base of this conclusion. Here, in this chapter an attempt is also mode to analyses the agricultural problems. Suitable suggestions are also made in this chapter to change the existing situation and thereby to achieve agricultural progress to the study investigation of Jamner Tahsil from the period of present work.

8.2 Conclusion:-

The following conclusion is drawn from chapter second to seven.

1) Jalgaon District Lies bet 20\degree north to 21\degree north latitude 74\degree 55^{1} east to 76\degree 28^{1} East longitudes the east west strength of district is 120 Km & north south Extension of district is 110 Km.

2) Tapi, Girna, Bori, Waghur are the main rivers in Jalgaon district.
3) Average annual rainfall is 793.6 mm. The rainfall in the district increase from the West to east varying from 4.30 mm chopda near the Border, to 750 mm.
4) Jalgaon district is located in the upper Tapi basin it forms district topographical Unit separated from neighboring MP State.
5) 80% of annual rain fall is received in the south west monsoon period July is the raining month our study region is only jammer Tahsil. In this region there are three main rivers, 1) Waghur 2) Kang 3) Sur all these rivers originated in the Ajanta Mountain ranges.
6) The climate of this region is hot & dry the cold season from Dec to Feb & Hot Season is March to June.
7) Daily minimum Temp is 10.3° C. & maximum Temp 45° c.
8) Average rainfall of the study region is 690.2 MM
9) The soil constitute the physical basis of an agricultural enterprise & play a very Important role in the agricultural economy of the region differences in soil texture Drainage & fertility of the major importance in explaining contrast in agricultural.
10) Natural vegetation is vital aim from rain distribution & inferrality of the Soil in this study region area under forest is recorded 14%
11) In the study region there are only one waghur project & medium project are 7.
12) Totally irrigated area is 20%
13) The growth of population in the study region is 6.23%
14) According to censuses report of India the population of Jamner Tahsil is 3 49 957.
15) The density of population in study region is 217% per Sq Km. and Men Female Ration is 942% per sq Km. the Total of settlement are 160.
16) According to 2001 census the literacy of Jamner is 70.20% 
17) In Jamner Tahsil total live stock is 164765. 
18) There are so many agricultural implements are used. 
19) Lot of chemical and fertilizers has been used for the purpose of agriculture. 
20) In this study region 180 Km. national highway 287 km.state Highway & 54 Km Narrow gauge railway. 
21) In the study region area under forest is 17.85% 
22) In this study region net zone area in recorded 73.15% Table No. 41 reveal Tahsil wise trends in general land use. 
23) Circle wise per capita net zone area is 0.34 hectare area recorded. 
24) The highest land use efficiency is recorded in Wakadi circle 140.77 & the lowest land use efficiency is found in Tondapur circle 112.22.8 
25) Cotton is important cash crop in the study area near about 80% area under cotton cultivation. 
26) Circle wise overall productivity of the selected crop in the study region is highlighted. 
27) Growth of yield also shown. 
28) For Case study each circle we have selected 3 villages or the micro level observation this study goes through field work & special questioners has been used. 
29) Chapter No. 7 gives the clearest idea about general landaus of all selected villages. Jammer Tahsil lies between 20° North to 21° North parallels of latitude and 74°55’ East to 76°28’ East Longitude. 
30) Waghur, Kang, Sur are the main rivers in Jamner Tahsil. These rivers have played very important role in the agricultural development of the study region; almost all the rivers become dry in summer season. There is shortage
of water in the region in summer season hence, agricultural captivities are affected.

31) The meteorological observatory in the Tahsil which is the cold weather commences towards the end of November when temperature begin to fall. December is the coldest month with the mean daily minimum at above $8.3^0c$ and maximum at above $28.5^0c$ in last twenty five years. In cold season the tahsil is sometimes affected by cold waves in association with the passage eastward of western disturbances across north India on such occasion drop about $3^0$ to $4^0c$ in the study region.

32) The average annual rainfall for the Jamner tahsil is 793.6mm. The rainfall in the tahsil increases from the west to East varying from 430mm at chopda near the border to 750mm. About 80 percent of the annual rainfall is received in the south-west monsoon period. September is the rainiest month. The variation in the annual rainfall from year to year is fairly large.

33) Table no. 2.2 indicates that about only 16200 hectare of land of the total geographical area of the study region was under forest during 1980-81. It increased from 16200 hectare to 21804 hectare. In the period of thirty years.

34) There are four major irrigation projects in the Jamner Tahsil. There are waghur lift irrigation, Kapuswadi minor irrigation project, and Godri Kang Project and Pimpalgaon Kamani Waghur project. Waghur lift irrigation project located in Jalgaon district. This project given many benefits to Jamner Tahsil. Waghur project is situated in Raipur village of Jalgaon Tahsil on Waghur River. This project canal length is 39.85 km. Irrigated area is 33252 Hectare.
35) There are 99718 wells in Jalgaon district during 1980-81. In 2010-2011 irrigation wells are decreased in every circle in Jamner Tahsil.

36) Table no.3.1 reveals that percentage of net irrigated area increased in the study region during the period of investigation. The table shows that Kamanitanda project recorded highest 6032 hectare land of net irrigated area to net sown area.

37) The average rainfall of Jamner Tahsil is 763.40 cm.

38) Table no.3.2 shows the circle wise progress of Irrigation well in Jamner Tahsil. The no. of wells used in Tondapur circle was highest in 1980-81 and Neri circle was highest in 2010-11 which used wells 295.

39) Table no.3.3 gives the picture about the percentage of net Irrigated area to net sown area. The highest net irrigated area in 1980-81 was in Tondapur circle it increased by 1.03hectare in 2010-11 and lowest area was in Fattepur circle 21.48hectare. It increased by 4.67hectare in 2010-11. The volume change was highest from 1980-81 to 2010-11 in Neri circle by 6.31%.

40) Irrigated area under different crops in Jamner Tahsil was in changing pattern from 1980-81 to 2010-11. There were different crops in the investigation region but with the help of questionnaire. Researcher includes major crops for research. The highest Irrigated area in 1980-81 was cotton 60.74% and lowest was Tur 0.84 but it was changed by 2.30 and cotton decreased by 4.83hectare. Total irrigated area was 23658hectres in 1980-81 and 31940hectare in 2010-11. Shows the increasing proportion of irrigation area.

41) Table no. 3.5 reveals the index number, of irrigated area in Jamner region. The base year 1980 was selected for investigation by Researcher. It
shows the increasing and decreasing ratio of surface, well irrigation, Net Irrigated area and gross irrigated area in the investigation till 2011. So, there were many reason behind the changing Index number of irrigated area e.g. Flood, drought etc.

42) The growth rate of population in increasing from 1951. The different use of census gives the highlight of increasing the population of growth rate in the study region but it was also changing from general to rural and urban in 1951-60 the urban growth decrease by 15.02 otherwise in all decades it increased.

43) Table no. 3.8 indicates the different types of densities in the study region. Crude, physiolocal, agricultural and caloric. The highest densities in 1980-81 was 213 in crude from Shendurni, Physiolocal in Jamner circle, Agricultural 107 in Jamner circle, and 207 of caloric in Shendurni. But in 2010-11 there were changes in densities. The highest from crude, physiolocal, agricultural and caloric were 471, 478, 112, 729 in Neri, Jamner, Shendurni and Jamner circle respectively and lowest were 107, 198, 65, 392 in Fattepur, Maldabhadi, Pahur and Maldabhadi respectively. The average densities in study region in crude, physiolocal, agricultural and caloric in 1980-81 and 2010-11 as 148, 203, 73, 189, 212, 271, 92 and 629 respectively.

44) The measure the rural population pressure on Agricultural land to understand the progress is important. So, with the help of Table 3.9. We can understand the pressure on all the circles in Investigation region. 0.52 was the pressure per capita land in hectare in 1980-81 and it was 0.41 in 2010-11.4
45) The circlwise literacy change can help to understand the mentality of people at education. The highest literacy percentage was 7.65 in Pahur circle at 1980-81 and 3.59 in Neri circle in 2010-11. Total literacy percentage of Jamner was 51.79 in 1980-81 and it was increased by 23.97 in 2010-11 means the literacy was 75.76 in 2010-11 at investigation region. The highest literacy was recorded 10.20 in 2010-11 at Jamner circle. And the highest change was recorded by 3.59 in Neri circle from 1980-81 to 2010-11.

46) Table no. 3.1 indicates the circle wise distribution of livestock in the study area. The total livestock in 1980 were 116208 at total Tahsil. It decreased in 2010-11 as 90794 Total bulls, Buffaloes, cows, sheep, goats were 24000, 18489, 19536, 19791, 34392 in 1980-81 respectively and it was 18951, 28319, 15210, 14097, 14217 in 2010-11 respectively means there seemed the increasing ratio of 0.22% of bulls and 15.27 of buffaloes but there was decrease of cows, sheep’s and goats by 0.06, 1.50, 13.94 receptively in 2010-11.

47) There was progress of same agricultural equipments from 1980-81 to 2010-11 as, Iron ploughs, electric pump, Tractors etc. but the wooden ploughs decreased in 2010-11 because farmers were adopted the new Technology in agriculture. There were 1174, 4745, 1168 and 712 wooden ploughs, Iron ploughs, electric pumps and Tractors they increased in 2010-11.

48) Table no.3.13 shows the using proportion of chemical fertilizer from 1980-81 to 2010-11 in quintals. It showed the progress in using chemical fertilizer in 2010-11. The highest increasing ratio was 15.89% in Jamner circle and lowest was recorded in 9.38% in shendurni circle.
49) The statement of consumption electricity shows in the study region in 2010-11. The highest consumption in 2010-11 was Jamner circle 21.12 and lowest was recorded 16.78 in Maldabhadi circle.

50) The consumption of electricity for various purposes indicated in Table no. 3.14 from 1980-81 to 2010-11. The total consumption in 1980-81 was 12970 k.w. and 67512 in 2010-11. The highest consumption was recorded for agricultural 61.07 in 1980-81 and lowest consumption was recorded as 4.00% for other consumption. The change in volume indicated that the highest increasing ratio was 3.40 for commercial means the use of electricity for irrigation increased but farmer used it in high ratio so, the change seem in low proportion.

51) Table no. 3.15 ravels the length of road according to the type of surface and also railway route from 1980 to 2011. The state and main state highway recorded same from 1980-2011 but major district road, other district road, village road increased by 62.57 to 122.48 km, 80.16km to 193.10km, 237.25 km to 525.30km respectively and there was single railway route of 28 km in 1980 and there was no change in it at 2011 also.

52) The proportion of land use for various purposes seems with the help of agricultural land, forest land and villages orchards in the study area.

53) Land was classified in the study region as good, poor and medium categories of land in some circles there was good, poor and medium land in the study region.

54) Map 4.1 shows the circle wise trends in general land use pattern in Jamner Tahsil because of the location and physical setting pattern of land differs from circle to circle.
55) There was circle wise per capita net sown area in the study region. The per capita net sown area was 0.49 hectare in 1980 in the study region.

56) The volume of change in land use from 1980-81 to 2010-11 were changing from the circles. Some circles changes in the land use in 2010-11.

57) The total geographical area in 1980-81 was recorded in the Jamner, Neri, Pahur, Fattepur, Maldabhadi, Wakdi, Shendurni and Tondapur as 15770, 17423, 16283, 14653, 16030, 14375, 16582hectare and 15340 respectively and in 2005-10, 16005, 18687, 17855, 16970, 18160, 16457, 18846 and 16929hectare respectively in the above circles from the study region.

58) The total Geographical area of Jalgaon 1134186hectare and 100820hectare of Jamner region.

59) The per capita net sown area decreased during the period of Investigation.

60) Table no.4.4 shows the efficiency of land use. It was recorded in 1980-81 as 90.38, 104.16, and 96.84. 93.20, 124.77, 103.34, 94.96, 100hectare in Jamner, Neri, Tondapur, Fattepur, Maldabhadi, Wakdi, Shendurni and Pahur circle respectively. The highest efficiency in 2010-11 was recorded in 140.77 at Wakdi circle and lowest at 112.22 at Tondapur circle.

61) Irrigated land variation agricultural crops indicates that due to impact of irrigation productivity developed in all field of farming and due to it the condition of farmer developed from 1980-81 to 2010-11.

62) Table 5.3 shows that indices of wheat and other crops are increased and decreased at particular circles.
63) There were 8 major crops in selected region. Table no. 5.3 indicates the area in hectare of selected crops. The change of volume increase of corn, cotton and groundnut by 719.87, 257.65 and 7.60 hectare respectively. The total area in hectare was 5845.39 in 1980-81. It was increased by 788.12 hectare in 2010-11.

64) There was changing productivity in different circles at study region. Table no. 5.5 shows the productivity of various crops in selected region. It was increasing as well as decreasing.

65) There was lot of crop combination changes in every circle from 1980-81 to 2010-11 in the investigated region.

66) The diversification of structural forms of agricultural such as cropping pattern, structure, climate, Irrigation, technology, equipments, livestock, rainfall etc.

67) Table no. 6.1 shows the quantitative differences in output of the selected crop during the period from 1980-81 average production was 1088.41 which seem 1056.35 m.ton in 2010-11.

68) The circle wise trends of productivity give more detail about the study region in table no. 6.4. It was changing from circle to circle.

69) Table no. 6.5 facilitates growth of productivity because of the impact of irrigation and the agricultural field. Where there were irrigation facilities the growth of productivity was high.

70) The overall productivity also increased in all circles of investigation region.
71) Researcher selects the 24 villages from 8 circles of study region which are totally different in various factors.

72) Irrigation, livestock and implements were in progress from 1980-81 to 2010-11 in the study region.

73) Table no.7.4 gives the clear idea about general land use and other land in study region.

74) The researcher filled the questionnaire at that time farmers told about the various problems regarding irrigation and other agricultural problems in the study region.

8.3 Agricultural problems of the study region:-

1) Erratic Monsoon rainfall:-

In the villages of study region major cultivated area is depend in monsoon rainfall. The major irrigation project, waghur is also depending on the monsoon rainfall but from 1980 to 2011. We saw that the rainfall proportion it decreasing year by year. So, it helps to make high effect on the irrigation system and so, to make agricultural development and develop the irrigation facilities, farmers are facing the problem of erratic monsoon rainfall in the study region of investigation period.

2) Lack of modern Technology:-

We saw that India is country which is totally based on agriculture. So, farmers also should be literate to use the modern technology for agricultural development. In investigation period, farmers were using the traditional method of harvesting and other techniques. So, it we want to make progress
regarding agricultural development. They must use modern technology. Irrigation system also need modern technology e.g. sprinkler, trip etc to make progress in agricultural development.

3) Costly varieties of seeds:-

Though the impact of irrigation was increasing in the study region, the rate of seeds was also get on the sky. Means the market is down while harvesting season and while planting the cost of seeds was high that’s the main problem in the field of agricultural development in the selected region. So, government should search the solution to less the rate of seeds.

4) Lack of fertilizers:-

From the period of investigation farmers were facing the problem of availability of fertilizers and proper rate of it. So, we can understand the problem of farmers in the area of Jamner Tahsil.

5) High rate of agricultural worker:-

The productivity increase due to impact of irrigation in Jamner Tahsil but the rate and availability were vanishing from 1980 to 2011 in the region of Jamner Tahsil.

6) Problems of Electricity:-

All the village farmers of selected regions replied about the problems of electricity. It is very co-related to irrigation. Without electricity, we never noticed the impact of irrigation in the development of agriculture during the whole year in the all villages faced the problem of irregular supply of electricity. The combination of electric supply and electric pumps are not
matching one and also the rate of electricity was increased from the investigation starting to end. So, there was problem of load shading means though the availability of irrigation, still lack of electricity farmers could not got use of irrigation method for increasing the productivity of crops.

7) **Problems of availability of water for irrigation purpose:**

We saw that the water level of all irrigation sources was decreasing from 1980 to 2011 in the selected region. Normally the rainfall of study area is 60 to 70 cms. The underground water level is going down year by year. The percolation of water in the surface was less than the use of underground water for irrigation purpose. Irrigation plays on important role in the field of agricultural development water is available in most of villages in the study region. Well is major source of other irrigation most of wells become dry from the period of starting investigation to last in summer season.

8) **Per Hectare productivity is very less:**

Most of the villages major crop is cotton, corn, wheat, Jowar, Bajara, Groundnut, Banana etc. particularly in the dry villages are not grown the banana, sugarcane, fruits, spices and vegetation because of water reason of insufficient irrigation, chemicals, fertilizers pesticides etc. so, result is per hectare productivity is very less.

9) **Problems of credit society:**

Farmers from various villages told that, many nationalize banks and credit societies did not get loans for their agricultural growth and banks did not get loan amount at time, so they are unable to take maximum production for
their field. It is major problem of village farmers so; they could not get more productivity of agricultural crops.

10) **Problem of high population pressure on land:**

Physical proportion of population was increasing from 1980 in the investigated region. So, it is also major problem in the investigation report because due to irrigation, we saw development of agricultural but increasing population helped to vanish the high rate of agricultural development.

11) **Soil Erosion:**

It was also major problem in the investigation of Jamner Tahsil because the Practicality of man soon made the high ratio of soil erosion and farmers tried to improve that land so, the total growth of productivity implied to improve the quality of land.

12) **Plant protection problem:**

Though irrigation was increasing in the selected region, the wild animals destroy the development of productivity and some part of production investing to protect the plant by farmers. So, there should be some scheme to government to help farmers for plant protection in the selected region of Jamner Tahsil.

13) **Lack of market system:**

Farmers are try to solve various problems regarding the development of crop productivity but grains merchant are destroying the mentality of farmers by decreasing the rate of crops so, some proper precaution should to maintain the rate facilities in market then they can maintain the economical condition.
8.4 Suggestions – To solve the problems:-

1) Erratic monsoon rainfall:-

To avoid the problem of irregular rainfall all farmers should maintain the environment that will help to maintain regular rainfall for that reason farmers should develop the ratio of planting the plants in near about area. The imbalance of all component related to rainfall are help to maintain the ratio of rainfall. So, there is need of lot of tree plantation. Government should also organize some issues in farmers regarding the welfare of tree plantation then it help to heighten the ratio of rainfall in the area of Jamner Tahsil.

2) Lack of modern Technology:-

Farmers must use modern Technology in the field of agriculture to develop the ratio of production. The use of technology can maintain the maximum output in minimum expenditure and time means. It helps to minimize other problems regarding the agricultural development and irrigation system also; farmers should come together and minimize the problem by using effectively it for forming purpose. Government should give the subsidy for various modern equipments and organize the demo for farmers that how these modern technology help to maintain their production capacity. Government should organize various programmers related to modern technology and give the demos and examples put further in front of farmers from various countries or other regions.
3) **Costly varieties of seeds:-**

The cost of various seeds should minimize by the Government forming body so, farmers can use various types of new varieties of seed in selected region. People also make other seeds available by home production and avoid the traditional seeds. The ratio of seed cost should be maintain by agricultural ministry that will help to make stable of cost of seeds.

4) **Lack of fertilizers:-**

Farmers are facing the problem of fertilizers in the selected region of Jamner Tahsil. So, people must neglect to use particular fertilizers. Farmers can use compose traditional manure at the place of chemical fertilizers. Governing body should concentrate on the ratio and rate of Fertilizer. Jamner should use the contact of farming officer and delivered the problem regarding to it to respective officer.

5) **High rate of farming workers:-**

We must neglect that farmer work is less important than Government job because our country is farming country. So, we avoid the issue about farming work in the mind of youth because, we are the son of farmer. Farmers also avoid the humiliate farming workers because we accept the constitution. So, no one is higher and lower quality. We have to live together without inequality.

6) **Problems of electricity:-**

Farmers have to use electricity only for required purpose. Lots of farmers use it carelessly then farmers have to search other resources at the place of electricity. Sun is best examples to use power of pumps of irrigation. So,
Government also tries to use sun source at the place of electricity because it is beneficiary in all purposes costly, timely and all other facilities are available.

7) Problems of availability of water for irrigation purpose:-

All farmers should stop water flooding at their farm. We can stop the availability of water problem. Then we have to stop water by Small River, pond, damping etc. then all citizens have to protect environment, use water at proper ratio, and avoid bad use of water. All people should plant the trees in large proportion then man soon water increase and solve the above problem.

8) Per hectare productivity is very less:-

We saw that due to various reasons, there is less productivity in selected region from 1980-2011. So we must avoid all these reasons e.g. High proportion of chemical fertilizer, pesticides, soil erosion, tree plantation, use of technology in the field of agriculture. Minimize the population growth, aware in farmers about saving the nature. Other suggestions are following.

1) Farmer should increase the proportion of tress
2) Soil erosion should be avoided by using techniques.
3) We should avoid discouraging rural atmosphere
4) Overcrowding should neglect in agriculture.
5) Adequate irrigation should be provided to farmers.
6) Govt. should help to develop the condition of agricultural labor.
7) Formers should use high variety seeds.
8) Credit facilities should be provided by agricultural ministry.
9) Marketing systems’ make available.
10) Small size folding problem should avoid.
11) Price of agricultural commodities should increase.
12) The productivity should develop.
13) Load shading problem should avoided.
14) More stress put on the literacy of farmers.
15) By organizing the farmers.
16) Training should given to farmers time to time
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