

Chapter No.2

The Profile of Agriculture Sector In Maharashtra

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2.1) Introduction:

In the south of India at west near Arabian Sea Maharashtra is located. On the border of Maharashtra there are many states. In it at the west side of Maharashtra state there is Arabian Sea. At the south west of Maharashtra there are Gujarat & Daman, Dadar Nagar Haveli the self-governed regions. In the north of Maharashtra there is Madhyapradesh & Chhattisgad state, in east Andhra Pradesh is in the north east Karnataka & Goa are at the south of Maharashtra state. Maharashtra has coastal area of 720 km long Maharashtra state was established on 1st May 1960, so 1st May is celebrated as a Maharashtra Din all over Maharashtra.

The Geographical area of Maharashtra is approximately 307762 sq km. In the sense of area Maharashtra stands third after the states of Rajasthan and Madhya Pradesh of all geographical sector of our country Maharashtra, occupies 9.37 percent of the land in area. The east-west length of Maharashtra is 800 km and south-north width of it is 720 km. geographical Maharashtra is a part of peninsula plate of India. Nearly ninety percent of land of Maharashtra is made of basalt rock derived from lava. The origin of Deccan plateau is of 14 corers years before so in Maharashtra one can see so many levels of lava rock. On each other at the bottom of this plateau we find the rocks of Arabian types. As go towards the east of this state the thickness of basalt goes on increasing and in Nagpur, Gondia, Bhandara, Chandrapur and Gadchiroli one can see the Archian, Dharwad, Kadappa and Vindhya types of rocks exposed bristly in this area the basalt rock layer gets thinner and finally disappears. In the basins of rivers in Maharashtra and the edges of creeks the levels of deposits carried by rivers. In addition the structure of land in Maharashtra does not differ recognizably. The type of land in Maharashtra is basically of black and alluvial soil.

2.2) Administrative parts of Maharashtra:

There are totally 35 districts in Maharashtra to bring a paper system in administration of Maharashtra. It has been divided into six parts for the conveyance of government. In the Godavari basin of central Maharashtra (Aurangabad, Nanded, Parbhani) or Aurangabad section is known as Marathwada division, and Amravati, Nagpur area is famous as Vidhabha. In the basin of river Tapi, Nandurbar, Dhule and Jalgaon district which is well known as Khandesh, Pune, Sholapur, Kolhapur, Sangali, Satara make west Maharashtra, finally Mumbai, Thane, Raigad, Ranthanagiri, and Sindhudrg are known together as Kokan section.

In these total 35 districts of Maharashtra there are 356 talukas. There are seven cities in Maharashtra which consist population over 10 lakhs. Mumbai is the capital city of Maharashtra.

When the assembly is in session at Nagpur there is the whole administration trend are moved by politician. Nagpur is the vice capital city of Maharashtra, Mumbai is an international status harbour of the world. Ahmadnagar district is occupying the most wide spread area of all. Pune, Nasik, Gadchiroli stand succeedingly. Mumbai city is the smallest district city which was established in 1990 of the total population the highest population is in Mumbai teen suburban district and Thane and Pune stand after that. The lowest number of population is of Gadchiroli and Singhudurg district. The total population of Maharashtra is 9 crore 67 lakhs 52 thousand the literacy percentage of Maharashtra is 77.27 percent and 86.27 percent of males and 67.51 of females are literate according to commuting of 2001Ap the total number of earning people is 4 crores 21 lakhs among them 55.41 percent earning people are in agriculture. Among the earning members in agriculture 55.54 percent farmers and 48.46 percent farm workers.

2.3) Climate of Maharashtra state:

The climate of Maharashtra is of temperate zonal monsoon type. The regional impact of Maharashtra is seen upon its climate. Maharashtra is divided into Kokan and plateau by Sahyadri Mountain on average Sahyadri mo 1000mtr high. The south west monsoon wind coming from Arabian Sea is blocked by sash m. that's why the climate in both east and west of shah differs than to each other. Due to Arabian Sea the climate in Kokan remains even damp. Vice versa platter on continental areas lacks evaporation. The climate there is odd not even.

In the motion regions of Sahyadri the temperature decreases accordingly we go high and higher. On the hilltops in the Ghatas the climate is cool. Due to cool temperature in summer also Matheran, Mahabaleshwar, Pachagani have become the hill stations and tour site centres. In the Ghats and Hillary region of shah it rains very heavily during monsoon and winter is extremely cool. On plateaus in Maharashtra winters are cool and summers are hot so climate in Maharashtra is not regular or even.¹

2.4) Nature of agriculture in Maharashtra:

Agriculture plays a vital role in Indian economy according to the population in 2001 the number of the working people of Maharashtra is 4.12 crores among, them 28.7 percent are farmers and 26.3 percent are farmers farm workers 55 percent of the state is depended directly upon agriculture for their earnings. In the tentative income of state agriculture and animal husbandry shares 10.1 percent in 2004-2005 approximately become the land in physical futures climate in Maharashtra is not expected for farming. One third of Maharashtra comes under the rainfall sector where there is scanty rainfall consequently the productivity of agriculture in Maharashtra is not that much as the productivity of agriculture of the country. The 57.2 percent area of Maharashtra is under cultivation. Though it is greater than the area of the country. The under irrigation area of Maharashtra is only 16.4 percent so the productivity per hector of Maharashtra is much less than that of the country. The geographical features differ everywhere in Maharashtra so productivity is somewhere less and higher somewhere vice versa.

2.5) Nature of monsoon in Maharashtra:

The monsoon arrives in Maharashtra state around 19 June and it becomes active up to 24 June all over the state. But due to the differences of geographical features the intensity of rainfall differs all over Maharashtra. The coastal area of Kokan hears the rainfall and in the eastern districts of Maharashtra like the rainfall is found scanty.

Table No. 2.1

Classification of Taluka and Districts according to the percentage rainfall

Groups according to percentage of rainfall	No of Taluka 2000-01	No of Taluka 2002-03	No of Districts 2003-04	No of Districts 2004-05	No of Districts 2005-06	No of Districts 2006-07
1	2	3	4	5	6	7
UP to 40	20 (5.7%)	4 (1.1%)	- (0.0%)	- (0.0%)	- (0.0%)	- (0.0%)
41 to 80	66 (18.9%)	161 (45.8%)	15 (45.5%)	2 (6.1%)	3 (9.1%)	1 (3.0%)
81 to 100	91 (26.0%)	92 (26.1%)	10 (30.3%)	3 (9.1%)	2 (6.1%)	36 (78.8%)
101 to 119	58 (16.6%)	51 (14.5%)	5 (15.1%)	17 (51.5%)	11 (33.3%)	- (0.0%)
120 to above	115 (32.8%)	44 (12.5%)	3 (9.1%)	11 (33.3%)	17 (51.5%)	6 (18.2%)
Total	350 (100 %)	352 (100 %)	33 (100 %)	33 (100 %)	33 (100%)	33 (100%)

Source: Maharashtra Economic Survey 2007-2008**Note:** Figures in the parenthesis indicate Percentages to total.

The table no.2.1 shown that there is mentioned numbers indicate that the rainfall in Maharashtra differs as per the physical features of the state. Especially the talukas having scanty or less rainfalls are 45 and among them 15 (33.3 percent) are of vidarbha 8 taluks (17.8 percent) are of Maharashtra, 21 talukas (46.7 percent) are of central Maharashtra and 1talukas (2.2 percent) is of Kokan division. Thus the rainfall varies in Maharashtra. The rainfall of 2007 is totally satisfying but abovementioned 2000, 2001, 2003, 2004, 2005, 2006, numerical figures indicate that the rainfall of Maharashtra is indicating is the nature. One year the rainfall is heavy causing floods and one year it is very low causing famine. So the graph of rainfall indicates ups and downs. All this is shows that nature of monsoon varies according to the physical and features of the land.²

2.6) Water supply deposits in Maharashtra state:

The water deposits of all big medium and small sources of irrigation are 27,857 billion meter up to 15 October 2007. It is 88 percent compared to projection capacity.

Table No. 2.2

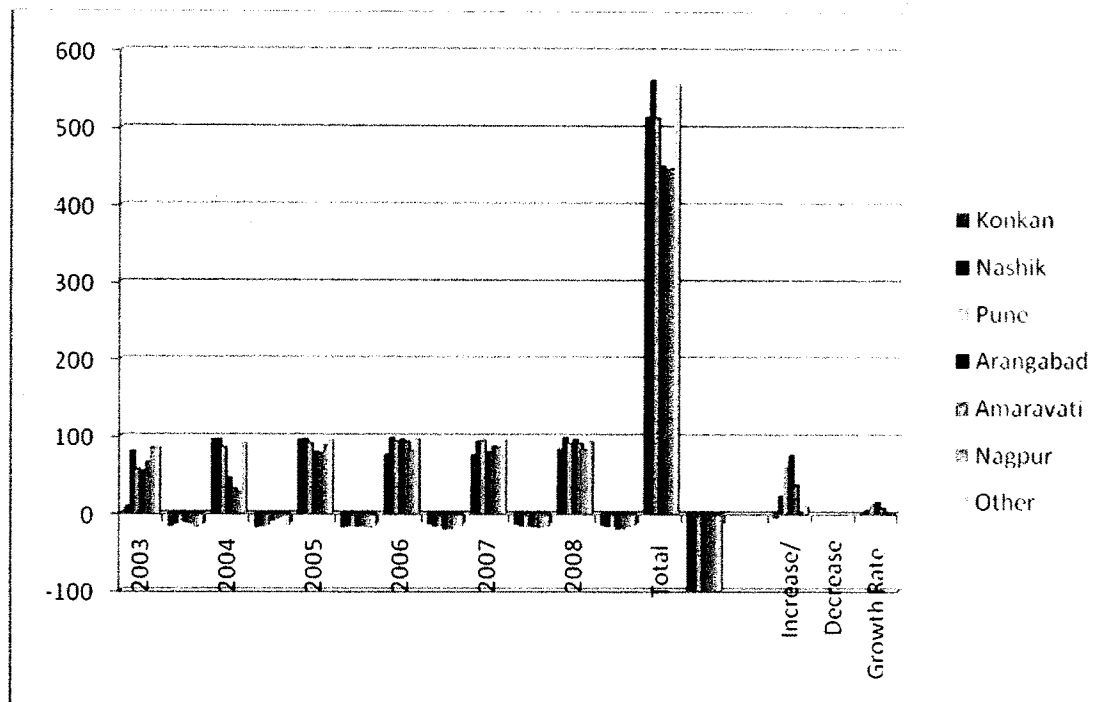
Live storage status of Reservoirs

Year	Konkan	Nashik	Pune	Arangabad	Amaravati	Nagpur	Other
1	2	3	4	5	6	7	8
2003	8.8 (17.1)	80 (14.2)	57 (11.1)	55 (12.1)	66 (14.7)	85 (18.9)	86 (15.4)
2004	96 (18.6)	96 (17.1)	86 (16.7)	46 (10.1)	32 (7.1)	27 (6.0)	91 (16.3)
2005	96 (18.6)	96 (17.1)	91 (17.7)	79 (17.5)	78 (17.4)	88 (19.6)	95 (17.0)
2006	76 (14.7)	98 (17.4)	93 (18.1)	96 (21.2)	93 (20.8)	81 (18.0)	96 (17.2)
2007	75 (14.5)	93 (16.5)	95 (18.5)	79 (17.5)	87 (19.4)	85 (18.9)	95 (17.0)
2008	83 (16.0)	98 (17.4)	91 (17.7)	96 (21.2)	91 (20.3)	82 (18.3)	94 (16.8)
Total	514 (100)	561 (100)	513 (100)	451 (100)	447 (100)	448 (100)	557 (100)
Increase/ Decrease	-5.6	22.5	59.6	75.4	37.8	-3.5	9.3
Growth Rate	-1.1	4.5	11.9	15.0	7.5	-0.7	1.8

Source: Maharashtra Economic Survey, 2007-2008

Note: Figures in the parenthesis indicate Percentages to total.

Graph No. 2.1
Live storage status of Reservoirs



The table no.2.2 and graph no.2.1 shown that there is mentioned numerical figures show that the percentage of useful water deposition of Maharashtra in 2008 is, Aurangabad division 21.2 percent, Amravati division is 20.3 percent, is more in comparison Nagpur division 18.3 percent, Nasik division 17.4 percent, Pune division 17.7 percent, Kokan division 16.0 percent which is less. The growth rate is high in the Pune division and less is in Kokan division. The rainfall differs as per the divisions.

2.7) Agricultural production in Maharashtra state:

Various types are crops are taken in Maharashtra. Mainly two types they are Kharip and Rabbi Crops. As per recorded in the past the production of the food grain and other crops in 2005-2006 was totally 122.27 lakhs tons and in 2004-2005 which was 104.6 lakhs tons of the previous year subsequently greater by 17.8 percent is found is below.

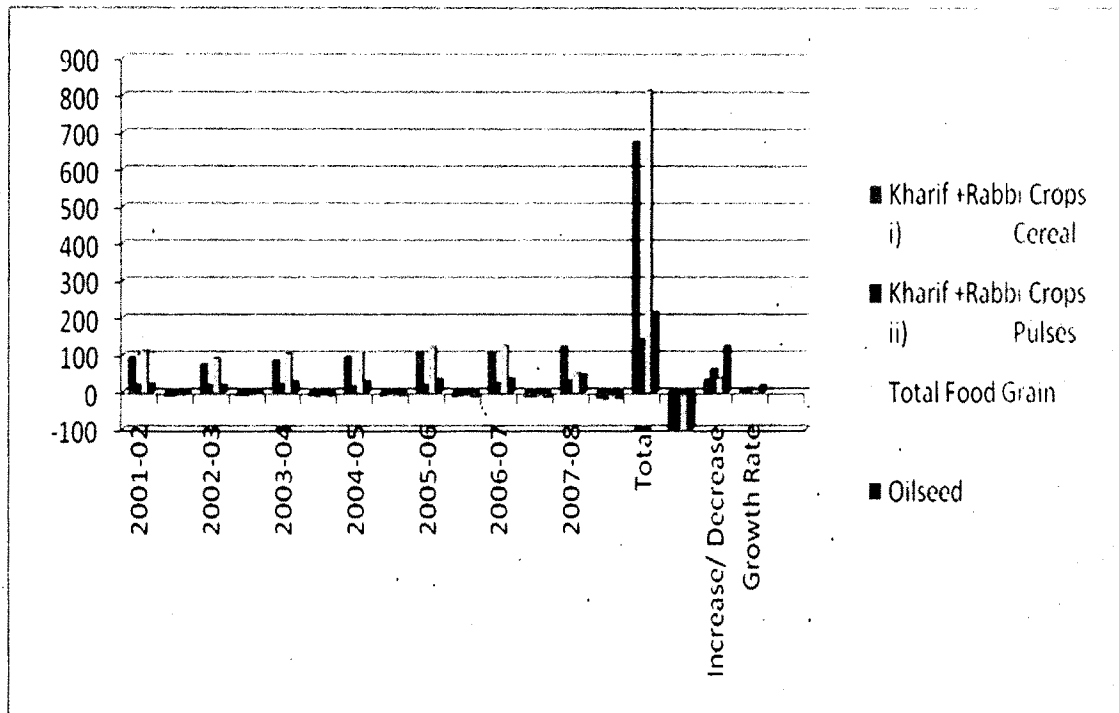
Table No.2.3**Food grain production in Maharashtra****(Lakh tonne)**

Year	Kharif +Rabbi Crops		Total Food Grain	Oilseed
	i) Cereal	ii) Pulses		
1	2	3	4	5
2001-02	92.32 (13.6)	18.80 (13.3)	111.12 (13.6)	21.11 (9.8)
2002-03	74.77 (11.0)	16.62 (11.8)	91.39 (11.2)	18.56 (8.6)
2003-04	82.84 (12.2)	19.55 (13.8)	102.39 (12.5)	28.37 (13.2)
2004-05	93.21 (13.8)	14.29 (10.1)	107.50 (13.1)	29.10 (13.6)
2005-06	104.54 (15.4)	17.93 (12.7)	122.47 (15.0)	33.95 (15.8)
2006-07	104.73 (15.5)	23.4 (16.6)	127.77 (15.6)	35.63 (16.6)
2007-08	122.65 (18.1)	30.20 (21.4)	52.85 (18.7)	47.08 (20.0)
Total	675.06 (100)	140.79 (100)	815.49 (100)	213.8 (100)
Increase/ Decrease	32.9	60.6	37.5	123.0
Growth Rate	4.7	8.6	5.3	17.5

Source: Economic Survey of Maharashtra 2007-2008**Note:** Figures in the parenthesis indicate percentages to total.

Graph No.2.2

Food grain production in Maharashtra



The table no.2.3 and graph no.2.2 shown various types of crops are taken in Maharashtra. Mainly types the kharip and the rabbi crops. As per recorded in the past the production of the food grain and other crops in 2007-2008 was totally 122.65 lacks tons and in 2006-2007 which was 104.73 lacks tons of the previous year subsequently by 3.4 percent is found is below.

The production of the kharip and the rabbi crops in Maharashtra. The pulses in 2007-2008 are 30.20 lakhs hectares. The growth rate in the production is 3.6. The total food grain production is 152.85 lakhs tons 2007-2008. The production oilseed crops kharip and rabbi in Maharashtra. The oilseeds All kharip crops in Maharashtra included pulses, cereals and oilseed, sugarcane and cotton. The production of the kharip and the rabbi crops in Maharashtra. The pulses in 2007-2008 are 30.20 lakhs hectares. The growth in the production is 3.6. The total food grain production is 152.85 lakhs tons 2007-2008. The oilseed production 2007-2008 is 47.08 lakhs hectares. The oilseed production growth rate is the 17.5. The production differs as per the years.

Table No.2.4**Area and production of principal kharif crops in Maharashtra state****(Area 000 hectares)****(Production in 000 tonnes)**

Types	Area / Production	2004- 2005	2005- 2006	2006- 2007	2007- 2008	Total	Increase(+) / Decrease(-)	Growth Rate
1	2	3	4	5	6	7	8	9
i) Cereals								
Rice	Area	1448 (24.3)	1484 (24.9)	1491 (25.0)	1524 (25.6)	5947 (100)	5.2	1.3
	Production	2097 (21.3)	2347 (23.8)	2489 (25.2)	2905 (29.5)	9838 (100)	38.5	9.6
Bajri	Area	1529 (27.0)	1443 (25.5)	1452 (25.7)	1221 921.6	5645 (100)	-20.1	-5.0
	Production	1126 (25.4)	1143 (25.8)	1059 (23.9)	1097 (24.7)	4425 (100)	-2.5	-0.6
Jowar	Area	1533 (26.9)	1517 (26.6)	1409 (24.7)	1224 (21.5)	5683 (100)	-20.1	-5.0
	Production	1792 (24.6)	1955 (26.8)	1684 (23.1)	1841 (25.3)	7272 (100)	2.7	0.6
Other Cereals	Area	573 (39.9)	729 (50.8)	70 (4.8)	61 (4.2)	1433 (100)	-89.3	-22.3
	Production	796 (41.5)	1051 (54.9)	33 (1.7)	34 (1.7)	1914 (100)	-95.7	-23.9
Total Cereals	Area	5123 (25.4)	5173 (25.7)	5033 (25.0)	4770 (23.7)	20099 (100)	-6.8	-1.7
	Production	5811 (22.1)	6496 (24.7)	6336 (24.1)	7646 (29.0)	26289 (100)	31.5	7.8

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1	2	3	4	5	6	7	8	9
ii) Pulses								
Tur	Area	1074 (23.8)	1121 (24.9)	1123 (24.9)	1181 (26.2)	4499 (100)	9.9	2.4
	Production	658 (21.6)	633 (20.8)	815 (26.7)	937 (30.7)	3043 (100)	42.4	10.6
Other Pulses	Area	1390 (49.9)	1039 (37.3)	188 (6.7)	177 (6.3)	2784 (100)	-87.2	-21.8
	Production	515 (49.2)	392 (37.4)	64 (6.1)	75 (7.1)	1046 (100)	-85.4	-21.3
Total Pulses	Area	2464 (25.4)	2160 (22.3)	2374 (24.5)	2677 (27.6)	9675 (100)	8.6	2.15
	Production	1173 (22.3)	1025 (19.5)	1315 (28.0)	1736 (33.0)	5249 (100)	47.9	11.9
Total Food Grains	Area	7587 (25.4)	7333 (24.6)	7407 (24.8)	7447 (25.0)	29774 (100)	1.8	0.45
	Production	6984 (22.1)	7521 (23.8)	7651 (24.2)	9382 (29.3)	31538 (100)	34.3	8.5

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1	2	3	4	5	6	7	8	9
iii) Cash Crop								
Groundnut	Area	2102 (40.6)	2401 (46.7)	342 (6.6)	320 (6.1)	5165 (100)	-84.7	-21.1
	Production	1892 (36.7)	2628 (51.0)	254 (4.9)	369 (7.1)	5143 (100)	-80.4	-20.1
Other Oilseeds	Area	284 (45.9)	310 (50.1)	12 (1.9)	12 (1.9)	618 (100)	-95.7	-23.9
	Production	99 (40.0)	140 (56.6)	4 (1.6)	4 (1.6)	247 (100)	-95.9	-23.9
Cotton	Area	2840 (23.6)	2889 (24.0)	3107 (25.8)	3191 (26.5)	12027 (100)	12.3	3.0
	Production	500 (4.3)	616 (5.3)	4618 (39.9)	5815 (50.3)	11549 (100)	10.63	2.6
Sugarcane	Area	324 (11.6)	523 (18.7)	849 (30.4)	1088 (39.0)	2784 (100)	235.8	58.9
	Production	20475 (10.1)	3469 (17.1)	66277 (32.8)	80599 (39.8)	202041 (100)	293.6	73.4

Source: Economic Survey of Maharashtra 2007-2008

Note: Figures in the parenthesis indicate percentages to total.

The table no.2.4 shows that there is growth of 27.2 percent in 2007-2008 than compared to 2006-2007 and growth of 32.0 is also there in production. Totally there is a wide growth in the land under cultivation as well as production of the cereals. There is decrease of 12.3 percent in kharip pulses cultivated land in the year of 2007-2008 than that of 2006-2007. Totally the kharip crop cultivated land area has been decreased by 3.3 percent in 2008 than the previous year 2007, but the production has increased by 7.7 percent in the field of kharip beans cultivation there is growth of 10.8 percent and growth of 29.7 percent in the production has also been recognized. Thus there is growth in kharip crops land and production but decrease is also found in some crops.

Various types of crops are taken in Maharashtra. Mainly types of the kharip and the rabbi crops. As per recorded in the past the production of the food grain and other crops in 2007-2008 was totally 152.85 lacks tons and in 2006-2007 which was 127.77 lacks tons of the previous year subsequently by 37.5 percent is found is below.

A) Kharip crops:

All kharip crops in Maharashtra included pulses, cereals and oilseed, sugarcane and cotton. The land cultivation under kharip crops and their production state follows below.

i) Cereals:

The land under cultivation of cereals in 2007-2008 is 23.7 lakhs hectares. The production of cereals is 29.0 lakhs tons. Land under cultivation of rice is 25.6 lakhs hectares and growth in the production is 29.5 lakhs tons. The land under cultivation of kharip Jowar is 21.5 lakhs heater and production is 23.3 lakhs tons. Land under cultivation of Bajara is 21.6 lakhs tons and production is 24.7 lakhs tons. All over the production of cereals is has been increasing.

ii) Pluses:

Land under Kharip pulses cultivation in 2007-2008 is 25.0 lakhs heaters and production is 29.7 lakhs tons totally. Means it has increased compared to that of 2006-2007. But the production of Tur has been increased by 4.4 percent.

iii) Oilseeds:

The land under cultivation of kharip oilseeds of Maharashtra in 2007-2008 is 30.3 hectares and production is 30.5 lakhs tons soybean is the prominent crop of oilseed in Maharashtra and land under cultivation is 79.3 percent and production 26.3 lakhs tons. The land under cultivation of groundnut is 3.2 lakhs heaters and production is 2.8 lakhs tones.

iv) Cotton:

The main cash crop of Maharashtra is cotton. The greater extent of land is under the cultivation of cotton 28.9 lakhs hectares of land was under the cotton cultivation in 2007-2008 and production is 6.2 lakhs tones. Mayoralty area of Vidharbha is under cotton cultivation of Maharashtra.

v) Sugarcane:

Sugarcane is another cash crop taken in Maharashtra. The land and climate in Maharashtra is suitable and nutrition. But now a day from last few years the sugarcane production is decreasing. On the country the expenditure of production is decreasing. To find out causes and apply remedies on that is necessary. New technology of the cultivation should also be applied while farming. The growth of land under sugar cultivation is recognizable in 2007-2008 land under sugarcane cultivation is 5.2 lakhs hectares and total production is 347 lakhs tons. That's why the farmers are turning to other crops than sugarcane.

vi) Rabbi Crops:

Rabbi crops mainly include rabbi Jowar, wheat, grams, and rabbi oilseed and Rabbi Beans. Total land under rabbi crop cultivation (excluding summer crops) in 2007-2008 is 54.5 lakhs hectares. Whereas land under rabbi Jowar cultivation has declined by 33 percent and wheat cultivated area has increased by 36.4 percent. The rabbi crops cultivating land and production can be explained by the chart below.

Table No.2.5

Area and production of principal Rabbi Crops in Maharashtra State

(Area thousand hectores)

(Production in thousand tonnes)

	Area / Production	2004- 2005	2005- 2006	2006- 2007	2007- 2008	Total	Increase(+) / Decrease(-)	Growth Rate
1	2	3	4	5	6	7	8	9
Jowar	Area	3223 (26.0)	3117 (25.1)	3209 (25.8)	2842 (22.9)	12391 (100)	-11.8	-2.9
	Production	1832 (21.1)	2387 (27.5)	2088 (24.0)	2359 (27.2)	8666 (100)	28.7	7.1
Wheat	Area	756 (17.7)	1031 (23.8)	1231 (29.8)	1237 (29.0)	4255 (100)	63.6	15.9
	Production	1016 (15.9)	1420 (22.2)	1869 (29.2)	2081 (32.5)	6386 (100)	104.8	26.2
Other Cereals	Area	74 (43.0)	88 (51.1)	5 (2.9)	5 (2.9)	172 (100)	-93.2	-23.3
	Production	134 (46.2)	151 (52.0)	3 (1.0)	2 (0.6)	290 (100)	-98.5	-24.6
Total Cereals	Area	4053 (23.8)	4236 (24.9)	4531 (26.6)	4167 (24.5)	16987 (100)	2.8	0.7
	Production	2982 (18.9)	3958 (25.2)	4137 (26.3)	4619 (29.4)	15696 (100)	54.8	13.7

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1	2	3	4	5	6	7	8	9
Gram	Area	830 (18.2)	1074 (23.6)	1308 (28.8)	1324 (29.1)	4536 (100)	59.5	14.8
	Production	466 (13.9)	704 (21.1)	924 (27.7)	1241 (37.2)	3335 (100)	166.3	41.5
Other Pulses	Area	91 (17.4)	143 (27.3)	146 (27.9)	142 (27.2)	522 (100)	56.0	14.0
	Production	28 (12.2)	64 (28.0)	66 (28.9)	70 (30.7)	228 (100)	150.0	37.5
Total Pulses	Area	921 (16.3)	1217 (21.5)	1454 (25.7)	1466 (25.9)	5649 (100)	59.1	14.7
	Production	494 (13.9)	768 (21.7)	990 (27.9)	1284 (36.9)	3536 (100)	159.9	39.9
Total Food Grains	Area	4974 (22.5)	5453 (24.7)	5985 (27.1)	5633 (25.5)	22045 (100)	13.2	3.3
	Production	3476 (18.0)	4726 (24.5)	5127 (26.6)	5903 (30.6)	19232 (100)	69.8	17.4
Oilseeds	Area	515 (23.9)	593 (27.6)	590 (27.4)	450 (20.9)	2148 (100)	-12.6	-3.1
	Production	243 (20.0)	346 (28.5)	313 (25.7)	312 (25.7)	1214 (100)	28.3	7.0

Source: Economic Survey of Maharashtra 2007-2008

Note: Figures in the parenthesis indicate percentages to total.

Table no.2.5 shows that the rabbi cultivated land as well as production which have increased. In 2007-2008 rabbi cereals producing land area was 4035 hectares in 2006-2007 means there is rise of 4.5 percent and rise of 32.7 percent is in production.

Total rabbi pulses cultivating land has been increased by 32 percent and in production there is growth of 55.5 percent. The rabbi production land has become 5453 hectares from 4974 hectares means there is growth of 9.6 percent and the production also has risen from 3476 thousand tons to 4726 tons. Means there is growth of 36 percent rabbi beans production has also increased by 42.4 percent. By all this we come to know that there is growth in cultivation as well as in land in 2007-2008 compared to 2007-2007.

vii) Fruits Production:

The fruits production per hectares in Maharashtra is greater compared tradition crop production. In 1990-1991 the total land under fruits production was 2.42 lakhs hectares. The state government is conducting various programmers to increase the fruits production like producing high quality of plants of fruits by plant societies forded by government itself or giving grants for growing particular plants of fruits connected with employment granters system. In 2005-2006 the land brought under fruits production is 11.64 lakhs hectares 15.63 farmers are benefitted by that.

Table No.2.6**Area and production of some main horticultural crops in the state**

(Area in 00 hectares)

(Production in 00 metrication's)

Name of Fruit crops	Item	Banana	Orange	Grapes	Mango	Cashew nut
1	2	3	4	5	6	7
1993-1994	Area	469 (6.8)	603 (4.6)	263 (7.0)	526 (1.8)	340 (3.0)
	production	25293 (10.3)	8566 (7.7)	6408 (6.7)	6943 (9.8)	341 (3.4)
1994-1995	Area	374 (5.4)	437 (3.3)	261 (7.0)	551 (1.9)	199 (1.7)
	production	21183 (8.6)	4390 (3.9)	4331 (4.5)	7274 (10.2)	201 (2.0)
1995-1996	Area	385 (5.6)	534 (4.0)	275 (17.3)	639 (2.2)	199 (1.7)
	production	22168 (9.0)	5578 (4.9)	6784 (7.1)	8435 (11.9)	161 (1.6)
1996-1997	Area	478 (7.0)	865 (6.6)	274 (7.3)	400 (1.4)	306 (2.7)
	production	26627 (10.8)	12047 (10.7)	7509 (7.9)	5279 (7.4)	320 (3.2)
1997-1998	Area	532 (7.7)	1007 (7.7)	244 (6.5)	551 (1.9)	314 (2.7)
	production	31299 (12.7)	10778 (9.6)	5528 (5.8)	7274 (10.2)	119 (1.2)
1998-1999	Area	587 (8.6)	1229 (9.4)	262 (7.0)	562 (1.9)	677 (6.0)
	production	34380 (14.0)	12953 (11.5)	6635 (7.0)	1876 (2.6)	756 (7.7)
1999-2000	Area	613 (8.9)	1411 (10.7)	298 (8.0)	3764 (13.2)	1305 (11.5)
	production	36780 (15.0)	13233 (11.7)	7792 (8.2)	5005 (7.0)	955 (9.7)

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2000-2001	Area	721 (10.5)	1322 (10.1)	298 (8.0)	4035 (14.2)	1384 (12.2)
	production	43305 (17.6)	10776 (9.6)	7790 (8.2)	5005 (7.0)	1015 (10.3)
2001-2002	Area	721 (10.5)	1542 (11.7)	324 (8.7)	4095 (14.4)	1533 (13.6)
	production	43313 (17.6)	8331 (7.4)	9370 (9.9)	5590 (7.9)	1252 (12.7)
2002-2003	Area	574 (8.4)	1508 (11.5)	352 (9.4)	4198 (14.8)	1591 (14.1)
	production	36075 (14.7)	8815 (7.8)	9887 (10.4)	6159 (8.7)	1345 (13.7)
2003-2004	Area	574 (8.4)	1303 (9.9)	390 (10.4)	4254 (15.0)	1615 (14.3)
	production	35588 (14.5)	8754 (7.8)	8960 (9.4)	6847 (9.6)	1576 (16.0)
2004-2005	Area	722 (10.5)	1185 (9.0)	438 (11.7)	4327 (15.2)	1638 (14.5)
	production	45346 (18.5)	7184 (6.4)	12339 (13.0)	4343 (6.1)	1598 (16.3)
2006-2007	Area	73 (1.0)	122 (0.9)	45 (1.2)	448 (1.5)	165 (1.4)
	production	4622 (1.8)	724 (0.6)	1284 (1.3)	646 (0.9)	161 (1.6)
Total	Area	6823 (100)	13068 (100)	3724 (100)	28350 (100)	11266 (100)
	production	245029 (100)	112229 (100)	94676 (100)	70676 (100)	9800 (100)
Increase(+) / Decrease(-)	Area	-84.4	-79.7	-82.8	-14.8	-51.4
	production	-81.7	-91.6	-79.9	-90.6	-52.1
Growth Rate	Area	-6.4	-6.1	-6.3	-1.1	-3.9
	production	-6.2	-7.0	-6.1	-6.9	-4.0

Source: Commissionerate of Agriculture Pune, 2006-2007

Note: Figures in the parenthesis indicate percentages to total.

The table no.2.6 shows that there has become a recognizable growth in 2005-2006 of fruits production than compared to that of 1990-1991. The production of bananas has increased up to 45346 from 16040. The orange production was 2290 thousand tons in 1990-1991 and it has become 7184 thousand tons in 2005-2006. Grapes are increasing in production widely. The production of the grapes has increased to become 12339 thousand tons in 2005-2006 from 2450 thousand tons of 1990-1991. The production of mangos has become 4343 thousand tons from in 2005-2006 from 2444 thousand tons. And production of cashew has increased up to 2598 thousand tons in 2005-2006 from 112 thousand tons of 1990-1991. There is a wide growth in fruits production in 2005-2006 compared to production in 1990-1991. The share of fruit crops is as further mango fruits crop share is 4.33 lakhs hectares pomegranate 0.89 lakhs hectares, orange 1.19 lakhs hectares, Cashew nut 164 hectares, sweet lemon 0.85 lakhs hectares, banana 0.72 lakhs hectares and grapes 0.44 lakhs hectares. But the value of traditional food grain production per hectare is only 4 thousand to 12 thousand. But the value of main fruit production per hectares was like grapes 5.88 lakhs rupees lemon sweet 2.82 lakhs rupees, banana 3.59 lakhs hectares and mango 1.28 lakhs rupees. Due to extra growth of the land under the cultivation of fruits production we find an increase in total agricultural production recognizably.³

2.8) Irrigation in Maharashtra State:

The grocer land under irrigation in 2003-2004 is 29.4 lakhs hectares. From the grocers land under irrigation the land under well water irrigation is 19.1 lakhs hectares. The percentage of 2003-2004 of total area under irrigation is 16.4. It has been stable as 15 percent since 1990-1991 and the production of area under cultivation and area under irrigation has not increased recognizably. The availability of water of the river basins, the cultivable land, the underground water and increase due to water modern means of irrigation considered by state. Irrigation commission the total irrigation capacity of state can be improved up to 126 lakhs hectares. It has been fore told by experts. Among those the share of water deposits on the earth and of the wells is 85 lakhs hectares. To utilize maximally all sources of water in the Maharashtra state. The government has under taken many big medium and small irrigation projects like canals, dams. Though small, big and medium irrigation project the area under irrigation is 51.72 lakhs hectares up to 2005. In total water deposition capacity big

project 45.0 percent, median 13.4 percent and small project share 22.6 percent. The excess water deposition capacity made in 2004-2005 is 1.12 lakhs hectares.

Table No.2.7
Irrigation potential created and utilization by types of projects

Types of project Items	Major		Medium		Minor	
	Irrigation potential created	Actual utilization	Irrigation potential created	Actual utilization	Irrigation potential created	Actual utilization
1	2	3	4	5	6	7
2003-2004	22.85 (19.1)	8.53 (16.3)	6.67 (18.6)	1.57 (14.6)	21.08 (18.7)	6.3 (17.6)
2004-2005	23.27 (19.5)	9.07 (17.4)	6.92 (19.3)	1.33 (12.3)	21.53 (19.1)	3.07 (17.0)
2005-2006	23.80 (19.9)	10.05 (19.3)	7.12 (19.8)	2.17 (20.1)	22.5 (19.9)	6.5 (18.2)
2006-2007	24.37 (20.4)	11.80 (22.6)	7.31 (20.4)	2.76 (25.6)	23.87 (21.1)	8.2 (22.9)
2007-2008	6.6 (20.8)	38.3 (12.60)	9.5 (21.7)	75.7 (27.1)	24.5 (21.7)	8.6 (24.1)
Total	119.14 (100)	52.05 (100)	35.82 (100)	10.75 (100)	112.58 (100)	35.67 (100)
Increase(+) / Decrease (-)	8.7	47.7	16.9	85.9	16.2	36.5
Growth Rate.	1.74	9.5	3.3	17.1	3.2	7.3

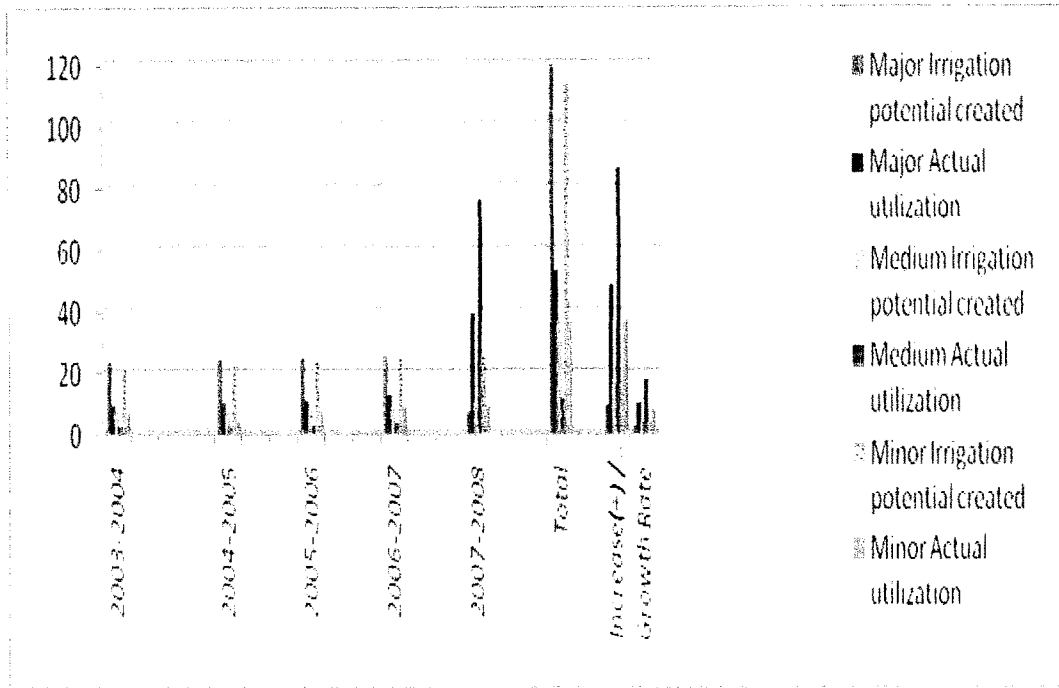
Source: Economic Survey of Maharashtra 2006-2007

Note: Figures in the parenthesis indicate percentages to total.

The table no.2.7 shown this figures indicate that water deposition capacity of irrigation projects is greater, in them the capacity of irrigation of big projects in 2003-2004 was 22.85 lakhs hectares but literal use was only 8.53 lakhs only in 2007-2008 irrigation capacity was 24.85 lakhs hectares but literally used was found only 12.60 lakhs hectares. Whereas the irrigation capacity of medium projects in 2003-2004 was

6.67 lakhs hectares and actual usage was only 1.57 lakhs hectares. In 2007-2008 the irrigation capacity was 7.80 lakhs hectares and actual use was 2.92 lakhs hectares found. The capacity of small projects was only 21.08 lakhs hectares in 2003-2004 and actual use was 6.3 hectares and in 2007-2008 it was 24.5 lakhs hectares and actual use was only 8.6 lakhs hectares merely. The same situation is of canals and other resources. This show that irrigation capacity is not used completely as it is.

Graph No. 2.3
Irrigation positional created and utilization by types of projects



The graph no.2.3 shows that there is a large irrigation capacity but not utilized completely has been discovered the use of irrigation is less than its 50 percent it has been noticed.

2.9) Use of improved seeds in Maharashtra:

To increase the agriculture production in Maharashtra, among the remedies of that the distribution of improved seeds is significant among systems. Both public and private sectors include in the distribution of seeds. In the kharip season 2004 totally 11.94 lakh quintals seeds and rabbi season 2004 totally 3.88 lakh quintals seeds are distributed. In kharip season 2005 public 12.21 lakh quintals and private 4.23 lakh

quintals seeds are distributed. During 2005-2006 crops and species were made available to the farmers.

2.10) Use of Chemical, Fertilizers and Insecticides:

The use of chemical, fertilizers in Maharashtra state in 2005-2006 was 19.4 lakhs tons means 11.5 percent than previous year which was 17.4 lakhs tons of chemical. In 2004-2005 the distribution of chemical, fertilizers was done through 37293 fertilizer distribution centers. Out of those 4672 centers are in co-operative sectors 252 centers are public sector and 32369 centers in private sector. The use of insecticides during 2004 kharif season was 2953 tons and in 1928 tons use of 2005. This is 3 percent less than previous year classification of the farming land area in Maharashtra.

2.11) Classification of the farming:

Since 1970-1971 the agricultural counting is done for per decade. For per five years sample testing is being done by this tonier, small, medium and big landholders and the land they are holding and area production of the farm land area they hold is recognized. It can be illustrated by the chart below.

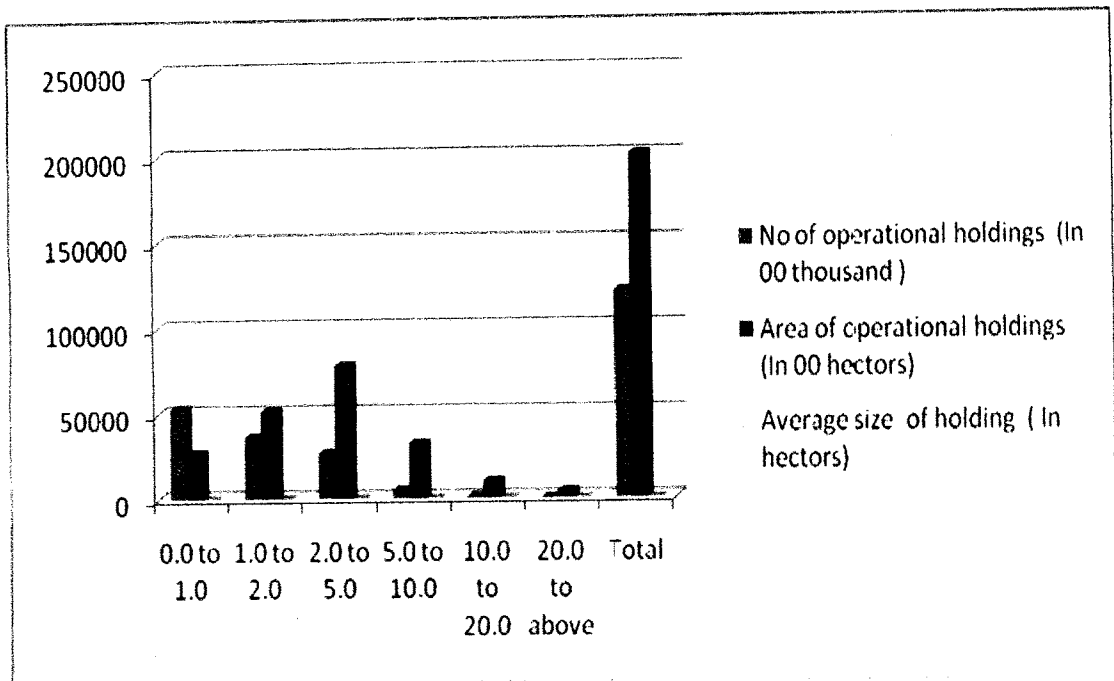
Table No 2.8
Classification of land area in Maharashtra state
Per Agriculture Census, 2000-01

Size class (Hectares)	No of operational holdings (In 00 thousand)	Area of operational holdings (In 00 hectors)	Average size of holding (In hectors)
1	2	3	4
0.0 to 1.0	52880 (43.7)	26408 (13.1)	0.50 (0.7)
1.0 to 2.0	35974 (29.7)	51153 (25.4)	1.42 (2.2)
2.0 to 5.0	26435 (21.5)	77552 (38.6)	2.93 (4.6)
5.0 to 10.0	4849 (4.0)	31920 (15.9)	6.58 (10.4)
10.0 to 20.0	768 (.06)	9898 (4.9)	12.89 (20.5)
20.0 to above	96 (0.07)	3684 (1.8)	38.37 (61.2)
Total	121002 (100)	200615 (100)	1.66 (100)

Source: Economic Survey of Maharashtra 2006-2007

Note: Figures in the parenthesis indicate percentages to total.

Graph No 2.4
Classification of land area in Maharashtra state
Per Agriculture Census, 2000-01



Through table no.2.8 and graph no.2.5 it is shown that there is the information of the number of small landholders is larger but the land they hold is smaller comparatively vice versa the number of big landholders is small and the land they hold is big. On average per person the landholding area is 1.87 hectares. The large number is of 1 to 2 hectares land holders means of small farmers. It compared to counting of farm counting of 1970-1971 the number of small land holders has been increased and number of big land holders has been decreased a bit. By annual classification of land holders we find inequality in distribution of land.

2.12) Usage of Land:

With the figure of usage of land of in 2003-2004 in state of Maharashtra, 17.3 lakhs hectares is pure sowing land 52.1 lakhs hectares is under forest, 31.2 lakhs hectares of land which is not ready for cultivation in availability 24.2 lakhs hectares unworthy and unavailable for planting and 25.2 lakhs hectares barren land area is there in Maharashtra. The usage of the land can be explained by the graph below.

Table No.2.9

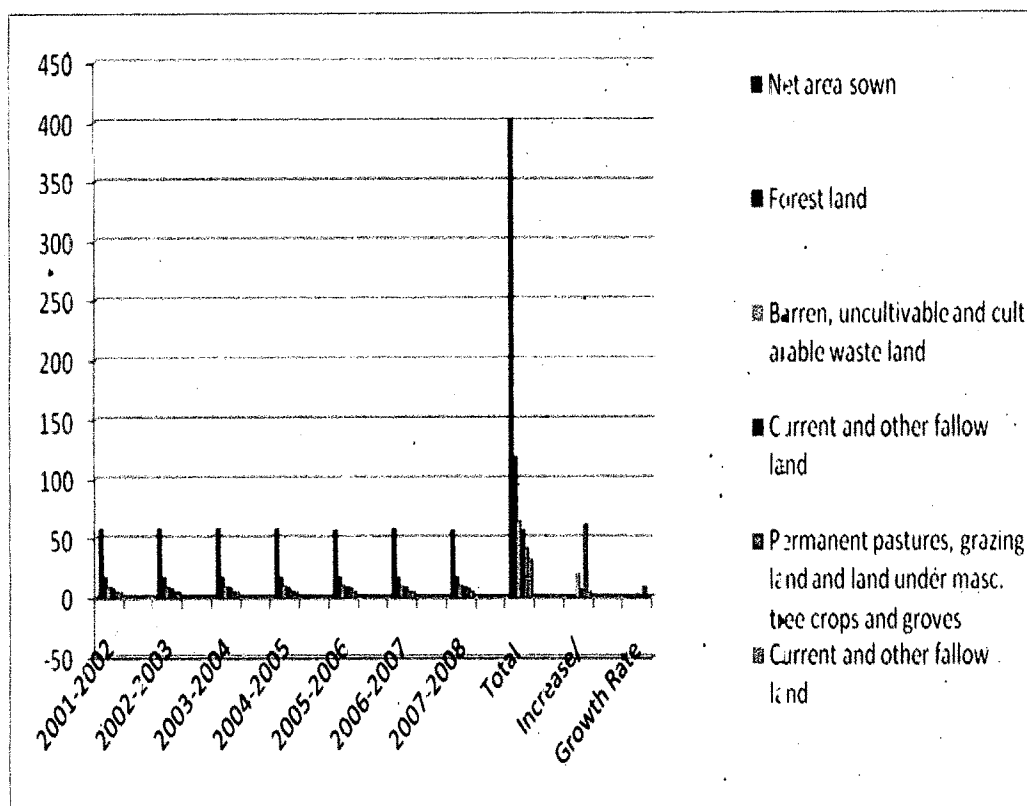
Land utilization in Maharashtra

(In percentage)

Items	Net area sown	Forest land	Barren, uncultivable and culturable waste land	Current and other fallow land	Permanent pastures, grazing land and land under masc. tree crops and groves	Current and other fallow land
1	2	3	4	5	6	7
2001-2002	57.3	17.0	8.5	7.8	4.9	4.5
2002-2003	57.9	16.9	8.5	7.9	4.8	4.4
2003-2004	57.9	16.9	8.5	8.3	4.8	4.5
2004-2005	57.6	16.7	9.5	7.9	5.4	4.4
2005-2006	56.8	16.9	10.2	8.2	7.9	4.6
2006-2007	57.8	16.7	9.5	8.2	5.4	4.5
2007-2008	56.4	16.9	10.2	8.3	7.9	4.7
Total	400.4	118.0	64.9	56.6	41.1	31.6
Increase/Decrease	-1.5	-0.5	20.0	6.4	61.2	4.4
Growth Rate	-0.2	-0.07	2.8	0.9	8.7	0.6

Source: Economic Survey of Maharashtra 2005-2006

Graph No.2.5
Land utilization in Maharashtra



One can have an idea how the land is utilized by the graph. Total land under cultivation is 57.3 percent in 2001-2002, 57.95 percent in 2002-2003 and it 56.68 percent in 2003-2004. The land under forest is 17.0 percent in 2001-2002 and 16.95 percent in 2003-2004. The infertile and a production land in 2006-2007 is 8.5 percent and in 2007-2008 is 8.59 percent.⁴

2.13) Agriculture Finance:

The financial institutions associated with direct agricultural finance in the state are Primary Agricultural Credit Co-operative Societies (PACS) extending short term crops loans to their cultivator members. The number of Agricultural Credit Co-operative Societies (PACS) as the end of 2004-2005 was 21047 with a membership of 106.80 lacks. During 2004-2005 the amount of loans advanced to the cultivator by these Primary Agricultural Credit Co-operative Societies (PACS) was Rs.4109 crore of which Rs.1767 crore i.e. 43 percent were given to small and marginal farmers.

The distribution of direct finance for agriculture and allied activities in the state in 2003-2004 and 2004-2005 by scheduled commercial bank (including nationalized bank) and Regional Rural Bank (RRB) are given in Table below.

Table No.2.10
Purpose wise agriculture loans advanced by commercial bank &
RBI in the state

(Rs. in crore)								
Purpose	Seasonal agricultural operations	Dairy develop ment	Poultry	Fisheries	Agri- imple ments	Horticulture & plantation	Other activities	Total
1	2	3	4	5	6	7	8	9
Commercial Banks								
2003-04	1054 (18.2)	96 (9.7)	22 (10.3)	25 (41.6)	40 (4.4)	153 (7.7)	187 (4.9)	1577 (9.8)
2004-05	1299 (22.4)	133 (13.5)	11 (5.1)	2 (3.3)	64 (7.1)	207 (10.4)	753 (20.0)	2465 (15.3)
2005-06	1935 (33.4)	221 (22.4)	45 (21.1)	8 (13.3)	213 (23.8)	439 (22.1)	696 (18.5)	3824 (23.8)
2006-07	199 (3.4)	250 (25.3)	60 (28.1)	11 (18.3)	280 (31.3)	583 (29.4)	1008 (26.8)	4495 (28.0)
2007-08	1299 (22.4)	285 (28.9)	75 (35.2)	14 (23.3)	295 (33.0)	596 (30.1)	1107 (29.5)	3671 (22.8)
Total	5786 (100)	985 (100)	213 (100)	60 (100)	892 (100)	1978 (100)	3751 (100)	16036 (100)
Increase/ Decrease	23.2	196.8	240.9	-44.0	637.5	289.5	491.9	132.7
Growth Rate	4.6	39.3	48.1	-8.8	127.5	57.9	98.3	26.5

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1	2	3	4	5	6	7	8	9
RBI								
2003-04	122 (11.3)	3 (7.1)	-	-	17 (30.9)	2 (8.6)	8 (11.1)	152 (11.6)
2004-05	134 (12.4)	3 (7.1)	-	-	1 (1.8)	3 (13.0)	29 (40.2)	170 (13.0)
2005-06	177 (16.4)	6 (14.2)	1 (33.3)	1 (33.3)	6 (1098)	3 (13.0)	8 (11.1)	211 (16.1)
2006-07	301 (27.9)	13 (30.9)	1 (33.3)	1 (33.3)	12 (21.8)	6 (26.0)	11 (15.2)	367 (28.1)
2007-08	343 (31.8)	17 (40.4)	1 (33.3)	1 (33.3)	19 (34.5)	9 (39.1)	16 (22.2)	406 (31.0)
Total	1077 (100)	42 (100)	3 (100)	3 (100)	55 (100)	23 (100)	72 (100)	1306 (100)
Increase/ Decrease	181.1	466.6	0	0	11.7	350.0	100.0	167.1
Growth Rate	36.2	93.3	0	0	2.3	70.0	20.0	33.4

Source: Economic Survey of Maharashtra 2006-2007

Note: Figures in the parenthesis indicate Percentages to total.

During 2007-2008 the amount of loans advanced for agriculture and allied activities by Primary Agricultural Credit Co-operative Societies (PACS) commercial bank (including nationalized bank) and Regional Rural Bank (RRB) taken together in the state was Rs.6748 crore which was more by 23.3 percent than that of the previous year Rs.5474 crore.⁵

2.14) Development in the bio-technology:

In order to examine the agricultural production for meeting the requirements of the increasing population it has been necessary to adopt bio-technology in the field of agriculture. According to the state government has established a committee for enlarging the scope government of Maharashtra has announced its bio-technology policy in January 2002 and constituted Maharashtra bio-technology board under the

chairmanship of the chief minister. The board on these diverse trade policy related issues.

The government has decided to supply electricity to the Agro-bio-technology companies at the rates prevailing in agriculture sector and further to establish the centre for research and development. Besides this a Parma bio-technology park at Hinjawadi (Pune), agro bio-technology Park at Shendra (Jalana), and Akola are also established. The bio-technology units are eligible under this scheme for all the benefit available to industry units located in D and D+ industry zones.⁶

2.15) Land reforms in Maharashtra:

The policy of reforming the agrarian system continued in the state. As a result of the implementation of the tenancy law as come in force in Maharashtra between 1957 to 1965 right of ownership was cornered on about 14.92 lacks tenants in respect of 1736 lakhs hectares of land by the end of March 2004.

The work of computerization of village from No 7/12 has been computerized in the state. This was taken up under 100 percent centrally sponsored scheme for computerization of land record. The data entry work of all the 7/12 forms totaling to 212 lacks in the state has been completed validation and verification of been completed. The computerized print outs of record of rights are made available at taluka level across the counter.

2.16) Conclusion:

The broad conclusions that emerge from the study of land use pattern in Maharashtra during the period 1991 to 2006 are summarized as follows,

Since the beginning of planned economic development, not a very significant change has occurred in different land categories. The area under forest remained unchanged round about 16.91 percent of the total geographical area. The land put to non agricultural uses has been increased from 11577 hundred hectares or 3.73 percent in 1990-1993 to 13428 hundred hectares or 4.43 percent in 2007-08. This is bound to occur as the development process gets accelerated and consequently the process of organization and industrialization gets accelerated. The agricultural lands are being increasingly converted into the non agricultural lands for dwelling and industrial proposes. This reflected in a decrease in the net shown area over the period. In concern to the other uncultivated land use category it did not make any contribution to

the net area sown for the whole period. The fallow land has made a small contribution to net sown area during the period under study.

However the area sown more than once registered an increasing trend. It was 9.51 percent or 29339 hundred hectares in 1990-93 which steadily increased to 47862 hundred hectares or 15.55 percent in 2007-2008 because of increasing irrigation facilities in the state. As a result gross cropped area has increased to 223867 hundred hectares or 71.78 percent in 2007-2008 over the base year 1990-93. The major contribution to the gross cropped area should come from the area sown more than once. The gross cropped area sown is likely to increase only through bringing agricultural lands under multiple cropping is possible only when increasing irrigation facilities are made available through construction of minor irrigation dams. We are therefore of the view that with a view to increasing gross cropped area emphasis should be placed on irrigation in the drought prone and dry tracts of the state.

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