

# Use of Crop Ranking Technique for Quantitative Evaluation of Landuse in Ahmednagar District in 1960-61 and 2010-11

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**Abstract**— *The net sown area, current fallows and land under tree crops and groves are included in agricultural land use. Use of land is an important factor for planning process because of the finite nature of land resource. Ahmednagar district in Maharashtra covered an area of about 17 lakh hectare comprising nearly 73.52percent area under net sown area in 1971-1972. Area under forest decreased slightly, area not available for cultivation decreased by 0.52 percent, other uncultivated area increased by 0.38 percent, while fallow land decreased by 0.92 percent during that period. Among the talukas, overall volume of change is greater in Nagar, Sangamner, Shirampur and Newasa tahsils probably due to dynamic conditions existing there.*

**Keywords**— *Land Utilization, Fallow land, Net Sown Area.*

## I. INTRODUCTION

Agriculture is very important occupation in most of the Indian states. Agricultural scientists, economists, geographers and many others are engaged in the study of agriculture. Utilization requires proper planning for being limited resource. For agriculture, land is a very important resource. For its large area size, and physical and socio-cultural diversities, Ahmednagar has different types of land uses. Agriculture is predominant economic activity in Ahmednagar, engaging nearly three-fifths of its working population. Though the share of agricultural sector in gross domestic product has considerably declined to about one-fourth yet the importance of agriculture as employment provider to workforce especially in the countryside is very high. Obviously, agriculture forms the hub of Indian economy as a large number of industries are also heavily dependent on agriculture for supply of raw materials. Agriculture involves not only crops rising but also animal ranching and fishing. Here an attempt has been made to study the land use pattern in Ahmednagar district from 1960-61 to 2010-11.

## II. DATA SOURCE & METHODOLOGY

Secondary data has been used from Socio-Economic Reviews and District Statistical Abstracts of Ahmednagar District from 1961 to 2011. The data have been collected for various crops for the year 1960-61 and 2010-11 in both kharif and rabbi crops from taluka headquarter office, Ahmednagar District Gazetteer, Socio-Economic Abstract of Ahmednagar District and Census Handbook of Ahmednagar District are sources of data for this study. It is supplemented by numerous spot-inquiries. The areas of crop have converted into percentage (to net sown area) which is later on, used for ranking of crops to identify the relative strength of individual crop.

### 2.1 Objectives

- To know the availability of land in Ahmednagar and its different uses.
- To present area wise efficiency of the crops grown in the taluka by ranking and analysis the factors responsible for this rank distribution.

### 2.2 Study Area

Ahmednagar district in western Maharashtra region of Maharashtra state is an economically and agriculturally developed area. In 1961-62, there were thirteen tahsils in Ahmednagar district. The District 'Ahmednagar' is located middle part of the bank of Godavari and Mula river. This lays between 18°02'North 19°09'north to 73°09'East 75°05'East longitude with an area of 1701836 hectors of land and in thirteen tahsils as per 1971-72 District gazetteers. It has an average elevation of 549 metres (1,801 ft) from mean sea level Physiography, rainfall, soil, temperature, and drainage influences on agricultural land use pattern in this district. Rainfall varies between 508 to 635 mms annually. The underline basalt on disintegration and decomposition brought various agents had yielded three kinds of soils viz. Deep black, deep & shallow Alluvial soils in Pravara, Mula and Seena river basins. These rivers are main irrigation source of middle district areas. The rainfall is mainly due to rain shadow area in term of amount of rainfall average receives 571.5 mms in western and middle part of district but southern part of district six talukas are totally drought prawn area. Therefore these areas are mostly hilly and unirrigated. The

variation in amount of rainfall & type of soil exerts influence on the Land use pattern of the study region in 1960-61 to 2010-11.

The crops growth and cultivation are closely related to environmental condition, use of high yielding varieties seeds, improved and efficient instrument, new irrigation technique, applications of chemical fertilizers and pesticides. The hectare under individual crop gives comparative efficiency and realistic picture of crop landuse in the analysis of crop ranking of the study region. The ranks of crops and their combination provide spatial variation in the distribution patterns. In this respect the study of crop combination and diversification manifests the present agricultural scenario.

### 2.3 Crop Ranking

**TABLE 1**  
**CROPS RANKING (1960-61)**

Sr. No.	Crops	Crops Ranks and Number of Talukas							
		I	II	III	IV	V	VI	VII	VIII
1	Jawar	11	01	--	--	--	--	01	--
2	Bajara	01	07	01	02	01	01	--	--
3	Fodder Crops	01	--	--	02	03	01	05	01
4	Pulses	--	03	03	04	01	02	--	--
5	Oilseeds	--	01	07	01	04	--	--	--
6	Sugarcane	--	01	01	01	--	--	01	03
7	Cotton	--	--	01	01	--	02	03	04
8	Wheat	--	--	--	01	04	07	01	--
9	Rice	--	--	--	01	--	--	--	--
10	Vegetables	--	--	--	--	--	--	01	04
11	Condiments & Spices	--	--	--	--	--	--	01	01
<b>Total Talukas</b>		<b>13</b>	<b>5</b>	<b>12</b>	<b>13</b>	<b>4</b>	<b>9</b>	<b>2</b>	<b>5</b>

*(Compiled by the Researcher)*

**TABLE 2**  
**CROPS RANKING (2010-11)**

Sr. No.	Crops	Crops Ranks and Number of Talukas							
		I	II	III	IV	V	VI	VII	VIII
1	Jawar	05	01	01	--	--	01	01	01
2	Bajara	04	06	01	--	01	--	01	--
3	Oilseeds	02	01	--	03	01	--	01	01
4	Cotton	01	01	01	--	01	02	--	01
5	Fodder Crops	01	--	--	--	--	01	04	03
6	Sugarcane	01	01	01	02	--	02	02	03
7	Wheat	--	01	05	--	05	01	--	--
8	Pulses	--	01	03	01	04	03	02	--
9	Rice	--	01	--	--	--	--	--	--
10	Vegetables	--	01	01	03	02	03	--	--
11	Condiments & Spices	--	--	01	--	--	--	--	--
12	Fruits	--	--	--	02	--	01	02	03
13	Maize	--	--	--	01	--	--	01	02
<b>Total Talukas</b>		<b>14</b>	<b>5</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>5</b>

*(Compiled by the Researcher)*

The ranking attained for thirteen crops in 1960-61 and 2010-11 for thirteen main crops in the district to recognize the comparative value of individual crop in cropping pattern. The first eight ranking crops have been recognize and mapped (Map 1 to Map 8). The ranking of crops and number of talukas have been shown in Table 1 and 2.

### 2.3.1 First Ranking

Map 1.A and B have shown the first ranking crops in the district. Three crops were respectively Jawar, Bajra and Fodder crops in 1960-61 and six crops respectively jawar, bajra, oilseeds, cotton, fodder crops and sugarcane in 2010-11 are recognize occupied first rank. In the district Jawar was the major crop stands as first rank and found to have largest coverage in the district from 1960-61 to 2010-11. The auspice environment in the district was beneficial for growing jawar on light black soils. In 1960-61, jawar was covered on 642779 hectares (88.46%) in eleven talukas, respectively, Kopargaon, Rahata, Shrirampur, Newasa, Shevgaon, Pathardi, Nagar, Rahuri, Parner, Shrigonda, Karjat and Jamkhed while in 2010-11 Jawar had covered on 287331 hectares (54.50%) in the five talukas, viz. Nagar, Parner, Shrigonda, Karjat and Jamkhed in the district. It observed 33.96 percent area decreased within the study period.

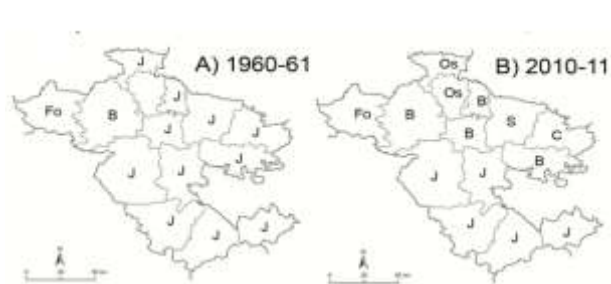
Bajara was identified as the second major crop in 1960-61 in the area under study. Bajara was the major crop grown in Sangamner taluka of the district (Map 1.A) and covered 57564 hectares (7.92%). While bajara identified as the second major crop in 2010-11 in the area under study. Bajara had grown in four talukas respectively Sangamner, Rahuri, Pathardi and Shrirampur and confined to the middle part of the district (Map 1.B) covered 104425 hectares (19.81%). The other crops were growing like jawar and bajara were not growing on the slopping land. Fodder crops were as major crop in Akole taluka. A Fodder crops was hold first rank on 26289 hectares (3.62%) at Akole taluka in 1960-61. Oilseeds hold first rank on 31321 hectares (5.94%) in 2010-11 at Kopargaon and Rahata talukas. The preference of farmers of this talukas leads to cultivation of oilseeds (Map 1.A&B). Then Sugarcane holds first rank on 47140 hectares (8.94%) at Newasa taluka while fodder crops rank first on 42621 hectares (8.08%) at Akole taluka in the district. While Cotton holds first rank on 14330 hectares (2.72%) at Shevgaon taluka (Map 1.B).

### 2.3.2 Second Ranking

The second ranking crops were relatively more than those of first ranking. Map 2.A & B reveals five crops respectively Bajara, Pulses, Jawar, Sugarcane and Oilseeds in 1960-61 and nine crops in 2010-11 ranked second. These nine crops are Bajara, Cotton, Pulses, Jawar, Sugarcane, Vegetables, Rice, Wheat and Oilseeds. In 1960-61 Bajara was dominant in the district and holds the second rank in seven talukas viz. Rahuri, Newasa, Shevgaon, Pathardi, Parner, Akole and Kopargaon of Ahmednagar district. It covered 144059 hectares area in the district (Map 2.A) and associated with the land and climatic conditions of these talukas which was very favourable for bajara cultivation. While in 2010-11 Bajara was dominant in the district and holds the second rank in six talukas respectively Kopargaon, Rahata, Shevgaon, Nagar, Parner and Karjat and occupied wide spread in size in Ahmednagar District. It covered 135172 hectares (51.26%) area in the district (Map 2.B). The land and climatic conditions of those talukas were very favourable for vegetable cultivation.

In 1960-61 (Map 2.A) Pulses ranked second in three talukas viz. Nagar, Karjat and Shrigonda covered 31937 hectares (14.24%) in the district (Map 2.A). The relative intensity of concentration of pulses was in Shrigonda, Nagar and Karjat talukas. While Jawar rank second in Sangamner talukas covered 26362 hectares (11.75%) in the district (Map 2.A). Sugarcane and Oilseeds also identified as second ranked crops in the district. Sugarcane occupied 13348 hectares (5.95%) in Shrirampur taluka while Oilseeds occupied 8611 hectares (3.84%) in Jamkhed taluka (Map 2.A).

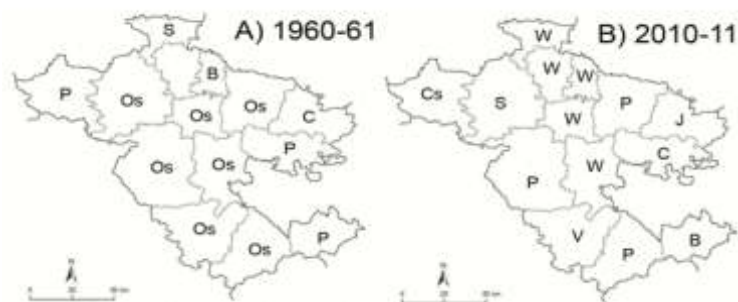
In 2010-11 (Map 2.B) Cotton ranked second in Newasa taluka covered 28006 hectares (10.62%) in the district (Map 2.B). Pulses stand second in Jamkhed taluka covered 25149 hectares (9.54%) in the district (Map 2.B). Jawar ranked second in Pathardi taluka covered 23137 hectares (8.77%) in eastern part of the district. These taluka were associated with low rainfall in the district as it appears to hardly crop to grow. Sugarcane ranked second in Rahuri taluka covered 15285 hectares (5.80% in the district. Vegetable ranked second in Sangamner taluka covered 10358 hectares (3.93%) in the district. Rice ranked second in Akole taluka covered 9810 hectares (3.72%) in western part of the district. These taluka are associated with high rainfall in the district as it appears to hardly crop to grow. Wheat and Oilseeds also identified as second ranked crops in the district. Wheat occupied 9635 hectares (3.65%) in Shrigonda taluka while Oilseeds occupied 7127 hectares (2.70%) in Shrirampur taluka (Map 2.B).



MAP 1: Ahmednagar District First Ranking Crop



MAP 2: Ahmednagar District Second Ranking Crop



J	Jawar	C	Cotton	S	Sugarcane	R	Rice
B	Bajara	Fo	Fodder crop	W	Wheat	F	Fruits
Os	Oilseeds	V	Vegetables	p	Pulses	M	Maize
Cs	Condiments & Spices						

MAP 3: Ahmednagar District Second Ranking Crop

### 2.3.3 Third Ranking

It is evident from Map 3 that the third ranking crops were widely spread in their areal distribution pattern. The ranking crops were Oilseeds, Pulses, Bajara, Sugarcane and Cotton in 1960-61 and eight in numbers in 2010-11. These eight crops were Wheat, Pulses, Jawar, Bajara, Cotton, Sugarcane, Vegetables and Condiments and Spices. It has seen from Map 3.A & B that oilseeds occupied first position covered 64825 hectares ( 52.37%) in seven talukas respectively Nagar, Rahuri, Newasa, Sangamner, Parner, Shrigonda and Karjat in 1960-61 while in 2010-11 wheat occupied 39460 hectares (42.59%) in five talukas respectively Kopargaon, Rahata, Shrirampur, Nagar and Rahuri hold third rank in Ahmednagar district while Pulses occupied 23584 hectares (19.5%) in Akole, Pathardi and Jamkhed talukas. Bajara, Sugarcane and Cotton hold third rank in the district (1960-61) and observed each in one taluka. Sugarcane occupied 12552 hectares (10.14%) in Kopargaon taluka, Bajara occupied 11454 hectares (9.25%) in Shrirampur taluka, while Cotton occupied 11369 hectares (9.18%) in Shevgaon taluka in the Ahmednagar District (Map 3.A).

Pulses hold third rank in the district and observed in three taluka (2010-11) occupied 18923 hectares (20.42%) in Newasa, Parner and Karjat talukas. Sugarcane, Bajara, Condiments and Spices, Jawar, Cotton and Vegetables stands as third ranking crops each in one taluka. Sugarcane occupied 9282 hectares (10.02%) in Sangamner, Bajara occupied 6195 hectares (6.69%) in Jamkhed, Condiments & Spices occupied 6087 hectares (6.57%) in Akole taluka, Jawar occupied 5670 hectares (6.12%) in Shevgaon taluka while Cotton occupied 4590 hectares (4.95%) in Pathardi taluka and Vegetables occupied 2446 hectares (2.64%) in Shrigonda taluka in the district (Map 3.B).

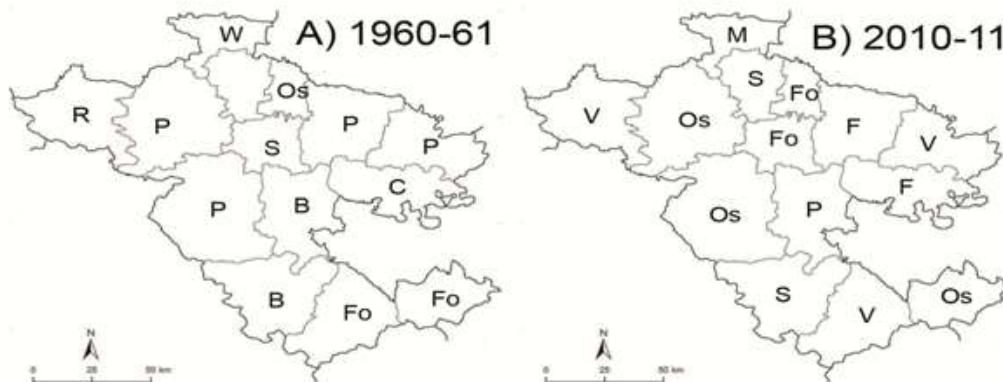
### 2.3.4 Fourth Ranking

Fourth ranking crops were presented a much varied distribution both were space and the number of crops involved (Map 4.A & B). There were eight crops, viz. Pulses, Bajara, Fodder crops, Oilseeds, Sugarcane, Cotton, wheat and Rice in 1960-61 and seven crops respectively Oilseeds, Vegetables, Sugarcane, Fruits, Fodder crops, Pulses and Maize in 2010-11. Pulses hold largest covered (i.e. 39.54 percent in 1960-61) among fourth ranking crops in Ahmednagar District. It was cultivated in Newasa, Shevgaon, Parner and Sangamner in 1960-61 and it covered 35254 hectares (39.54%).

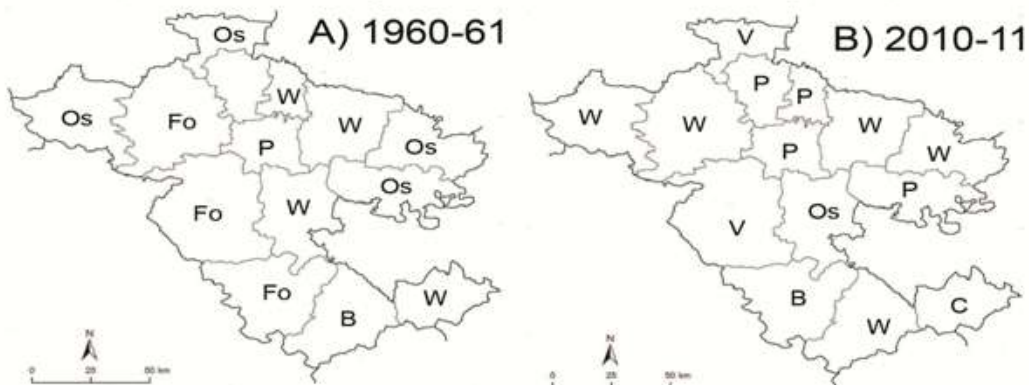
While in 2010-11 Oilseeds and Vegetables cultivated in three talukas Viz. oilseeds occupied Sangamner, Parner and Jamkhed talukas covered 15733 hectares (29.38%) and vegetables occupied Akole, Shevgaon and Karjat talukas covered 10663 hectares (19.91%). Bajara and Fodder crops hold fourth rank in the district (1960-61) and observed each in two-two talukas. Bajara occupied 13864 hectares (15.55%) in Nagar and Shrigonda talukas while Fodder crops occupied 8967 hectares (10.06%) in Karjat and Jamkhed talukas. Wheat, Rice, Oilseeds, Cotton and Sugarcane hold fourth rank in the district (1960-61) and observed each in one- one taluka. Wheat occupied 8667 hectares (9.69%) in Kopargaon taluka, Rice

occupied 8052 hectares (9.03%) in Akole taluka, Oilseeds occupied 4834 hectares (5.42%) in Shrirampur taluka, Cotton occupied 4806 hectares (5.39%) in Pathardi taluka, while Sugarcane occupied 4743 hectares (5.32%) in Rahuri taluka in Ahmednagar district, (Map 4.A & B).

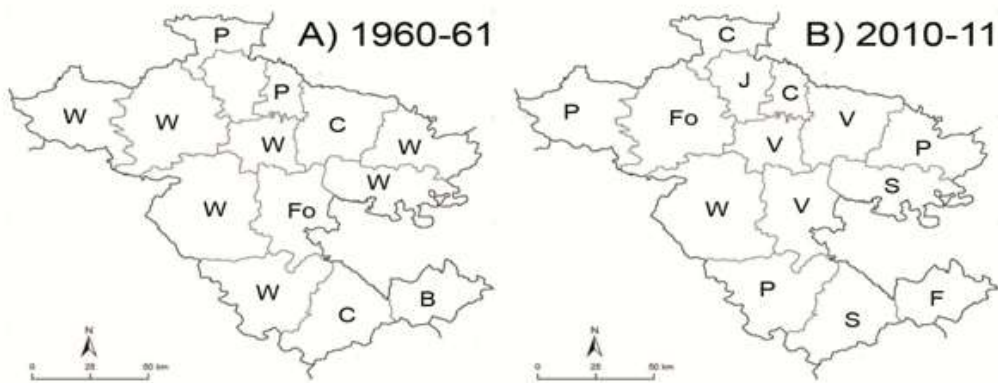
Fodder crops, Fruits and Sugarcane hold fourth rank in the district and observed each in two talukas (2010-11). Fodder crop occupied 6867 hectares (12.82%) in Shrirampur and Rahuri talukas. Fruits occupied 6396 hectares (11.94%) in Newasa and Pathardi taluka while Sugarcane occupied 5713 hectares (10.67%) in Rahata and Shrigonda talukas. Maize and Pulses are grown in one taluka each, Maize occupied 6185 hectares (11.55%) in Kopargaon taluka While Pulses occupied 1989 hectares (3.71%) in Nagar taluka (Map 4.B).



**MAP 4: Ahmednagar District Fourth Ranking Crop**



**MAP 5: Ahmednagar District Fifth Ranking Crop**



J	Jawar	C	Cotton	S	Sugarcane	R	Rice
B	Bajara	Fo	Fodder crop	W	Wheat	F	Fruits
Os	Oilseeds	V	Vegetables	P	Pulses	M	Maize
		Cs	Condiments & Spices				

**MAP 6: Ahmednagar District Sixth Ranking Crop**

### 2.3.5 Fifth Ranking

The numbers of crops in fifth rank were five in 1960-61 and six in 2010-11 and were spread throughout the district. The crop distributional pattern in this ranking was more fragmented and diversified (Map 5.A & B). An oilseed holds largest covered (38.58 percent in 1960-61) among fifth ranking crops in Ahmednagar District. It was cultivated in Shevgaon, Pathardi, Akole and Kopargaon talukas and area covered 22681 hectares (38.58%). Wheat also cultivated in four talukas (Nagar, Jamkhed, Shrirampur and Newasa) in the area 18249 hectares (31.04%). Fodder crop hold fourth rank in the district and observed in two talukas (1960-61). Fodder crops occupied 10207 hectares (17.36%) in Sangamner, Parner and Shrigonda talukas. Pulses and Bajara were grow in one taluka each, Pulses occupied 4147 hectares (7.05%) in Rahuri taluka while Bajara occupied 3507 hectares (5.97%) in Karjat taluka. (Map 5.A).

The increased crops were six in number (2010-11) that include Wheat, Pulses, Vegetable, Bajara, Cotton and Oilseeds. Wheat was dominant crop in the district. Wheat covered 15081 hectares (35.08%) comprising five talukas, respectively Akole, Sangamner, Newasa, Shevgaon and Karjat. Pulses covered 10746 hectares (24.99%) comprising four talukas respectively, Rahata, Shrirampur, Pathardi and Rahuri (Map 5.B). Vegetable also cultivated in two talukas (Kopargaon and Parner) in the area covered 11623 hectares (27.03%). Bajara, Cotton and Oilseeds stand as fifth ranking crops each in one taluka. Bajara occupied 2325 hectares (5.41%) in Shrigonda taluka, Cotton occupied 1782 hectares (4.14%) in Jamkhed taluka and Oilseeds occupied 1436 hectares (3.34%) in Nagar taluka in Ahmednagar District (Map 5.B).

### 2.3.6 Sixth Ranking

There were five crops which emerge in sixth rank in 1960-61 while seven crops in sixth rank in 2010-11 in the district. In 1960- 61 the crops were Wheat, Pulses, Cotton, Bajara and Fodder crops. Sixth rank crops indicate diversity in number and crop distribution in the area under study.

Among the five crops, Wheat hold largest coverage (53.94 percent in 1960-61) among fifth ranking crops in Ahmednagar District. It is cultivated in seven talukas (Rahuri, Shevgaon, Pathardi, Shrigonda, Parner, Akole and Sangamner) in the area covered 21869 hectares (53.94%). Pulses and Cotton are cultivated in two talukas each. Pulses covered 7552 hectares (18.63%) in Shrirampur and Kopargaon talukas while Cotton covered 6180 hectares (15.24%) in Newasa and Karjat talukas. Fodder crops and Bajra cultivated in one taluka under each crop. Fodder crops covered 3015 hectares (7.44%) in Nagar taluka while Bajara covered 1928 hectares (4.76%) in Jamkhed taluka in Ahmednagar District (Map 6.A).

There were seven crops which emerged in sixth rank in the district. In 2010-11 the crops were Vegetables, Pulses, Cotton, Sugarcane, Fodder Crops, Wheat, Jawar and Fruits. Sixth rank crops indicate diversity in number and crop distribution in the area under study. Among the seven crops, Vegetable and Pulses are dominant crops in the district. Vegetables covered 6003 hectares (17.90%) comprising three talukas, respectively Newasa, Nagar and Rahuri talukas. Pulses covered 5559 hectares (16.57%) comprising three talukas respectively Akole, Shevgaon and Shrigonda. Cotton and Sugarcane are cultivated in two talukas each. Cotton covered 8222 hectares (24.51%) in Shrirampur and Kopargaon talukas while Sugarcane covered 2237 hectares (6.67%) in Pathardi and Karjat talukas. Fodder crops, Wheat, Jawar and Fruits cultivated in one taluka under each crop. Fodder crops covered 3851 hectares (11.48%) in Sangamner taluka, Wheat covered 3800 hectares (11.33%) in Parner taluka, Jawar covered 2467 hectares (7.36%) in Rahata taluka while Fruits covered 1400 hectare (4.17%) in Jamkhed taluka in Ahmednagar District ( Map 6.B).

### 2.3.7 Seventh Ranking

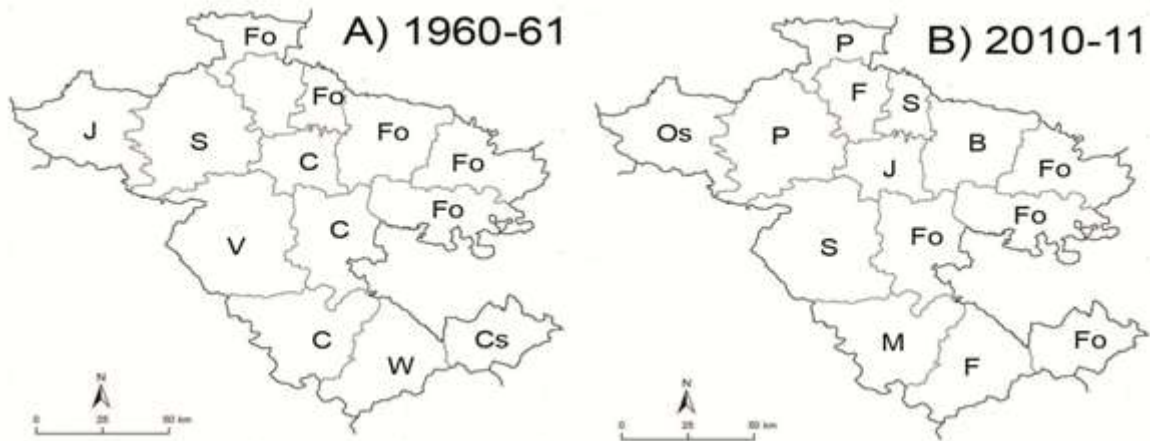
In 1960-61 the numbers of crops in seventh rank were seven and were spread throughout the district. The crop distributional pattern in this ranking was more diversified. Those crops were Fodder crops, Cotton, Vegetables, Sugarcane, Wheat, Jawar and Condiments & Spices. Among the seven crops Fodder crops was principal crops found in five talukas. Fodder crops covered 10377 hectares (46.25%). The largest coverage of fodder crops found in the talukas respectively Shrirampur, Newasa, Shevgaon, Pathardi and Kopargaon talukas. Cotton was cultivated in three talukas respectively Nagar, Rahuri and Shrigonda covered 5557 hectares (24.77%) in the district. Vegetable, Sugarcane, Wheat, Jawar and Condiments & Spices were cultivated in one taluka each. vegetables covered 1667 hectares (7.43%) in Parner taluka, Sugarcane covered 1668 hectares (7.43%) in Sangamner taluka, Wheat covered 1468 hectares (6.54%) in Karjat taluka, Jawar covered 1215 hectares (5.42%) in Akole taluka while Condiments & Spices covered 485 hectares (2.16%) in Jamkhed taluka of Ahmednagar District (Map 7.A).

The numbers of crops in seventh rank were eight (2010-11) and were spread throughout the district. The crop distributional pattern in this ranking was more diversified. Those crops were Fodder crops, Sugarcane, Pulses, Fruits, Jawar, Bajara,

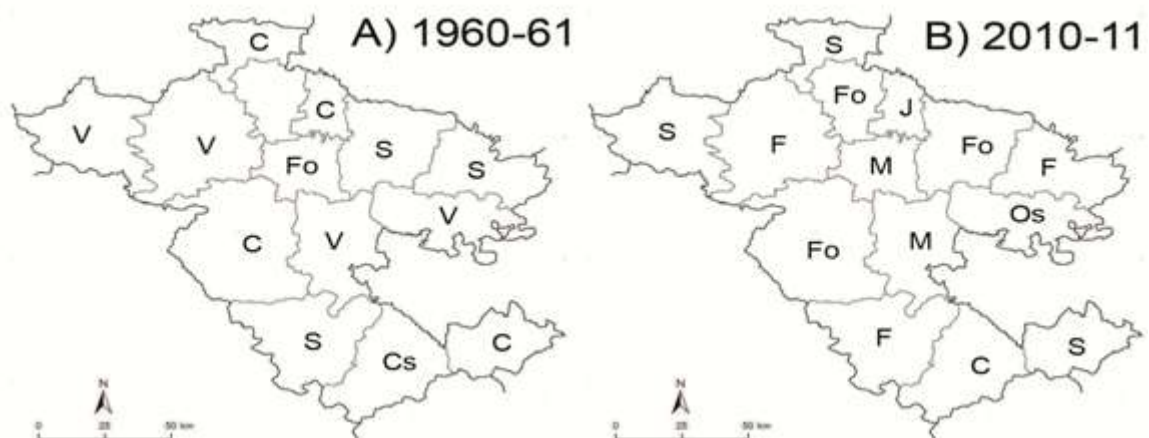
Oilseeds and Maize. Among the eight crops fodder crops was found largest coverage on 2348 hectares (10.61%). The largest coverage of fodder crops was found in the talukas respectively Shevgaon, Pathardi, Nagar and Jamkhed. Pulses, Sugarcane and Fruits were cultivated in two talukas each. Pulses covered 7234 hectares (32.69%) in Sangamner and Kopargaon talukas, Sugarcane covered 3598 hectares (16.26%) in Shrirampur and Parner talukas while Fruits covered 2831 hectares (12.79%) in Rahata and Karjat talukas. Oilseeds, Bajara, Jawar and Maize were cultivated in one taluka under each crop. Oilseeds covered 2020 hectares (9.13%) in Akole taluka, Bajara covered 1705 hectares (7.71%) in Newasa taluka, Jawar covered 1315 hectares (5.94%) in Rahuri taluka while Maize covered 1075 hectares (4.86%) in Shrigonda taluka of Ahmednagar District (Map 7.B).

**2.3.8 Eighth Ranking**

In 1960-61 there were five crops which emerge as eighth in rank in Ahmednagar District. The crops were Cotton, Vegetables, Sugarcane, fodder crops and Condiments and Spices. Eight rank crops indicate diversity in number and crop distribution in the area under study. Among the five crops Cotton and Vegetables were the principal crops found largest coverage in the district. Cotton coverage on 3762 hectares (32.43%) and found in four talukas respectively Shrirampur, Kopargaon, Parner and Jamkhed. Vegetables covered 3208 hectares (27.65%) and found in four talukas respectively Sangamner, Pathardi, Nagar and Akole. Sugarcane covered on 2070 hectares (17.84%) and found in three talukas viz, Newasa, Shevgaon and Shrigonda. Fodder crops and Condiments and spices cultivated in one talukas under each crop. Fodder crops covered 2036 hectares (17.55%) in Rahuri taluka, Condiments and Spices covered 525 hectares (4.53%) in Karjat taluka in Ahmednagar District (Map 8.A).



**MAP 7: Ahmednagar District Seventh Ranking Crop**



J	Jawar	C	Cotton	S	Sugarcane	R	Rice
B	Bajara	Fo	Fodder crop	W	Wheat	F	Fruits
Os	Oilseeds	V	Vegetables	P	Pulses	M	Maize
		Cs	Condiments & Spices				

**MAP 8: Ahmednagar District Eighth Ranking Crop**

There were seven crops (in 2010-11) which emerged as eighth in rank in Ahmednagar District. The crops were Sugarcane, Fodder crops, Fruits, Maize, Jawar, Cotton and Oilseeds. Eight rank crops indicate diversity in number and crop distribution in the area under study. Among the seven crops Sugarcane, Fodder crops and Fruits were the principal crops found largest coverage in the district. Sugarcane covered 5734 hectares (29.70%) and found in three talukas respectively Akole, Kopargaon and Jamkhed talukas, Fodder crops coverage on 4834 hectares (25.04%) and found in three talukas respectively Rahata, Newasa and Parner talukas While Fruits occupied 4607 hectares (23.86%) in three talukas respectively Sangamner, Shevgaon and Shrigonda talukas. Maize was cultivated in two talukas viz. Nagar and Rahuri covered 1382 hectares (7.16%). Jawar, Cotton and Oilseeds cultivated in each crop one taluka. Jawar covered 2099 hectares (10.87%) in Shrirampur taluka while Cotton covered 398 hectares (2.06%) in Karjat taluka and Oilseeds covered 254 hectares (1.32%) in Pathardi taluka in Ahmednagar District (Map 8.B).

### III. CONCLUSION

- The ranking of crops denotes the relative strength of individual crops. Jawar ranks as the first ranking crop in 11 talukas respectively, Kopargaon, Rahata, Shrirampur, Newasa, Shevgaon, Pathardi, Nagar, Rahuri, Parner, Shrigonda, Karjat and Jamkhed (85% to total talukas) and consequently occupies an outstandingly predominant position in 642779 hectares in 1960-61.
- In 2010-11 Jawar had covered on 287331 hectares (54.50%) in the five talukas, viz. Nagar, Parner, Shrigonda, Karjat and Jamkhed in the district.
- Bajara stands second in rank in six tahsils (43 % to total tahsils) and wheat stand third in rank in five tahsils. Other crops namely sugarcane, pulses, oilseeds, fodder crop, cotton, vegetables, fruits, maize and rice have low percentage than that of Jawar, Bajara and Wheat.
- The third ranking crops were Oilseeds, Pulses, Bajara, Sugarcane and Cotton in 1960-61.
- Pulses hold third rank in the district and observed in three taluka (2010-11) occupied 18923 hectares (20.42%) in Newasa, Parner and Karjat talukas. Sugarcane, Bajara, Condiments and Spices, Jawar, Cotton and Vegetables stands as third ranking crops each in one taluka.
- The fourth ranking crops were Pulses, Bajara, Fodder crops, Oilseeds, Sugarcane, Cotton, wheat and Rice in 1960-61 and seven crops respectively Oilseeds, Vegetables, Sugarcane, Fruits, Fodder crops, Pulses and Maize in 2010-11. Fodder crops, Fruits and Sugarcane hold fourth rank in the district and observed each in two talukas (2010-11).
- The numbers of crops in fifth rank were five in 1960-61 respectively, Wheat, Fodder Crop, Pulses, Bajara and Oil Seeds and six in 2010-11 respectively, Wheat, Pulses, Vegetable, Bajara, Cotton and Oilseeds. Wheat was dominant crop in the district. Wheat covered 15081 hectares (35.08%)
- There were five crops which emerge in sixth rank in 1960-61 while seven crops in sixth rank in 2010-11 in the district. In 1960-61 the crops were Wheat, Pulses, Cotton, Bajara and Fodder crops. There were seven crops which emerged in sixth rank in the district. In 2010-11 the crops were Vegetables, Pulses, Cotton, Sugarcane, Fodder Crops, Wheat, Jawar and Fruits.
- The crop distributional pattern in seventh ranking was more diversified. Those crops were Fodder crops, Cotton, Vegetables, Sugarcane, Wheat, Jawar and Condiments & Spices. Among the seven crops Fodder crops was principal crops found in five talukas. Fodder crops covered 10377 hectares (46.25%).
- The numbers of crops in seventh rank were eight (2010-11). Those crops were Fodder crops, Sugarcane, Pulses, Fruits, Jawar, Bajara, Oilseeds and Maize. Among the eight crops fodder crops was found largest coverage on 2348 hectares (10.61%).
- In 1960-61 there were five crops which emerge as eighth in rank in Ahmednagar District. The crops were Cotton, Vegetables, Sugarcane, fodder crops and Condiments and Spices. Among the five crops Cotton and Vegetables were the principal crops found largest coverage in the district. Cotton coverage on 3762 hectares (32.43%) and found in four talukas respectively Shrirampur, Kopargaon, Parner and Jamkhed.
- There were seven crops (in 2010-11) which emerged as eighth in rank in Ahmednagar District. The crops were Sugarcane, Fodder crops, Fruits, Maize, Jawar, Cotton and Oilseeds. Eight rank crops indicate diversity in number and crop distribution in the area under study. Among the seven crops Sugarcane, Fodder crops and Fruits were the principal crops found largest coverage in the district.

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