

## **CHAPTER 2**

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### AGRICULTURAL SYSTEM IN ATHANI TALUKA

#### 2.1 LOCATION

Athani taluka is situated in the north-east corner of Belgaum district at a distance of 145 Kms. from Belgaum. On the longitudinal  $75^{\circ} - 4'$  and latitude  $16^{\circ} - 44'$  comprising of 89 villages. It is surrounded to East by Bijapur district, west by Chikodi taluka, south by Raibag taluka, and the north by Maharashtra state. This taluka extends east and west. There is Krishna river on the southern border of this taluka which runs about 88 Kms. in length.

Athani taluka is divided in two parts by Miraj-Bijapur road, a state highway. The area to the north of this road is Anantpur and some villages of Telasang circle is dry and ' Maradi ' lands and that to the south is black soil. An area of 26,000 acres comprises of 27 villages which is on the bank of Krishna river and is irrigated by its water. However, the area under irrigation in this taluka is very low.

## 2.2 GEOGRAPHICAL AREA

Athani taluka is always prone to scarcity conditions, the remaining portion of lands depends on rain water for their crops, since the area under irrigation is very low. The general information pertaining to the geographical profile is given in Table 2.

**TABLE 2**

### GEOGRAPHICAL PROFILE OF ATHANI TALUKA

(Area in Acre - Gunthe)

1.	Geographical area of the taluka	4,93,008 - 8
2.	Cultivable area	4,50,069 - 33
3.	Uncultivable area	42,938 - 15
4.	Area under Kharif crops	2,14,466 - 36
5.	Area under Rabi crops	2,07,291 - 89
6.	Area under irrigation :	
	(a) Under Govt. canals (tanks)	1,285 - 20
	(b) Under wells	42,309 - 19
	(c) Under other sources	15,804 - 20
	(d) Number of irrigation wells	10,554 - 00

**SOURCE :** Records of Revenue Office, Athani, 1985.



Besides the above mentioned Government irrigation sources like tanks and other bhandaras namely, GIBC canals, barrages, irrigation tanks (including Aigali, a surveyed village under this present study), percolation tanks, etc.

### 2.3 AGRICULTURAL POPULATION

The population of Athani taluka according to 1981 census was 3,27,613 of which 1,67,670 were males and 1,59,943 were females. The total cultivable area is 4,50,069.33 acres, which constitutes 14.84 percent of the total cultivable land in the district.

Out of 89 villages, 35 villages can be classified as Kharif villages and the remaining 54 villages as Rabi villages. In this study out of the selected 4 villages, 3 villages are Kharif and one village that is, Kokatnur is a Rabi village. The classification is however, based on the major portion of the Kharif or Rabi area and not on the exclusive basis. The data regarding principal crops in area under present study and its comparison with the Belgaum district is given in the following table. It is observed that the principal crops grown in this area are Kharif and Rabi Jowar, Bajara, Groundnut, Sugar Cane, Chillies, Cotton, and Wheat.

**TABLE 3**

**MAJOR CROPS IN ATHANI TALUKA & BELGAUM DISTRICT  
(1987 - 1988)**

(Land in hectares)

<b>CROP</b>	<b>BELGAUM DIST.</b>	<b>ATHANI TALUKA</b>	<b>PERCENTAGE</b>
Groundnut	95,585	10,220	10.69
Sugar Cane	64,310	9,491	14.75
Cotton	45,583	2,416	5.30
Jowar	2,61,717	82,574	31.55
Bajara	47,139	16,760	35.55
Wheat	47,926	5,850	12.20
Maize	60,276	4,598	7.63
Paddy	64,540	177	0.27

**SOURCE** : Dist. Statistical Office, Belgaum 1988.

The above table shows the major crops grown in Athani taluka and its comparison with that grown in Belgaum district recorded in the year 1987-88. There is no significant change in the cropping pattern both at the taluka and the district level in last five years. It is observed Jowar and Bajara are the principal crops followed by sugar cane, wheat, and groundnut in Athani taluka. The present study focusses on the groundnut crop.

## 2.4 AGRICULTURAL PROFILE OF ATHANI TALUKA

### A] Labour Force

As per the 1981 census the agricultural labour force of the Athani taluka can be classified as followed.

Total workers	1,17,744	(100 %)
Cultivators	58,670	(49.83 %)
Agricultural labourers	38,638	(32.82 %)

### B] Cropping Area

The crops are sown more than once. As per the statistics of 1983-84 the cropping area in Athani taluka was 1,60,060 hectares whereas, that of Belgaum district was 9,38,071 hectares.

### C] Land Holdings

According to the agricultural census of 1980-81, the total number of land holders in Athani taluka was 49,021, and the corresponding total area of land holding was 1,99,555 hectares.

#### D] Agricultural Zones & Soil

According to the agro-climatic conditions of the Belgaum district, it can be divided into three regions namely, north dry zone, northern transitional zone and hilly zone. The north dry zone consists of five talukas viz, Athani, Raybag, Ramdurg, Gokak, and Parasgad. The rain fall in the Athani taluka is most variable. Athani has moderate or severe drought with annual rain fall deficiency exceeding 25 to 20 percent of the year. Eighty percent of the rain fall occurs from June to October.

As regards the soil in Athani taluka, shallow to medium black soils and deep to very deep black soils are found. This region is predominantly a Rabi area in which the major crops grown are Jowar, Bajara, Wheat, Cotton, Sugar Cane, Groundnut, etc.

#### E] Soil Conservation

In order to conserve the soil, the Karnataka Land Improvement Act 1961, was brought into force as on 31st March, 1985. Out of the total contour banded area of district 2,16,918 hectares, Athani taluka has 65,799 hectares. For this purpose the State Government has spent Rs. 4.05 lakhs during 1983 - 85.

### F] Dry Land Development Project

This project aims to minimise the risk in rainfed farming. It envisages utilisation of rain water to maximum extent through improved crop management. Considering this objective of the project, HEREHALIA watershed in Athani taluka has been selected for overall development. The watershed spread over to 12 villages covering an area of 34,340 acres. During 1984-85, Telasang mini-watershed for contour bunding, gully plugging and land levelling work.

Besides this Aigali and Kokatnur villages are also selected and studied under the present study of groundnut marketing, which are also included in the mini-watershed project.

The Dry Land Development Project has helped the various villages in the taluka as a mini-watersource, which has encouraged the production of groundnut, sunflower, soyabean, etc. This has especially helped in the production of the oil seeds which are considered as the cash crops today in addition to sugar cane and turmeric.

Horticulture has also assumed importance in this taluka due to this project undertaken by the Karnataka Government. In the year 1989-90, 320 acres of land will be



brought under horticulture in the Kokatnur area. Approximately five percent of the people have also adopted the sericulture, which in fact is most beneficial farming today next to horticulture<sup>3</sup>.

## 2.5 CROPPING PATTERN

Cropping activities go on all round the year in the district. The major three seasons include Kharif (June to October), Rabi (November to February), and Summer (March to May). The prevailing cropping systems are the cumulative results of past and present decisions taken by individuals, communities, Government, and various agencies. The main food crops of the district are Jowar, Paddy, Wheat, and maize among the cereals, gram among pulses, and groundnut, Sugar Cane, and Cotton are the chief non-food crops. The cropping pattern of Athani taluka during the past five years is shown in Table 4.

High yielding varieties programme is also taken up in the state as well as in the Belgaum district. Unfortunately, the nature did not co-operate with the taluka agriculture. There was a continuous drought in the district as well as in the taluka since 1984 - 85 upto 1987-89. Continuous efforts have been made for the economic

development of the district through Plan Programmes, especially where agriculture has a dominant role and where most of the area falls under rainfed conditions. The farmers whole heartedly adopted the recommended practices and co-operated the efforts of the extension functionaries in the implementation of the scientific strategies.

**TABLE 4**

**FIVE YEAR CROPPING PATTERN OF ATHANI TALUKA (1984-89)**  
(Area in Hectres)

CROP	1984-85	1985-86	1986-87	1987-88	1988-89
Jowar	82,113	83,225	82,393	82,574	85,105
Bajara	16,360	18,127	18,180	16,760	18,210
Wheat	4,484	6,382	6,480	5,850	6,501
Gram	4,320	5,828	5,690	4,768	6,300
Tur	1,340	1,660	2,160	2,687	2,334
Sugar Cane	9,220	10,210	10,560	9,491	11,201
Groundnut	10,700	10,899	11,005	10,220	11,300
Cotton	2,210	3,537	3,652	2,416	2,301
Pulses	6,300	8,266	10,104	6,024	7,302
Minor Millets	24	27	30	46	51

**SOURCE** : District Statistical Office, Belgaum (1984-89)

Athani taluka was selected for the effective development target for the Dry Land Development Programme. Even the Karnataka Government established a " Goshala " at Kokatnur village of the taluka with the help of central aid in the year 1984-85 for foodless animals.

## 2.6 AGRICULTURAL PRODUCTION PROGRAMME DURING 1986-88

During the year 1986-87, the general thrust was not to increase agricultural production but the main thrust was to increase the production of pulses and oil seeds, through effective extension support as well as effective distribution of inputs on the large scale.

This year another new programme was undertaken in the direction of achieving the agricultural production target called " Village Accelerated Technology Production Programme ". However, this was implemented in the selected villages.

Furthermore, since the major part of the cultivable area in the taluka is under rainfed, it was intensively planned to popularise the dry farming technologies in these area in order to achieve the targets. The Dry Land Development Programme constituted new dimensions to farming.

During 1987-88, the Kharif season on the whole did not measure up to the expectation. The wide spread rain received during Rabi in 143 talukas in the state helped the late sown Kharif crops to recover. However, later on the crops suffered as the supporting rains were not received afterwards.

## 2.7 WEATHER & ITS EFFECT ON CROPS

### (a) Kharif Season

In Karnataka south-west season is the main season. Since 44 years monsoon has been erratic in the state. The rain fall received during April and May was below normal. During April 1986, out of 175 talukas only 65 talukas received normal rain fall. Whereas during May 1986, only 54 talukas received normal rain fall and the rest received scanty and deficient rain fall. However, due to good rains in June sowing operations were continued and by the end of June about 31 percent of the sowing was completed. In June 55 percent of the area was sown. By the end of August about 90 percent of the Kharif area was sown. During second fortnight of September the monsoon was active with widespread rainfall except in parts like coastal and Malnad region. By the end of September 96 percent of the Kharif area was sown.

(b) Rabi Season

The north-east monsoon which starts from October accounts for only 16 percent of annual rain fall. Athani is the last taluka of the Belgaum district which mainly depends on the Rabi season. The rain fall was reported in 143 talukas out of 175 in the state which helped the late sown Kharif crops, standing Rabi crops and also complete the Rabi sowing held up in few pockets.

During the year 1987-88 however, the thrust was on dry farming with widespread distribution of agricultural inputs. In addition, priority was given to increase oil seed and pulses production. Equally food production target was also increased to meet the increasing demand.

High yielding variety programme was also taken up in the district of Belgaum and Athani taluka as well. The efforts were made to provide quality seeds before the onset of Kharif, Rabi and Summer season with co-operation of distributing agencies.

The above mentioned Table 2 shows the cropping pattern of the Athani taluka. The taluka basically depends on the Kharif crops only, though Rabi has also its share to

limited extent. Various crops like Jowar, Bajara, Wheat, Gram, Tur, Groundnut, Pulses, minor Millets, Sugar Cane, and and Cotton are grown all round the year.

The present study therefore focuses its attention on four villages where groundnut has been grown as cash crop to a large extent. This crop assumes importance next to sugar cane, and termeric. Besides groundnut is also grown in Rabi season however, the coverage of area in this period is very meagre.

Since 1981 there is constant drought in the taluka hence it is treated as a drought prone area. Various projects have been introduced by the state and the central Governments for the betterment of the taluka. During this decade the agricultural production has gone down and the farmers are seeking Government help through procuring loans from nationalised banks at a subsidised rates. They have become economically very poor and the agricultural economy has suffered a major setback during this period.

## **2.8 GROUNDNUT PRODUCTION**

Karnataka is one of the major groundnut producing states out of nine states, which accounts 11.42 percent of India's groundnut production.

Belgaum district is one of the main groundnut producing districts of Karnataka which accounts to 15.96 percent of the state's production. Whereas, the selected taluka for the present study, Athani accounts to 10.69 percent of the district's production.

Iron chlorosis is a common feature when the crop is grown in black soil under irrigation owing to its calcareous nature. Iron is essential micronutrient element playing a key role in plant nutrition.

Groundnut production of the Athani taluka is increasing year after year. This crop is treated as a cash crop like sugar cane and turmeric today. The taluka stands 4th place in the Belgaum district's groundnut production. Table 5 shows the groundnut production in major groundnut producing talukas in Belgaum district during past five years.

It is observed from the table that during 1987-88 nearly 10 percent deduction was found in Athani taluka's groundnut production. In general one notices 10 percent decrease or increase in the groundnut production of this taluka. The first three places in the district's groundnut

**TABLE 5****GROUNDNUT PRODUCTION IN BELGAUM DISTRICT**

(Land in Hectares)

<b>TALUKA</b>	<b>1984-85</b>	<b>1985-86</b>	<b>1986-87</b>	<b>1987-88</b>	<b>1988-89</b>
Athani	10,700	10,899	11,150	10,220	11,300
Bailhongal	7,630	8,473	8,870	8,620	8,900
Belgaum	4,505	4,945	4,740	4,955	5,311
Chikodi	17,180	18,385	20,330	21,810	22,702
Gokak	10,400	11,540	11,840	11,340	11,940
Hukkeri	15,550	17,784	17,690	16,730	17,600
Khanapur	1,430	1,541	1,600	1,180	1,670
Raibag	2,460	2,668	2,600	2,380	2,650
Ramdurg	10,150	10,764	9,590	9,750	10,630
Soundatti	7,620	8,519	8,030	8,600	9,332

**SOURCE :** District Statistical Office, Belgaum (1984-89)

production are taken by Chikodi, Hukkeri, and Gokak whereas, Athani ranks the fourth.

Since, the oil seeds are having more demand, groundnut is the major crop for oil seeds. Though Sunflower



**TABLE 6****TOTAL GROUNDNUT PRODUCTION IN FOUR VILLAGES**

VILLAGE	(Land in Hectares)				
	1984-85	1985-86	1986-87	1987-88	1988-89
Aigali	2,621.01	2,880.00	2,455.00	2,523.20	3,080.00
Kokatnur	3,331.11	3,634.10	3,571.05	3,453.35	4,041.17
Mangasuli	2,329.03	2,110.00	2,410.00	1,600.00	2,428.04
Shedbali	4,340.00	4,743.10	4,932.00	5,625.00	4,777.15

**SOURCE** : Records of respective village Officers (1984-89)

and safflower are now introduced as substitute for oil seeds to groundnut, the latter has not lost all of its importance, since it has high protein content.