

## ROLE OF INDIGENOUS FOOD CROPS IN TRIBAL LIVELIHOOD OF WESTERN SATPURA IN AKKALKUWA TAHSIL NANDURBAR DISTRICT

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### Abstract

*Indigenous food crops refer to crops that have their origin in native place. Added to these crops are those that were introduced into the country or any region and are now recognized as naturalized or traditional crops. These crops are produced and found growing in the native place various weather conditions with many found in the wild. They are grains, vegetables and fruit. Akkalkuwa tahsil in Nandurbar district is mostly scheduled tribe population lives about 85 percent of the total population. The Bhil, Pawara and Dhanka Tadvi etc. tribal communities were dependent primarily on their own agricultural produce and a variety of forest based products for livelihood. In this paper has focused on identify different types and importance of indigenous food crops in study area. In the study area, the available cultivable land is less than the forest cover area to the total geographical area and it is about three percent area was under the irrigated. In fact the study area most of the farmers, their cropping pattern was a **kharip** type, agriculture is mainly depends on rainwater. It may be observed that most of the tribal people has been cultivated the indigenous crops of **more, banti, padi, rala, lal jawar, kodra etc., vegetables and fruits**. The varieties of millets traditionally produced were locally consumed and were hardly sold. They were primarily stored for food security.*

**Keywords:** *Cropping pattern, landuse pattern, indigenous crop, kitchen garden, tribal community.*



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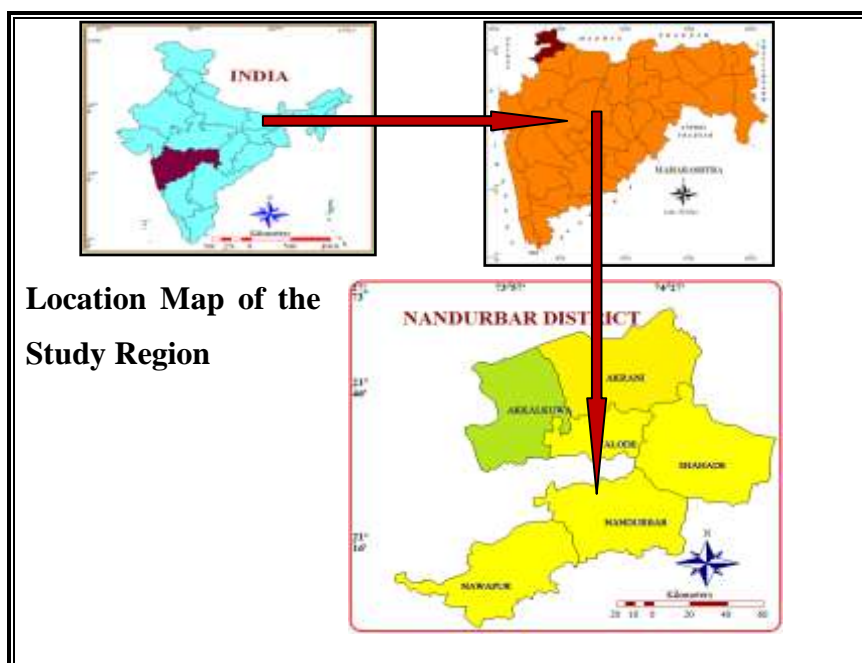
### Introduction:

Indigenous food crops refer to crops that have their origin in native place. Akkalkuwa tahsil in Nandurbar district is mostly scheduled tribe population lives about 85 percent of the total population. The Bhil, Pawara and Dhanka Tadvi etc. tribal communities were dependent primarily on their own agricultural produce and a variety forest based products for livelihood. They had subsistence economy, which means that whatever they produced was locally consumed with hardly any surplus. The agricultural produce included cereals, pulses, and oil seeds, traditional vegetables and a variety of millets as the item in diet. In the study area is under the cultivation was 34.00 percent, and out these cultivation area was 2.83 percent in under irrigation. Tribal communities under the predominantly depends on agriculture, cattle

and forest subsistence. The Akkalkuwa in Satpura region is an essentially agricultural dominant region involving centpercent working force in agricultural practice. It is located in the hilly terrain where people had developed agricultural plot on hill slopes. In contrast, the land given in compensation is more flat and fertile. Traditionally Maize (Makka), oil seeds like *khursani* (black teel), indigenous crops such as *More*, *Banti and Padi*, *Rala* were produced by sample villages. Besides the different cereals and pulses a variety of indigenous crops and leafy vegetables such as Bhendi and Ambadi are cultivated on hill slopes and require little attention.

### Study Area:

The Nandurbar district extends between 21° 0' to 22°03' north latitudes and 73°33' east to 74°32' east Longitudes. The Nandurbar district lies in the North Western part of Maharashtra. Nandurbar district with geographical area of 5955 Sq.km. has an amorphous shape. The district is bounded to the South and South-east by Dhule district, to the west and north is the state of Gujrat, to the north and north-east is the state of Madhya Pradesh. Akkalkuwa Tahsil extended 21°30'45'' north to 21°54'30'' north latitudes and 74°47'15'' east to 74°7'30'' east longitude. Akkalkuwa tahsil lies in the north western part of Nandurbar district as well as Maharashtra state and geographical area of 868.74 Sq.km. The tahsil bounded to the north and west, south-west and south by the Gujrat state, and east is the Akrani and Taloda tahsil. The most of this region is covered by Satpura mountain ranges, and between Narmada valley in the north and Tapi valley in the south.



**Location Map of the Study Region**

### Objectives:

The objective of the present study is to understand and study the Role of indigenous food crops in tribal livelihood in study area. The main objectives of the study are:

- Studying the general and agricultural landuse.
- To identify cropping pattern in study area.
- To identify the different types of indigenous crops in study area.

### Data Base and Methodology:

The present study is based on both primary and secondary data. The primary data is collected through questionnaires, Observations and personal discussions with villagers of dominant NTFPs collectors, the researcher has been conduct the intensive fieldwork. Out 94 villages of Satpura Mountain area in Akkalkuwa tahsil 11 villages are selected as sample villages by random sampling method. Near about 309 households were selected as sample household engaged in agricultural activities. It has helped us to better understand to general and agricultural landuse. And identify cropping pattern and different types of indigenous

**Table No.1 Nandurbar District: Land use pattern of selected Sample Villages (in hectares).**

Name of the sample village	Total Geographical area in Hectares	Forest Cover Area	Cultivation Area	Culturable Waste	Area not available for cultivation
Bagda	578	264	279	0	35
Bardi	679	406	275	0	3
Barisurgas	435	317	115	0	3
Dab	3930	2690	1088	0	152
Dahel	1518	1068	438	0	12
Jangthi	1116	869	200	0	47
Kewdi	1250	1089	157	0	4
Kuwa	602	363	235	0	40
Nandwane					
BK	365	273	82	0	10
Veri	392	68	297	0	27
Wadibar	581	355	203	0	23
<b>Total</b>	<b>11446</b>	<b>7762</b>	<b>3369</b>	<b>0</b>	<b>356</b>
<b>Percentage</b>	<b>100</b>	<b>67.81</b>	<b>29.43</b>	<b>0.00</b>	<b>3.11</b>

*Source: Socio-Economic Statistical Abstract of Nandurbar district, March 2016.*

crops in study area. The secondary data is collected through the unpublished record of the government and various publications such as toposheets, district census handbook of Nandurbar and Dhule district 1991, 2001, and 2011 etc and socio economic abstract of

Nandurbar district in 2013. The collected data to process analyze and represent this data with the help of various cartographic techniques and MS Excel.

**Discussion and methods:**

**a) Landuse Pattern in Selected Sample Villages:**

Data related to landuse pattern in 2001 has been presented in the table no. 1.1 and has helped in assessing the pattern of landuse in the selected 11 NTFPs related tribal (Adivasi) villages of Western Satpura hilly region in tahsil Akkalkuwa, Akrani in Nandurbar district of Maharashtra.

It is clearly shown in table. No.1 that the highest proportion of landuse has been under the forest cover area (67.81%) and followed by cultivation area, area not available for cultivation with 29.43 and 3.11 percent respectively and land not available for Culturable waste to the total geographical area in sample villages. In the sample villages' second largest proportion of land is used for cultivation. The proportion of land under cultivation to the total geographical area for the study area was 29.43 percent.

**b) Cropping pattern:**

**Table No. 2 Nandurbar District: Cropping pattern. (Area in Acres)**

Sr. No.	Name of the sample village	Cereals	Pulses	Oil Seeds & Cash Crops	Indigenous crops
1	Bagda	94.25	36.8	7	72
2	Bardi	65	21.5	9.75	70.5
3	Barisurgas	101.5	22	6.5	46.5
4	Dab	126.5	20	21	122
5	Dahel	208.1	37.8	7.5	67.8
6	Jangthi	87	52.8	15	88.5
7	Kewdi	81	37	1	79.5
8	Kuwa	81.6	12.3	19.8	35.3
9	Nandwane	46	19.5	23	55.5
10	Sari	168	13	15	38.5
11	Veri	55.5	19.3	22.5	46.3
12	Wadibar	159.25	24.5	11.5	68.5
Total		1273.70	316.50	159.55	790.90
Percentage		<b>50.13</b>	<b>12.46</b>	<b>6.28</b>	<b>31.13</b>

*Source: Household interview questionnaire.*

Table No. 2 and the temporal variations in cropping patterns of the selected sample villages of Akkakuwa tahsil in Nandurbar district. The highest proportion of crops area under the cereals 1273.70 acres (50.13 percent) and followed by indigenous crops, pulses and lowest was in oil seeds with 790.90 (31.13 percent), 316.50 (6.28 percent) and 159.55 acres (6.28 percent) respectively.

**a) Cereals:**

Cereals are a collective term for all kinds of grass-like plants which have starchy edible seeds. The most common cereals include rice, wheat, maize, jowar, bajara etc. Because of their ease of cultivation and their high nutritional value, they have formed the basic diet of mankind since the dawn of history. Cereals are sometimes called the 'staff of life'. Traditionally some variety of hybrid jawar and maize cobs, wheat and rice has been main cereals produced. Mani jowar, maize and rice (indigenous variety) local variety were commonly produced. Jowar and Maize is staple food crop cultivated in Kharif season and also maize and wheat in Rabi season. In the study area Maize is consumed fresh, boiled and as a food grain. Jowar, Maize and Rice crops are generally cultivated in rotations with More, Banti, Rala, Padi, Tur, Udid etc. in study region. Wheat is cultivated in Rabi season and it requires four months for its maturity and irrigation facilities. Wheat occupies a negligible area, due to available irrigated land is negligible. Wheat crop is cultivated in Dab, Wadibar, Bagada, Bardi, Veri, and Barisurgas sample villages. All these crops can be used for the livestock as food.

**b) Pulses:**

Udid, tur, chavali, channa and moong are the major pulses in the study area, it occupies 316.50 acres (12.46 percent) under the cereals to the total shown area. These crops are grown on a small scale in study region. The highest percent under the pulses cultivation is found in Jangathi village, and lowest having in Kuwa village. Kewadi, Dahel and Bagada sample villages have observed more than 12.00 percent land under the pulses to the total area. About more than 90.00 percent households cultivated tur, udid and chavali in sample villages. Moong and channa are cultivated in rabi season, these crops occupy a negligible area under the crops. Among the pulses, tur, udid, chavali, chana and moong, their production is very little. Out of 85.00 percent pulses were consumed for food grain and remaining was sold in local market. The pulses like Tur, Udid, Chavali cultivated separately and sometimes these are intercrops with Jowar, Maize, Soyabean, Rice, Banti, Groundnut etc.

**c) Cash Crops and Oil Seeds:**

Oilseeds are sown on 159.55 acres area accounting 6.28 percent of the total cropped area. Oilseeds consist of soyabean, Khursani (black teel) and groundnut. Oil seeds are commonly grown as a rotation with jowar, more, banti, rice, udid, tur and maize etc in study area. It is observed cash crops and oilseeds highest consist of soyabean followed by teel and

groundnut. Soyabean oil seed has been commonly grown in all over the sample villages. While groundnut and teel crops grown in very few sample villages such as teel crop found in Dab, Wadibar, and Nandwane Bk, sample villages. Groundnut has been observed in Nandwane Bk, Veri, and Barisurgas, All the sample villages are cash crops and oil seeds cultivated is not large scale due to larger area is under jowar, maize, more, banti and udid.

**d) Indigenous Food Crops and Vegetables:**

Bhil, Pawara and Dhanka Tadvi tribe besides the different cereals, pulses and vegetables a variety of indigenous crops such as *More, Banti, Rala, Padi, Mani Jowar, Safed Jowar, Chikany Jowar, Kodra, Bhendi, Ambadi, Ghewada, Wal and Cucumber, Ambadi, Bhendi, Nachani* were produced by in Akkalkuwa Tahsil in Satpura mountain ranges. All these food crops and vegetable are cultivated in traditional methods, and do not use any chemical fertilizers and pesticides for their growth. Among these food crops i.e. *More, Banti, Rala* and *Padi* are most important crops in the tribal livelihood.

**Table No. 3 Nandurbar District: Major Indigenous Food Crops (Area in Acres).**

Sr. No	Name of the sample village	Indigenous Food crops			Total
		More	Banti	Rala/Padi and other	
1	Bagda	34	34	4	72
2	Bardi	34.5	29.5	6.5	70.5
3	Barisurgas	25.5	21	0	46.5
4	Dab	62.5	59.5	0	122
5	Dahel	29	30.8	8	67.8
6	Jangthi	42	30	16.5	88.5
7	Kewdi	38.5	31.5	9.5	79.5
8	Kuwa	23.5	11.8	0	35.3
9	Nandwane	23	26	6.5	55.5
10	Sari	28	7	3.5	38.5
11	Veri	24.3	22	0	46.3
12	Wadibar	33	28.5	7	68.5
<b>Total</b>		<b>397.80</b>	<b>331.60</b>	<b>61.50</b>	<b>790.90</b>
<b>Percentage</b>		<b>50.30</b>	<b>41.93</b>	<b>7.78</b>	<b>100</b>

*Source: Based on Field survey, household interview questionnaire.*

After the cereals second largest occupies under the cultivation area of indigenous crops (31.13 percent) in the study region. These crops are cultivated on hill-slops and require little attention. The highest proportion of area under cultivation for indigenous food crops is *More* crop (50.30 percent), followed by *Banti* crop, *Rala and Padi* crop and other crops with 41.93, and 7.78 percent respectively. The varieties of millets traditionally produced were locally consumed and were hardly sold. They were primarily stored for food security. A simple meal of *Banti, Badi, Rala, Rice or Padi* and *udid or tur dal* was served to villagers

during major communal activities such as building or repairing the house, occasion of marriage, socio-cultural & religious events and agricultural activities such as ploughing or sowing as part of reciprocity.

e) **Kitchen Garden:**

Traditionally tribal economies have been subsistence economics. What is produced is consumed and there is no surplus. In this context kitchen garden assume importance as a supportive means of subsistence. While their farm products include cereals and pulses, kitchen garden provides a variety of other accompaniments (Yashada Report 2006, pp.68). Kitchen garden cultivated very small scale specific variety of vegetable in the study area. Brinjal, Bhendi (Lady's Finger), Chilly, Ghewada, Cucumber, Wal Papdi, Dodka, Pumkin etc produced very small scale in and around the house.

**Conclusion:**

The Bhil, Pawara and Dhanka Tadvi etc. tribal communities of Satpura in Akkalkuwa tahsil were dependent primarily on their own agricultural produce and a variety of forest products for livelihood. They had subsistence economy, which means that whatever they produced was locally consumed with hardly any surplus. The agricultural produce included cereals, pulses, and oil seeds, traditional vegetables and a variety of millets as the item in diet. More than one third area under the forest cover, followed by cultivation area, area not available for cultivation and land not available for culturable waste to the total geographical area in sample villages. It may be seen from the field survey of the sample villages are very low area under the irrigation. In fact the study area most of the farmers, their cropping pattern was a *kharip* type, agriculture is mainly depends on rainwater. Traditionally hybrid variety of *Jawar, Maize, Tur, Udid, Rice, Soyabean, Groundnut* and some indigenous crops like *More, Banti, Rala* and *Padi* is more commonly cultivated in the study area. The distribution of crops is uneven the highest proportion crops is cereals and followed by indigenous crops, pulses and cash crops & oil seeds.

The highest proportion of area under cultivation for indigenous food crops is *More* crop (50.30 percent), followed by *Banti* crop, *Rala and Padi* crop and other crops with 41.93, and 7.78 percent respectively. The important role of indigenous food crops in tribal livelihood, because these crops used a simple meal of *Banti, Badi, Rala, Rice or Padi* and *udid or tur dal* was served to villagers during major communal activities such as building or

repairing the house, occasion of marriage, socio-cultural & religious events and agricultural activities such as ploughing or sowing as part of reciprocity.

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