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## Study the economics of dry chilli cultivation

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#### Abstract

In year 2016-17 in India, the total area under Chilli cultivation was 830.80 hectares and total production was 1872.00 MT and productivity 2.25 MT/ha. In Maharashtra area was 17.30 hectare and total production was 35.90 MT and productivity 2.08 MT/ha. Majority of the Chilli grown in India is cultivated in states such as Andhra Pradesh 49 per cent, Karnataka 15 per cent, Orissa 8 per cent, Maharashtra 6 per cent, West Bengal 5 cent, Rajasthan 4 per cent and Tamil Nadu 3 per cent. Andhra Pradesh first both in area 1.88 ha and production 2.7 L tons with a productivity 1447 kg per ha. Chilli is cultivated almost all state in India but, Andhra Pradesh is the largest producer accounting for more than 50 per cent of the total Chilli output in the country. Karnataka is the second largest producer contributing for about 10-15 per cent of total production in the country rest of the output is spread across the number of states including Maharashtra, Orissa, Rajasthan and Tamil Nadu.

**Keywords:** Socio economics, chilli Growers, Chilli cultivation

#### Introduction

Chilli is not only used as a food additives but also for various medicinal purposes. The capsaicin extracted from ripe dried fruits is used in pharmaceutical preparations and medicines related to heart diseases. The daily use of Chillies stimulates saliva and enaIndia, as observed in the earlier section, is the largest producer, consumer and exporter of Chillies in the world. India produces on average 1.3 to 1.5 million tonnes of red Chillies annually. Nearly, 80 per cent India's production is consumed within the country and only about 15 to 20 per cent of domestic production is exported.

Trends in area and production during the last two decades indicate that, there is a significant rise yields per hectare particularly from 2003 to 04 onwards and it has led sharp increase in production level from less than one million tonne in late 2000's.

bles proper digestion and good blood circulation. The extracts of Chillies are used in preparation of ginger beer and other beverages. It is also used as an anti-irritant in prickly heat powder, cosmetics, skin ointments and pain balms. Chilli has also acquired a great importance in food and beverages industries in the form of olerosins, which permits better distribution of coloured and flavour in food as compared to Chilli powder. The food industry prefers the use of highly coloured and less pungent chillies for the preparation of oleoresin. Chilli has antioxidant, anti-mutagenesis, hypocholesterolemic and immunosuppressive properties.

World Chilli production is primarily concentrated in South Asian countries to an extent of about 55 per cent of total world production. India is the single largest producer contributing for about 38 per cent followed by neighbours China with 7 per cent Pakistan and Bangladesh contributing about 5 per cent each. Rest of the output spread across South American countries and African countries. India's Chilli exports are currently in bull stage and Chillies exports from India are mostly to UAE, Bangladesh, Pakistan, Saudi Arabia, UK, Bahrain, Qatar, Nepal, Oman, Maldives, Kuwait and US. Among these countries UAE, Pakistan, Bangladesh, UK, Saudi Arabia and Nepal are the major exporter of India's Chillies.

#### Methodology

A schedule was designed for data collection by keeping in view the objectives of the study, the data were collected for the year 2017-18 through personal interviews of farmers, village-traders, Wholesalers, commission agents retailer and Agriculture produce market committee. The survey method was followed for data collection. Data pertaining to cropping pattern, input utilization, Cost of cultivation and returns were collected from the selected growers and other relevant information related to marketing of dry chilli was collected through a survey method with the help of pre-tested schedule.

The present study was undertaken in Buldhana district of Vidarbha region. The district was selected purposively. The data pertained for the year 2017-18. Total tahsils in Buldhana district is 13. Out of Thirteen tahsils in Buldhana district two tahsils viz. Sindkhed raja and Deulgaon raja were selected for the present study. From each tahsil, 3 villages were selected randomly for present study. schedule was designed for data collection by keeping in view the objectives of the study, The data were collected for the year 2017-18 through personal interviews of farmers, village-traders, Wholesalers, commission agents retailer and Agriculture produce market committee. The survey method was followed for data collection. Data pertaining to cropping pattern, input utilization, Cost of cultivation and returns were collected from the selected growers and other relevant information related to marketing of dry chilli was collected through a survey method with the help of pre-tested schedule.

## Result and Discussion

**Table 1:** Crop season and crop rotation of Buldhana district

Sr. No.	Kharif Season	Rabi Season
1.	Cotton	-
2.	Cotton + Tur + Jowar	-
3.	Jowar	Gram
4.	Cotton +Green gram + Black gram	Wheat
5.	Cotton + Tur + Green gram	Gram
6.	Jowar	Safflower/wheat
7.	Cotton + Tur	Safflower
8.	Cotton +Tur +Jowar + Green gram	Sunflower
9.	Mung	Safflower
10.	Cotton + Mung	

### Land utilization pattern

The information in respect of land utilization pattern in Buldhana district is presented in Table 2. It can be seen from the Table. That out of the total geographical area (967100 ha) 69.11 per cent area is under cultivation. There is need to improve cultivable waste land for bringing it under cultivation.

**Table 2:** Land utilization pattern of Buldhana district

Sr. No.	Particulars	Area (00 ha)	Percentage to total
1	Total geographical area	9671	100
2	Area under forest	883	9.13
3	Barren land	483	4.99
4	Non-agricultural land	511	5.28
5	Cultivable waste land	263	2.72
6	Permanent pasture and other grazing land	13391	138.46
7	Land under miscellaneous tree crop and not included in net area sown	10	0.10
8	Current fallow	174	1.80
9	Other fallow	272	2.81
10	Net sown area	6684	69.11
11	Area sown more than once	1695	17.53
12	Gross cropped area (GCA)	8379	86.64
13	Cropping intensity (%)		125.36

**Source:** District wise statistical information of Maharashtra, D.S.A.O., Buldhana 2015-16

### Cropping pattern

The usual cropping pattern is determined by large number of factors. The most important factors are climate, soil, topography, customs and distance of the market.

**Table 3:** Cropping pattern of Buldhana district

Sr. No.	Crops	Area (ha)	Percentage to total
1	Rice	368	4.39
2	Wheat	214	2.55
3	Jawar (Kharif + Rabi)	214	2.55
4	Bajara	641	7.65
5	Maize	145	1.73
6	Other millet	472	5.63
	Total cereals	1991	23.76
7	Gram	131	1.56
8	Tur	382	4.56
9	Mung	765	9.12
10	Udid	704	8.40
11	Pigeon pea	24	2.27
	Total spices	626	7.47
16	Fruits	61	0.73
17	Vegetables	37	0.44
18	Cotton	162	1.93
19	Other fibre crop	30	0.35
	Total fiber crop	288	3.46
20	Groundnut	126	1.50
21	Sesamum	34	0.41
22	Sunflower	38	0.45
23	Other oilseed crop	201	2.39
	Total oilseed crop	399	4.76
	Total non-food crops	3050	36.40
24	Gross cropped area (GCA)	8379	100
12	Other pulses	19	0.22
	Total pulses	2025	24.16
	Total food grain	4016	47.92
13	Sugarcane	374	4.46
14	Chilli	60	0.72
15	Other spices	192	2.29

**Source:** D.S.A.O., Buldhana, 2015-16

### Size of land holding

Table 4 indicates that, maximum farmers of district are small 36.32% and marginal 26.92% land holders covering 23.80% ha and 7.73% ha area respectively. Farmers having medium land holding are less 11.40% but contributing maximum area of 30.01% ha. The average size of holding is 2.2.

**Table 4:** Size of land holding in Buldhana district

Sr. No.	Land holding	No. of farmers	Area (ha)
1	Marginal (below 1 ha)	82409 (26.92%)	52192 (7.73%)
2	Small (1 to 1.99)	111170 (36.32%)	160647 (23.80%)
3	Semi-medium (2 to 3.99)	73536 (24.02%)	199620 (29.58%)
4	Medium (4 to 9.99)	34913 (11.40%)	202566 (30.01%)
5	Large (10 and above)	4110 (1.34%)	59883 (8.88%)
6	Total holding	306138 (100%)	674908 (100%)

**Source:** D.S.A.O., Buldhana 2015-16

### Irrigation

For the agriculture development in general and economic development in particular, it is necessary to increase irrigation facilities. Wells, minor projects and rivers are the main sources of irrigation in district. The Table 5 shows source wise irrigation in district.

**Table 5:** Sources of irrigation of Buldhana district

Sr. No.	Source	Area (ha)	Percentage
1	Surface irrigated area	2653	7.63
2	Wells	14726	42.37
3	Net area under irrigation	17379	50.00
4	Total area under irrigation	34758	100

Source: D.S.A.O., Buldhana 2015-16

### Conclusion

The average fallow land was 0.04 hectares (2.35%) in small, 0.08 hectares (2.56%) in medium, 0.56 hectares (10.51%) in large size group of land holding and overall average was 0.22 hectares (6.69%). The net sown area for small size group was 1.65 hectares (97.06%) of the gross cropped area, in medium size group, 3.05 hectares (97.44%) and that of in large size group it was 4.77 hectares (89.49%) and the overall average was 3.16 hectares i.e. (93.31%) of the gross cropped area.

In case of small, medium and large size group, area sown more than once was 0.65 hectares (38.24%) 1.56 hectares (49.84%) and 2.59 hectares (48.59%) respectively and overall average was worked out to 1.60 hectares (47.24%).

The gross cropped area of small, medium and large size group was 2.30 hectares, 4.61 hectares and 7.36 hectares, respectively and overall it was 4.76 hectares. The cropping intensity of small, medium and large size group was 139.39 per cent, 151.15 per cent and 154.30 per cent, respectively and overall it was 148.28 per cent.

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