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## Constraints faced by farmers in oilseeds crop production in Vidarbha region of Maharashtra state

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### Abstract

The present study was undertaken in Vidarbha region of Maharashtra state. The Vidarbha region was selected purposively as the oilseeds crop area is decline in this region. Total 60 oilseed growers were selected from the different district of Vidarbha region and data collected in predesigned schedule pertains for the year 2020-21 by keeping in view of the objectives of the study. In Maharashtra major Oilseed crops are groundnut, sunflower, soybean and minor oilseed crops is safflower which is largely grown in area. During the last few years, to domestic consumption of edible oils has increased substantially and has touched the level of 18.90 million tonnes in 2011-12 and is likely to increase further. In Vidarbha region total oilseed crop area, production and productivity was 18013.85 hundred hectare 19802.13 hundred tonnes, and 1099.27 kg/ha, respectively during the year 2019-20. And during year 2020-21, the total oilseeds crop area, production and productivity of was, 18859.58 hundred hectare, 22,616.81 hundred tonnes and 1199.22 kg/ha, respectively.

**Keywords:** Farmers, oilseeds crop, soybean

### Introduction

Agriculture has been and will continue to be the lifeline of the Indian economy. As the largest private enterprise in India, agriculture contributes nearly about 14 percent of the national GDP, sustains livelihood of about two thirds of population and is the backbone of agro-based industries. A large number of important industries like textiles, Vanaspati oils, jute, tobacco and sugar are sustained on raw materials produced in farm sector. India is one of the largest producers of oilseeds in the world and occupies an important position in the Indian agricultural economy. The Oilseeds sector has been one of the most dynamic components of world agriculture in the past three decades growing at 4.1% per annum surpassing the growth of agriculture and live stock products.

In Maharashtra major Oilseed crops are groundnut, sunflower, soybean and minor oilseed crops is safflower which is largely grown in area. During the last few years, to domestic consumption of edible oils has increased substantially and has touched the level of 18.90 million tonnes in 2011-12 and is likely to increase further. In Vidarbha region total oilseed crop area, production and productivity was 18013.85 hundred hectare 19802.13 hundred tonnes, and 1099.27 kg/ha, respectively during the year 2019-20. And during year 2020-21, the total oilseeds crop area, production and productivity of was, 18859.58 hundred hectare, 22,616.81 hundred tonnes and 1199.22 kg/ha, respectively. In Vidarbha region total oilseed crop area, production and productivity was 18013.85 hundred hectare 19802.13 hundred tonnes, and 1099.27 kg/ha, respectively during the year 2019-20. And during year 2020-21, the total oilseeds crop area, production and productivity of was, 18859.58 hundred hectare, 22,616.81 hundred tonnes and 1199.22 kg/ha, respectively. With intension to smooth growth of oilseed production in Vidarbha region, it is need of hour to study the various dimensions of oilseed productions. The major crops cultivated in Vidarbha region are groundnut and soybean.

Groundnut is the most important oilseed of India and accounts for a little less than half of the major oilseeds produced in the country. Groundnut kernels are rich in proteins and vitamins and have high calorific value. It contains 40-50 percent oil which is mainly used as edible oil in its pure form or hydrogenated Vanaspati form. Soybean (*Glycine max*) is important oil yielding rainy season crop having multiple uses. It stands second, among nine oilseed crops, next only to groundnut production in the country.

It has outstanding nutritive value with 40-44% biological protein, 20% oil and is also very rich in vitamins, iron, mineral salts and amino acids. Soybean which is also known as soya beans are species of legume that have become one of the most widely consumed foods in the world.

### Materials and Methods

Primary data for the year 2020-21 were collected by personal interview in predesigned schedule. Survey method was adopted for selection of districts, tahsils, villages and oilseed

growers. In the first stage, Three districts namely, Nagpur, Wardha and Yavatmal were purposely selected from as area of major oilseed crop is concentrated in these districts. In the second stage, from each district two tahsils were selected on the basis of more area under oilseeds cultivation. In third stage, list of predominant villages with respect to area under oilseed crops were obtained from selected tahsils. From each tahsils, two villages were selected purposively. Total 60 sample of oilseed growers of selected district of Vidarbha region keeping in view of the objectives of the study

#### Selection of sample

Sr. No	Name of District	Name of Tehsil & Villages	Total No. of Farmers
1	Nagpur	Saoner 1) Bhendala 2) Wakodi Umrer 1) Makardhokada 2) Dhurkhe	20
2	Wardha	Selu 1) Kelzer, 2) Hingni Deoli 1) Deoli 2) Takli	20
3	Yavatmal	Yavatmal 1) Kapara 2) Yelabara Kalmab 1) Sarap Dhari 2) Rasa	20
	Total		60

The constraints in oilseed crops production faced by the oilseed growers were analysed by using Garrett's ranking technique. To identify the most important factor influencing the production, Garrett's ranking technique was applied. The ranks given by each oilseed grower were converted into percent position by using formula:

$$\text{Percent position} = 100 (R_{ij} - 0.50)/N_j$$

Where

$R_{ij}$  = Rank given to  $i$ th constraint by the  $j$ th individual and  
 $N_j$  = Number of constraints ranked by the  $j$ th individual.

### Results and Discussion

**Table 1:** Constraints encountered by the growers in production of soybean in Vidarbha region

Sr. No	Constraints in production of soybean	Total mean (Score)	Garrett Rank
<b>Technological Factors</b>			
1	Non-availability of suitable varieties	51.60	III
2	Lack of awareness of improved oilseeds technologies	50.66	IV
3	Poor crop germination	57.13	II
4	Lack of irrigation facilities	31.63	V
5	Incidence of diseases and insects pests	74.73	I
6	Irregular supply of water/electricity	31.23	VI
<b>Agro-climatic Factors</b>			
1	Drought at critical stages of crop growth	37.96	III
2	Excessive rains	65.20	I
3	Poor pod/grain setting	46.83	II
<b>Economic Factors</b>			
1	High input costs (Seed, diesel, fertilizers, agrochemicals)	73.33	I
2	Shortage of human labour	49.66	II
3	Low and fluctuating prices	47.66	IV
4	Oilseeds less profitable compared with other crops	49.33	III
5	Destruction due to wild animals	30.00	V

The result of the study indicated from Table 1 that the most important technological constraints in the production of soybean was incidence of disease and insect pest ranked I with the total mean score I (74.73%) and poor crop germination ranked II (57.13%). It is followed by non-

availability of suitable varieties (51.6%), lack of awareness of improved oilseeds technologies (50.66%), lack of irrigation facilities (31.63%) and irregular supply of water /electricity (31.23%) ranked III, IV, V, VI, respectively. As regards to the agro-climatic factors constraints excessive rains ranked I

(65.20%) and poor pod setting ranked II (46.83%) which is followed by drought at critical stages of crop growth (37.96%) ranked II position.

Among the economic factors constraints High input cost (Seed, Diesel, fertilizers, agrochemical) Ranked I (73.33%) and shortage of human labor ranked II (49.66%), oilseed less profitable as compared with other crops ranked III (49.33%), low and fluctuating prices ranked IV (47.66%) and destruction due to wild animals ranked IV, respectively.

**Table 2:** Garrett's ranks and scores on Constraints encountered by growers in production of groundnut in Vidarbha Regions

Sr. No.	Constraints in production of groundnut	Total mean (Score)	Garrett Rank
<b>Technological Factors</b>			
1	Non-availability of suitable varieties	50.00	II
2	Lack of awareness of improved oilseeds technologies	48.53	III
3	Poor crop germination	46.00	IV
4	Lack of irrigation facilities	43.53	VI
5	Incidence of diseases and insects pests	45.97	V
6	Irregular supply of water/electricity	65.70	I
<b>Agro-climatic Factors</b>			
1	Drought at critical stages of crop growth	53.17	II
2	Excessive rains	36.07	III
3	Poor pod setting	60.77	I
<b>Economic Factors</b>			
1	High input costs (Seed, diesel, fertilizers, agrochemicals)	57.17	III
2	Shortage of human labour	57.33	II
3	Low and fluctuating prices	51.33	IV
4	Oilseeds less profitable compared with other crops	36.50	V
5	Destruction due to wild animals	150.00	I

Multiple response taken to ascertain the constraints faced by oilseeds growers in the production of groundnut opinion of the selected oilseed growers were taken in order to understand the problems in the production of groundnut.

Garrett ranking technique was employed to find out the constraints faced by the oilseed growers in production of groundnut were explained in terms of rank and total mean (score) presented in the table 12. The results influence the most important technological factors constraints in the production of groundnut crop which rank first was irregular supply of water/Electricity with the total mean score (65.70%) followed by non-availability of suitable varieties and lack of awareness of improves oilseeds technologies which ranked II and III with the total mean score 50% and 48.53%. As regards to the agro-climatic factors, poor pod setting ranked I (60.77%), drought at critical stages of crop growth ranked II and excessive rains (36.07) rank III.

In economic factors destruction due to wild animals rank I with highest percentage (150.00) among all the factors and shortage of human labour rank II (57.33%) and high input costs (Seeds, diesel, fertilizers, agrochemicals) ranked III (57.17%). Low and fluctuating prices ranked IV (51.33%) and oilseeds less profitable compared with other crops ranked V (36.50%).

## Conclusions

The most important technological constraints in the

production of soybean was incidence of disease and insect pest ranked I with the total mean score I (74.73%) and poor crop germination ranked II (57.13%). Agro-climatic factors constraints excessive rains ranked I (65.20%) and poor pod setting ranked II (46.83%). In economic factors high input costs (seed, diesel, fertilizers, agrochemicals) rank I with highest percentage (73.33) among all the factors and shortage of human labour rank II (49.66%).

The most important technological factors constraints in the production of groundnut crop which rank first was irregular supply of water/Electricity with the total mean score (65.70%) followed by non-availability of suitable varieties and lack of awareness of improves oilseeds technologies which ranked II and III with the total mean score 50% and 48.53%. In agro-climatic factors, poor pod setting ranked I (60.77%). Economic factors destruction due to wild animals rank I with highest percentage (150.00) among all the factors and shortage of human labour rank II (57.33%).

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