

Increasing area, production and productivity of chickpea crop in district

Background / Problem Statement:

Bhavnagar district falls under Saurashtra region of Gujarat which is characterized with semi-arid climate. Majority area of the district comes under a water scarcity area, prone to draught condition. The district has only 45 per cent cultivated area under irrigated condition. Yield of crops under *Rabi* season mostly depend upon availability of irrigation water. Wheat was the main *Rabi* crop and the yield was often affected adversely due to scarcity of irrigation water at later stage of the crop.

Intervention of KVK:

- KVK encouraged cultivation of less water intensive crops in *Rabi* season through trainings, group discussion and awareness programmes
- Started demonstration of recommended variety of rainfed chickpea in the water scarcity areas of district (CFLDs started from year 2016-17)
- On receiving positive feedback from farmers, demonstrations were extended to the irrigated area also with newly introduced varieties for irrigated area
- Along with variety, KVK demonstrated integrated crop management practices for chickpea crop
- With the increasing demand for reliable seed for chickpea crop, KVK established linkage with the seed hub of KVK-Kheda and supplied reliable seed to the farmers

Output:

- Laid out demonstration in rainfed and irrigated areas under FLDs and CFLD – Pulses covering more than 400 farmers and 160 ha area across the district
- Supplied certified seeds of late varieties of chickpea and other organic farm inputs to support higher yield
- Conducted capacity building programmes to increase adoption rate of the recommendations of chickpea crop
- Started supply of reliable certified seed of chickpea from the source centre of KVK

Outcome of the intervention:

- Farmers adopted cultivation of chickpea crop and its recommended practices
- More than 15 T of certified seed of chickpea is made available to the farmers from the resource centre of KVK
- Under CFLDs farmers realized 12 to 28 per cent of yield increase and 14 to 60 per cent increase in net economic return
- A functional linkage between the seed hub of KVK-Kheda and KVK-Bhavnagar is established to meet the demand and supply chain of chickpea seed
- Being a water scarcity tolerant crop, large scale adoption of chickpea crop in district

Large Scale Impact/ Horizontal Dissemination:

- Due to improved package of practices, increased average yield and economic return of chickpea crop in district, the area under this crop gradually increased and is doubled

Table: Trend of chick pea crop in Bhavnagar district

Year	Area ('00 ha)	Production ('000MT)	Yield (Kg/ha)
2016-17	6.46	7.26	1123.90
2017-18	31.92	41.02	1285.21
2018-19	6.86	9.32	1357.97
2019-20	47.49	146.27	3080.01
2020-21	217.04	518.51	2389.00
2021-22	507.11	1227.69	2420.96
2022-23	230.15	381.45	1657.41
* Avg. of last three years (2020-21 to 2022-23)	318.10	709.22	2229.54

Source: Directorate of Agriculture, Govt. of Gujarat, Gandhinagar

The information above, published by state government of Gujarat for the trend of chick pea crop in Bhavnagar district, reveals the large-scale impact of the collective efforts of all the extension agencies for increasing the area, production and productivity of chickpea crop in district as well as it helps to estimate probable increase in the farm income of the growers.

