

IMPACT OF INTERVENTIONS BY ICAR-KVK, GADAG IN GREENGRAM CROP FOR HIGHER PRODUCTIVITY



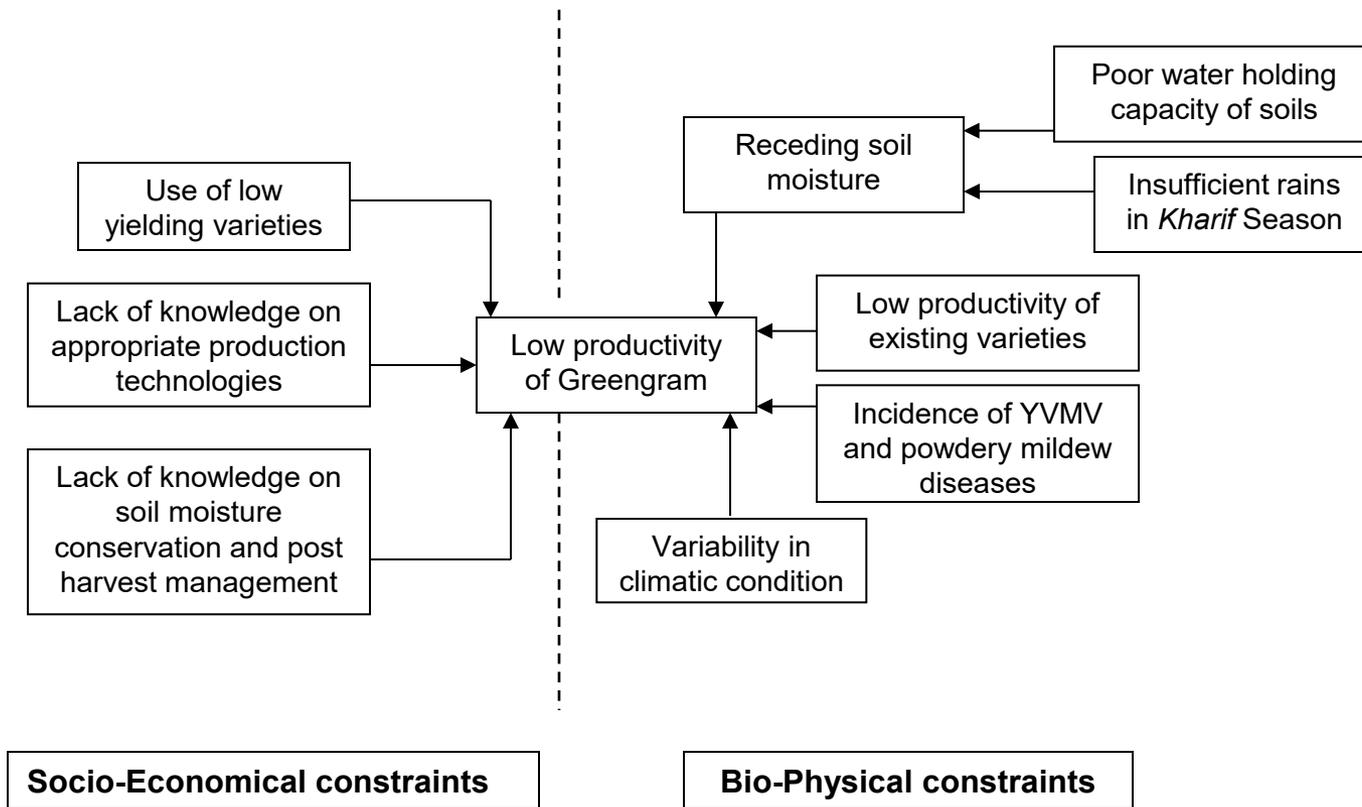
Introduction

- Greengram (*Vigna radiata*) is one of the most important pulse crops.
- Karnataka stands at 2nd place in India with 4.14 lakh ha area under Greengram contributing 17.46 % of the total production in the country.
- In northern part of Karnataka state greengram is a major pulse crop cultivated mostly during *kharif* season.
- In Gadag district, Greengram is predominantly cultivated in *kharif* season under rainfed situation.

Table 1. Production Scenario of Greengram in Gadag District

Year	Area (ha)	Production (tons)	Productivity (kg/ha)
2018-19	140566	19363	145
2019-20	96267	21858	239
2020-21	122811	20701	172
2021-22	90252	18686	207
2022-23	130109	47560	373

Production Constraints in Greengram



Problem Analysis and Interventions

Problems	Technological Interventions	Tools used
Decreasing genetic potentiality of China Moong variety	<ul style="list-style-type: none"> ➤ Promotion of high yielding DGGV-2 variety 	<ul style="list-style-type: none"> ➤ On-Farm Testing ➤ Front Line Demonstrations ➤ Training on ICM practices
Moisture stress during critical stages of crop growth	<ul style="list-style-type: none"> ➤ Compartmental bunding ➤ Seed priming with CaCl_2 	<ul style="list-style-type: none"> ➤ Front line demonstrations ➤ Method demonstrations
Non availability of quality seeds	<ul style="list-style-type: none"> ➤ Seed production and supply 	<ul style="list-style-type: none"> ➤ Training programmes on seed production
Lack of knowledge on appropriate production technologies	<ul style="list-style-type: none"> ➤ Promotion of Integrated Crop Management practices 	<ul style="list-style-type: none"> ➤ Organization of On and Off campus training programmes
Incidence of YVMV and powdery mildew disease	<ul style="list-style-type: none"> ➤ Seed treatment with Rhizobium, Trichoderma and PSB 	<ul style="list-style-type: none"> ➤ Method demonstrations ➤ Training programmes on seed treatment
Application of imbalanced nutrients	<ul style="list-style-type: none"> ➤ Foliar spray of Pulse Magic (Micronutrient mixture) during flowering & grain filling stage @ 1 % 	<ul style="list-style-type: none"> ➤ Method demonstrations ➤ Training programmes on Nutrition Management

OUTCOME AND IMPACT

Efforts of KVK to address the productivity constraints and for dissemination of integrated management practices in greengram through Front Line Demonstrations, training programmes, extension activities, advisory services and seed production programmes have resulted in increased productivity of greengram besides horizontal spread of technologies.

•Economic performance of FLD programmes:

Year	Yield (q/ha)		% increase in yield	Economics of demonstration (Rs./ha)				Economics of Local Check (Rs./ha)			
	Demo	Local check		Gross cost	Gross return	Net return	BCR	Gross cost	Gross return	Net return	BCR
2018-19	8.37	6.71	24.74	28000	46894	18894	1.67	26698	37576	10878	1.41
2019-20	6.95	5.97	16.41	25125	38206	13081	1.52	23642	32821	9179	1.39
2020-21	5.91	4.50	31.33	30294	36642	6348	1.21	25937	27900	1963	1.07
2021-22	12.96	9.36	38.52	25335	80352	55018	3.17	23439	58007	34568	2.47
2022-23	10.30	8.35	23.40	23750	67975	44225	2.86	23250	54246	30996	2.33
Avg.	8.90	6.98	26.88	26500	54014	27513	2.09	24593	42110	17517	1.73



- Seed production activities and supply of seeds**

Year	KVK		Seed producing farmers		Total (KVK + farmers)	
	Quantity (q)	Supplied to no. of farmers	Quantity (q)	Supplied to no. of farmers	Quantity (q)	Supplied to no. of farmers
2018-19	4.23	30	0.6	11	4.83	41
2019-20	8.10	112	1.35	23	9.45	135
2020-21	2.95	75	1.21	34	4.16	109
2021-22	2.65	60	1.44	29	4.09	89
2022-23	3.97	51	1.76	42	5.73	93
Total	21.9	328	6.36	139	28.26	467



Spread of DGGV 2 variety in Gadag District

- ❑ The impact of various activities such as front line demonstrations, cluster front line demonstrations, capacity building programmes and awareness programmes has created a high demand for DGGV 2 variety of greengram in the District.
- ❑ KVK has played a facilitator role by taking up seed production programme in its farm as well as in farmers' participatory mode.
- ❑ Seed chain has also been developed through FLD participating farmers.
- ❑ KVK's seed production programme as well as seed production by identified seed producers has achieved considerable success in meeting the demand of DGGV 2 variety.
- ❑ 28.26 quintals of seeds have been sold to farmers. In addition, seed producers and FLD farmers have retained DGGV 2 variety for self-use in their farms.
- ❑ Considering all these factors, it can be said that DGGV 2 variety has spread in more than 11000 Hectares in last five years in Gadag District and stands as one of the most successful technologies disseminated by ICAR-KVK, Gadag in the district.