Crop: Red gram

Technology Module:

Improved Varieties	:	BDN 711
Seed Rate/ha	:	12.50 kg/ha (Ridges and furrow method)
Seed Treatment	:	Biofertilizers and Trichoderma Rhizobium @25gm/kg of seed, PSB @25gm/kg of seed Trichoderma @5 gm/kg seed,
Sowing Time	:	Last week of June 2023
Spacing	:	90x20 cm. (RxR- 90cm & PxP-20cm)
Irrigation with stages	:	No of irrigation 03 Vegetative growth stage (30-35 DAS) Flowering stage- (60-70 DAS) and Pod filling stage.
Moisture Conservation Practices Followed	:	Sowing on ridges and furrow Hoeing
Fertilizer Application	:	Application of 25kg N and 50 kg P_2O_5/ha at the time of sowing + Zinc Sulphate as micronutrient @25kg/ha
Insect/pest Management Practices	:	Leaf folder, pod fly, cow bug, Helicoverpa. Control measures : Use of IPM package:- - Spraying of Neemark @2ml/lit - Installation of Pheromen traps+Lures @5/ha. - T bird purchase - Beaveriya Bassiana @1kg - Quinolphos 20EC @2ml/lit of water - Corogen@30ml
Weed Control	:	One hand weeding at 15 to 20 DAS and 2 times Hoeings
Harvesting	:	Maturing period- 160 to 170 days Harvesting done by cutting the plant with the help of sickle.
Existing Cropping Systems	:	Groungnut-Redgram Rabi Jowar-Redgram Bengalgrm-Redgram

Good quality action photographs

	**Training programme on improved cultivation practices of red gram.**
	**Training programme on ICM technology of red gram.**
	**Inputs provide to CFLDs farmers for ICM package in Red gram**
	**Women's Farmer beneficiary of Red gram demonstration Variety BDN 711 at Pod filling stage**

	**Women Farmer beneficiary of Red gram demonstration Variety BDN 711 at Pod filling stage**
	**CFLD plot at Vegetative growth stage in Red gram**
	**Visit to ICM in Red gram demonstration Variety BDN 711 at Pod filling stage**
	**The larvae feed on leaves, flower bud, flower and pods in red gram**

	**Infestation of Pod borer in Red gram**
	**More no of pods showing of demonstration plot variety BDN 711**

- **Short title of the technological intervention :** Integrated Crop Management in Red gram
- **Farming situation :** Irrigated
- **Climatic vulnerability Akkalkuva Taluka: Rainfall 640 mm,rainy days 36,** 2 dry spells.
- **Problems identified :** Use of traditional varieties, Fusarium wilt & pod fly incidence affects the yield, Unawareness regarding improved cultivation practices, Lack of awareness regarding INM,IPM packages.
- **Unawareness about IPM practices.**
- Technological intervention in brief : **Integrated Crop Management**

  Seed of Red gram (6 kg/acre)
  Biofertilizer for Seed Treatment- Rhizobium,and PSB, @250gm/demo each and Trichoderma:@100gm /demo
  Zinc Sulphate (ZnSO4) @ 10 kg/acr.
  Neem oil: ½ lit/Acr.
  Pheromone Traps+Lure (2 no/acr.)
  Potassium Nitrate (13:00:45) 1% spraying(2 kg)
  Spraying of insecticides: Corogen @30ml/Acr.
  Grain Pro bag : 2 Bags/Demonstration
- **Efforts made by KVK / methodology followed :** Farmers meetings, selections of fields Training programmes, Demonstration, Field visits and field day
- **Output, outcome and impact of the intervention –**

Yield : Average yield of Demonstration 18.57 qt/ha, 39 percent increase in yield.

Economics: Average Net return of demonstration plot is Rs 108690/ha as compared to Net return of check plot is Rs 73790/ha.

Additional cost demonstration is Rs 1850/ha, will get additional net return of Rs 34900/ha

Important observations :

- ►Bold white seeded variety- BDN 711.
- ► Bio fertilizer seed treatment found effective for germination and wilt disease.
- ► Variety BDN 711 found resistant to water stress & sterility mosaic disease.
- ►Seed treatment of trichoderma found effective for the control of fusarium wilt.
- ►ICM Package found effective for increasing yield (39%)

- **Area covered (ha) : 10**
- **No. of farmers benefited : 25**
- **Convergence :** State agriculture department

Success story on Pulses Kharif- 2023-24

Name of KVK	KVK Nandurbar
Crop and Variety	**Red gram** (BDN 711)
Name of farmer & Address	Mrs.Tulsibai Ishwar VAlvi, Village Moramba Tal. Akkalkuva Dist.- Nandurbar
Details of technology demonstrated	**Integrated Crop Management :-** ►Demonstration of Improved variety (BDN 711) of Red gram was given. ►Biofertilizers and Trichoderma as a seed tratment Trichoderma @5 gm/kg seed Rhizobium @25gm/kg of seed PSB @25gm/kg of seed ►Correction of Zink deficiency identify of micronutrients. Application of micronutrients i.e ZnSo4 @ 25 kg/ha at sowing time in soil. ►Use of IPM package:- -Neemark(10000ppm)500ml/acre - Use of Pheromen traps+Lures @2/acre. - T bird purchase ► Potassium Nitrate (13:00:45) 1% spraying ► Spraying of insecticides: Quinolphos 20 EC @½ lit/Acr. ► Storage of seed :- Grain storage bags (Grain pro bags)@2 bags/demo.
Institutional Involvement	► Identify the Red gram growers villages in Akkalkuva Tahasil village Vanyavihir and Moramba ►Three times farmers meeting were conducted and discuss the NFSM on pulse crop of Red gram. ►The cluster approach block sowing of red gram crop. ►To analyze the technology gap and to get information on farmers practice regarding Red gram cultivation as well as also discuss soil testing and other conditions. ►02Farmers training were conducting the demonstration. ►03 Farmers meeting were conducted demonstration. ►03 Demonstration and 01 field was conducted in ICM of Red gram.
Success Point	►Maintain plant population ►Timely pest disease management and harvesting ►Timely intercultural operations ►Collection of folded leaf
Farmer Feedback	►Bold white seeded variety- BDN 711. ►Bio fertilizer seed treatment found effective for germination and wilt disease ► Variety BDN 711 found resistant to water stress & sterility mosaic disease. ►Seed treatment of trichoderma found effective for the control of fusarium wilt ►ICM Package found effective for increasing yield (40%)
Yield (q/ha)	

Demonstration	21.48
Potential yield of variety/technology	23
District average	7.94
State average	9.53

Performance of technology vis-à-vis Local check (Increase in productivity and returns)

Practice used	Yield (q/ha)	Gross cost (Rs/ha)	Gross income (Rs/ha)	Net income (Rs/ha)	B:C ratio
Farmer practices	15.27	19600	106890	87290	5.45
Demonstration	21.48	21400	150360	128960	7.03
% Increase	40.67				