

## **INTEGRATED CROP MANAGEMENT IN DESI COTTON**

Herbaceous Cotton is one of the major crop of Gadag district. It is cultivated in rainfed farming situation during rabi season (September-October). There has been a decrease in the area under Cotton cultivation as the productivity has gone down. The attributing factor for low productivity are moisture stress during critical stage of crop growth, cultivation of old Jayadhar variety, improper agronomic practices and flower dropping. Apart from productive constraints, low market price was another reason for discontinuing the Cotton cultivation.



Considering the importance of Cotton to the district economy, from 2002-03 onwards, KVK started organizing Front Line Demonstration in the selected cluster of villages. Purpose of the demonstration was to demonstrate the Integrated Crop Management practices to enhance the productivity of Cotton and quality of fibre. Technological components of the demonstration are introduction of DDHC-11 an improved variety, use of bio-fertilizers, application of vermicompost, spray of NAA, topping, spray of DAP 2% and  $MgSO_4$  1%. Compartment bunding one month before sowing and opening of furrow at every 5 meter row after sowing was also demonstrated. The demonstration was conducted in 120 ha covering 300 farmers spread over 13 villages in Gadag district.

Results of the demonstration were very positive. Compartment bunding and dead furrow practices have resulted in increased moisture conservation. Cultivation of DDHC-11 variety along with application of bio-fertilizer and vermicompost has enhanced the sustainable productivity of crop. Spray of NAA has reduced the square dropping. There has been 30 percent increased yield compared to conventional practices. Apart from enhanced productivity, the quality of the fibre was improved. The improved fibre quality with respect to different parameters and yield levels are given below.

### Quality Parameters and yield of Cotton due to adoption of ICM Technology

Sl. No.	Particulars	Quality Parameters			Ginning %	Yield (Q/ha)
		Fibre Length (mm)	Fiber Strength (g/tex)	Fiber Fineness ( $\mu\text{g}/\text{inc}$ )		
1.	Demonstration of DDHC-11 variety with ICM	23.90	17.60	5.00	34%	5.37
2.	Local check with Jayadhar variety	23.00	17.40	5.40	32%	4.53

Adoption of Integrated crop Management practices in DDHC-11 variety has resulted in improved quality parameters of fibre length, strength and fineness. There was 34 percent ginning as compared to 32 percent in local checks.

By seeing the success of technological interventions, interest was developed among other farmers and during the subsequent years, the technology was diffused to neighboring villages. During the year 2007-08, the technology was adopted in 23 villages in an area about 1500 ha.