

Zeal is the mother of success

AICRP-Surat, Gujarat

Smt. Naynaben Mavjibhai Gamit, aged 34 years, is a farmer of the village Bedi, taluka Songadh, district Tapi of Gujarat. She realized economic returns from the improved production technology of sorghum. She was a source of inspiration to the other farmers of the area. Her education was only up to 8th standard. She always remain in regular contact with scientists of krishi vigyan kendra (KVK), Vyara and Sorghum Research Station, Surat for necessary guidance, seeds of new improved varieties, knowledge about recommended dose of fertilizers, plant protection measures etc. She was small farmer with a holding of 0.6 ha land without irrigation facility. Generally, she used to grow local sorghum variety, which had poor yield potential. She was innovative and well aware of the changes taking place in surroundings. She visited the Sorghum Research Station, Navasari Agriculture University, Surat and KVK, Vyara during 2009. They allotted her *kharif* frontline demonstration (FLD) on sorghum to observe the impact of improved production technologies in comparison to the local practice.

Generally, this area received 1000-1300 mm rainfall. Soil of the area was clay loam with slight undulated topography and good drainage. Summer ploughing was done in the month of May and the field was kept open till the receipt of monsoon. This practice helped the destruction of harmful insect-pests including microbes. About 10 t /ha farm yard manure (FYM) was applied to the the field. One third of nitrogen and full dose of P₂O₅ fertilizers were applied as basal. Sowing was done with 10 kg /ha seeds of sorghum variety CSV 20 keeping 45 cm distance. It was followed by thinning 20 days after sowing (DAS) keeping 15 cm distance within the rows. Top dressing of one third of nitrogenous fertilizer was done at 20 and 40 DAS. The cypermethrin at 20 DAS and furadon granules at 40 DAS were applied to control the shoot fly and stem borer, respectively. The weed population was kept under control by doing two hand weeding. Manual bird scaring was done for one month prior to harvest of the crop. The local sorghum cultivar was also grown using farmer practices along with CSV 20 for comparison. Both the cultivars were harvested after four months (after 120 days).



Scientists examining the crop in farmer's field A field view of CSV 20 along with the farmer

As it is evident from Table below that farmers of the area were pleased with the productivity of new sorghum cultivar CSV 20, which excelled to the tune of 2300 kg /ha grain yield as compared to 1150 kg /ha from the local cultivar. Farmers of this region reported that they had not seen such a high yielding sorghum cultivar. Smt. Gamit got net benefits of Rs.22140/- while under local practice Rs. 11075 /ha was obtained. She was highly convinced to grow new sorghum varieties on her field in future.

Economics of improved sorghum cultivar CSV 20

Sr. No.	Particulars		Sorghum cultivar	
			CSV 20	Local
(A)	Cost of cultivation (Rs. /ha)			
	(i)	Land preparation	1900	1300
	(ii)	Human labour	8200	5500
	(iii)	Inputs		
		(a) Seeds	250	250
		(b) Manure	3000	1000
		(c) Fertilizer	1560	Nil
		(d) Plant Protection Chemicals	450	Nil
(B)	Yield (kg /ha)			
	(i)	Grain	2300	1150
	(ii)	Fodder	6600	3550
(C)	Market rates (Rs. /100 kg)			
	(i)	Grain	1200	1200
	(ii)	Fodder	150	150
(D)	Cost and benefits (Rs. /ha)			
	(i)	Cost of production	15360	8050
	(ii)	Value of production	37500	19125
	(iii)	Net returns	22140	11075