

## Impact of sorghum production technologies on tribal community

In view to socio-economic upliftment of tribal farmers by introducing latest sorghum production technologies under TSP, one component of AICRP was implemented with the help of All India Coordinated Research Project on Sorghum (earlier AICSIP) and plan component was implemented with the help of KVKs of agricultural universities in Maharashtra. The year-wise impact of the demonstrated technologies are given hereunder.



During 2011-12, total 1330 demonstrations on their fields in five different sorghum growing states viz., Madhya Pradesh, Maharashtra, Karnataka, Andhra Pradesh and Gujarat were organized covering 571 ha through seven AICSIP centres during 2011-12. The cooperative and well responsive farmers from schedule tribe and schedule caste categories were selected from the villages of each site. The demonstrated sorghum varieties gave 70 per cent higher grain and 34 per cent stover yields than the local check. On an average, the demonstrated sorghum technologies could obtained net returns of Rs.23,368/- on the cost of Rs.15,051/- per ha, which is 86 per cent more than the local checks/practices.

During 2012-13, total 785 demonstrations were allotted to five AICSIP centres and three KVKs for organization in farmers' fields in Maharashtra, Rajasthan, Madhya Pradesh, Andhra Pradesh and Gujrat under TSP. Out of which, 521 field demonstrations on sorghum were organized during kharif 2012-13 in farmers' fields of tribal community for their socio-economic upliftment in around 18 districts of the different sorghum growing states viz., Madhya Pradesh, Rajsthan, Andhra Pradesh, Gujrat and Maharashtra. High yielding sorghum cultivars viz., CSV 15, GJ 39, JJ 1041, CSV 20, CSV 17, CSH 23, SPH 1635, CSV 28, Bhagyaxmi 296 and SU 1080, were demonstrated along with locally popular cultivars for comparison in their fields. The demonstrated sorghum varieties gave double grain (113%) and 29% higher fodder yields than their own traditional sorghum practices, across the regions. On an average, the demonstrated varieties could earn net returns of Rs.19,722/- per ha on the cost of Rs.13,092/- per ha, which is 84 per cent more than the local checks (Rs. 10,719/- per ha). In this way, the demonstrated technologies could help to raise monetary benefits of the tribal farmers from the improved sorghum cultivation. Besides, during rabi 2012-13, 264

demonstrations on sorghum were organized with variety PKV Kranti on farmers' fields on 114 ha in Gadchiroli district of Maharashtra with the help of KVK, PDKV, Gadchiroli. This variety yielded quite better grains (0.92 t ha<sup>-1</sup>) than the local variety (0.60 t ha<sup>-1</sup>) which is 53% higher than the check.

Under tribal sub-plan (TSP) 2013-14, 741 field demonstrations on sorghum were organized during kharif 2013-14 in farmers' fields of tribal community for their socio-economic upliftment in around 12 districts of the different sorghum growing states viz., Madhya Pradesh, Rajasthan, Andhra Pradesh, Gujrat and Maharashtra. Sixteen high yielding sorghum cultivars viz., PSV 56, GJ 39, CSV 21F, JJ 1041, CSV 20, CSV 17, CSH 23, CSH 16, CSV 28, SU 1080, SPV 1753, CSV 15, CSV 23, CSV 25, CSH 18 and GJ 42 were demonstrated along with locally popular cultivars for comparison in their fields. The demonstrated sorghum varieties gave almost double grain (94%) and 39% higher fodder yields than their own traditional sorghum cultivars, across the regions. On an average, the demonstrated varieties could earn net returns of Rs.27,068/- per ha on the cost of Rs.16,285/- per ha, which is 94 per cent more than the local checks (Rs. 13,972/- per ha). Besides, 420 rabi demonstrations were organized on farmers' fields on 168 ha in Gadchiroli, Buldhana, Parbhani and Akola districts of Maharashtra with the help of KVK, PDKV, Akola and AICSIP centres with PKV Kranti Parbhani Jyoti (CSV 18), Parbhani Moti and Phule Vasudha which yielded better (up to 197%) than the local variety. It was resulted into more than double net returns to the farmers. In this way, the demonstrated technologies could help to raise monetary benefits of the tribal farmers from the improved sorghum cultivation.

Under tribal sub-plan (TSP) 2014-15, out of total 1106 demonstrations, 506 field demonstrations on sorghum were organized during kharif 2014-15 in farmers' fields of tribal community for their socio-economic upliftment in around 12 districts of the different sorghum growing states viz., Madhya Pradesh, Rajasthan, Andhra Pradesh, Gujrat and Maharashtra. Sixteen high yielding sorghum cultivars viz., CSV 28, CSV 23, CSV 20, CSV 15, CSH 16, CSH 14, SPH 1641, SPH 1653, SPV 1862, JJ 1041, PC 080, GFS 5, GJ 42 and during rabi PKV Kranti were demonstrated along with locally popular cultivars for comparison in their fields. The demonstrated sorghum varieties gave almost double grain (153%) and 70% higher fodder yields than their own traditional sorghum cultivars, across the regions. On an average, the demonstrated varieties could earn net returns of Rs.35092/- per ha on the cost of Rs.18139/- per ha, which is 169 per cent more than the local cultivars (Rs. 13,033/- per ha). Besides, 600 rabi demonstrations were organized on farmers' fields on 240 ha in Gadchiroli and Buldhana districts of Maharashtra with the help of KVK, PDKV, Akola with PKV Kranti and Parbhani Moti which yielded better (up to 61%) than the local variety. It was resulted into more than double net returns to the farmers. In this way, the demonstrated technologies could help to raise monetary benefits of the tribal farmers from the improved sorghum cultivation.

Under tribal sub-plan (TSP) 2015-16, out of total 2199 field demonstrations, 1137 field demonstrations on kharif sorghum were organized in farmers' fields of tribal community for their socio-economic upliftment in around 12 districts of the different sorghum growing states viz., Madhya Pradesh, Rajasthan, Andhra Pradesh, Gujrat and Maharashtra. Sixteen high yielding sorghum cultivars viz., CSV 31, CSV 27, CSV 30, CSV 25, CSV 23, CSV 20, CSV 15, CSH 30, CSH 25, CSH 16, CSH 14, GJ 39, PC 1080, JJ 1041, SPV 1862, JJ 938, SPV 2205, SPH

1653 and GJ 42 and during rabi PKV Kranti were demonstrated along with locally popular cultivars for comparison in their fields. The demonstrated sorghum varieties gave 62% grain and 23% higher fodder yields than their own traditional sorghum cultivars, across the regions. On an average, the demonstrated varieties could earn net returns of Rs.20051/- per ha on the cost of Rs.12481/- per ha, which is 84 per cent more than the local cultivars (Rs.10852/- per ha). During, rabi, total 1062 demonstrations were organized on farmers' fields on 425 ha in Gadchiroli and Buldhana districts of Maharashtra with the help of KVK, PDKV, Akola with PKV Kranti and Parbhani Moti which yielded better (up to 61%) than the local variety. It was resulted into almost double net returns to the farmers.