

Participatory model for sorghum promotion in rice fallows to achieve economical and nutritional security

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ABSTRACT

Sorghum is emerging as a potential alternative feed, fodder and bio-energy besides, food crop under changing climate scenario. However, the area under kharif sorghum cultivation is decreasing rapidly due to various reasons. The situation demands a search for potential niches for its cultivation in non-traditional areas. In rice-fallows of coastal Andhra Pradesh especially in Guntur and adjoining Krishna and Prakasam districts, sorghum cultivation is gaining popularity among farmers due to its high productivity and low water requirement. It is now grown in more than 15,000 ha area in rice-fallows with an average productivity of 6.8 t/ha, which is the highest in the country. Sorghum in rice-fallows in coastal Andhra Pradesh, especially in Guntur and adjoining districts is gaining popularity among the farmers. To know social, motivational and agro-economical aspects for enhancement of sorghum profitability and researchable aspects for further development, a study have been conducted by following participatory technology evaluation and dissemination approach. It was comprised of six steps: (i) site selection and rapport building, (ii) resources characterization, (iii) farming system analysis, (iv) participatory varietal selection, (v) validation and (vi) technology delivery and dissemination.

Results revealed that due to delayed transplanting of rice owing to late release of water and severe infestation of yellow mosaic virus and weeds in blackgram, the farmers are switching over to non-traditional crops like sorghum (in less irrigated areas) and maize (in assured irrigated areas) as an alternative to blackgram. Practically, the sorghum growers in this area are mostly inclined towards obtaining maximum monetary benefits from grain yields than others. Therefore, During last three years (2009-12), total 22 public and private sorghum hybrids were evaluated through participatory mode where *kharif* hybrid, CSH 16 gave (24%) higher grain yield than others during three years (2009-12) and found most suitable for this area. The farmers of this area liked it much, due to it's high grain potential and medium height. Its plant height showed negative correlation with grain yield indicating the need for medium-tall hybrids for rice-fallow situations. This calls for wide dissemination of identified sorghum hybrids. The farmers were well convinced with the technologies evaluated and developed for this area by following participatory approach. They were willing to cultivate sorghum in more areas along with proven production technologies.