

RESEARCH

Three projects were entertained by SAURES in the year 2006-2007. The result of the ongoing research projects and completed research projects are presented as summary form in this report.

ONGOING RESEARCH PROJECTS

DEVELOPMENT OF SHORT DURATION DROUGHT AND/OR SALINITY TOLERANT GENOTYPES IN *BRASSICA RAPA* THROUGH INTERSPECIES HYBRIDIZATION WITH *B. JUNCEA* FOR IMPROVED YIELD AND OIL CONTENT

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Extended Summary

Mustard/ rapeseed is the leading oil crop of Bangladesh. Bangladesh has a chronic shortage of edible oil. Around 25-30% of her edible oil requirement is met with local production and the huge shortage is met by import. The cultivated area of rapeseed/mustard occupies only 0.297 million ha which is only 4.04% of the total cultivable area. It seems to be impossible to increase its area of production in the existing cultivable land. The yield of the existing *B. rapa* varieties is very low in some areas where there is a problem of drought at one or more stages of crop growth. Moreover, the drought and saline prone area of the country remains uncultivated during rabi season due to lack of rape seed/ mustard variety that are at least to some extent tolerant to drought and /or salinity. To expand the cultivation of rape seed to the coastal areas of Noakhali, Barisal, Patuakhali and saline area of Satkhira we need to develop new genotypes of *B. rapa* with certain degree of tolerance to salinity. Varieties of *B. juncea* have got both tolerance to drought and saline to some extent but they are low yielders. These varieties can be utilized in the crossing programme with *B. rapa* in order to combine high yield along with drought/ salinity tolerance. In order to fulfill these objectives a crossing programme was initiated with the following materials of the two species:

B. rapa : SAU Sarisha 1, BARI Sarisha 6, BARI Sarisha 15, Tori 7, SS-75

B. juncea : Rai 5, BARI Sarisha 10, BARI Sarisha 11

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The varieties were grown thrice with 10 days interval of sowing: 1st Nov, 10th Nov and 21st Nov, 2007 in order to achieve synchronization of flowering and to have maximum inter species hybrid seeds.

The crosses were carried out in the following fashion:

SAU Sarisha 1	x Rai5	BARI Sarisha 15	x Rai5
	x BARI Sarisha10		x BARI Sarisha10
	x BARI Sarisha11		x BARI Sarisha11
BARI Sarisha 6	x Rai5	SS 75	x Rai5
	x BARI Sarisha10		x BARI Sarisha10
	x BARI Sarisha11		x BARI Sarisha11
Tori 7	x Rai5		
	x BARI Sarisha10		
	x BARI Sarisha11		

The crop continued to grow up to late February 2008. The collection of F₁ seed was continued for a duration from mid -January to late -February 2008.