



Sweet Sorghum an alternative energy Crop

Grant Agreement n° 227422

WP2

Deliverable 2.7:

*Ten to fifteen hybrid parents with
high sugar and grain yields adapted
to post rainy season*

Composition of the consortium

CIRAD
ICRISAT
EMBRAPA
KWS
IFEU
UniBO
UCSC
ARC-GCI
UANL
WIP



A total of 28 hybrid male parents/restorer lines were evaluated for sugar yield and related traits during 2011-12 postrainy season at Icrisat, Patancheru. The Icrisat cultivars ICSV 25323 (3.1 t ha⁻¹), ICSV 25300 (2.9 t ha⁻¹), and ICSV 25316 (2.9 t ha⁻¹) and OPV 007 (3.0 t ha⁻¹) developed by ARC-GCI South Africa are found to be best for sugar yield in postrainy conditions (Table-1).

Table-1. List of promising restorer lines with postrainy season adaptation

Male parent	Days to 50% flowering	Plant height (m)	Stalk yield (t ha ⁻¹)	Brix (%)	Sugaryield (t ha ⁻¹)
ICSV 25300	63	2.6	52.4	16.8	2.9
ICSV 25299	62	2.5	49.8	15.9	2.5
ICSV 25315	62	2.7	48.9	16.5	2.8
ICSV 25316	78	3.2	45.25	16.5	2.9
ICSV 25323	77	3.2	52.72	16.4	3.1
OPV 007	74	3.4	50.03	17	3.0

Similarly about 35 female hybrid parents were evaluated during 2011-12 postrainy seasons and the Brix range among the top ten parents is 13.5 to 15.3 while the sugar yield ranged between 1.14 to 1.65 t ha⁻¹. The lines ICSB 702, ICSB 726 and ICSB 324 are best for sugar yield during postrainy season (Table-2).

Table-2. List of promising female hybrid parents with postrainy season adaptation

Female parent	Days to 50 % Flowering	Plant height (m)	Stalk yield (t ha ⁻¹)	Brix (%)	Sugar yield (t ha ⁻¹)
ICSB 324	68	1.7	28.1	13.5	1.43
ICSB 467	64	1.6	26.4	13.9	1.39
ICSB 479	68	2.1	21.9	13.5	1.14
ICSB 480	87	2.5	32.2	14.0	1.41
ICSB 652	68	2.0	24.3	13.5	1.35
ICSB 690	81	1.4	26.3	14.9	1.27
ICSB 702	73	1.5	26.5	15.0	1.65
ICSB 726	71	1.6	25.1	15.3	1.48
ICSB 729	84	1.8	36.5	14.0	1.38
ICSB 731	76	1.9	24.4	13.9	1.34