



# Sweet Sorghum an alternative energy Crop

Grant Agreement n° 227422

**WP3**

**Deliverable 3.10:**

*Fifteen to thirty experimental sweet sorghum hybrids available for elevation*



Composition of the consortium

**CIRAD**  
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The twelve sweet sorghum A-lines described in Deliverable 3.9 as well as other potential sweet sorghum A-lines are currently being crossed to sweet sorghum tester R-lines, BRS508, BRS509 and BRS 511 the winter nursery. We expect to produce small quantities of seed for 36 or more experimental sweet sorghum hybrids for multiple environment field evaluation in the 2013/2014 agricultural year (November – April) in Brazil.

Preliminary results in a small experiment in 2012/2013 with experimental hybrids in one row plots with three replications are shown in the table below. Note that juice extraction and days to mid flower were similar for all three groups of cultivars. The Brix of the experimental hybrids and their male parents are quite similar and significantly higher than the commercial hybrids. This implies that the female parents are truly sweet sorghum females and do not result in significant reduction of the hybrids made with this female. Note that BRS507 is the same as BRS509 and that CMSXS642 is the same as BRS 508. Note that the female parents are also still in the development stage. The Brix values are not at their potential level due to excess rain at harvest.

Experimental hybrid	Days to Mid Flower.	Extraction (%)	Brix (°)
201220(B) 003-2 x CMSXS643-2	76 a1	72 a1	11.00 a3
201220(B) 003-8 x BRS509-8	81 a1	71 a1	12.47 a3
201220(B) 005-5 x CMSXS646-5	78 a1	71 a1	12.14 a3
201220(B) 005-7 x BRS506-7	78 a1	72 a1	11.80 a3
201220(B) 005-8 x BRS506-8	78 a1	74 a1	11.60 a3
201220(B) 007-7 x BRS506-7	83 a2	71 a1	9.63 a2
201220(B) 011-4 x BRS507-4	81 a1	75 a1	10.80 a3
201220(B) 011-5 x CMSXS642-5	80 a1	68 a1	13.17 a3
201220(B) 011-8 x CMSXS646-8	78 a1	74 a1	10.07 a2
201220(B) 011-9 x CMSXS647-9	79 a1	73 a1	10.80 a3
201220(B) 017-4 x CMSXS643-4	78 a1	72 a1	12.27 a3
201220(B) 017-5 x CMSXS646-5	77 a1	73 a1	10.80 a3
201220(B) 019-3 x CMSXS646-3	86 a2	69 a1	13.73 a3
201220(B) 019-5 x CMSXS643-5	86 a2	80 a1	8.57 a2
201220(B) 019-6 x BRS507-6	83 a2	73 a1	12.36 a3
Hybrid average	80	72.54	11.41
BRS 506	88 a2	74 a1	12.20 a3
BRS 509	86 a2	72 a1	11.37 a3
BRS 508	84 a2	68 a1	15.93 a3
CMSXS643	86 a2	72 a1	10.67 a3
CMSXS646	84 a2	73 a1	12.77 a3
CMSXS647	81 a1	76 a1	11.10 a3
Variety average	85	72.44	12.34
Sugargraze	84 a2	70 a1	9.37 a2
V82391	80 a1	72 a1	9.10 a2
V82392	77 a1	68 a1	7.43 a1
V82393	78 a1	75 a1	6.20 a1
Commercial hybrid average	78	71.56	7.58