



**Seventh framework programme
Food, Agriculture and Fisheries, and Biotechnology**

Specific International Co-operation Actions
Small or medium scale focused research project



Sweet Sorghum an alternative energy Crop

Grant Agreement n° 227422

WP3

Deliverable 3.24:

*Five to ten sweet sorghum varieties
with an improved PIU recommended
for ethanol production*

Composition of the consortium

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



The PUI of five cultivars was determined for three Embrapa released varieties in 2012 (BRS511–CMSXS694, BRS508–CMSXS642 and BRS509–BR507), and two commercial hybrids (Sugargraze and XBSW80147) for two cropping seasons, 2011/2012 (figure 1) and 2012/2013 (Figure 2).

The minimum level for Brix for an adequate level of PIU is 14.5 while the minimum number of days recommended for adequate PIU is 30 days. Heavy rains (>150 -200 mm) occurred on about 105 days in 2011/2012 resulting in an increase in juice content and a decline in Brix and Sugar for a short period of time.

Note that in both years the PIU for the hybrids did not meet the minimum requirement of 30 days, in fact the hybrid Sugargraze did not meet the minimum requirement for even one day, whereas the hybrid XBS80147 met the minimum requirement for only 10 days in 2011/2012.

The year 2012/2013 was not a typical year at the PIU evaluation site with constant rain between 100 and 145 days after planting. Even with this excess rain in 2012/2013, the released variety BRS508 exceeded the minimum Brix of 14.5 for 45 days in both years.

Figure 1. PUI of five cultivars for three released varieties (BRS511–CMSXS694, BRS508–CMSXS642 and BRS509–BR507), and two commercial hybrids (Sugargraze and XBSW80147) in 2011/2012.

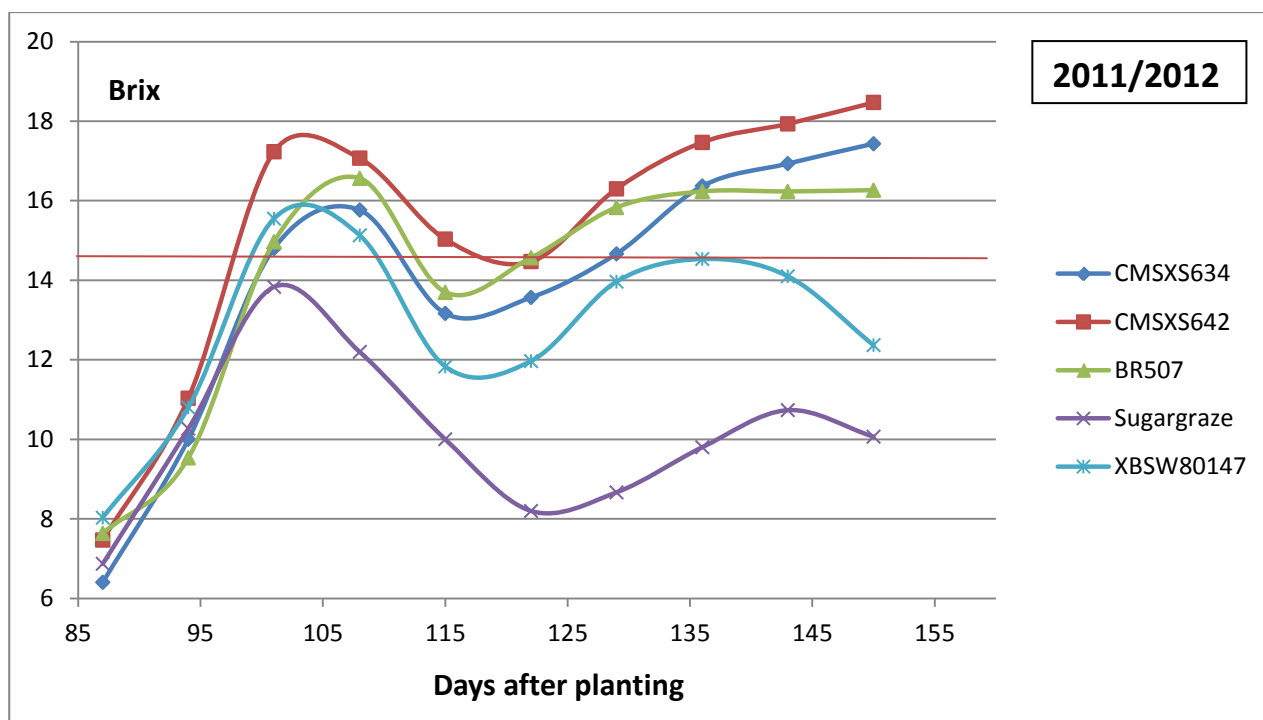


Figure 2. PUI of five cultivars for three released varieties (BRS511–CMSXS694, BRS508–CMSXS642, and BRS509–BR507), and two commercial hybrids (Sugargraze and XBSW80147) in 2012/2013.

