

INITIAL RESULTS FROM THE SWITCHGRASS BREEDING PROGRAM  
AT AUBURN UNIVERSITY

*Edzard van Santen and David Bransby*

Dept. of Crop, Soil and Environmental Sciences  
Auburn University, AL 36849-5412, USA  
[vandedza@auburn.edu](mailto:vandedza@auburn.edu)

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The breeding program is based on a collection of 21 accessions consisting of seed collected from stands of seven named cultivars (Alamo, Blackwell, Carthage, Cave in Rock, Kanlow, Pangburn, Pathfinder) and 14 unnamed accessions collected in seven states viz. TX (5), NC (4), FL (2), KS (1), MS (1), and WV (1) between 1966 and 1985 and established at the Plant Breeding Unit, Tallassee, AL in 1988. In 2006 two 9-clone polycross nurseries were established at the same location. HS-progeny evaluation began in 2008 with a single planting at the abovementioned location. We use spaced-plants (1-foot within, 2-6 feet between) to eliminate differences in plant populations. A 3-location, 3-yr evaluation began in 2009 with 19 entries and Alamo as check. The majority of HS-families evaluated in the 2008 trial exceeded Alamo in yield in individual years as well as on a cumulative basis. Alamo had a stable yield ranging from 15.4 - 18.6 Mg and no stand maturation effect was noted. This stable yield of Alamo across years has been observed in many studies. However, in the multi-location multi-year study, Alamo never ranked higher than 7<sup>th</sup> in yield. There were four important results from that study, viz. (1) using transplants rather than seeded stands resulted in uniform establishment; (2) early-season transplanting enabled us to get biomass data during the establishment year; (3) the best HS-families could be reliably identified during the 2<sup>nd</sup> year; and (4) border rows are absolutely essential for reliable progeny testing.