Contributions of Introduced Sorghum Germplasm to Hybrid Development in the USA

R.R. Duncan
University of Georgia
Griffin, Georgia

P.J. Bramel-Cox
Kansas State University
Manhattan, Kansas

F.R. Miller
Texas A&M University
College Station, Texas

The genus *Sorghum* is characterized by a vastly diverse germplasm pool; the immense morphological diversity of the cultivated races has emerged because of variable climates and geographical exposures in which its wild ancestors evolved, coupled with selection pressures imposed by the environment (natural introgression, geographical isolation) and by man (disruptive selection—Doggett and Majisu, 1968, ethnological isolation) for domestication. Mounting evidence suggests that sorghum evolved and was subjected to early domestication about 5000 yr ago in northeastern Africa, in the area north of the equator and east of 10°E lat. (roughly stretching from near the Ethiopian border west through Sudan to Chad to near Lake Chad, Mann et al., 1983).

The basic distinction between a wild or domesticated cereal is the presence or absence of an abscission zone (layer) at the base of the spikelets on the panicle (Schwanitz, 1966). For domestication to be successful, practical harvesting of whole panicles and subsequent utilization of the grain for seed are essential steps. Selection for other visible characteristics such as panicle size, seed size, or grain quality could have been practiced without completing the domestication process. Sociological issues and