

Hybrid Grain Sorghum Trials

yields of 23 hybrids tested in growing areas of state under varying conditions showed increases over old line varieties

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To evaluate the relative merits of hybrid varieties of grain sorghum 23 hybrids were grown in comparison with established varieties in trials conducted in grain sorghum growing areas of the state. Most of the trials involved non-replicated strip plantings in commercial fields. The cultural practices—including harvest—were typical of those used by growers in the particular areas where the tests were made.

Double Dwarf 38 was the check variety in most comparisons, but in a few, Double Dwarf Yellow Sooner or Ryer 15 was used. RS 610 was the most consistent in performance and appeared to be the one preferred by the growers where a choice was indicated. In general, the hybrids showed a yield advantage from either early or late plantings. The hybrids often—although not consistently—showed a greater yield advantage under adverse conditions such as soil salinity or moisture stress. Outsanding results were also obtained under high-yielding conditions.

Emergence was usually somewhat later for the hybrids than for the milo types



Grain sorghum hybrid RS 610—background—showing height and size of the heads. RS 610 also permits a taller stubble—middleground—than the old line variety—foreground—Double Dwarf Yellow Sooner.

but after their establishment the hybrids were visibly the more vigorous in plant growth.

Harvesting of the hybrids was generally easier than for the milos. The heads stood well above the foliage and there

was less lodging and stalk breakage. In terms of size of kernels or weight per bushel the grain quality of the hybrids was as good as the milo. Moisture content at harvest was usually slightly higher in the hybrids than in the check varieties. None was as early as Ryer 15 or Norghum.

Based on available data the early maturing hybrids were RS 501 and K-135—formerly known as Kingscrot 3010—while the medium maturing were RS 590, RS 610, Amak R-10, DeKalb C44A, DeKalb D50A, DeKalb E56A, Frontier 400 and Genetic Giant 7. The late varieties were RS 650, Texas 620, Texas 660, Amak R-12, DeKalb F62A, Frontier 390, Frontier 410, and Genetic Giant 5. RS 501, K-135, and DeKalb D50A grow 8" to 12" taller than most of the other hybrids and milo varieties.

Most plantings had mixtures of off-type plants, probably due to lack of adequate isolation in seed production but—as experience is gained in the production of seed—purity of seed probably will be improved.

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Left—Old line variety Double Dwarf 38 in field in Colusa County. Yield was 2,755 pounds per acre. Right—Hybrid RS 610. Yield in this plot was 4,224 pounds per acre.



Yields of Open-pedigreed Hybrid Varieties of Grain Sorghum
(Varieties included in 10 or more trials)
Based on standardized moisture percentage

Hybrid	No. of comparisons	Av. yield of check lbs./acre	Av. increase hybrid over check lbs./acre	Av. yield of hybrid as % of check	Comparisons where hybrid yield was less than check
RS 590	14	4,640	249	108	3
RS 610	19	4,214	1,169	133	1
RS 650	17	4,636	609	115	5
Tex. 620 . . .	10	3,748	359	110	2
Tex. 660 . . .	11	4,167	873	129	1