

TifQuik for Faster Forage

Forage growers would naturally like to get the jump on weeds and extend their forage production season. So Agricultural Research Service geneticist Bill Anderson of the Crop Genetics and Breeding Research Unit in Tifton, Georgia, and his colleagues have developed a new bahiagrass (*Paspalum notatum*) cultivar that may help them do just that.

Released by the U.S. Department of Agriculture (USDA) and the University of Georgia (UGA) TifQuik has great promise as a forage grass in the Southeast. Currently, Tifton 9 bahiagrass, another USDA/UGA variety, developed by the late Glenn Burton, an ARS Hall of Fame member, is widely grown for forage, with good results. But the TifQuik cultivar is even better.

“TifQuik was developed to have reduced hard seed and thus faster germination and field establishment than Tifton 9,” says Anderson. “These features mean that a TifQuik-seeded pasture will be covered earlier, and grazing or hay removal can be performed sooner—with higher initial yields.”

The bahiagrass cultivars now grown have a considerable amount of hard seed and thus require 2-3 weeks to establish a full stand. During this time, weeds may infest the pasture, and moisture for forage seed germination may be restricted.

In developing TifQuik, the sole criterion for selection of plants was fast germination. It took 4 years to achieve the desired qualities. Former ARS agronomist Roger Gates and retired geneticist Wayne Hanna performed the four selection cycles, beginning with Tifton 9. During each cycle, enough seed was planted from the previous one to obtain 1,000 seedlings that germinated within the first week. Seedlings were transplanted to clay pots in the greenhouse and then to a fumigated field to establish a nursery. Plants were allowed to cross-pollinate, seed was hand-harvested, and that seed was then used to start the final cycle, the following spring, in a greenhouse. The four cycles were

completed in 2002, and the seed from 2002 was used to establish greenhouse germination tests and a replicated field test and to begin seed increase.

In the greenhouse studies, germination of TifQuik averaged five times more than Tifton 9 after 6 days and three times more after 8 days. In the field studies, TifQuik emerged about 75 percent faster after 1 week than Tifton 9 and Pensacola, another commonly used forage bahiagrass. After 4 weeks, TifQuik plants were taller than both Tifton 9 and Pensacola. Dry-matter yields of TifQuik were two times higher than Tifton 9 and four times higher than Pensacola for the first clipping, which was done 2 months after planting.

“TifQuik will be particularly valuable to growers who wish to include bahiagrass

in a sod-based rotation system with row crops such as peanut and cotton in the southeastern United States,” says Anderson. “Bahiagrass has been shown to reduce nematode and disease problems in subsequent crops, and it should provide many forage growers with another tool to make their operations more efficient and, hopefully, more profitable.”—By **Sharon Durham, ARS.**

This research is part of Rangeland, Pasture, and Forages, an ARS national program (#205) described on the World Wide Web at www.nps.ars.usda.gov.

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STEPHEN AUSMUS (D1074-6)



In a replicated plot outside Tifton, Georgia, technician Freddy Cheek (left) and geneticist Bill Anderson harvest grasses to measure yields, dry matter content, and quality.

STEPHEN AUSMUS (D1076-2)



A distinguishing trait of bahiagrass is its V-shaped seed head (or inflorescence).