United States Department of Agriculture
Agricultural Research Service

# Recent Forage Grass Cultivar Releases by the Grazinglands Research Laboratory: "*Artillery*" Smooth Bromegrass & "*Armory*" Endophyte Free Tall Fescue

Grazinglands Research Laboratory, El Reno, Oklahoma May 2017

**Rationale:** Agriculture in the Southern Great Plains (SGP) is mixed with cropland, pastureland, and native prairie rangelands interspersed within individual farms across the landscape. These transitional lands range between both humid and arid zones. However, crop and animal production and farm income in the SGP fluctuate wildly because of large climate variability. Forage resources in this transition zone include both tall-grass prairie and introduced perennial grasses that provide resilience to the summer forage supply during variable climate conditions. Winter wheat is the principal annual crop, with much of it serving dual use as a cool-season forage as well as for grain production. Production from existing forage crops is, however, seasonal in nature and grazing livestock are confronted with significant periods of forage deficit throughout the year. As such, the identification or development of plant materials and improved technology to provide improved quantity and quality of forage is essential. Current livestock production systems face serious challenges due to increasing production costs, climatic uncertainties and environmental concerns. As a consequence, adapted, perennial cool-season grass forages have been developed, released, and commercially marketed to fill forage gaps between the winter wheat and perennial summer grazing periods in the Southern Plains Region.

'Artillery" smooth bromegrass in Albany, OR

**Objective:** Develop persistent, perennial, cool-season grass forages that will improve productivity and sustainability of grazing and crop lands in the Southern Great Plains.

**What we are doing:** The perennial, cool-season grass forage program was initiated at the Grazinglands Research Laboratory in 2000. Since that time, we have searched the world for species and accessions that exhibit tolerance to the environmental extremes of the Southern Plains Region. For nearly a decade, we have performed hybridizations and selections within the gene pool of these materials to identify particular genotypes that are persistent and adapted to the environmental extremes of the Southern Plains. Specifically, these extremes include long periods of elevated temperature and drought, two traits not commonly found in cool season grass forages.

From this program, two cultivars have been recently released for use in the Southern Plains. "*Artillery*," a smooth bromegrass, and "*Armory*," a semi-rhizomatous, endophyte free tall fescue. Each were evaluated against popular commercial checks and across multiple locations across the USA. Both releases exhibit competitive forage production to commercial cultivars and each are superior performers under drought conditions. Plant Variety Protection was granted on both cultivars in 2016 and both are to be marketed by Barenbrug Seeds USA beginning in fall of 2017.

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