

**IMPROVING GERMINATION OF POVERTY GRASS [*Danthonia spicata* (L.)  
BEAUV. EX. ROEM & SCHULT]**

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*Abstract:* Poverty grass (*Danthonia spicata* L.) a native-cool season grass widely distributed in the United States is being evaluated for native plantings and golf courses for its short growth habit, drought tolerance, adaptation to full-sunlight or shade, and tolerance to acidic or low organic matter soils. The effects of mechanical scarification, potassium nitrate, cold-moist-stratification (0, 10, 20, 40 days), and light or darkness were tested on 77-78% viable but dormant seed from Missouri and Minnesota to increase germination. All seed tested was dry-cold stratified and, unless indicated, seed was grown at 25°C for 40 days. Germination was higher for scarified Missouri seed when exposed to light (63%) than when seed was maintained in the dark (46%). Germination for scarified and cold-moist stratified seed was from 59% to 66% when grown under light and was less than 5% for seed grown in the dark. Light had less effect on the Minnesota seed source where germination averaged 50% for seed grown in the dark and 60% for seed grown under light. Potassium nitrate (0, 1, 2, and 3g/1000ml) compared to mechanical scarification did not improve germination; although there was a trend for higher concentrations to reduce germination. Temperature affected germination of Minnesota source. Best germination was achieved at 30°C in the light (69%) in contrast to (42%) in the dark and was 0 at 40°C. The effect of pH and depth of planting on plant growth of other seed collections from Missouri and other states is being tested.