

Seed Production Potential of Switchgrass in the Southeast USA.

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Lack of adequate seed supplies and poor and variable seed quality are major current limitations to switchgrass use. Most of the switchgrass seed currently harvested commercially occur in the central Great Plains. Development and adoption of seed production in the southeast USA has potential acceptance given favorable weather conditions of generally favorable rainfall and optimal ambient temperature during the growing season. Rainfall is generally limited in October thereby facilitating seed harvest, except in years with tropical storms. An established stand of 'Alamo' switchgrass was harvested for hay and seed (half season) or for only seed (full season) from 1998 to 2001. Herbage yield of hay harvested at the late vegetative stage in June ranged from 4 to 10 Mg ha⁻¹. Seed harvested in October had a yield of 246 kg ha⁻¹ following hay harvest in June and a seed yield of 483 kg ha⁻¹ when grown for the full season. Germination ranged from 70 to 80%. Seed yield varied with year and ranged from 123 to 516 kg ha⁻¹ averaged over June cutting treatments. Seed harvest was lost in 1999 due to a tropical storm so there was a 25% chance of losing seed production over the four-year period of this study. This risk is significant, however, seed yield in good years compared very favorably to seed yield achieved in the central Great Plains. Development of seed production capability in the southeast USA may provide producers with an economic alternative during the start up period for growing switchgrass for biomass. Switchgrass can be utilized for forage prior to seed or biomass harvest giving it versatility unmatched by other potential biomass for energy crops.