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Establishing and Managing Switchgrass as an Energy Crop

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Abstract

When it was first adopted as a crop, switchgrass was evaluated and improved for forage uses; but it has more recently been extensively studied as an energy crop, where its biomass might be used as feedstock for bioenergy. Of the two morphological forms or cytotypes of switchgrass, the lowland cultivars tend to produce more biomass; but upland cultivars are generally of more northern origin and more cold tolerant and therefore are usually preferred in the North. Attention to weed control, planting date, planting depth, and seed dormancy can greatly increase establishment success with this species. Stands of switchgrass should be harvested no more than twice per year, and one cutting often provides as much biomass as two. Harvesting after aboveground biomass has senesced can aid persistence, facilitate harvest operations, conserve N, and improve feedstock quality; but other harvest patterns may provide a better fit in some situations. If its biology is properly taken into consideration, switchgrass can offer great potential as an energy crop.

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