Bioenergy for Cattle and Cars: A Switchgrass Production System that Engages Cattle Producers

Switchgrass (*Panicum Virgatum* L.) has been identified as a primary next-generation cellulosic feedstock by the U.S. Department of Energy. However, the lack of current markets for the switchgrass biomass, coupled with the expense and risk associated with the establishment and maintenance of this crop, has prevented widespread adoption by the producers. In addition, biorefineries are reluctant to develop in regions that lack an established feedstock base. Recent trends in grain and feeder cattle markets indicate that beef cattle producers face increased pressure to achieve greater livestock gains on forage-based diets prior to being shipped to feedyards. Stocker cattle producers, therefore, are seeking forage systems that allow them to extend their traditional pasture-based grazing seasons.

Switchgrass has been reported to have high forage quality in early spring for grazing, thus complementing the cool-season grasses. Information regarding the grazing potential of switchgrass, under different stocking rates, in a continuous grazing system and the production of end-of-growing-season harvested biomass is lacking. Using switchgrass for this dual purpose has the potential to mitigate some of the risks associated with the development of a large-scale bioenergy industry in the region.

In the July–August 2013 *Agronomy Journal*, a team of scientists from the Noble Foundation in Ardmore evaluated whether or not switchgrass can be managed for use in a combined beef stocker cattle and bioenergy production system. Their goal was to evaluate the effect of stocker cattle rate on animal performance, forage nutritive values, and end-of-growing-season harvested biomass.

They evaluated three stocking rate treatments—light (2.5 steers ha⁻¹), moderate (4.9 steers ha⁻¹), and heavy (7.4 steers ha⁻¹), and...