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Forage Production & Utilization

This research is investigating factors that will minimize forage production and utilization. Inputs are monitored to determine efficient levels that will maximize profit and protect environmental quality.

Alfalfa is the primary hay crop in Delaware. Ongoing cultivar trials evaluate forage production, predicted feed value, and stand longevity. The impact of five levels of residual soil fertility and four levels of commercial fertilizer are being compared in a long-term experiment evaluating nutrient requirements of alfalfa when maximum yield management is practiced. A defoliation management experiment measures the effects of regrowth interval and fall harvest on dry matter production, forage quality, and stand persistence.

Year-round grazing of rotational pastures by a cow-calf herd is being fine-tuned. Bermudagrass is being compared to reed canarygrass for utilization during July and August; maximum utilization during July and August. Maximum utilization of stockpiled tall fescue pastures is being determined; strip vs. Non-strip grazing management with and without ionophores are treatments. Endophyte levels in tall fescue pastures are measured annually. Animal response on the year-round system is measured by recording: conception and weaning rates; correlation of calf weights with expected progeny differences; pelvic areas; health; cow weights and condition; and correlation between seasonal forage production / quality and animal condition. All production inputs are recorded and compared to production product.

The first attempted embryo flush at the University was successful and the first calf was born utilizing a surrogate cow. A Delaware State University bull was the second highest selling bull in the West Virginia Bull Performance Sale. A new bovine hospital and a feed processing center have been constructed in support of the forage-beef research.

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