

Evaluation of Grass Species for Improved Pasture Management

Final Report for FW96-073

Project Type: Farmer/Rancher

Funds awarded in 1996: \$4,800.00

Projected End Date: 12/31/2004

Matching Non-Federal Funds: \$3,215.00

Region: Western

State: Montana

Principal Investigator:

[Robert Lee](#)

Project Information

Abstract:

OBJECTIVES

The Judith Gap (Montana) Pasture and Range Club wanted to extend the time a cow spends on grass, as opposed to processed feed, by analyzing grass species that work best for the area's elevation, growing season and precipitation.

ABSTRACT

The Robert E. Lee Ranch Co., nestled at the base of the Big Snowy Mountains near Judith Gap, Mont., is a diversified cattle company that raises cattle, hay, wheat and barley. Established in 1969, the ranch is operated by Bob and Kathy Lee with input and help from children Kim, Krista and Kenny.

The Lees operate under the philosophy that "by working within our environmental limitations, monitoring our production costs and wise use of our rangelands, we strive to be economically and socially sustainable." To that end, the Lees, working with the 10 husband-and-wife ranching teams in the Judith Gap Pasture and Range Club, applied for a SARE grant that would help them evaluate ways of harvesting grass through the cow.

SPECIFIC RESULTS

The research team set out plots that would enable them to study different grass and legume species, along with seeding rates and drill-row spacing, to identify species that would help livestock producers in this area of central Montana extend the grazing season.

The grasses and legumes were seeded June 3, 1996, and samples were taken and calculations made on June 15, 1997.

The following are the species, acres and row spacing for each of the plots, along with the pounds per acre of dry matter harvested, the animal units that could be accommodated on each species and the number of plants recorded for each 3 feet of seeded row.

- Trailhead Basin Wildrye planted on 3 acres at 20-inch row spacing had six plants in

3 feet of row, yielding 100 pounds of total usable forage (dry weight) per acre, an amount sufficient to support 0.08 animal units.

- Slender Wheatgrass, Spredor and Bozoisky planted on 12 acres at 10-inch row spacing had 11, 26 and 12 plants per 3 feet of row, respectively, yielding 1,334 pounds of total usable forage per acre, an amount that would support 4.24 animal units.
- Altai Wildrye planted on 6 acres at 20-inch spacing had 15 plants in 3 feet of row, yielding 1,000 pounds per acre, enough to support 1.59 animal units.
- Sodar Streambank planted on three acres at 10-inch spacing had 8 plants in 3 feet of row, yielding 1,300 pounds per acre of total usable forage, enough to support 1.5 animal units.
- Bozoisky planted on 3 acres at 20-inch row spacing had an average of 15 plants in 3 feet of row, yielding 1,900 pounds per acre of total usable forage, enough to support 1.5 animal units.
- Critana Thickspike planted on 3 acres at 10-inch spacing averaged 6 plants per 3 feet of row, yielding 1,700 pounds total usable forage, enough to support 1.35 animal units.

The average production for all six plots was 1,222.3 pounds of total usable forage per acre, and the average animal units came to 1.63.

POTENTIAL BENEFITS

One of the long-term outcomes of the project will be the determination of palatability and longevity of grass species.

FARMER ADOPTION AND DIRECT IMPACT

The rancher members of the Judith Gap Pasture and Range Club continue to monitor and discuss the outcomes of the trials. Says Bob Lee, "The plots have matured and, with the clipping data, I feel great understanding has taken place. This has been a real benefit to local ranchers, helping them remain sustainable in the beef industry."

FUTURE RECOMMENDATIONS OR NEW HYPOTHESES

The project team offered no recommendations or new hypotheses.

DISSEMINATION OF FINDINGS

Many local ranchers, including the 150 participants in the Montana Governor's Range Tour in September 1997, have observed the grass-seeding plot.

PRODUCER INVOLVEMENT

Rancher Bob Lee says one of the biggest benefits of the grass plot trials has been to see producers, FFA members and state and county agency people working together. Dave Phillips, technical advisor, says that even though the project has been completed, ranchers involved in the discussion and study group are continuing to meet and discuss outcomes from the trials.

Research

Participation Summary

Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Agriculture or SARE.



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