



Western SARE Program

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TESTING A NEW RANGELAND FORAGE

Situation

Forage kochia is a short-lived perennial plant that can be used for livestock grazing or haying. Research in recent years has shown the value of forage kochia as a winter food source for cattle, big game, small wild animals and birds. However, there is a need for research on planting (interseeding) forage kochia into established stands of grass, pasture or rangeland plants.

Ron Harper, who ranches on 5,500 acres of private and leased ground and 8,000 acres of BLM rangeland, typically begins feeding protein and mineral supplements to his cattle in early December. If forage kochia could be established by interseeding, its ability to retain nutrient value longer than other forage grasses and forbs already established in his pastures



Producer Ron Harper prepares to thin CRP for planting forage kochia.

and grazing lands would allow grazing later into the year and shorten the time of supplemental winter feeding.

This would not only help maintain healthier cattle more cost effectively, it would also provide feed and cover for herds of elk and mule deer that use the range and dryland pastures for winter grazing.

Objectives

1. Establish a demonstration plot interseeding forage kochia into Conservation Reserve Program (CRP) land
2. Interseed forage kochia



Plots thinned for planting.

on CRP land to increase utilization by livestock and wildlife

3. Capture the results of the interseeding effort
4. Present the results during a dryland field day

Actions



Seed is flown on the plots over 5 inches of snow.

On Sept. 14 and 18, 2006, the project team prepared 20 plots, each 47 feet wide by 1 mile long. Ten plots were treated with one pass of a 47-foot-

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Farmer/Rancher Grant

Project Number: FW06-012

Title: Interseeding Forage Kochia in Established CRP Land for Enhanced Livestock and Wildlife Utilization

Coordinator:

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Technical Advisor:

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Amount Funded: \$7,621



Western SARE, a USDA organization, funds grants for research and education that develop or promote some aspect of agricultural sustainability, which embraces

- *profitable farms and ranches*
- *a healthy environment*
- *strong families and communities.*

The Western Region, one of four SARE regions nationwide, is administered through Utah State University.

Western SARE:
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wide chisel plow to thin the existing CRP stand to about 50%. The other 10 plots received two passes with the chisel plow to thin the CRP stand to 25%.

Planting was affected by a shortage of forage kochia seed and early snowstorms that covered the plots with 5-6 inches of snow. To compensate, the seeding rate was reduced proportionately, to 2.2 pounds per acre, and on January 2, 2007, the seed was flown on, one of four planting techniques originally planned.

The flying service did a good job of seeding, but the area subsequently experienced a serious drought, with only 50% of normal precipitation during the growing season.

Results

After receiving late-summer moisture, germination rates appeared to increase. Despite the drought in 2007, germination rates on the forage kochia plots were estimated at 15-20%.

On July 26, 2007, Utah State University hosted the Nephi Experiment Station Dryland Field Day, featuring a presentation by Blair Waldron of the USDA's Agricultural Research Service. Forty-nine producers and agency employees from around the state heard Waldron discuss the



Late summer growth of forage kochia.



Twenty plots were prepared, each 47 feet wide, the width of the chisel plow, and a mile long. Half were thinned to 25%, half to 50% of the CRP stand.

purpose, details and results of the project at that stage.

Benefits and Impacts

While the forage kochia appears to have been well established on the research plots, the long-term benefits of the project are subject to future weather, which means it may take several years before results can be demonstrated.

As of spring 2008, the plots had received good winter moisture, but growth had been delayed by unseasonably cold weather and virtually no rainfall. The plants that germinated in the fall of 2007 were healthy and stood 1-2 inches tall. It was anticipated that more would germinate in 2008, but that depended on moisture through early summer.

The project team expected the forage plants to "take off growing" in 2008, but said it will take

at least two more years before the success of the project can be fully evaluated.

Since the plots were established, producers in the area have become interested in forage kochia, with several contacting the project coordinator and technical adviser seeking information on seeding, rates, costs, timing and other aspects of this new approach.



By late fall, the forage kochia had reached this size. Future growth depends on weather.