

Development of Sustainable Crop and Livestock Production Systems for Land in the Conservation Reserve Program (CRP)

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Title: Development of Sustainable Crop and Livestock Production Systems for Land in the Conservation Reserve Program (CRP)

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Five grazing management systems were assessed for the production of stocker calves on weeping lovegrass.

Major Participants: Eight participants: five from New Mexico State University, one from NRCS, two producers

Cooperators: Twenty-five cooperators: two New Mexico State University scientists, six county agents, a banker, a nonprofit representative, three NRCS district conservationists, 12 producers

SARE Grant: \$312,000



Weeping lovegrass, left, and blue grama were among grazing species assessed.



Situation:

The Southern Great Plains states of New Mexico, Colorado, Kansas, Oklahoma and Texas had (in 1994) nearly one-third of the nation's 30 million acres of land enrolled in the Conservation Reserve Program (CRP). Many counties in the region had more than 25% of all cropland in the long-term cropland retirement program in which producers remove highly erodible land from production in exchange for USDA payments.

Perennial grasses cover up to 99% of CRP lands in the Southern Great Plains. Producers basically have two post-CRP options:

1. Convert the land to crop production
2. Retain existing grass cover and graze livestock

Economically viable crop and livestock production systems could extend the wildlife and environmental benefits of CRP beyond the 10-year contract, and still maintain compatibility with existing production systems, established farmer goals and external production constraints.

Objectives:

1. Develop grazing systems for the predominant grass species on CRP land
2. Identify dryland cropping systems for converting CRP grassland to sustainable crop production
3. Compare potential environmental impacts of systems evaluated in objectives 1 and 2 with traditional livestock productions systems and current use of CRP land
4. Identify and demonstrate techniques for improving and maintaining wildlife habitat on CRP and post-CRP lands
5. Conduct economic analyses: a) whole farm cost and return, b) short- and long-term profitability and c) risk
6. Determine compatibility of potential production systems with existing systems
7. Deliver information from the project to agricultural producers



Birds and wildlife used the water catchment on the conservation food plot.

Actions:

To assess the potential to convert CRP grassland to non-irrigated cropland, the project evaluated three crop-production systems:

1. wheat-sorghum-fallow rotation
2. continuous wheat
3. continuous sorghum

and three tillage systems:

1. conventional tillage
2. minimum tillage
3. no tillage

To determine the viability of using CRP land for grazing, seasonal production of CRP grasslands was evaluated, and five grazing managements systems were assessed for the production of stocker calves on weeping lovegrass.

A 200-square-foot wildlife food plot was established and seeded with grain sorghum and wildflowers. A wildlife water system was also installed.



Dryland wheat is harvested near Clovis, New Mexico.

Results:

- Crop yields for all evaluated systems were extremely low or nonexistent, partly because of low soil moisture and devastating weather.
- Dry forage production ranged from less than 1,000 pounds per acre for grama grass to more than 4,000 pounds for Old World bluestem, with intermediate yields from mixed species plantings, kleingrass and weeping lovegrass.
- Animal weight gains varied, with higher early-season gains, which tapered as the season progressed.

Economic analysis showed that neither reverting to crop production nor yearling stocker grazing would produce acceptable returns to land and risk.

Without CRP payments and crop subsidies, the study concluded, dryland farmers in the Southern Great Plains face an uncertain future. Land values would fall and marginal farming areas would revert to rangeland and natural vegetation. Although this could lead to a more sustainable use of the land, it would displace many producers in the process.

The wildlife water system provided a reliable source of water for wildlife consumption, and the grain sorghum, although affected by drought and competition from perennial grasses, produced some food for wildlife.

Information about the project and its results was disseminated widely:

- 500 people attended on-site field days
- The project's annual report was mailed to more than 1,700 people, mainly CRP contract holders in New Mexico
- Presentations were made at several regional and local meetings, including the 1995 Decision CRP Symposium attended by 1,200 producers from the Southern Great Plains states



Pasture is clipped to estimate forage yield and quality.

Potential Benefits:

- Early results contributed to revised NRCS guidelines for establishing vegetative cover on newly contracted CRP lands.
- The grazing and tillage trials provided producers with important information on cultural practices to renovate existing stands for grazing and converting standing cover to crops.
- The results armed legislators, commodity groups and others with information for discussing farm bill legislation.
- The wildlife component generated increased interest in tree and shrub planting for wildlife and conservation.