# PROJECT FACT SHEET

OKLAHOMA PRODUCER GRANT PROGRAM
The Kerr Center
FUNDING FARMER INNOVATION

**YEAR GRANT AWARDED: 1998**

**AREA 2: Water Quality, Water Conservation**

**PRINCIPAL COOPERATOR**
Tom Gunn
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**OTHER COOPERATORS**
Jim Coe, Comanche County Extension Agent
Gary VanDeventer, District Conservationist, USDA-NRCS

**PROJECT BASICS**
*Duration:* Three years (1998-2000)
*Type:* Demonstration project
*Grant Amount:* $7,500
*Location:* Hulen, Comanche & Stevens Counties


# Ranch Management Practices to Improve Water Quality

*Margo Hale, ATTRA, for the Kerr Center for Sustainable Agriculture*

## FARM/RANCH PROFILE

Tom Gunn operates Beaver Creek Farms, a 600-acre cattle operation, at Hulen, Oklahoma. Gunn uses rotational grazing and raises pure-bred Murray Grey cattle. He started out selling grass-fed beef directly to customers. While he still sells freezer beef, his operation primarily sells seedstock. Gunn sells heifers and bulls to other grass-fed cattle producers.

## PROJECT OBJECTIVES

The goal of Gunn's project was to improve the water quality of his pond and its watershed. The pond was very turbid, due to erosion and runoff.

KERR CENTER

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*Specific objectives were to improve water quality by:*

1) Converting 19.5 acres of highly erodible and 37.6 acres of non-highly erodible cultivated fields, within the pond's watershed, into a crabgrass/rye rotation using no-till or low-till methods.
2) Creating limited access points into the pond for watering cattle.
3) Using buffer strips to reduce cattle waste runoff into the pond.
4) Planting reed grass on the pond dam to reduce erosion.
5) Repairing an existing small dam on the upper part of watershed to catch silt runoff from neighbors' wheat fields.

## PROJECT DESCRIPTION AND RESULTS

Gunn took two wheat fields out of cultivation and established them as crabgrass/rye pastures using no- or low-till methods. Taking the fields out of tillage reduced erosion from the fields and kept soil from running into the pond. Gunn is still able to use these pastures as forage for his grass-fed cattle. Gunn faced challenges the first few years of forage establishment and production on these fields due to drought. The conversion of this acreage to no- or low-till improved the pond's water quality, while still providing valuable grazing for Gunn's grass-fed cattle.

Gunn fenced off the pond with a four-strand barbed wire fence. He allows his cattle to graze the buffer strip around the pond on a limited basis. The buffer strip is an area of native grasses, with a dense population of various species. The buffer strip reduces runoff into the pond, offers great habitat for wildlife, including quail, and provides valuable forage for the cattle.


Gunn created limited access points into the pond for his cattle, making three 20-foot alleyways from the grass areas. The alleyways are covered with crushed rock, which discourages cattle from loitering in the alleyways and in the pond. By preventing the cattle from standing in the pond continually, the limited access points have reduced the amount of cattle manure and urine in the water. Also, with limited access, the cattle don't eat all of the vegetation from the pond bank, which has helped to reduce erosion.

The pond dam had experienced significant erosion. Winter winds caused wave and wind erosion on the north-facing dam. During Gunn's project, heavy rains caused the dam to break. Once the dam was repaired, Gunn planted reed grass along the dam. The reed grass established a buffer between the dam and the water, which has helped control the erosion from the dam.

Gunn also had to deal with runoff coming from his neighbors' wheat fields. There are about 1,500 acres of cultivated wheat fields that drain into Gunn's pond. Gunn built two 1,200-yard silt reservoirs in the existing drainage areas to help filter the silt runoff before it enters the main pond watershed. This has improved water clarity.

Gunn noted that several neighbors noticed his no-till practices, and some switched their cultivated fields to no-till production. Gunn hopes more neighbors adopt no-till production, as this would reduce silt buildup in his pond as well as erosion of their fields.

Through the Kerr Center Producer Grant program, Gunn was able to implement several practices that improved the water quality of his pond. Not only has Gunn seen improved water quality, the aquatic life has also improved, which includes good fishing!

## SINCE THE PROJECT

Gunn has continued to work on improving the water quality of the pond and preserving the watershed. He is now working with the U.S. Fish and Wildlife Service Partners Program to repair the

pond's spillways to keep them from washing out. He is also establishing a wetland area within the watershed.

Gunn is also working to redo the water access points. After a few years of use, the access points are eroding. These projects and others will further Gunn's work to prevent runoff and erosion, improve the water quality of his pond, and increase the overall sustainability of his operation.

## RESOURCES

To learn more about Gunn's operation and his Murray Grey cattle, visit www.murraygrey.net.

OKLAHOMA
PRODUCER GRANT PROGRAM
The Kerr Center
FUNDING FARMER INNOVATION

*Grants Awarded Statewide!*

# Oklahoma Producer Grant Program

Farmers and ranchers know their land better than anyone else. They know their problems, and they often have innovative ideas about how to solve those problems.

While good ideas may not in short supply, money often is. This program, the first of its kind in Oklahoma, supports farmer and rancher innovation with cash grants.

Established in 1998, the Oklahoma Producer Grant program encourages an exchange of ideas and experiences between producers that will benefit all.

## WHAT IS A PRODUCER GRANT?

- It funds projects that promote a sustainable agriculture and are innovative, unique, and experimental
- Two year grants are funded up to $3,500, three year grants up to $7,500

## WHAT KIND OF PROJECTS WILL BE FUNDED?

- Those that address one or more of eight priority areas (some years, special areas are added)
- Research, demonstration or educational projects*
- Research and demonstrations with a strong educational component—results are shared with other producers
- Projects with agriculture professionals (Extension, NRCS, etc.) as collaborators/cooperators given priority
- Ideas applicable to more than one farm

* A demonstration project is an on-farm demonstration of a farming/ranching practice; a research project is an on-farm test of an idea or technology. An educational project shares information about innovative approaches.

## WHO MAY APPLY FOR A GRANT?

- Active, resident producers in Oklahoma

## HOW ARE GRANTS AWARDED?

- Annually, on a competitive basis
- Proposals are evaluated by an impartial technical committee of ag professionals and producers

## WHAT IS THE APPLICATION PROCESS?

- Producers or producer groups may submit grant proposals once a year during the "Call for Proposals" time period
- Application forms are available from the Kerr Center or online

## WHAT IS A SUSTAINABLE AGRICULTURE?

- A sustainable agricultural system will last over the long term because it maintains or increases net farm profit, protects and conserves natural resources, and is equitable to farmers and ranchers.

## 8 Eight Priority Areas and a Few Examples

**1. Soil Conservation, Soil Health**
Farming methods that stop erosion, increase organic matter, improve texture and structure and microorganisms.

**2. Water Quality, Water Conservation**
Farming methods that prevent soil erosion or filter pollutants, efficient irrigation systems

**3. Proper Management of Organic Wastes**
Non-polluting approaches to waste application, composting, new, less concentrated systems of raising livestock and poultry

**4. Crops and Livestock Adapted to Oklahoma**
New crops or varieties that match climate and soil type, livestock adapted to climate and forage

**5. Biological Diversity**
Incorporating wildlife habitat, rotations, diversified crops and livestock, cover crops

**6. Environmentally-Safe Pest Management**
Approaches to weed management that eliminate or cut spraying, methods of insect and disease management that emphasize use of beneficials, biological control agents, or innovative rotations

**7. Energy Conservation**
Reducing use of diesel or gasoline through lowering horsepower needs, reducing tillage, using renewable fuels, recycling

**8. Farm Diversification and Increased Profitability**
Cutting expenditures for inputs, adding value to crops or livestock, diversifying farm enterprises, growing crops that receive premium prices, maximizing the use of on farm resources, substituting management for off-farm inputs, direct marketing

**Further Resources** (available from Kerr Center or online at www.kerrcenter.com)

For more information on the program, field events, application, and descriptions of funded projects go to www.kerrcenter.com