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"I didn't realize you have to be a grass farmer before you are a cattle person," says Buchanan, Ga., producer Bill Rapp. "We were buying tons and tons of hay.

"I also didn't realize, until I sent in a questionnaire to the GGLCC, how far above average we were on feed and hay costs. We were using \$7,000 worth of hay and \$2,400 worth of feed a year for 40 cows."

"That's because we didn't have good grass," adds his wife, Carol. "We thought it grew itself."

The need for a change in their commercial cow-calf operation, established in 1995, was highlighted during a severe drought in 1999.



► Carol Rapp says they didn't have water or grass during the 1999 drought.

"We didn't have water or grass," Carol recalls.

Former Haralson County agent Billy Skaggs told the Rapps about the technical help and cost-share dollars provided by the GGLCC. He also helped them with the application process.

"It took weeks to fill out the application," Bill recalls. "We used our farm records from the first two years, worked with the Natural Resources Conservation Service (NRCS), the Extension service, and my son, Tom."

That process provided direction, he explains. "It was easy to decide once we saw the numbers."

Then Bill, formerly an engineer, went to work. He drew the conservation plan to scale and modified it five times. The result was a \$10,000 cost-share grant from the GGLCC for a demonstration project.

GGLCC funding

Funding for GGLCC demonstration projects comes from a cooperative agreement between the GGLCC and the NRCS. NRCS directs a portion of its annual GLCI congressional earmark to the coalition's projects. With producers' input, coalition members develop demonstration projects for other producers.

Combined with the \$10,000 the Rapps invested, the results are almost unbelievable.

The headliner goal was to increase grass production. The Rapps' cutover timberland-turned-pasture needed tons of lime, literally. "The soil test called for 6.5 tons of lime an

acre. You can't put on more than two tons an acre at a time," Bill says.

He made sure every ounce went to work by buying an aerator. "I run it through before I lime. It breaks up the ground and allows the lime to penetrate. Before, it was running into the creek."

No. 2 on the list was to increase the quality of their pastures. The Rapps reseeded the rough ground three times with Bermuda grass and clover. They also changed the timing of their fertility program to favor the Bermuda. Now, they apply fertilizer in the late fall or late spring, rather than in early spring. As a result, their formerly fungus-infected fescue pastures are now 60% to 70% Bermuda grass. They also seed 15-20 acres of ryegrass using no-till in the fall for quality cool-season grazing.

In addition, they cross-fenced their 160 acres of pasture into six paddocks, with plans for one more. "We're learning rotational grazing. We wait until the grass is grazed down to 4 or 5 inches, then move the cows," Bill says. "They don't eat it to the ground."

"We now have grass 11 months of the year," Carol adds.

Rotational grazing is taken a step further on the Rapps' operation. They practice management-intensive grazing (MiG), a system that Jim Gerrish helped to develop. The University of Missouri researcher says, "With management-intensive grazing, the soil structure and organic matter of the soil improve, the water holding capacity of the soil improves, the plant community improves, and producers increase their management skills."

However, while the Rapps saw almost immediate results from their move to MiG,

Gerrish warns it is generally a slow process.

"Over time we can see increased forage output and increased animal performance, but probably not the first year. If a pasture has been used heavily, it is generally three to five years before you see changes you get excited about. With highly eroded cropland, it may be five to 10 years."

Improving feed and water areas

Putting their grass to work is by no means the only change the Rapps made through GGLCC. Next on their list was improving their hay and supplement feeding areas. With technical advice from the NRCS, they built

► The ponds and the cows are in better shape at the Rapps' operation now that they have limited-access watering areas.



two 50×50-feet (ft.) heavy-use protected feeding areas. After grading the areas, they put down porous geothermal material. Next came 8-10 inches (in.) of #57 (1½-in.) rocks.

"The feeding areas have really saved our hay," Bill says. "We have cut our hay losses from 15%-18% to 2%. There is no mud, and they eat all the hay."

The feeding areas are also fenced so the Rapps can use them to corral their cattle when needed.

Last on the list was more fencing, this time to keep their cattle out of their two ponds. They built limited-access watering areas on each side of both ponds so the cattle can still drink from them.

The 14×16 -ft. watering areas are enclosed on three sides with wooden fence, leaving just enough room for the cows to walk in, take a drink, and walk out, but not to lounge around. Once again, geothermal material was used on the bottom of the watering areas and covered with 10 in. of gravel.

"The ponds were a mess from an environmental standpoint," Bill says. "These controlled access areas keep the cows from defecating in the ponds and keep them from tearing up the dams."

"We had cows neck deep in water," Carol adds. "Now they have a clean source of water all the time."

The feeding areas and limited access watering areas had another benefit the Rapps didn't expect. "Our herd health problems have gone to almost nothing," Bill says. "We had foot rot, but this year we've only had two cases, and they weren't serious. We also have no scour problems."

The Rapp's bottom line is a lot healthier, too. Instead of spending \$7,000 on hay and \$2,400 on feed for 40 cows, Bill reports,

"Now we have 60 mama cows and are using \$2,000 worth of hay and \$2,400 of feed. After eight years, we are breaking even."

Storing quality hay

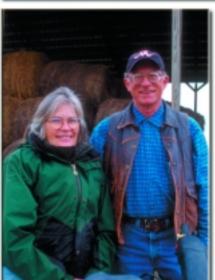
Across the state, in Tignall, Ga., Angus breeders Marion and Dorothy McHugh are also putting GGLCC cost-share funds to work. Two hay barns were already on their Rolling M Ranch when they bought it five years ago, but that still left 200-250 round bales of hay unprotected.

"Research has shown you lose up to 30% of the hay if it is stored outside," Dorothy McHugh says.

Their local NRCS employee told them about GGLCC and

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► Above: The heavy-use feeding areas mean the Rapps' hay, and the cows, stay out of the mud.

► Left: Dorothy and Marion McHugh say their hay barn, which allows them to store all their hay under a shelter, is paying for itself.

► Dorothy and Marion McHugh are now able to move equipment across the creek without causing damage to the streambed.



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they applied for cost-share funds in 1999.

"Being from the aerospace industry, we were pretty darn good at putting proposals together," Marion McHugh comments.

The result was \$10,000 in cost-share money for a 48-ft.-wide, 105-ft.-long, 16-ft.-high pole barn with the capacity for 450 round bales.

"It certainly helped our bottom line by

giving us the ability to store and feed quality hay," Dorothy says. "I'm sure it has paid for itself."

Whether it is feeding and wasting less hay as the Rapps have achieved, or stemming storage losses like the McHughs have done, Gerrish says producers are wise to watch every bale.

"Hay costs are what separate the low-cost

producers from the high-cost producers," he explains. In an Ohio State University study, Gerrish says the highest-cost producers spent an average of \$299 a year to maintain a cow, the middle-cost producers spent \$186, and the lowest-cost producers spent \$78. He says hay



► Supplemental feed stretches further now that Bill Rapp has pumped up grass production.

costs make up the bulk of those differences.

Dorothy McHugh says the cost-share funds they received from GGLCC helped more than just their hay budgets. "It freed up our money for other projects. It was a double bonus."

One of those projects was a hardened crossing through a creek that flows through their farm. They used an egg-crate-type geothermal material as the base and covered it with gravel, similar to the limited-access watering areas at the Rapps' farm.

"The ability to use the creek crossing means we can move equipment through it instead of having to move it a distance to another crossing. That saves our equipment and the creek," Marion comments.

Although the impact of the GGLCC costshare funds at the Rapp and McHugh operations are paying major dividends, Holli Kuykendall says their stories are just part of the total GGLCC effort.

Kuykendall, a grasslands water quality specialist for the NRCS, as well as recording secretary for the GGLCC, says, "In two sign-up periods, we have obligated \$400,000. Since this is cost-share money, the producers have to contribute an equal amount. That means \$800,000 has gone into conservation and grazing efficiency improvements in this state."