



The *New* American Farmer

Dan and Jan Shepherd, Shepherd Farms

Clifton Hill, Missouri

Summary of Operation

- 1,000 acres in eastern gamagrass hay and pasture
- 400 acres in eastern gamagrass seed
- 500 acres of corn and soybeans
- 270 acres in pecans
- 125 acres in timber
- 160 brood cows in a 400-head buffalo herd

Problem Addressed

No control over wholesale prices. To get a better return on their investment, Dan Shepherd and his father, Jerrell, changed the focus of their farm from commodity grains to pecans, buffalo and gamagrass seed. That way, they capture niche markets, particularly for grass seed.

Background

Shepherd Farms is in north central Missouri on the Chariton River. The family first began farming there in the late 1960s, growing corn, beans and wheat on 1,900 acres. Later, they broadened into more unusual crops. Dan's late father once shared a great nugget for planning a sustainable farming venture. "We stand to make a little money doing what others are already doing," he said, "or we can make a lot of money doing things others won't."

Today, Dan puts about 80 percent of his time into producing and marketing gamagrass seed, with pecans and buffalo taking up most of the rest of his efforts.

Dan believes that to be successful in alternative agriculture, a person needs to be a good salesperson. "You have got to communicate to sell. Some of the most successful people in the world are salesmen. Farmers are great producers, but few of them want a career in sales."

Current marketing of conventional commodities and livestock production means someone else is setting the price. Standing on the trading room floor in a place like Chicago or Kansas City is a trader telling the farmer what their price will be. "Nobody is doing that in the buffalo business," Shepherd says. The family takes direct marketing very seriously and maintains a store on their property. They sell a variety of buffalo products, from breeding stock to meat, hides and horns. They created a diverse product list that includes their pecans, sweet corn and pumpkins as well as peaches, jellies and other nuts they purchase in Arkansas, Missouri and Kansas for re-sale.

The store is open seven days a week until 6 p.m. Dan's wife, Jan, runs the store, does the billing and manages the books. Dan oversees the day-to-day farm operations and makes all the purchases.

Focal Point of Operation — Alternative crops

The family backed into producing their no. 1 crop. While seeking a good native forage for their buffalo herds, they tried grazing them on eastern gamagrass. The buffalo loved it. With help from USDA researchers, the Shepherds learned ways to grow and harvest seeds from the palatable forage.



The Shepherds find that raising a range of crops, from gamagrass seed to buffalo meat to pecans, brings a good profit.

“There is no finer grass,” Dan says. “When people found out that we had seed, they wanted to buy it. So we decided to get in the seed business.”

Eastern gamagrass is a tall, native, warm-season grass that has largely disappeared from the Plains because of over-grazing and cattle producers opting for non-native grasses. Shepherd likes the crop not only because his buffalo graze it, but also because it can grow up to 2 or 3 inches a day in the summer. It thus provides a lush cover with high tonnage.

Raising gamagrass, however, poses some real challenges. It is hard to harvest and has

to be carefully managed to avoid overgrazing. “Historically, the problem for sustaining stands is it’s so highly palatable, so tasty for the animals, they wipe it out,” Shepherd says. “Buffalo or a free-range hog will eat it right down to the dirt.”

Finally, growing it for seed requires impeccable timing and care. Eastern gamagrass seed

has to go through a dormancy period; the seed will not germinate unless it goes through a cool-down period. “We used to plant the seed in December, but the mice and fungus would work on it all winter,” he says.

The seed, which is very green with a moisture content as high as 65 percent, never ripens at the same time. The seed head ripens from the top down and, as the seed matures, it falls off. Shepherd keeps a close eye on the plant to ensure the most seed for sale. The high moisture content and the variable harvesting time means that they can only capture 25 or 30 percent of the seed. Time is of the essence. Shepherd often calls his custom combiner the evening before

and says they need to begin harvesting first thing the next morning. It’s stressful work. “They have to watch the machinery very closely — one clog can gum up the whole works,” he says. “And that wears them out.”

They soak the seed in a water and fungicide solution, then store it wet, just above freezing, for about six to eight weeks. Shepherd’s attention to detail has helped him become the largest grower and shipper of eastern gamagrass seed in the country. He ships to customers all over the U.S. starting in early March and continuing through June.

“There is a bit of a misconception out there that somehow, whatever we are able to import has to be better than what we already have here, but people are finally starting to come around to the value of the grass,” he says.

The farm’s focus has changed a lot since it was first purchased to raise pecans. Originally, the family planted 900 trees on 15 acres in 1969. “The trouble was, we are about as far north as you can go and still raise a good nut,” says Shepherd, who, at 14, helped plant most of the first trees. “We really didn’t know what we were doing.”

It takes a great deal of time to start and attain an orchard of quality pecan trees. The Shepherds educated themselves about how to graft native root stock and known varieties for a better producing tree with a better nut. Dan’s father used to drive around Missouri on weekends, seeking quality pecan trees to improve their stock.

It took close to 20 years before they achieved a viable nut harvest. But they will continue to reap good harvests for another 80.

“The nice things about these trees is that they will produce while we just tend to them and amend the orchard as needed,” Shepherd says. “But it was a heck of an up-

front investment. We worked for 19 years before we were seeing a good, sustainable return from them.”

In between, the family broke even by farming the alleys between the trees, an agroforestry method known as “alley-cropping.” They grew wheat and soybeans for small returns that basically paid for their expenses.

As the trees matured, they crowded out the row-crop rotation so the Shepherds seeded the floor with blue grass. The grass does not produce a lot of tonnage, but offers a great feed for the Shepherds’ third main commodity: buffalo. The family began raising their first herd in 1969, rotating them through gamagrass pastures in a management-intensive grazing program. In the summer, the herd is moved every four days.

Growing the gamagrass provides them with quality hay. They manage about 1,000 acres for hay and pasture, reserving 400 acres for seed production.

Economics and Profitability

Shepherd’s economic data speaks for itself. The gamagrass seed is consistently profitable, with the Shepherds netting about \$700 per acre. After several years, their pecan trees began producing nuts. In 2000, they netted about \$300 per acre in pecans, but expect to triple or even quadruple that profit in another decade.

The store does a bang-up business, too. Last year, they sold 70,000 ears of sweet corn at 10 cents each. Even at that low price, the Shepherds net about \$1,000 on 15 acres. Besides, sweet corn helps draw customers to the store, where they may be tempted by other products.

Environmental Benefits

The Shepherds began growing eastern gamagrass partly for its environmental ben-

efits. After the first year, when the stand is established, there is no need for pesticides, though Shepherd does continue to apply fertilizer. “Chemicals are a tool, but we use them wisely,” he says.

Nor does Shepherd need to disk or plant on a yearly schedule. Therefore, he minimizes erosion. At the same time, the thick grass provides a natural wildlife habitat.

Gamagrass plants will last 10 to 15 years before production slows. Its extensive root system helps break up compacted soil layers. When older roots decay, organic matter improves. When production falls, Shepherd burns the grass, disks the soil, then follows with row crops for a year or two.

Practicing agroforestry brings environmental benefits, too. By pairing complementary tree and row crops, the Shepherds provide erosion control, wildlife habitat and semi-permanent homes for beneficial insects.

Community and Quality of Life Benefits

With harvest times varying throughout the year, it allows for a sane production and harvest schedule. The Shepherds employ one full-time worker and a part-timer from the community. In the summer, they elevate their part-timer to full time, and add additional part-time help — usually local kids.

“Everything fits together,” Shepherd says. “The gamagrass, pecans and buffalo all come in at different times. We’re busy year round.”

Clifton Hill has a population of somewhere between 80 and 100 people. The community is small, and everyone knows everyone else. The Shepherds help sponsor “Buffalo Day,” when many from the area come together to eat buffalo burgers donated by Shepherd Farms. The Shepherds keep young people in their lives by participating in an exchange program through their Rotary Club. They have

hosted youths from Russia, Thailand, Belgium and France. The children stay for four months, then go on to another family.

Transition Advice

Trying new alternatives in agriculture is not necessarily a “save-all” approach, Shepherd says. “Don’t look to alternative ag as a bail out,” he says. “Think of getting in, or making the change to this system in good times, not bad. Alternative ag produces different yields seeking different markets.”

It’s important to be committed and be willing to take risks, he says. “The average learning curve for anything new is up to eight years,” Shepherd says. “It takes that long to know what the heck is going on. I see so many people get in, try something for a few years, and then quit. They take all that risk, do all that work, and then walk away before they can see their investment to fruition.

“You won’t know what will or won’t work until you try it. It’s a lot easier for people to sit back and say it won’t work. There’s no risk there and we’ve heard a lot of that over the years. Making change, taking an alternative path in farming, or anything else for that matter, is not easy. If it were, everyone would be doing it.”

The Future

The Shepherds are happy with the status quo on the farm. Dan Shepherd is pondering creating a beef stocker operation and/or raising cows on a rotational pasture system.

■ *John Flaim*

For more information:

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