

BROWNS' PROPERTY

EVALUATE OUR PROGRESS

The three properties chosen by the Small Acreage Issue Team for its Property Improvement Project reflect land management issues common to many Wyoming acreages. Landowners and team members developed plans to meet landowner goals and address property issues. Read on to see how well these plans worked!

For the introductory articles about the property north of Evansville owned by Tim and Krista Brown, the subject of this article, and the other two properties, go to barnyardsandbackyards.com and click on the Property Improvement Project link on the left-hand side of the page.

(Editor's note: The introductory article to the Browns' property "They're not in Kansas anymore ..." is in the Spring 2010 Barnyards & Backyards issue.)

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A cheatgrass area that has been treated is on the right, untreated on the left.

By Jennifer Thompson, Rachel Mealor, Donna Cuin, Martin Curry, and Brian Connelly

The last several years have been busy for Tim and Kirsta Brown; despite this, they've made a number of changes on their property north of Evansville.

Cheatgrass Control

When the team first visited the Browns in 2009, their property and the surrounding land was a sea of cheatgrass. Cheatgrass is a highly flammable invasive weed that often sprouts in the fall and overwinters as a seedling, resuming growth immediately in the spring (visit our "Resources – Weeds" Web page to view a variety of articles and videos on this challenging invader).

After inspecting the area and determining that beneficial perennial grasses and forbs were still present but hidden by the cheatgrass, the team decided the best course to reduce cheatgrass on the property was an application of Plateau herbicide.

The Natrona County Weed and Pest Control District was

recruited to apply the herbicide in the fall of 2009. The success of this application was marked. The parts of the property that had a high native diversity of shrubs, forbs, and grasses, but with an accompanying cheatgrass understory, saw the best results at an estimated 90+ percent control. Those parts of the property dominated by cheatgrass and with a thick duff layer (old, dry cheatgrass covering the soil underneath the plants) saw less control that was estimated at 70+ percent. This reduced efficacy was probably because much of the herbicide was tied up in the duff layer and ineffective. Continued monitoring and treatment should continue to suppress the cheatgrass to the benefit of the native plant species.

Krista is happy with the progress. "Coming from Georgia, I didn't even know what cheatgrass was," she says. "Since we've lived here, there have been several fires, and it's been scary. The fact we've been able to control cheatgrass and, since then, two of our neighbors have treated for cheatgrass, the safer it makes the area. And, it's pretty, too, now that we've got native grass. I was skeptical at first when team members assured me the natural grass would grow back, but it did! And it is beautiful."

Blowout Begins to Heal

A major challenge on the Brown property is the revegetation of a sandy blowout next to their house created by the removal of soil to cover the septic

UPDATE

Successful seeding of the blowout with the drill seeder.



Final seed mix

Species	Pure Live Seed (PLS) LBS/Acre	Seeds/LB	Seeds/Ft SQ
Western Wheatgrass "Rosana CT"	6	110,000	15.15
Needle-and-Thread	1	115,000	2.64
Indian Ricegrass "Rimrock CT"	8	141,000	25.9
Blue Grama "Bad River"	2	825,000	37.88
Sand Dropseed	0.3	5,298,000	36.49
Fringed Sage "Washakie SI"	0.2	4,536,000	20.83
Rabbitbrush, Rubber	0.75	400,000	6.89
Total seeding rate for this area:		18.25 lbs/acre	

The blowout area was planted using a broadcast seeder in April 2010. Due to several variables, the seeding was unsuccessful. After re-evaluation, the team decided to try a different seeding method. In April 2011, the area was seeded using a drill seeder with a similar seed mix, changing a couple of the species in the mix (see us in action in the video "Grass re-seeding of a tough, sandy Wyoming location" on the YouTube channel on the barnyardsandbackyards website). We returned several months later to assess the area, and we found numerous seedlings emerging!

Most likely, our initial success was created by: 1) The drill seeder placed some of the seeds in furrows and covered them with soil, which probably helped keep seeds from blowing away in this windy location; 2) Precipitation fell in this area soon after (and during, in the form of snow!) the seeds were drilled. This combination probably created the good seed-to-soil contact necessary for the seeds to begin growing. Spring precipitation amounts were fairly high, which also may have helped

seed germination and seedling survival.

Such a seeding will initially look sparse because the plants are so small. However, we expect these plants to grow and start to anchor the soil and provide new seed to repopulate this area. We will continue evaluating our seeding efforts, but as of right now, we are happy with the results.

So is Krista. "As much as the wind blows out here, I didn't think anything was going to take," she says. "But this last time, seedlings are popping up. It may look scarce now but in a couple years the grass will spread."

The Landscape

Another continuing challenge for the Browns is creating a welcoming and colorful landscape around the house. Krista tried many different plants and had some successes and some frustrating failures. Due to the sandy soil, drying winds, temperature extremes, rabbits, antelope, deer, and grasshoppers, it was clear that plants used to create a welcoming landscape would have to be tough and water-thrifty.

system when the house was built (before the Browns bought the property).

This excavation and the ever-present wind created the blowout, leaving an area of dry, shifting sand. This challenging area would need to be reseeded if the landowners were to see improvement.

We identified which plants were already growing at the site as a starting point to select species for the seed mix. Choosing plant species likely to grow and survive in the area (considering soils, precipitation/climate, etc.) is important. We selected both warm and cool-season grasses along with a few shrub species. Purchasing seeds from a reputable seller (local extension educators can assist) helps ensure viable seeds. Once the seed mix was designed and purchased, we were ready to plant.



Diagram 1. Initial design



Diagram 2. Final design



Xeric perennials were planted that can withstand the challenging environmental conditions of the property.

Jennifer Thompson, small acreage outreach coordinator, and Donna Cuin, horticulturist in the Natrona County office of the University of Wyoming Extension, visited the site, talked with the homeowners, and made measurements of the house and other landscape features to create a simple map of this portion of the property.

This map was used to develop an initial design that would create beds of xeric perennials, which would soften the straight lines of the house and

the adjacent front sidewalk (see Diagram 1). After discussing this initial design with the homeowners, it was clear that heavy use of the front lawn required keeping this area as grass. The team created an alternative plan that incorporated multiple smaller beds (see Diagram 2).

Delays prevented planting until July, a less-than-ideal time for transplanting plants in this area due to the lack of moisture and high temperatures. However, Krista was diligent about

watering, and most of the small plants survived the stressful summer season.

Another factor that probably helped survival is the plants on the north side of the house received partial shade, which reduced heat stress. Krista's use of mulch also helps keep water from evaporating, and her consistent weeding minimizes competition for water and other resources.

Visit us next spring and summer to see how this landscape evolves!