

The extreme drought of 2021 proved the durability and value of our perennial pastures.

In 2021 we produced the normal number beef and bison. But we used less hay than normal.

We accomplished that through adaptive grazing in a year of intense heat and irregular rainfall.

In our area, non-irrigated crops were a complete failure.

Our farm has 200 acres of permanent pastures, divided into 70 paddocks. We rotationally graze, frequently interseed and carefully manage our pastures.

Our farm is located in the Anoka Sand Plain. The Anoka Sand Plain is an area of 2,000 square miles that was formed by retreating glaciers over 10,000 years ago. Our farm consists of gently undulating, uplands, poorly drained, highly organic lowlands, and the transition slopes between those two soil types.

We graze cattle, bison, horses, sheep and goats. We also pasture raise hogs, chickens, geese, ducks and turkeys.

The primary grazing herds are 100 beef animals, and 30 bison.

The beef animals are mostly 600-to-1,000-pound heifers. We slaughter all of the beef animals each Fall.

The bison herd consists of a mature bull, a half dozen cows, and young animals.

Our goal is to produce excellent, grass-fat animals for "Custom Direct" sale to consumers.

We offer our cattle high quality hay every month of the production season. The hay is specifically selected to complement the pasture. The objective is to assure that they have full, productive bellies at all times.

Pastures normally reach peak productive in June. That is simply a feature of the Minnesota growing season. June normally has adequate moisture, moderate temperatures and very long sunny days.

However, our greatest need for forage is in the Fall months. Our heifers are maturing in size, the shorter days trigger their bodies to add fat, the cooler temperatures motivate them to eat more.

Normally the peak growing season is far out of sync with the peak grazing season.

In 2021, those two seasons overlapped perfectly.

The spring of 2021 was relatively dry, but our deeply rooted pasture plants got off to a fair start.

June, July and the first half of August were extremely dry and hot.

Through the summer months we carefully used the spring grown pastures.

During those summer months the cattle consumed more than the normal amount of supplementary hay.

Starting in mid-August, we received several inches of rain. The rain continued into September.

The pastures, which had been grazed, but not overgrazed, responded with an incredible surge of growth.

In a normal year, hay consumption is light in June and July, then steadily increases to a high level by September. Thereafter, hay consumption continues at a high rate until the cattle harvest is finished at the end of November.

In 2021 the cattle and bison were able to graze lush pastures into November.

They consumed more hay early in the year, but much less hay through the fall.

Hay consumption for the year was below average. (26 tons versus 40 tons)

The pastures look beautiful going into winter. They have never looked better.

The beef and bison carcasses were above average.

2021 was a good grazing year.

Tom Barthel, Snake River Farmer Emeritus.

First photo. Heifers in grazed pasture, ready for the daily move to a fresh paddock. The grazing herd ranged from 50 to 75 head as thin, immature animals were added and finished heifers were harvested weekly. These animals are about a month from harvest condition

Second photo. This is the hay transport that we move daily. It also carries mineral and salt.

Third photo. This is a just grazed paddock in late July, before the August rain. It shows the effect of the drought. We try to build a sward that combines all types of grasses, legumes and forbs which will grow well in our soil. As you can see in the photo, fine grasses such as bluegrass are dormant. Some coarser grasses and deep-rooted legumes are green. The tall stem to the center-left is a deep-rooted native grass, (Indian Grass).

Fourth photo. Neighboring row crops had zero ability to recover with the late summer rains. This corn field is directly across the road from our pastures.

Fifth photo. Our paddocks, which had been twice grazed, looked excellent in late October. Notice the recovered legumes and bunch grasses. Spring will tell, but fine, shallow rooted, grasses like bluegrass may take longer to recover fully.



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This is a normal upland paddock in late August, shortly after rain. Notice the broad mixture of fine sod forming grasses, legumes including alfalfa and red clover and stemmy native grasses. This is a durable sward.



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