

He's a grazing 'wolf'

By LON TONNESON

KEN Miller is a bear one day and a wolf the next.

At least that's how he describes his role on his ranch.

Miller moves 300 cows and their calves every couple of days to new grass in one of the 37 pastures on his ranch south of Mandan, N.D. Some of the pastures are no more than 10 acres in size.

"I'm trying to mimic the grazing patterns of buffalo," explains Miller, who also works as a grazing technician with the Burleigh County Soil Conservation District.

Bears and wolves kept buffalo bunched up on the open range and constantly on the move, he says. The herd clipped every tuft of grass in its path. It trampled grass, manure and seed into the soil and moved on, not returning to the same spot for a year or more. The result was a lush, diverse mix of prairie grasses, legumes and forbs that had the root reserves to withstand long stretches of dry weather.

Miller says he tries to accomplish the same thing by building fences and by moving the cattle to new grass every

Key Points

- Short duration grazing system doubles carrying capacity.
- Pastures look as if they haven't been grazed at all.
- Irrigated pasture, cover-crop cocktails are among new innovations.

couple of days.

"I'm the bear and the wolf," he says.

Doubled stocking rates

According to Miller, the principles of short-duration grazing are simple:

- Keep pastures small so the animals are forced to graze everything, not just their favorite grasses.
- Don't let the cows eat too much before moving them to a new area.
- Rest grazed areas for months — for a whole year, if possible.

"Just clip the grass and move. Keep the [plant's] solar panel intact — that's the idea. Don't force a plant to use root reserve to put on another leaf."

As a result, Miller has been able to double the stocking rate and still produce so much grass that it looks as if his pastures haven't been grazed at all,



even in drought years. "I'm saving more grass than I used to grow," he says.

Cover crop grazing

Recently, Miller expanded his grazing system to include crop ground, too. In 2007, he planted a cover crop "cocktail" into wheat stubble in July. The cocktail included a mixture of triticale, radishes, sunflowers, soybeans, turnips, millet, cowpeas and other species.

Miller selected the mix not just for the forage it could produce, but also for what the roots could do for the soil. Plants with big tap roots, such as sunflowers and turnips, drill through the hardpan and create paths for water to

follow down in the soil. The deep-rooted plants also pull nitrogen up into the root zone. All the roots add to the soil organic matter when they die. Cowpeas, soybeans and clovers fix their own N and add N to the soil, which becomes fertilizer for other plants.

When Miller planted the cover crop seeds, it didn't look as if anything would grow. The air temperature was 100 degrees F, and the soil was bone dry. But when the field caught a rain shower a few weeks later, the seeds sprouted and the plants quickly covered the ground. The dense canopy of leaves reduced evaporation, trapped morning dews and raised humidity levels. By September,



ROOT SOLUTIONS: Deep-rooted plants like this turnip break up the soil hardpan, improve water infiltration and increase soil organic matter.



IRRIGATED PASTURE: Ken Miller is converting irrigated hayland to irrigated pasture as part of his effort to create a sustainable, low-input grazing system.

Dakota Digest

SDSU presents specialists with Extension awards

South Dakota State University Extension Service recently presented awards to Mike Moechnig, Mary Brashier and John Ball. Moechnig, a weed specialist, received the 2007 Certificate of Merit Award. Brashier, an information specialist, and Ball, a forestry specialist, received distinguished service awards.

Aasmundstad, Goehring elected

Eric Aasmundstad was recently unanimously re-elected to a two-year term as president of North Dakota Farm Bureau, and Doug Goehring of Menoken was re-elected vice