

Teff — Worth a Try

► Teff makes up for some of its lack of yield in quality, containing more crude protein and total digestible nutrients than most commonly used summer grasses.

PHOTOS COURTESY MARVIN HALL, PENN STATE

This new annual forage grass is high in protein and offers fast summer growth.

by Kindra Gordon

There's a new summer annual forage garnering livestock producers' interest from coast to coast. The grass is called teff, and forage trials in Oregon, Nebraska and Pennsylvania suggest there's good potential for this fast-growing grass.

Teff's origins trace back to Ethiopia, where it has a history as a cereal grain for flour, as well as being used as a hay crop for livestock in other parts of Africa. Because it is well-suited to dry climates, the summer annual is also grown for livestock feed in Australia, South America and India — and now the United States.

University of Nebraska Extension forage specialist Bruce Anderson has conducted some research trials with teff in his state, and he believes it may offer some feed opportunities for livestock producers. He reports that teff is well-liked by cattle and sheep and is becoming popular with the horse hay market.

"For most farms and ranches, teff is an alternative to growing foxtail millets like German and Siberian millet or sorghum-Sudan grass," Anderson says. "Compared to these grasses, teff is much leafier and finer-

stemmed and even faster-developing, often starting to head in 50 to 60 days."

He cautions that as a single cutting at heading, teff won't yield as much as these other summer grasses. For instance, Nebraska trials during 2007 showed that single cuts of teff may produce 2 tons to 3 tons per acre, while millets and sorghums produced 3 tons to 5 tons. However, Anderson says, teff regrows so rapidly that 5



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tons to 6 tons can be achieved with two or three cuts.

Likewise, teff makes up for some of its lack of yield in quality. Teff contains more crude protein (CP) and total digestible nutrients (TDN) than most commonly used summer grasses, according to Anderson. Its protein level, though, is heavily influenced by nitrogen (N) availability. Thus, it could be a good crop to recover excess nitrates but might not do as well on low-fertility soils, Anderson says.

Marvin Hall, Penn State Extension forage specialist, says he likes teff because it can be put up as hay or it can be chopped into silage. However, he cautions that teff's shallow root system can make it challenging to graze, as cattle can pull the plants right out of the ground when they graze it.

In Pennsylvania trials, Hall reports teff yielded only slightly less than sorghum and a sorghum-Sudan hybrid. With those promising results, he says, "I believe that teff can have a future in Pennsylvania."

In test plots at Oregon State University's experiment station near Klamath Falls, a May planting was ready for its first cutting at

the end of July and yielded about 3 tons per acre with a 13%-14% protein level. After that cutting, the teff was fertilized with ammonium sulfate and irrigated. The second cutting, taken six weeks later, produced nearly 3 tons per acre again.

Planting considerations

- ▶ Anderson reiterates that teff has rapid seed germination and fast growth, and it is well-adapted to dry climates. But, he emphasizes that teff has no tolerance for freezing temperatures. Thus, it needs to be planted and harvested between mid-May (after the risk of frost) and early August in Northern Plains states. Oregon researchers report their first fall frost killed the teff plants in both years they had test plots.

- ▶ Because teff has very tiny seeds, Anderson recommends planting it no more than 1/8 inch (in.) to 1/4 in. deep at a seeding rate between 8 pounds (lb.) and 9 lb. per acre. He suggests that on tilled ground, a culti-packer seeder or even broadcasting the seed probably works better than seeding with a drill.
- ▶ Depending on conditions, nitrogen inputs may be needed to maximize teff yields.
- ▶ Once planted, teff trials have not required insect or disease control.

To producers considering teff, Nebraska's Anderson concludes, "Don't gamble your entire farm on it, but teff might be worth a try."



Seed sources

Several teff varieties are available, with names including VA-T1-Brown, Tiffany, Pharaoh and Dessie summer love grass. Companies offering seed include:

Hankins Seed, Bonanza, Ore.;
541-545-6649

Target Seed, Parma, Idaho;
866-400-6434

United Seed, De Graff, Minn.;
208-454-1186

First Line Seeds, Guelph, Ont.,
Canada; 509-765-1772

King's Agriseeds, Ronks, Pa.;
717-687-6224.