New Names in Forages

These relative newcomers to the forage scene could quickly become favorites.

by ***Kindra Gordon***

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If you're looking to enhance your forage options for grazing or haying, consider some of these newer varieties that are proving their stuff in university trials. Here are highlights by region:

For the Midwest

Italian ryegrass. University of Minnesota Extension forage agronomist Paul Peterson describes Italian ryegrass as a high-quality annual forage with good productivity. Peterson reports Italian ryegrass, relatively new to the Midwest, has been grown successfully in other regions of the U.S. for many years.

Peterson says it is a vigorous forage that can produce high-quality grass — either solo-seeded or as a nurse crop for alfalfa. Italian ryegrass can also be used for silage or grazing.

Peterson seeded it in several Minnesota research plots in a trial beginning in April and harvested the plots five times, with the last cutting taken mid-November. The highest-yielding entries had 6.5 tons of dry matter (DM) per acre, with what Peterson calls "alfalfa-like quality." The relative forage quality (RFQ) numbers are in the ballpark of 200, with relative feed values (RFV) around 150, he reports. But, he cautions that these results were with cooler-than-normal temperatures and above-average moisture.

If you plan to seed Italian ryegrass, Peterson says fertile soil is ideal. He also recommends applying nitrogen (N) (or preplant manure) at about 30-40 pounds (lb.) per acre. Based on research in Wisconsin, Peterson says a seeding rate of 4-5 lb. per acre is best if it's being used as a nurse crop. If it's being planted alone, he recommends 30 lb. per acre.

Cicer milkvetch. A perennial legume with a creeping root system, Cicer milkvetch performs well in areas where other legumes often don't survive. University of Nebraska Extension forage specialist Bruce Anderson notes that it is fairly tolerant of semi-arid and high-pH soils. He adds, "It's also very winter hardy. And, since its quality declines slowly as it matures, it works well for stockpiling."

Cicer's crude protein (CP) content runs about 20%, and at 86% for digestibility — higher than alfalfa. It also does not present the bloat concerns of alfalfa.

While Cicer can be slow to establish, newer varieties out of Canada (Oxley and Oxley II) have speedier establishment times. Scarifying the seed and applying a special inoculant can also help. Once established, Cicer is persistent.

Anderson says this legume is best-suited to rotational grazing, where moving cattle quickly through pastures is a key to success in controlling the plant's growth. The plant's viny nature makes it less suitable for hay production, although Anderson says it can be done. However, he adds, "Be ready for mechanical challenges. Plant material tends to plug up harvesting equipment."

Quack grass. Commonly considered a weed, quack grass may be a beneficial forage, especially if mixed with other pasture species, according to Ohio State University (OSU) researchers.

"Quack grass exhibits various characteristics that make it ideal for forage production," says David Barker, OSU grassland ecologist. The characteristics that make it a beneficial forage include erect stem growth habit, high feed quality, adaptation to a range of soil fertility and long periods of seasonal growth.

Barker says they are not recommending that a producer plant quack grass or propagate it, but says that in a pasture where quack grass is widespread, there could be an opportunity to take advantage of the plant's forage characteristics that make it compatible with other common pasture species.

The researchers found that quack grass yielded the best results when grown with a complementary species rather than one that competed with it for resources. In greenhouse research, growth habits of quack grass were analyzed when incorporated with orchard grass and white clover with two-week and six-week cuttings. The researchers found that yield for the six-week cutting was 43%-58% greater than yield for the two-week cutting. Additionally, quack grass performed better with white clover than with orchard grass. Yields were 23% higher with a quack grass-white clover mixture than when either species was grown alone.

"We found that quack grass was quite persistent under both cutting regimes and appears to be a rather tolerant species adapted to cohabitation," Barker says. "The grass is pretty robust under most production conditions. There does not appear to be much

potential to control this species with close defoliation or with competition from another species."

In the South

Lablab. A fast-growing legume native to the tropics, lablab is a plant Texas researchers believe holds potential as an annual summer forage for the South. It appears to be well-suited to being grown for emergency or supplemental summer grazing, cut as hay, or grown in mixtures with corn or sorghum and harvested as silage.

Gerald Smith, a Texas Agricultural Experiment Station legume breeder, reports lablab has about the same forage production and nutritive value as cowpeas, but is much more palatable. The viny legume has heart-shaped leaves about the size of an adult's hand. CP content can reach 25%.

Also known as hyacinth bean, lablab favors sandy, slightly acidic soils and can thrive on 10-15 inches (in.) of precipitation during the growing season once it is established. It can yield nearly 2 tons of dry forage per acre.

Smith says the biggest drawback to the forage is the seed cost, at about $1.50 per lb. He says low-cost varieties adapted to the region still need to be developed to make this forage economical for cattlemen. Several experimental lines are in development.

Jesup MaxQ™ tall fescue. The MaxQ nontoxic endophyte technology from Pennington Seed has been inserted into the Jesup variety of tall fescue with apparent success. Georgia research trials have found that beef steers grazing the forage from April to June in 1999 had average gains of 2.6 lb. per day, compared to 1.7 lb. per day on high-endophyte Jesup.

Persistence has also been extensively tested on producer farms and in research plots throughout Central and North Georgia, and this variety has persisted in common Bermuda grass stands for more than six years, even when subject to constant, heavy grazing through drought years. John Andrae, Georgia Extension forage specialist, says, "I am confident that it will persist in the tall-fescue belt when reasonably managed."

Mississippi researchers have also continuously grazed paddocks of this variety since 2000 and report it has persisted as well as the toxic variety.

Matua prairie grass. Native to New Zealand, Matua is seeing more use in the Southeast and Mid-Atlantic States as a cool-season forage with high CP content and palatability. However, its inability to survive harsh winters has limited its use in the Midwest.

Those who favor this forage say it can be used for grazing, but it does best when used for hay or silage production. Matua is also finding a niche because of its ability to soak up excess nitrogen. One New Zealand study showed Matua utilized up to 800 units of nitrogen per acre per year.

Out West

Monsanto Roundup Ready® alfalfa is making its debut in 2005 with expectations for about 1 million pounds to be distributed in the initial seed release. It's anticipated that the technology will be most popular in the West, because those growers use more herbicides than growers in other regions.

Because many Roundup Ready crops are already fed to livestock, experts do not anticipate much resistance to the alfalfa.

Monsanto licensed the technology for alfalfa to Forage Genetics, which in turn licenses it to other seed companies for development of Roundup Ready varieties. In other such crops, the trait was incorporated into existing varieties. However, Roundup Ready alfalfa followed a forward-breeding process, which means only new varieties — not existing ones — will carry the technology.

Forage for your horse

Teff is a fast-growing annual grass earning acclaim as a hay among horses. Researchers at the Oregon State University Southern Oregon Research & Extension Center near Klamath Falls have planted test plots of the fine wheat-like crop the past two years and have found it is a fast-emerging crop that likes the heat. With irrigation, researchers are finding that a first cutting yields about 3 tons per acre and 13%-14% protein levels. With fertilization, second cuttings are nearly as good.

The researchers sold their crop to local horse owners with a great response. As a result, the Oregon researchers believe teff has a huge potential for the California horse market, with the capability of competing with timothy hay, which sells for $180-$200 per ton. For more information contact crop scientist Ken Rykbost at kenneth.rykbost@oregonstate.edu or (541) 883-4590.