

# Study Tells Which Perennial Grass Is Best For You

WOOSTER, Ohio— Perennial grasses provide both early and late-season grazing opportunities. The "1998 Ohio Forage Performance Trials" publication will help you determine which variety is best for you and your herd.

Perennial grasses such as bromegrass, orchardgrass, timothy, tall fescue, and reed canary grass are great for grazing as well as hay. These grasses have important characteristics that vary among each species.

Ed Vollborn, grazing leader in the South District of Ohio State University Extension, said the most important items measured were yield, quality, and persistence.

"For example," Vollborn said, "The contributing factors for measuring persistence are winter hardiness, disease resistance, and drought tolerance. The key factor for quality measurement is maturity."

Vollborn said tall fescue stands up well in high-traffic areas. "Timothy, often used for hay, can only be grazed when sod is firm. orchardgrass would not be the best

choice for drainage ditches and waterways because it's a bunch-type grass and doesn't form a sod. Instead, it forms clumps that are interspersed with bare soil."

Orchardgrass is a versatile, perennial bunch-type grass that establishes rapidly. It's suitable for hay, silage, or pasture. "Orchardgrass is the most productive cool-season grass grown in Ohio—especially when it's fertilized regularly," Vollborn said.

It has rapid regrowth capabilities, produces well under intensive cutting or grazing, and obtains more summer growth than most cool-season grasses. It expresses limited growth under drought conditions.

Orchardgrass is especially well-suited for mixtures with tall legumes such as alfalfa and red clover. As hay, very early maturing varieties of orchardgrass are not well-suited for mixtures with these legumes. One of the limitations of this species is the rapid decline in palatability and quality with maturity. Early maturing varieties generally produce more forage for grazing

and stockpiling. Orchardgrass varieties at the Jackson Branch of Ohio State's Ohio Agricultural Research and Development Center have held up from a quality standpoint into February the last two winters.

Tall fescue is a versatile and persistent perennial forage, Vollborn said. Fescue has many uses, including erosion control, reclamation, and turf. Tall fescue can tolerate somewhat poorly drained soils and low pH situations. It grows and establishes on medium fertility soils and is somewhat resistant to drought. It's the most desirable grass to stockpile for late autumn and winter grazing. Tall fescue varieties also provide adequate forage quality for beef cattle and sheep during the autumn and early winter. Tall fescue is also tolerant of heavy grazing traffic.

"During winter months, higher yields of quality stockpiled fescue are obtained when compared with other species of cool season grasses," Vollborn said.

"New varieties of endophyte-free and low-endophyte tall fescue have the potential to increase animal per-

formance during the summer grazing season," said Chris Penrose, agriculture and natural resources extension agent in Athens County.

Endophyte-free fescue varieties are free from the fungus *Acremonium coenophialum*, which causes elevated body temperatures in animals. The toxins can cause blood restriction to cattle extremities.

Timothy is a hardy perennial bunch grass that grows best in cool and moist climates. It produces most of its annual yield in the first cutting. Summer regrowth is usually limited because of its intolerance for hot and dry conditions. Timothy is primarily used as hay and is especially popular for horses. It's less competitive with legumes than most other cool-season grasses and it's adversely affected by frequent cutting. A study currently taking place at OARDC's Southern Branch is looking at higher than traditional seeding rates for timothy.

Reed canarygrass is a high-yielding perennial grass tolerant to many soil and climatic conditions. It can be used for hay, silage and pasture, but has a reputation of poor palatability and low quality. Vollborn said this is because older varieties of the grass contained high levels of alkaloids—chemical compounds which reduced palatability. New varieties of reed canarygrass are available and offer improved quality and palatability. They can also be used for feeding lactating dairy cows. Only new low-alkaloid varieties are recommended if the crop is to be used for animal feed. These varieties are Palaton, Venture, and Rival.

Reed canarygrass is winter hard, drought tolerant, and resistant to leaf diseases. It's a persistent grass that responds well to high fertility and tolerates spring flooding, low pH, and frequent cutting or grazing. It also forms a dense sod.

Traditional thinking would say that limitations include slow establishment. Forage quality and palatability are thought to decline rapidly after heading. Current studies are proving otherwise, however.

Vollborn and colleagues from extension, the OARDC, and Ohio State University have studied key characteristics of these important grass species commonly grown in



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