

Foraging Around



By Dr. John E. Baylor
 Director of Market Development
 Beachley-Hardy Seed Company

Cool season grasses

Most perennial grasses grown for forage in the Northeast are considered cool-season grasses. They are species that make rapid growth during the cool moist periods of the year but are somewhat dormant and relatively non-productive during hot weather.

Orchardgrass, bromegrass, timothy, bluegrasses, ryegrasses and reed canarygrass are all cool-season grasses. Tall fescue is also considered a cool season grass but is most widely grown for forage in the humid temperate areas of the U.S., including Kentucky, Tennessee and Missouri.

In general, late summer, with its cool nights, adequate rainfall and warm soil, provides a favorable period for establishing a stand of cool season grasses. Grasses sown in late summer or early fall tend to root more deeply because the slower top growth is conducive to better root formation.

However, some grass species are relatively non-winter hardy in the seedling stage while others may be quite hardy but lack seedling vigor and simply need more time to get established. Thus, you can't follow the same seeding rules for all cool season grasses!

This month let's take a brief look at some of the seed and seeding characteristics of several cool season grasses, and consider from a practical viewpoint how these relate to time and method of seeding on your farm. And while I

recognize grasses are generally grown in mixture with a legume, comments today will be limited to the grasses only.

To begin with, seeds of all the perennial grasses are small (see table). Thus, a firm seedbed - to assure uniform, shallow, seed placement and a good moisture relationship in the zone of the seed; and shallow seed placement are essential.

Also, in general, for grasses, the smaller and lighter the seed, the more feeble the establishment. For example, bluegrass has an establishment capacity of 20-25%, timothy 40-50% and ryegrass about 60-80%. Thus, correspondingly more seeds per unit area must be used with the smaller seeded species.

	Approximate seeds/pound
Kentucky bluegrass	2,000,000
Timothy	1,260,000
Orchardgrass	600,000
Reed Canarygrass	530,000
Perennial Ryegrass	230,000
Tall Fescue	230,000
Smooth bromegrass	135,000

Since Timothy is the most widely grown grass for hay in the Northeast let's start with it. Timothy, because of its seed characteristics, is easy to sow. It is very winter hardy in the seedling stage and is best adapted to cool, humid climates, but not to droughty conditions. Thus, in the cooler areas of the Northeast, timothy can be sown in late winter, spring

and later summer into fall

However, in southern Pennsylvania, Maryland and Delaware, and other areas with similar climate, successful seedings are generally limited to late summer and fall. Lack of drought and heat tolerance in the seedling stage makes spring seedings of timothy in these areas risky.

Like timothy, Kentucky Bluegrass is very hardy in the seedling stage. However, the seeds are very small (see table) and germination and emergence relatively slow. While Kentucky bluegrass can be successfully spring seeded when conditions are favorable, it lacks heat and drought tolerance in the seedling stage. Thus, late August and early September is a preferred time of sowing.

Orchardgrass, on the other hand, is usually established with relative ease. And while it is more heat tolerant than Kentucky bluegrass or timothy, orchardgrass is only moderately winter hardy, especially in the seedling stage. Thus, for best results this species should be seeded either in early spring or August. Seedings made in September or later usually disappear over winter.

Historically, getting good stands of Reed Canarygrass has been a problem, partly because of low germination and vigor. Improved seed production and handling methods have helped to overcome this problem. This species can be successfully established in either the spring or late summer if moisture conditions are satisfactory.

However, reed canarygrass seedlings are susceptible to killing by cold temperatures and must be well developed going into winter. Likewise, they are not as drought tolerant as orchardgrass. Thus, August seedings on a firm, well prepared seedbed are usually most successful.

Perennial Ryegrass is a relative newcomer to the Northeast forage scene. Lack of winter hardiness and persistence had been a limiting factor in the earlier use of this species. Newer, more hardy varieties have made the use of this species useful in our area, especially when grown with a legume. As indicated earlier, perennial ryegrasses have a high establishment capacity which help to overcome their lack of heat and drought tolerance and hardiness in

the seedling stage. Thus, early spring and late summer seedings are most likely to succeed.

Tall Fescue is not considered difficult to establish even under rather adverse soil conditions. Both spring and late summer are good times to sow this species. And while tall fescue seedlings are not as hardy as bluegrass or timothy they do exhibit somewhat more hardiness than orchardgrass. Thus, summer seedings may be stretched out later with this species.

In general a moist, fertile, firm seedbed is required for successful

seedings of Smooth Bromegrass. And depth of seeding (not more than 1/4" to 1/2") can be especially important with this grass. A relatively slow to establish grass, bromegrass may be sown in spring or late summer. Seedlings that develop in the cool days of autumn usually grow rapidly the following spring. On the other hand summer seedings must be made early enough to assure good establishment before cold weather occurs.

Next month we'll take another look at fall management of alfalfa.

Centre extension director retires

UNIVERSITY PARK - Russell C. Seward, Centre County Extension Director and senior extension agent, retired June 30 after 30 years of service with the University.

Throughout the years, Seward has worked with various dairy health and nutrition programs, field demonstrations with corn and no-till planting, and lamb pools for sheep and wool growers. Additionally, Seward actively organized and participated in community development, planning and education.

He was instrumental in getting a high school local government course off the ground, developing the Centre County Vacationland Council that promotes tourism, initiating the effort which brought Keystone Legal Services to the county, and in bringing together various people and groups interested in housing to form the Centre County Housing Council. Most recently he has been involved with purchasing and long-range planning for the Centre County Grange Fairgrounds, which recently purchased a 136-acre farm.

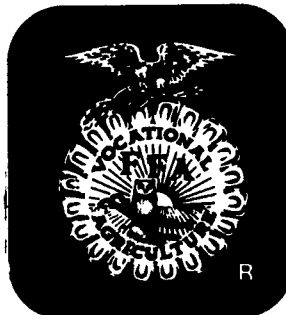
Early in Seward's career when he coordinated the program, enrollment increased and programs expanded in the 4-H Club. The 4-H building at the Grange Fairgrounds exists in large part as a result of his efforts. While working with 4-H youth, Seward also expanded his programs to include adults—he organized the first Senior Extension Program in Centre County which offered programs in education, service and recreation for adults.

An effective communicator, Seward has contributed regularly

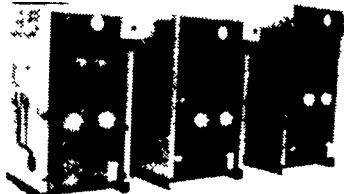
to the area media and played host on several occasions to international visitors who were participating in agricultural training programs or were interested in seeing how the Cooperative Extension Service functions on the county level. Another pioneering effort was his appearance on the first series of Extension television programs broadcast in Central Pennsylvania, first from Altoona and later from WPSX at University Park.

A Penn State graduate, Seward holds a bachelor's degree in agricultural education and a master's degree in extension education. He is a member of many professional and civic associations, including both the Pennsylvania and National Associations of County Agricultural Agents, Epsilon Sigma Phi, the Centre County Agricultural Forum, and the Centre County Environmental Advisory Committee. He has served on the Steering Committee for Penn State's Ag Progress Days for many years.

During his retirement, Seward says he plans to travel internationally, continue his work with civic organizations and remain active professionally.



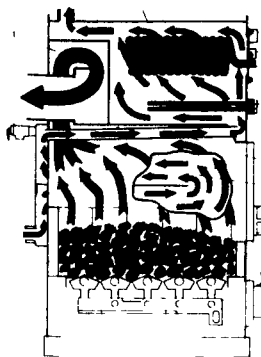
HARMAN TRIDENT BOILERS



THE ULTIMATE IN WOOD/COAL BOILERS, FURNACES & FREE STANDING STOVES (Available to plumbers at wholesale price)

FEATURES:

1. Exclusive Harman Spiral Chamber
2. Harman Cast-Iron Grate System with external shaker lever
3. 1" Schedule 80 Water Pipes
4. Optional Electric Back-Up Kit
5. Optional 4 gpm Domestic Hot Water Coil
6. ASME Pressure Relief Valve
7. Temperature Pressure Gauge Fitting
8. Dual Function Aquastat Fitting
9. Electronic Automatic Draft Control
10. Heavy 1/4" & 5/16" Steel Construction
11. Overfire Draft Controls Provides Secondary Air To Burn Coal Gases
12. Unique Water Flow Pattern For Maximum Heat Transfer
13. Heavy Cast-Iron Doors
14. Fire-Brick Lined



CHESTER B. NOLT

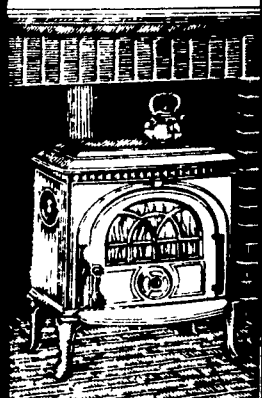
30 S. Hershey Ave. (Bareville) Leola, Pa. 17540

Phone (717) 656-6898

Hours: Mon. & Tues. by Appointment

Wed., Thurs., Fri. 10 to 8; Sat. 10 to 4

Jøtul, a tradition in cast iron since 1853.



American Fireplace Stove JØTUL

BOWMAN'S STOVE SHOP
 RD 3, Ephrata, PA 17522
 Rt. 322, 1 Mi. East of Ephrata
 (717) 733-4973
 Tues., Wed. 10-6;
 Thurs., Fri. 10-8;
 Sat. 10-4

ROHRER'S QUALITY SEEDS

FOR AUGUST SEEDING

- Arrow Alfalfa
- Apollo Alfalfa
- Apollo II Alfalfa
- Armor Alfalfa
- Vanguard Alfalfa
- Redland Clover
- Orchard Grass
- Baylor Brome Grass
- Certified Climax
- Toro Timothy
- Annual Rye Grass
- Winter Rye
- Pasture Mixture
- Waterway Grass Mix
- Winter Vetch
- Reeds Canary Grass

Holland Extra Baler Twine



P. L. ROHRER & BRO., INC.

SMOKETOWN, PA PH: 717-299-2571