



Reed Canarygrass

Reed canarygrass (*Phalaris arundinacea* L.) is a high yielding, high quality perennial cool-season grass that is very persistent in the Northeast. It is adapted to both wet and dry soils. Low alkaloid varieties are required for forage use, and it appears that high alkaloid seed is no longer sold in the USA.

Description

Reed canarygrass has a circumglobal distribution across the northern hemisphere. It is native to the USA, but wild reed canarygrass is now a mixture of native plants and more aggressive European types introduced here long ago. In spite of its native stature, this grass is sometimes considered invasive due to its aggressive growth habits in a wide array of habitats.

Reed canarygrass is widely adapted to a range of stressors including flooding, drought, freezing and grazing. It is a sod-forming grass that spreads underground by short, thick rhizomes. Reed canarygrass flowers in late May or early June in the Northeast. The light to dark gray seed shatters shortly after ripening and drops to the ground. This trait makes seed production difficult.

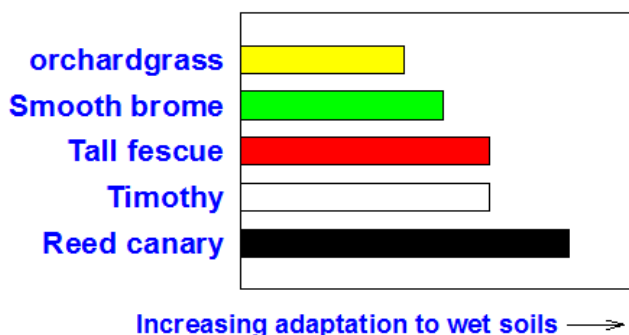


Figure 1. Species adaptation to wet soils.

Seeding Rate Issues

Currently seeding rates are suggested between 8 and 14 lbs/a for the Northeast, while the seeding rate in the rest of the country tends to be lower. A series of seeding rate studies were

conducted in NY (see Grass Information Sheet #12). Seeding rates as low as 5 lb/a resulted in satisfactory stands. These were ideal seed bed conditions, however, and do not suggest any change in current Northeast seeding rates. Make sure to calculate pure live seed rates; some seed lots can be as low as 50% germination.

Although vigorous plants after establishment, reed canarygrass seedlings are weak and slow to establish. Plants require at least 6 weeks of growth before winter, or they may be damaged or killed by cold temperatures.

Reed canarygrass is suitable for mixtures with alfalfa, and is often favored over other cool-season grasses for this purpose. Although it tends to be a vigorous grass under most conditions, it is not particularly competitive with alfalfa. Often reed canarygrass will not exceed 20-30% of an established alfalfa-grass stand. The grass in the mixture will have a positive influence on soil erosion, alfalfa heaving, weed encroachment and bloat potential.

Low Alkaloid Reed Canarygrass

Old cultivars of reed canarygrass contained high concentrations of alkaloids, which significantly reduce the performance of ruminant animals. Alkaloids are complex, nitrogen containing compounds that reduce palatability. The tryptamine-carboline alkaloids also cause severe diarrhea. Animals grazing on high alkaloid reed canarygrass are more likely to lose weight on pasture instead of gaining weight.

Essentially all reed canarygrass seed currently sold in the USA is derived from low alkaloid germplasms. Wild reed canarygrass permanently established in seasonally wet areas, that is sometimes used as forage or pasture, will most likely be high in alkaloids. Selection of any of the new low alkaloid cultivars will result in satisfactory performance.



Management

Regular animal manure applications will eliminate the need for fertilizer NPK. Otherwise apply P and K to soil test recommendations. Apply 100 lbs actual N at spring greenup, 75 lbs N after spring harvest and 50 lbs N after second cut to maximize forage yield. An alternative is to apply 110 lbs N at spring greenup and after spring harvest.

Harvest spring growth just before heading or when the first heads are barely visible in the field at 50-55% NDF. This will usually be late May in southern NY and early June in northern NY. Although there will be very few or no visible heads in regrowth, stems are elongating quickly without a developed inflorescence at the apex. Regrowth will approach 50-55% NDF within 30 to 35 days.

The first two harvests can be used for lactating dairy feed. A third harvest taken in September will be dry cow feed quality. Four harvests are possible, but it will be difficult to get lactating dairy quality feed in the 3rd and 4th cuts.

Conservation Uses

Reed canarygrass can be used in gullies and waterways for erosion control, but tends to be so successful that a monoculture is likely. This grass should not be used along slow-running

shallow streams or ditches, because silting may occur and the waterway can become clogged. Although it can tolerate high water tables and persist for up to a month submerged, it cannot tolerate persistent or stagnant water.

For soil conservation uses reed canarygrass can be established using small pieces of sod in early spring or late summer wet seasons. Shoots will penetrate up to 7 inches of sediment. Chopped pieces of green stems taken from stands at least 3 years old can also be imbedded in wet gullies and will develop into rooted plants.

Summary

Reed canarygrass can thrive under wet poorly-drained soil conditions, but it does not solve a drainage problem. Farmers who established reed canarygrass in wet fields have been disappointed to find the field under water at optimum spring harvest time. Spring growth makes a very nice straw product in those cases. Reed canarygrass adequately fertilized and harvested in a timely fashion can produce high-yielding acceptable quality forage for lactating dairy cows.

Additional Resources

- 2011 Cornell Guide for Integrated Field Crops Management. Electronically accessible at: <http://ipmguidelines.org/Fieldcrops/>.
- Species selection NY: <http://forages.org>

Disclaimer

This information sheet reflects the current (and past) authors' best effort to interpret a complex body of scientific research, and to translate this into practical management options. Following the guidance provided in this information sheet does not assure compliance with any applicable law, rule, regulation or standard, or the achievement of particular discharge levels from agricultural land.

For more information



Cornell University
Cooperative Extension

Grass Management Manual
<http://forages.org>

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