

# 2019 Cool-Season Forage Variety Recommendations for Florida<sup>1</sup>

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## Introduction

Perennial warm-season pasture grasses used in Florida become dormant in late fall and winter because of short days, cooler temperatures, and frosts. Many livestock producers may choose to establish cool-season annual pasture species to supplement their forage production. These plants are usually higher in total digestible nutrients (TDN) and crude protein (CP) than summer perennial grasses. Planting and growing these forage crops can involve considerable expense and is somewhat risky because rainfall is often unpredictable during the fall establishment period. The species and varieties for potential use vary in the distribution of production during the cooler months and in the type of soils where they are best adapted.

Many cool-season forages are also grown as silage crops or as cover crops, in addition to their use for grazing. If grown for silage or cover cropping, delaying planting by 1 month, or similar planting dates to those of varieties grown for grain, is recommended. If multiple silage cuttings are desired, planting may occur at the same time as normally recommended planting dates for grazing; however,

harvesting must occur when plants are still in the vegetative stage to avoid potential freeze damage or winter kill of the stand. Early planting for silage or cover cropping has, in some years, made stands susceptible to diseases, insect pests, and lodging.

This publication provides the most up-to-date information on current adapted cool-season forage varieties. The recommendation of varieties is based on multi-location, multi-year cultivar evaluation experiments that may include trials in Georgia and other states. Table 1 includes information about the planting dates, seeding rates, and other considerations. If you have questions about a particular variety, contact your local UF/IFAS Extension agent for additional information (<http://sfyl.ifas.ufl.edu/find-your-local-office/>).

1. This document is SS-AGR-84, one of a series of the Agronomy Department, UF/IFAS Extension. Original publication date September 2003. Revised June 2010, October 2011, December 2012, September 2013, September 2014, September 2017, September 2018, and August 2019. Visit the EDIS website at <https://edis.ifas.ufl.edu> for the currently supported version of this publication.
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## Recommended Cultivars (Varieties)

### Alfalfa

Alfalfa is usually grown as a winter short-term perennial in Florida, typically used for haylage, green chopping, or hay. Alfalfa requires good management practices for establishment and maintenance. It is not tolerant to flooding or soils with high water tables and requires a soil pH of 6.5 or greater. This species is not widely cultivated in Florida because it is difficult to produce timely hay cuttings with Florida's humid conditions. However, the cost of producing alfalfa haylage and silage has decreased in recent years, and this has made it a viable and cost-effective option as a high-quality, conserved legume forage. Some new cultivars have been developed for tolerating a certain amount of grazing, but they are not as grazing-tolerant as other legume species, such as most of the clovers.

### RECOMMENDED VARIETIES

Alfagraze 600RR (Roundup Ready) and Bulldog 805

### Clover, Arrowleaf

Arrowleaf clover is an annual species, similar to crimson clover in soil adaptation, management, and fertility requirements. It is mainly grown on heavier soils in northwestern Florida. Arrowleaf clover makes more growth in late spring than crimson clover.

### RECOMMENDED VARIETIES

Blackhawk and Apache (for north and central Florida). Yuchi is not recommended because it is an older variety and is more susceptible to disease. Blackhawk and Apache have improved virus resistance compared to Yuchi.

### Clover, Ball

Ball clover grows on a wide range of soil types, including poorly drained soils. Although it is well adapted, it is not considered to be a highly productive forage in Florida.

### RECOMMENDED VARIETIES

Don, Grazer's Select, and Segrest. Pre-inoculated seed is recommended.

### Clover, Berseem

Berseem clover has low bloat potential and is well adapted to many soil types in Florida, including more alkaline and wet soils. Care should be given to the management of berseem clover when grazed. It is advisable to graze at about 10 inches and leave a 3–4 inch stubble height.

## RECOMMENDED VARIETIES

Bigbee and Frosty.

### Clover, Crimson

This clover is a reseeding annual adapted to fertile, well-drained soils. It has a relatively short grazing season. Crimson clover may be grown in combination with ryegrass or a small grain crop.

### RECOMMENDED VARIETIES

Dixie and AU-Robin (seed availability may be limited).

### Clover, Red

Red clover behaves as a winter annual under Florida conditions and usually does not reseed itself. It does not tolerate poorly drained soils. Red clover provides long-season forage production in north Florida.

### RECOMMENDED VARIETIES

Barduro (mid-dormant, released by UF/IFAS), Red Ace, Southern Belle (non-dormant, released by UF/IFAS), and FL2,4D (resistant to herbicide 2,4D, released by UF/IFAS). Southern Belle is a non-dormant red clover. It offers earlier forage production and greater total-season forage yields than more dormant varieties. Barduro is a UF red clover cultivar that is a mid-dormant type. Bulldog Red is also marketed in the southeastern United States but data is limited on its performance in Florida. FL2,4D was released by UF/IFAS in 2016 and licensed to Grassland Oregon. Seed of the 2,4-D red clover is not expected to be available commercially until at least fall of 2019.

### Clover, White

White clover is usually a winter perennial but may act as an annual, depending on moisture conditions. It is adapted to moist soils throughout Florida and is moderately tolerant to acidity. Production and persistence of white clover can be limited by nematodes and other pests.

### RECOMMENDED VARIETIES

Louisiana S-1, Ocoee (released by UF/IFAS, nematode tolerant, seed availability in 2018 may be limited), Osceola (released by UF/IFAS), Regal Ladino, and Regalgraze. Durana is also well adapted, has a prostrate growth habit, and persists well under grazing, but it has lower initial forage yields.

### Fescue, Tall

In general, fescue should not be planted in Florida. It does not persist as a perennial, and small grains and ryegrass are

more productive as a cool-season annual. A few producers have had limited success with Ga-5 when planted on low, wet clay soils in northwestern Florida.

### RECOMMENDED VARIETIES

Max Q II and Texoma endophyte-friendly fescue were adapted.

### Lupine

Lupine is an annual plant adapted to well-drained soils in northern and western Florida. It is an excellent cover crop. Seed supply has been low in recent years, and forage production has been limited by diseases and insects. Only sweet lupine varieties are suitable for forage.

### RECOMMENDED VARIETIES

Tifblue. Frost and Tifwhite are also recommended; however, commercial seed production of these lupine varieties has been limited and seed is currently unavailable.

### Medic

Medics are small-seeded legumes that grow on a wide range of soil types. Although they are well adapted, they are not considered to be highly productive forages in Florida.

### RECOMMENDED VARIETIES

Armadillo burr and Devine little burr. Pre-inoculated seed is recommended.

### Oat

Oat is very palatable but susceptible to freeze injury. Oat may be planted and grazed earlier than rye. Legend 567 and Horizon 720 are new crown rust-resistant varieties. In 2013, a new strain of crown rust was identified on all commercially available eastern oat varieties and symptoms ranged from mild infection to early plant senescence. We recommend planting disease-resistant varieties when available; however, in grazing systems, crown rust resistance is less critical since rust inoculum is reduced by the grazing animal. Other commercially available varieties of oat are often very productive, although susceptible to crown rust. Early planting of susceptible varieties is not recommended. Few fungicides are labeled for use by the grazing animal, and many have hay use limitations. Horizon 306 and RAM LA 99016 are excellent forage types that have winter hardiness and good grain production, but are susceptible to the new strain of crown rust that is prevalent statewide. Susceptible oat plantings may need to be scouted for rust and treated with legal fungicides, particularly if grown for silage or grain. In some years,

some varieties, such as NK-Coker 227, may be injured by Barley Yellow Dwarf Virus (BYDV), an aphid-transmitted virus. Typically, oat varieties grown for grazing, which are early planted, are not sprayed with insecticides for aphid control. Grazing reduces populations of aphids but may not prevent early infection of BYVD in early planted situations where warm fall weather prevails.

### RECOMMENDED VARIETIES

Legend 567 (currently crown rust-resistant), Horizon 720 (moderately resistant to crown rust), Horizon 306, Horizon 270 (crown rust-susceptible), and RAMLA 99016 (moderately crown rust-susceptible).

### Peas, Austrian Winter (Common)

This annual legume is best suited to well-drained soils with high clay content.

### RECOMMENDED VARIETIES

Common, Maple, and Whistler.

### Rye

Rye is the small grain most widely used for winter grazing. Rye is more cold tolerant than oats and generally produces more forage than either oat or wheat. If rye is planted very early in the season, there may be a decreased stand caused by various seedling diseases. Normally rye developed from northern states produces little forage in late fall or early winter and usually is severely damaged by leaf rust; therefore, only plant varieties recommended for the southeastern United States.

### RECOMMENDED VARIETIES

FL 401 (for early grazing or use in blends), FL 104 (seed availability may be limited, full-season grazing), Wrens Abruzzi and late-forage season producers, developed in Oklahoma: Bates RS4, Elbon, Oklon, Maton, and Maton II.

### Ryegrass

Ryegrass is a valuable winter and spring grazing crop for use on flatwoods soils or the heavier sandy loam soils in northwest Florida. Ryegrass may be seeded alone or with a small grain on a prepared seedbed or overseeded onto permanent grass pastures. Seeding ryegrass with a small grain crop lengthens the grazing season. (NOTE: Few differences were found between early and late variety performance in the 2016–2017 season of production.)

## EARLY RECOMMENDED VARIETIES

Andes, Attain, Big Boss, Credence, Diamond T, Earlyploid, Flying A, Frostproof (recently released by UF/IFAS), Jumbo, Lonestar, Marshall (susceptible to rust and gray leaf spot), Maximus, Nelson, Prine, TAMTBO, and Tetrastar.

## LATE RECOMMENDED VARIETIES

Andes, Attain, Big Boss, Credence, Jumbo, Marshall (susceptible to rust and gray leaf spot), Maximus, Nelson, Prine, TAMTBO, and Tetrastar.

## SEASON-LONG RECOMMENDED VARIETIES

Andes, Attain, Big Boss, Credence, Diamond T, Earlyploid, Flying A, Jackson, Jumbo, Lonestar, Marshall (susceptible to rust and gray leaf spot), Maximus, Nelson, Passerel Plus, Prine, TAMTBO, and Tetrastar.

These varieties were selected based on their recent three-year, multi-location performance. Other ryegrass varieties, such as Beefbuilder III, Big Daddy, Brigadier, Ed, Fantastic, Florina, Fria, Graze-N-Gro, King, Ocala, Rio, Surrey II, Verdure, and Winterhawk have also performed well in regional trials. Other new varieties may be suitable but have not been adequately evaluated in Florida.

## Sweetclover

Sweetclover grows on slightly drier soils than white clover. It will not tolerate flooding. Sweetclover has an earlier but shorter grazing season than white clover. Sweetclover should be reseeded each year.

## RECOMMENDED VARIETIES

None at present. New varieties should be commercially available shortly.

## Triticale

Triticale is a cross between wheat and rye. It is well adapted to the southern United States and peninsular Florida. Triticale has the forage quality of wheat and the excellent disease resistance of rye. Triticale does not respond well to close grazing and therefore is recommended for haylage or silage if grown alone. If used for grazing, consider blending with ryegrass to promote a longer growing season. It is advisable to use recommended varieties as there are triticale varieties sold in the state that are not adapted to Florida growing conditions and will not perform well.

## RECOMMENDED VARIETIES

Trical 342, Monarch, and NF 201.

## Vetch

Vetch grows best on well-drained, fertile, loamy soils. Although it is well adapted, it is not considered to be a highly productive forage in Florida.

## RECOMMENDED VARIETIES

AU-Early Cover, Cahaba White, Hairy, Merit, and Nova II. Commercial seed production of most vetch varieties is limited and it may be necessary to special order seed.

## Wheat

Wheat is similar to oat in forage yield and palatability. Wheat is less susceptible to freeze injury than oat. Wheat should not be planted for grazing before October 15, and take caution to plant only Hessian-fly-resistant varieties for grazing.

## RECOMMENDED VARIETIES

AGS 2024, AGS GrazeAll (AGS 2027), AGS 2033, AGS 2038, Dyna-Gro Savoy, Pioneer 26R10, Pioneer 26R41, and Pioneer 26R94.

## Remember the Following

- Planting cool-season forages on a clean-tilled seedbed results in earlier and more total forage production compared to overseeding on grass sod. If overseeding on bahiagrass, the sod should be disked to 30% disturbance. For overseeding on bermudagrass, a pasture drill or no-till drill can be used alone. Excess warm-season forage should always be removed as hay or by grazing before planting the cool-season forage.
- Success of winter pastures depends on adequate rainfall. This is especially true when overseeding.
- In central and south peninsular Florida, sod seeding (overseeding) of cool-season annuals into an established grass sod often fails because of insufficient soil moisture and warm-season grass competition. Sod seeding is generally not recommended unless irrigation is available or rainfall is adequate.
- Look for opportunities to plant on a clean-till seedbed, such as following vegetables or a row crop, after lifting sod, or in a pasture renovation program where the sod is plowed or turned under.
- In south central Florida, small grains and ryegrass have been successfully grown on flatwoods in a pasture renovation program. If the sod is turned with a moldboard plow (late October–early November), the soil harrowed, planted, and packed the same day, there will usually be

enough moisture conserved to establish the new planting. If equipment and labor does not allow for such a rapid progression of work, then it may be best to turn the sod and then disk in early to mid-October and wait for adequate rainfall before planting.

- Winter legumes are more dependable on the heavier clay soils of northwestern Florida or on sandy soils underlain by a clay layer compared to deep upland sands or sandy flatwoods. However, white clover and ryegrass overseeded can also be grown successfully on flatwoods soils in northeast Florida and south central Florida where the soil remains moist throughout the growing season.
- Remember to add the correct inoculant (nitrogen-fixing bacteria) to the legume seed before planting. Coated (already pre-inoculated) seed is sometimes available, but seed coatings with bacteria have a limited shelf life and may be costly when compared to purchasing raw seed and inoculant separately and mixing just prior to planting. Be aware of proper storing for pre-inoculated seeds or inoculants; excess heat can kill bacteria.

Table 1. Planting dates, seeding rates, planting depths, and grazing parameters for certain cool-season forage crops.

Seed-propagated crops <sup>1</sup>	Planting dates <sup>2</sup>	Seeding rates (lb/A broadcast)	Seeding depth (in)	Grazing height (in)		Rest period
				begin	end	
Alfalfa	Oct. 1–Nov. 15	15–20	1/4–1/2	10–16	3–4	Hay: 35–40 Grazing: 15–30
Clover, Arrowleaf	Oct. 1–Nov. 15	8–12	0–1/2	8–10	3–5	10–20
Clover, Ball	Oct. 1–Nov. 15	2–3	0–1/4	6–8	1–3	7–15
Clover, Berseem	Oct. 1–Nov. 15	15–20	1/4–1/2	8–10	3–5	10–20
Clover, Crimson	Oct. 1–Nov. 15	20–25	1/4–1/2	8–10	3–5	10–20
Clover, Red	Oct. 1–Nov. 15	10–15	1/4–1/2	8–10	3–5	10–20
Clover, Subterranean	Oct. 1–Nov. 15	15–20	1/4–1/2	6–8	1–3	7–15
Clover, White	Oct. 1–Nov. 15	3–4	0–1/4	6–8	1–3	7–15
Fescue, Tall	Nov. 1–Dec. 15	20–25	1/4–1/2	4–8	2–3	15–30
Medic	Oct. 1–Nov. 15	10–15 rates differ	0–1/4	6–8	1–3	7–15
Oats for forage	Sept. 15–Nov. 15	100–120	1–2	8–12	3–5	7–15
Pea, Austrian Winter	Oct. 1–Nov. 15	40–60	1/2–1	Poor grazing tolerance. Better suited as a hay or silage crop.		
Rye for forage	Oct. 15–Nov. 15	90–120	1–2	8–12	3–4	7–15
Ryegrass, Italian (annual)	Oct. 1–Nov. 15	20–30	0–1/2	6–12	3–4	7–15
Sweetclover	Oct. 1–Nov. 15	10–15	1/4–1/2	8–10	3–5	10–20
Turnips	Oct. 1–Nov. 15	5–6	1/4–1/2	6–8	2–3	varies
Vetch, hairy	Oct. 1–Nov. 15	20–30	1–2	6–8	3–4	varies
Wheat for forage	Oct. 15–Nov. 15	90–120	1–2	8–12	3–5	7–15
Triticale for silage or use in blends	Oct. 15–Nov. 15	90–120	1–2	Harvest for silage at milk or soft dough stage of maturity.		

<sup>1</sup> Always check seed quality. Seed germination should be 80% or higher for best results.

<sup>2</sup> Planting date range: in general, cool-season forage crops in northern Florida can be planted in the early part of the planting date range and in southern Florida, in the latter part of the planting date range.