

Arrowleaf Clover

*Dennis W. Hancock,
Extension Forage Agronomist,
Crop and Soil Sciences Department*

AT-A-GLANCE: ARROWLEAF CLOVER

Adaptation: Coastal Plain and lower Piedmont. Requires well drained soil, not tolerant of soil acidity or low fertility.

Establishment: Plant scarified seed at 5 to 10 lb/A in September to early November. Excellent reseeder.

Varieties: Apache. This variety has virus disease resistance but is still susceptible to crown and stem rot which wiped out most plantings of the Yuchi variety

Arrowleaf clover is a highly productive winter annual clover grown from East Texas to Georgia. It is most productive when grown on well-drained loam or sandy loam soils but can do well on well-drained clay soils. It will not tolerate acid soils. This clover generally produces less forage in late fall and winter than crimson clover but can produce six weeks (or more) longer in spring. In most areas of the state, it will provide excellent quality grazing until late May. Digestibility remains high until maturity. Arrowleaf is a good clover to include in grazing mixtures. It has a very low bloat potential, and its late spring production extends the grazing season while providing excellent quality forage.

Arrowleaf is a prolific seed producer, much of which will be hard seed. As a result, arrowleaf is considered a good reseeder if it is allowed to reseed. To allow reseeding, remove animals from the paddocks or reduce stocking rates in late April or early May when the clover starts to flower. **WARNING:** If arrowleaf has been grown in a pasture for several years, the ability of arrowleaf to reseed dependably is seriously compromised by a *Fusarium* spp. disease complex.

Sod-seeding arrowleaf into warm season perennial pastures is an excellent way to achieve spring grazing and to introduce biologically-fixed N into the system. Unchecked vigorous spring growth can reduce early spring growth of the perennial grass. In overseeded pastures, closely



Arrowleaf Clover (*Trifolium vesiculosum*)

graze arrowleaf clover during the spring to avoid a full canopy developing over the perennial grass.

Arrowleaf will continue to produce new leaves and remain productive until late spring/early summer, if grazing is managed to keep it 2 – 6 inches tall. This management also will help improve light and air movement into the canopy, thus reducing disease problems. Arrowleaf will often exhibit symptoms of stress (e.g., purpling of the leaves) in response to fertility problems, cold stress, or disease.

Several varieties of arrowleaf clover are available in the Southeast. However, many of the varieties are affected by a virus complex that can drastically reduce yields. Some cultivars are now available that have demonstrated improved resistance to these viruses.

Information about specific varieties of recommended cool season annual legume species may be found on the web page entitled “Forage Species and Varieties Recommended for Use in Georgia” (<http://www.caes.uga.edu/commodities/fieldcrops/forages/species.html>).

Establishment of Arrowleaf Clover

Arrowleaf clover can either be established on a prepared seedbed or they can be overseeded on warm season perennial grass pastures. Planting with a drill (using the small seed box) or by broadcasting the legume seed can result in satisfactory stands. However, the seeding rate needs to be adjusted to compensate for the differences in these planting methods (Table 1). Information on broadcasting legume seed is detailed in Factsheet CSS-F004 “Seeding Methods for Small-Seeded Legumes.”

Table 1. Seeding rates for achieving a solid or mixed stand of arrowleaf clover.*

Desired Stand	Drill	Broadcast
	(lbs of pure live seed/acre)	
Solid Stand [†]	5-7	8-10
Single Clover in Mixture [‡]	5-6	7-8
Multiple Clovers in Mixture [§]	5	6

* Use lower seeding rates when planting into a prepared seedbed or no-tilled into existing sod (overseeding). Use higher seeding rates when seed is broadcast.

[†] When only one legume is seeded and not in a mixture with grasses or other legumes (e.g., sod-seeding into bermudagrass).

[‡] Winter annual clovers are typically grown with one or more winter annual grasses.

[§] Often two or more clover species will be grown with the grass. The seeding rate of an individual clover species can be reduced if multiple clovers are included in the mix.

When planting into dormant warm season grass sod, one or more legumes may be used to achieve a solid legume stand. When planted in a prepared seedbed, one or more of these legumes are often mixed with a small grain crop or ryegrass. Seeding rates for arrowleaf clover when used in such mixtures will need to be adjusted to minimize seed costs and prevent excessive competition (Table 1).

Planting too deep is not usually a problem when legumes are broadcast on dormant warm season perennial grass sod. However, when the legumes (especially small-seeded species) are being drilled or broadcast onto a prepared seedbed, special care should be taken to ensure that the legume seeds are not planted more than $\frac{1}{4}$ - $\frac{1}{2}$ inches deep (see the Factsheet CSS-F004 "Seeding Methods for Small-Seeded Legumes"). Large-seeded legumes such as lupine or common vetch can be planted up to 1 in. deep.

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CSS-F001

January 2009

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, The University of Georgia College of Agricultural and Environmental Sciences and the U.S. Department of Agriculture cooperating.

J. Scott Angle, Dean and Director

