

Cowpeas have long been grown in the Southern region and are a useful summer legume cover crop. They are fast growing with a long tap root that is excellent for erosion control and help mediate soil compaction. They are heat and drought tolerant legumes that are adapted to a range of soils, but do not do well in very wet conditions. Some varieties tend to vine and can be difficult to terminate with mowing without heavy equipment. They work well in mixtures by filling in gaps of other upright summer cover crops to suppress weeds as well as supplying nitrogen. Cowpea seed are relatively expensive and difficult to establish in pastures.

Recommended Varieties

Variety	Reasons Why	Source
Iron and Clay	Nematode resistance, combines semi-bushy and viney plants, 90 days to maturity.	Jimmy Carter Plant Materials Center data, Managing Cover Crops Profitably
Chinese Red	Good biomass, bushy plants, earlier maturing than Iron and Clay at 45-50 days.	Jimmy Carter Plant Materials Center data, Managing Cover Crops Profitably
Red Ripper	Good biomass, bushy plants, earlier maturing than Iron and Clay at 45-50 days.	Jimmy Carter Plant Materials Center data, Managing Cover Crops Profitably
Ace	Nematode resistance, semi-bushy growth, high biomass yield. Small seeded variety of forage cowpea for forage and cover cropping systems. 90-100 days maturity.	Texas A&M AgriLife Research Overton, Texas

Planting Information

Information	Comments	Source
Drilled Seed Depth (inches)	1 - 2	Managing Cover Crops Profitably
Drilled Seeding Rate (lbs/acre)	30 - 90 Use <i>Bradyrhizobium</i> spp. inoculant There are a wide range of seeding rates reported. In pure stands, most common seeding rates is 50 - 60 lbs/acre.	ARS Fact Sheet, Managing Cover Crops Profitably
Broadcast Seeding Rate (lbs/acre)	80 - 100 Not a preferred method unless timely moisture is available for stand establishment. May consider drag or mowing of prior crop residues to aid in seed soil contact. The relatively large seed does not germinate and persist well without some soil coverage.	ARS Fact Sheet, Managing Cover Crops Profitably

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Termination Information

Information	Source
<p>Cowpeas can be terminated by grazing. Cowpeas can also be terminated by mowing if shallow tillage is also used. Herbicides can be used. Controlled grazing or roller crimper can also be used. It is common to use a combination of methods to achieve optimum results. Historically, cowpeas volunteered in row crop systems. Some varieties may produce hard-seed; consequently, cowpeas should be terminated at bloom.</p> <p>Consult your local Extension and state Pest Management Handbook for herbicide recommendations. Always follow the herbicide label.</p>	<p>Managing Cover Crops Profitably, USDA Cowpea Plant Guide</p>

Cultural Traits

Traits	Comments	Source
Typical Dry Matter Range (lbs/acre)	3,800 - 6,000	Jimmy Carter Plant Materials Center data, Managing Cover Crops Profitably, Unpublished Literature Review in Coastal Plain – Gaskin
Typical Total N Range (lbs/acre)	75 - 150	ARS Fact Sheet, Unpublished Literature Review in Coastal Plain – Gaskin
Life Cycle	Warm season annual legume	
Growth Habit	Bushy or viney depending on variety	Iron and Clay are bushy early then sprawl out.
Preferred Soil pH	6.0 - 7.0	Midwest Cover Crops Council Selector Tool
Relative Seed Cost (\$/acre)	\$\$\$\$	Based on survey of seed costs using maximum price and max seeding rate
Min. Germination Temp (F)	65°	ARS Fact Sheet
Cautions	Consider using in a mix with annual summer grass such as sorghum sudangrass or millets due to low C:N ratio. Cow peas lack persistent residue for soil health benefits throughout the growing season. Can be hard-seeded or set seed to become a weed, but could be controlled with herbicides.	

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Forage Traits

Information	Source
Cowpea may provide acceptable forage yields and quality; however, it is relatively expensive and difficult to establish. In addition, it is not very tolerant of grazing. It can potentially be mixed with other high yielding summer annuals (sorghum-sudan or pearl millet) to increase crude protein levels in the stand. This usually decreases yield per acre when compared with sorghum family monocultures.	UGA Forages

Sources:

ARS Fact Sheet:

<https://iapreview.ars.usda.gov/SP2UserFiles/Place/60100500/FactSheets/FS04p.pdf>

Jimmy Carter Plant Materials Center Annual Reports:

https://www.nrcs.usda.gov/wps/portal/nrcs/detail/ga/plantsanimals/?cid=nrcs144p2_022076

Managing Cover Crops Profitably: <https://www.sare.org/Learning-Center/Books>

Midwest Cover Crop Council Selector Tool - Missouri Data: <http://mccc.msu.edu/covercroptool/covercroptool.php>

USDA Cowpea Plant Guide: https://plants.usda.gov/plantguide/pdf/pg_viun.pdf

UGA Forages: <https://georgiaforages.caes.uga.edu/species-and-varieties/warm-season/other-warm-annual-legumes.html>