WINTER PEAS (*Pisum sativum* L.)

Winter peas are often used in cover crop mixes. Pea may be faster growing in the fall than clover or vetch; consequently, may provide better winter ground coverage. The winter pea varieties available currently are susceptible to Sclerotinia (white mold), a disease intensified under cool, wet conditions often encountered in the Southeast. Use caution planting pea as a cover crop directly before other legume cash crops, because pea could potentially intensify disease or insect problems in the following legume cash crop. Disease may be reduced when pea is mixed with small grains to help keep the vines off the soil where they are more susceptible to diseases intensified by wet conditions. It is a nematode host and should not be planted in fields with nematode problems. Winter peas are sensitive to soil salinity and extreme acidity. In the Southeast, peas may exhibit cold injury after freeze events in the form of foliar necrosis. This injury is often transient, and many varieties are capable of recovering from cold injury in this region.

Recommended Varieties

Variety	Reasons Why	Source
CAH-11, Chelan, Common, Fenn, Granger, Melrose, Romack, Specter	Produced 3000-6750 lbs dry biomass /acre in NC variety trials.	R.A. Vann et al. - Unpublished
Frostmaster, Survivor, Whistler, and Windham	Cultivars with smaller leaf sizes and are typically more winter hardy.	MS Plant Materials Center data

Planting Information

Information		Comments	Source
Drilled Seed Depth (inches)	1 - 3	Breeders indicate better anchoring, cold tolerance, and growth if planted 2 – 3 inches.	Managing Cover Crops Profitably
Drilled Seeding Rate (lbs/acre)	50 – 70 in monoculture, 30 – 40 in mixture	Use the inoculant *Rhizobium leguminosarum biovar viceae*. Pea generally performs best when drilled on narrow row spacing (<10 inch).	GA Cover Crop Standard, NCSU variety trials
Broadcast Seeding Rate (lbs/acre)	45 – 60 Not usually recommended	Pea seed can be broadcast if good moisture is present following broadcasting; biomass production will likely be less than that for drilled pea.	Wright et al. 2013, R.A. Vann and S.C. Reberg-Horton
Aerial Seeding Rate (lbs/acre)		Not recommended.	

Continue to next page…

WINTER PEAS (*Pisum sativum* L.)

Termination Information

Information	Source
Winter peas can be terminated with herbicides, mowing or disking at full-bloom stage to optimize nitrogen. Herbicides are most effective prior to blooming. Use of roller/crimper is not recommended unless plants are at least 14 inches in height. Consult your local Extension and state Pest Management Handbook for herbicide recommendations. Always follow the herbicide label.	Managing Cover Crop Profitably, USDA Fact Sheet: Terminating Cover Crops with a Roller Crimper

Cultural Traits

Traits		Comments	Source
Typical Dry Matter Range (lbs/acre)	3,000 - 4,500	Pea variety and growth habit have a large influence on biomass production.	Managing Cover Crops Profitably, Unpublished Literature Review in Piedmont – Gaskin, Atwell 2017
Typical Total N Range (lbs/acre)	70 - 120		Unpublished Literature Review in Piedmont, Atwell 2017
Life Cycle	Cool season annual legume		
Growth Habit	Viney, Prostrate to Climbing		
Preferred Soil pH	6.0 - 7.0		Managing Cover Crops Profitably
Relative Seed Cost ($/acre)	$$$$		Based on survey of seed costs using maximum price and max seeding rate
Min. Germination Temp (F)	41°		Managing Cover Crops Profitably
Cautions	Due to susceptibility to Sclerotinia and Sclerotium rolfsii (*Athelia rolfsii*), do not plant before any legumes or hemp unless fumigating before planting cash crop. New varieties are being developed with resistance		USDA Pea Plant Guide; Clemson University

Sources:

Atwell, R.A. (2017). Optimizing short-term cover crop benefits through genotype screening and management. Ph.D. diss., North Carolina State University, Raleigh, NC.

Continue to next page…

MS Plant Materials Center data:
https://www.nrcs.usda.gov/wps/portal/nrcs/main/plantmaterials/pmc/southeast/mspmc/

NRCS GA Cover Crop Standard:
https://efotg.sc.egov.usda.gov/references/public/GA/Cover_Crop_(340)_Standard_October_2015.pdf

USDA Fact Sheet: Terminating Cove Crops with a Roller Crimper. 2015:
https://efotg.sc.egov.usda.gov/references/public/MS/Terminating_Cover_Crops_with_a_Roller_Crimper.pdf

USDA Pea Plant Guide: https://plants.sc.egov.usda.gov/plantguide/pdf/pg_pisa6.pdf

Wright, D.L., E.B. Whitty, and A.R. Blount. 2013. Planting dates, rates and methods of agronomic crops. UFL #SS-AGR-150.