Legume
Pea, Winter
Pisum sativum

PLANT HARDINESS ZONE 6 DATASET

COVER CROP DESCRIPTION

Also known as Austrian Winter Pea. Vining cool-season annual. Variable winter hardiness. Excellent N-fixer, good biomass and forage. Low risk of reseeding and becoming a weed. Susceptible to sclerotinia crown rot, rotate with non-susceptible crops to reduce risk. Inoculate the seed with appropriate Rhizobium spp; cross inoculates with vetch. If the goal is overwintering, select cultivar accordingly; avoid planting too early or late, and plant at the deeper end of the recommended planting depth range (~2" deep). May be planted in spring, but potentially slower growth and lower biomass and N fixation than spring peas. Mixes well with upright species due to its vining habit. Residue decomposes rapidly and releases N faster than vetch.


Pea, Winter - Mirsky Lab [2020]


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GOALS

Growing Window	Medium
Nitrogen Scavenging	
Lasting Residue	
Prevent Fall Soil Erosion	
Prevent Spring Soil Erosion	
Forage Harvest Value	
Nitrogen Fixation	
Penetrates Plow Pan	
Reduces Surface Compaction	
Improve Soil Organic Matter	
Increase Soil Aggregation	
Good Grazing	
Pollinator Food	

WEEDS

Residue Suppresses Summer Annual Weeds	
Outcompetes Summer Annual Weeds	
Suppresses Winter Annual Weeds	
Persistence	
Volunteer Establishment	

ENVIRONMENTAL TOLERANCES

Low Fertility	
Drought	
Heat	
Shade	
Flood	
Salinity	

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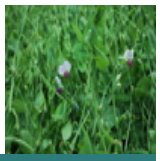

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Growth Traits

Duration	Annual
Zone Use	Common
Shape And Orientation	Semi-Erect, Climbing
Dry Matter (Lbs/A/Yr)	1000 - 2500
Soil Texture	Medium
Soil pH	6 - 7.5
Soil Moisture Use	Medium
Hessian Fly Free Date?	No
Nitrogen Accumulation (Lbs/A/Yr)	40 - 100
Ease Of Establishment	■■■■□
Establishes Quickly	■■□□□
Early Spring Growth	■■■■□
Flowering Trigger	Plant Size
Root Depth	Medium
Inoculant Type	Pea/Vetch

Soil Drainage

- Very Poorly Drained
- Poorly Drained
- **Somewhat Poorly Drained**
- **Moderately Well Drained**
- **Well Drained**
- **Excessively Drained**
- Saturated Muck
- **Well Drained Muck**

Planting

Seeds Per Lb	4000
Seed Price Per Lb	$$$
Base Seeding Rate (Lbs/A)	50 - 90
Drilled Depth	1" - 1.5"
Can Aerial Seed?	No
Can Frost Seed?	No
Min Germination Temp (°F)	42

Termination

Tillage At Vegetative	■■■■□
Tillage At Flowering	■■■■□
Freezing At Vegetative	■■□□□
Freezing At Flowering	■■■■■
Chemical At Vegetative	■■■■■
Chemical At Flowering	■■■■■
Mow At Flowering	■■■■■
Roller-Crimp At Flowering	■■■□□

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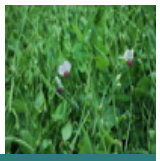

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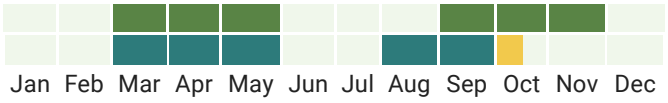
Planting and Growth Windows

Frost Seeding	N/A
Reliable Establishment	03/01 - 05/31 08/15 - 09/30
Temperature/Moisture Risk	10/01 - 10/15
Active Growth Period	Fall Spring
Winter Survival	NeverSeldom
Can Interseed	N/A



Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

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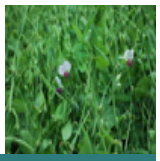

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Extended Comments

Taxonomy: Most other winter pea varieties are not as winter hardy as the Austrian Winter Pea.

Basic Agronomics: Dry matter highly dependent on planting and termination date and precipitation. Season length, habit vary by cultivar. Biomass breaks down quickly; early planting and termination reduces winter survival. Mixes well with grains when grown for forage. Bloat potential that is easily managed. Seed vigor highly variable. For grazing purposes, restrict to 30% of total ration or mixing with a grass is recommended.

Termination: If using herbicides to terminate use a tank mixture (e.g., glyphosate + dicamba or 2,4-d)

Forage and Grazing: Good cool season component for grazing mixes.

Weeds: Late planting increases heaving. Weak plant with low volunteer seed survivability.

Disease: Information too limited to rate P and K effect. Some cultivars, nematode resistant. Poor host for soybean cyst nematode. With late planting, biomass is low and spring pea won't suppress winter weeds. Good cool season component for grazing mixes. Quick cool season nitrogen fixer. Susceptible to sclerotinia in East; Late planting increases heaving. Host for root knot nematode, Penetrans Root-Lesion Nematode and sugarbeet cyst nematode. Weak plant with low volunteer seed survivability.

Goals: Best mixed with cereals to prevent lodging.

Pollinators: Self-pollinated so not particularly useful for pollinators compared to other legumes.

Nematodes: Some cultivars, nematode resistant. Poor host for soybean cyst nematode. Host for root knot nematode, Penetrans Root-Lesion Nematode and sugarbeet cyst nematode.

References & Resources

Fall Cover Crops, University of Delaware Cooperative Extension
Spring Planted Cover Crops for Vegetable Rotations, University of Delaware Cooperative Extension
Plant Cover Crops, University of Maryland Extension
Cover Cropping for Success, University of Maine Cooperative Extension
Canadian Field Peas, Cornell University Cooperative Extension
Cover Crops for Conservation Tillage Systems, Penn State Extension
Using Flowering Cover Crops for Native Pollinating Bee Conservation, Penn State Extension