Broadleaf
Buckwheat
Fagopyrum esculentum

PLANT HARDINESS ZONE 5 DATASET

COVER CROP DESCRIPTION

Low-growing summer annual. Popular summer cover crop. Needs warm conditions, but very low tolerance to drought or high heat. Prefers light to medium textured well drained soils and performs poorly on heavy, wet, or compacted soil. Fine root system good for topsoil conditioning, but not subsoiling. Purported to be good for unlocking soil phosphorus (P), but that only works in calcareous soils. Tolerant of low pH (5.0). Excellent weed suppressor at high planting rates due to very fast growth (not allelopathy). Blooms and extrafloral nectaries excellent for pollinators and other beneficial organisms. High risk of reseeding if overmature: kill or mow within 7-10 days after first bloom. Sets seed faster than all other covers – if reseeding is a concern, don't grow in mixes. Easy to kill.


Buckwheat - Bjorkman [2020]


Buckwheat - Kelly Gill [2020]


Buckwheat - Allina Harris [2020]


Buckwheat - Kelly Gill [2020]


Buckwheat - Bjorkman [2020]


Buckwheat - Bjorkman [2020]


Buckwheat - Bjorkman [2020]

GOALS

Growing Window	Very Short
Nitrogen Scavenging	
Lasting Residue	
Prevent Fall Soil Erosion	
Prevent Spring Soil Erosion	
Forage Harvest Value	
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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Growth Traits

Duration	Annual
Zone Use	Common
Shape And Orientation	Erect, Semi-Erect
Dry Matter (Lbs/A/Yr)	1500 - 3500
Soil Texture	Coarse, Medium
Soil pH	4.8 - 7.2
Soil Moisture Use	High
Hessian Fly Free Date?	No
Ease Of Establishment	
Establishes Quickly	
Early Spring Growth	
Flowering Trigger	Plant Size
Root Depth	Medium

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	15000
Seed Price Per Lb	$$
Base Seeding Rate (Lbs/A)	40 - 60
Drilled Depth	0.5" - 1"
Can Aerial Seed?	No
Can Frost Seed?	No
Min Germination Temp (°F)	50

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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Planting and Growth Windows

Frost Seeding	N/A
Reliable Establishment	05/01 - 09/15
Temperature/Moisture Risk	09/15 - 09/30
Active Growth Period	Summer
Winter Survival	Never
Can Interseed	N/A

Extended Comments

Growth, Roots, and Nutrients: Minimum germination temp for competitiveness 62°F. Fine roots explore soil quickly, but are unable to penetrate compacted areas. Successful planting dates in Z5 are June and July. Mineralizes rock phosphate, but not other unavailable P.

Forage and Grazing: Buckwheat causes photosensitivity and liver damage in livestock. Do not feed.

Pollinators: Potential honey income. Top-rated cover crop for bees, along with phacelia.

Nematodes: Host for root-knot nematode.

Insects: Can be combined with sunn hemp as summer cover crop. No obvious insect issues noticed through casual observation

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References & Resources

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