



PLANT HARDINESS ZONE 4 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]

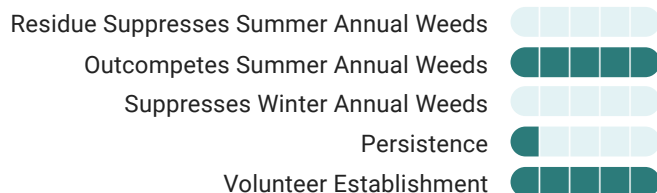


Buckwheat - Bjorkman [2020]

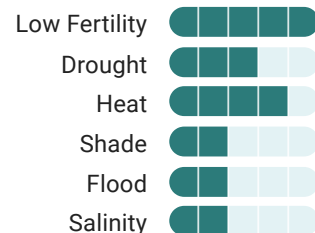
## GOALS



## WEEDS



## ENVIRONMENTAL TOLERANCES



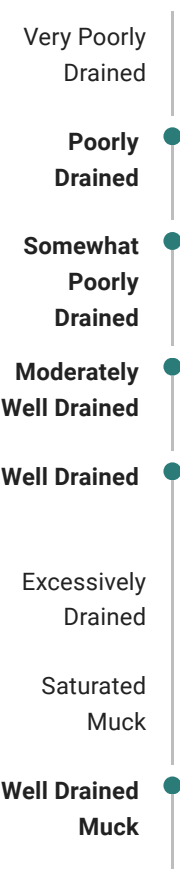


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Growth Traits

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	
Hessian Fly Free Date?	No
Ease Of Establishment	
Establishes Quickly	
Early Spring Growth	
Flowering Trigger	Plant Size
Root Depth	Medium

Soil Drainage



Planting

Seeds Per Lb	
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	05/15 - 08/15
● Temperature/Moisture Risk	N/A
● Active Growth Period	Summer
Winter Survival	Never
Can Interseed	N/A



### Extended Comments

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

**Environmental Tolerances:** Does better than many species on low-P soils.

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

**Nematodes:** Host for root-knot nematode.

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

### References & Resources

**Cover Crops and Green Manures**, University of Vermont Extension  
**2015 Cover Crop Mix in Corn Silage Trial**, University of Vermont Extension  
**Cover Cropping for Success**, University of Maine Cooperative Extension  
**Cover Crops for Home Gardens**, University of Maine Cooperative Extension  
**Using Green Manures**, Maine Organic Farmers and Gardeners Association  
**Selected Green Manures and Cover Crops for Maine**, University of Maine  
**Green Manures/Cover Crops**, Maine Organic Farmers and Gardeners Association  
**Cover Crops – What a Difference a Few Weeks Makes**, Cornell University Cooperative Extension  
**Buckwheat**, Cornell University Cooperative Extension  
**Early Summer Seasonal Cover Crops**, Cornell University Cooperative Extension  
**Mid and Late Summer Seasonal Cover Crops**, Cornell University Cooperative Extension