Broadleaf
Buckwheat
Fagopyrum esculentum

PLANT HARDINESS ZONE 7 DATASET

COVER CROP DESCRIPTION

Low-growing summer annual. Popular summer cover crop. Needs warm conditions, but very low tolerance for 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	■■

Broadleaf
Buckwheat
Fagopyrum esculentum

PLANT HARDINESS ZONE 7 DATASET

Growth Traits

Duration	Annual
Zone Use	Common
Shape And Orientation	Erect, Semi-Erect
Dry Matter (Lbs/A/Yr)	1500 - 2500
Soil Texture	Coarse, Medium, Fine
Soil pH	6 - 8.4
Soil Moisture Use	Low
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	20000
Seed Price Per Lb	$$
Base Seeding Rate (Lbs/A)	30 - 80
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	

Broadleaf
Buckwheat
Fagopyrum esculentum

PLANT HARDINESS ZONE 7 DATASET

Planting and Growth Windows

Frost Seeding	N/A
Reliable Establishment	04/28 - 08/15
Temperature/Moisture Risk	N/A
Active Growth Period	Summer
Winter Survival	Never
Can Interseed	N/A

Extended Comments

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

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.

Nematodes: Host for root-knot nematode.

Basic Agronomics: will self-seed if not terminated early in flowering

Insects: Only recently started evaluating its potential as an interplanted living mulch but casual observation suggest interplanting it with cantaloupe does not result in increased herbivore numbers in canataloupe

Termination: Terminate at first sign of flowering to avoid risk of self-seeding.

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. Does very poorly under low-N conditions like most grasses.

Broadleaf
Buckwheat
Fagopyrum esculentum

PLANT HARDINESS ZONE 7 DATASET

References & Resources

Planting Flowers for Bees in Connecticut, Connecticut Agricultural Experiment Station
Cover Crop Research at the University of Rhode Island, University of Rhode Island Cooperative Extension
Conservation Cover for Pollinators, Xerces Society for Invertebrate Conservation
Cover Crops and Green Manure Crops – Benefits, Selection, and Use, Rutgers Cooperative Research and Extension
Cover Crops and Green Manures (New England Vegetable Management Guide), University of Massachusetts Extension
Choosing Cover Crops, University of Massachusetts Extension
Summer Cover Crops, University of Massachusetts Extension
Late Season Cover Crops, University of Massachusetts Extension
Cover Crops, Buckwheat, University of Massachusetts Extension
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
Cover Crops for Conservation Tillage Systems, Penn State Extension
Using Flowering Cover Crops for Native Pollinating Bee Conservation, Penn State Extension
Summer Cover Crops, Penn State Extension
Cover Crops in Home Gardens Improve Soil and Reduce Erosion, Penn State Extension