



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]

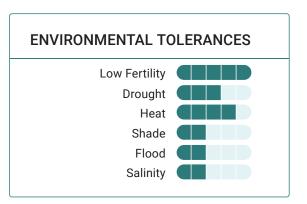
Buckwheat - Bjorkman [2020] Buckwheat - Bjorkman [2020]

GOALS

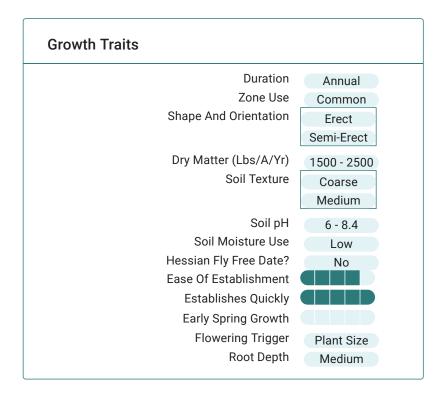


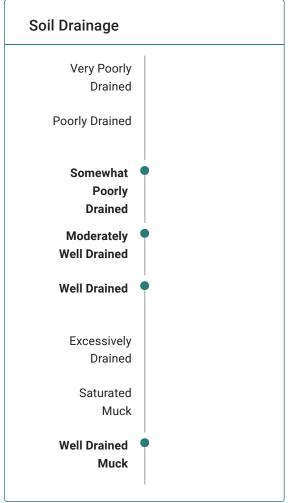
Penetrates Plow Pan **Reduces Surface Compaction** Improve Soil Organic Matter Increase Soil Aggregation **Good Grazing** Pollinator Food

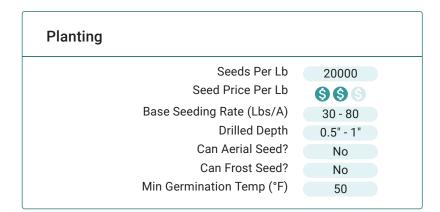
WEEDS Residue Suppresses Summer Annual Weeds **Outcompetes Summer Annual Weeds** Suppresses Winter Annual Weeds Persistence Volunteer Establishment

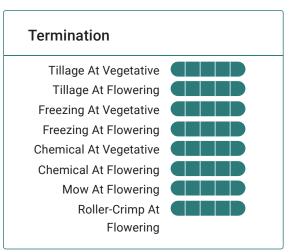






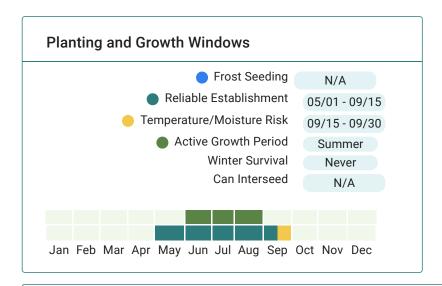












Extended Comments

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

Planting: Can be used a nurse crop in low rates with mixes of winter annual legumes. Good quick summer cover field prep crop before an August or September seeding of alfalfa or a mixed grass legume hay field.

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

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





References & Resources

Planting Flowers for Bees in Connecticut, Connecticut Agricultural Experiment Station

Use of Cover Crops and Green Manures to Attract Beneficial Insects, University of Connecticut Integrated Pest Management Program

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, University of Maryland Extension

<u>Plant Cover Crops</u>, University of Maryland 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

Cover Crops for Conservation Tillage Systems, Penn State Extension

<u>Using Flowering Cover Crops for Native Pollinating Bee Conservation</u>, Penn State Extension

Summer Cover Crops, Penn State Extension

Cover Crops in Home Gardens Improve Soil and Reduce Erosion, Penn State Extension