

PLANT HARDINESS ZONE 5 DATASET

COVER CROP DESCRIPTION

A cool season annual with a short, upright growth habit. Popular in warmer regions of the Northeast. Shade tolerant. Does not reliably overwinter in plant hardiness zone 5 and colder. Good forage producer, good N-fixer. Showy red blooms, good for pollinators. Can reseed quickly and become a weed. Host to some problem nematodes. Inoculate the seed with appropriate Rhizobium spp.; cross-inoculates with red or white clover. Mixes well with barley, wheat, triticale or annual ryegrass. Larger seeded and better seedling vigor than most clovers. Earlier-seeded, more fall growth, earlier spring bloom than hairy vetch. Slower residue breakdown of stems and N release than vetch.



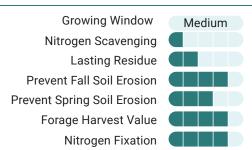




Clover Crimson - Mirsky Lab [2020] Clover Crimson - Aaron Sande [2020] Clover Crimson - Bjorkman [2020]



GOALS



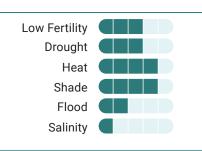
Penetrates Plow Pan **Reduces Surface Compaction** Improve Soil Organic Matter Increase Soil Aggregation **Good Grazing** Pollinator Food



WEEDS

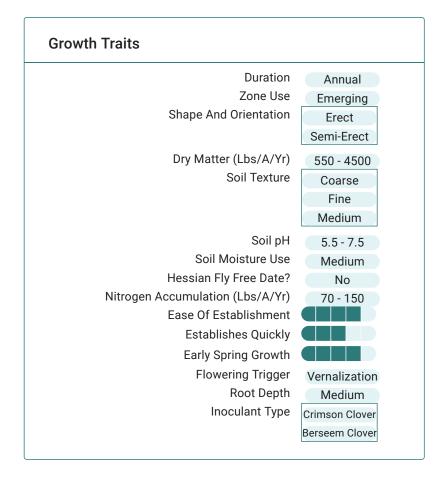
Residue Suppresses Summer Annual Weeds **Outcompetes Summer Annual Weeds** Suppresses Winter Annual Weeds Persistence Volunteer Establishment

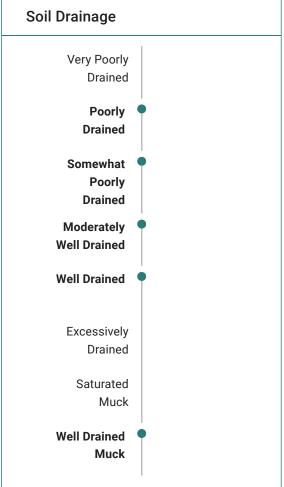
ENVIRONMENTAL TOLERANCES

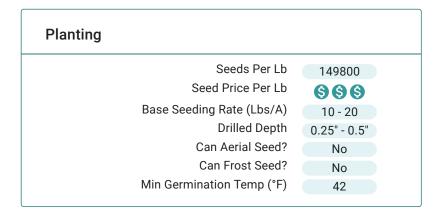


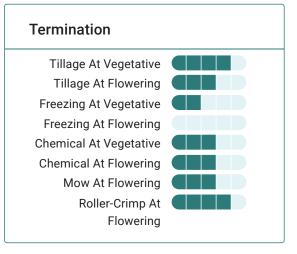


REPUBLICATION PROPERTY PROPERT



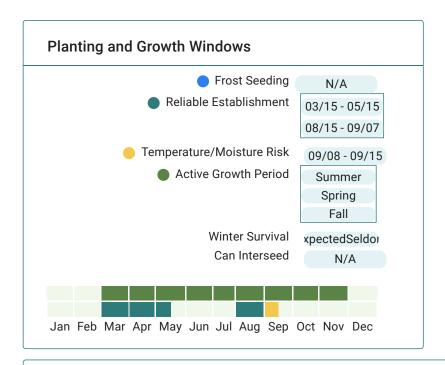








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Extended Comments

Environmental Tolerances: Winter survival depends on seeding: too early of a seeding it flowers and doesn't survive, too late and it doesn't establish and survive.

Basic Agronomics: Planting by early August will produce highest biomass before winter termination.

Termination: If using herbicides to terminate use a tank mixture (e.g., glyphosate + dicamba or 2,4-d). Roller crimping as a termination method has not been studied in zone 5.

Forage and Grazing: Failure to overwinter reliably in USDA hardiness zone 5 and less may limit utility for grazing and forage harvest unless planted in mid to late summer for winter termination.

Pollinators: Attracts bumblebee queens and honeybees. One of the earliest flowering clovers. Delay termination until at least 30-50% bloom to maximize value to pollinators.

Nematodes: Excellent host for root-knot nematode.

Insects: Used as an interplanted dying mulch can reduce CPB colonization in eggplant and enhance the ratio of generalist predators to CPB prey



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References & Resources

Planting Flowers for Bees in Connecticut, Connecticut Agricultural Experiment Station

Multiple Purpose Cover Crops, Northeast Organic Farming Association of Connecticut

2016 Cover Crop Mix in Corn Silage Trial, University of Vermont Extension

2015 Cover Crop Mix in Corn Silage Trial, University of Vermont Extension

2014 Summer Cover Crop Mix, University of Vermont Extension

UNH Researchers Find Forage Radish is the Cream of Cover Crops, University of New Hampshire Ag Experiment Station

Choosing Cover Crops, University of Massachusetts Extension

<u>Cover Crops for Home Gardens</u>, University of Maine Cooperative Extension

<u>Using Green Manures</u>, Maine Organic Farmers and Gardeners Association

Selected Green Manures and Cover Crops for Maine, University of Maine

<u>Cover Crops – What a Difference a Few Weeks Makes</u>, 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

Special Cover Crop Control Considerations, Penn State Extension