Broadleaf
Sunflower
Helianthus annuus

PLANT HARDINESS ZONE 4 DATASET

COVER CROP DESCRIPTION

Upright summer annual. Black oilseed varieties are most commonly grown for cover crops. Good heat and drought tolerance once established. Sunflower blooms are attractive to people, pollinators, and wildlife. Deep branched taproot, good for pulling up nutrients (but not necessarily subsoiling). Middling weed suppressor. Low seeding rate means low cost. Adaptable in mixes; it may grow tall in a tall mix, short in a short mix.


Sunflower - Ackroyd [2020]


Sunflower - Ackroyd [2020]


Sunflower - Salon [2020]


Sunflower - Salon [2020]

GOALS

Growing Window	Medium
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	Emerging
Shape And Orientation	Erect
Dry Matter (Lbs/A/Yr)	200 - 5000
Soil Texture	Coarse Fine Medium
Soil pH	5.5 - 7.8
Soil Moisture Use	
Hessian Fly Free Date?	No
Ease Of Establishment	
Establishes Quickly	
Early Spring Growth	
Flowering Trigger	
Root Depth	Deep

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	
Seed Price Per Lb	$ $ $
Base Seeding Rate (Lbs/A)	15 - 40
Drilled Depth	1" - 1.5"
Can Aerial Seed?	No
Can Frost Seed?	No
Min Germination Temp (°F)	65

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 - 07/31
Temperature/Moisture Risk	N/A
Active Growth Period	Summer
Winter Survival	Never
Can Interseed	N/A

Extended Comments

Basic Agronomics: Dry matter highly dependent on planting and termination date and precipitation.

Insects: Serve as host for BMSB but could be beneficial if used as a trap crop

Nematodes: Minor host for root-lesion nematodes that attack corn and wheat (e.g. P. neglectus).

Pollinators: Be wary of insecticide-treated seeds if value to pollinators is of interest. Hollow stems left as residue provide pollinator nest sites.

References & Resources

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