

**Sunflower (*Helianthus annuus*)**

Sunflower is usually used in summer cover crop mixtures. It has many features that make it attractive as a cover crop. It is relatively inexpensive, attractive to pollinators, adapted to a variety of soils and planting timings and has a taproot that can penetrate compacted soil layers as well as mine nutrients deep in the soil. It is also used in wildlife mixes.

**Recommended Varieties**

Variety	Reasons Why	Source
Peredovik Sunflower	Good biomass.	Jimmy Carter Plant Materials Centers data

**Planting Information**

Information	Comments	Source
Drilled Seed Depth (inches)	1 – 1 ½	Midwest Cover Crops Council Selector Tool
Drilled Seeding Rate (lbs/acre)	10 - 40	Southeast AgriSeeds
Broadcast Seeding Rate (lbs/acre)	Not a preferred method unless timely moisture is available for stand establishment. May consider drag or mowing of prior crop residues to aid in seed soil contact.	

**Termination Information**

Information	Source
Sunflower can be terminated with heavy grazing. Sunflower can also be terminated by mowing, herbicides and tillage. It will also winter kill, but may set viable seeds and become weedy. Sunflower is attractive to migrating birds. Check with your state’s wildlife resources department on how hunting regulations may affect planting and management.	Midwest Cover Crops Council Selector Tool
Consult your local Extension and state Pest Management Handbook for herbicide recommendations. Always follow the herbicide label.	

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**Cultural Traits**

Traits		Comments	Source
Typical Dry Matter Range (lbs/acre)	2,000 – 5,000		Midwest Cover Crops Council Selector Tool, Jimmy Carter Plant Materials Center data
Typical Total N Range (lbs/acre)	N/A		Midwest Cover Crops Council Selector Tool
Life Cycle	Warm season annual broadleaf		Midwest Cover Crops Council Selector Tool
Growth Habit	Upright		Midwest Cover Crops Council Selector Tool
Preferred Soil pH	6.0 – 7.0	More tolerant of higher salt soils.	Midwest Cover Crops Council Selector Tool
Relative Costs (\$/acre)	\$\$		Based on survey of seed costs using maximum price and max seeding rate
Min. Germination Temp (F)	65°		Midwest Cover Crops Council Selector Tool
Cautions	If large amounts of biomass are produced, sunflower residue may become woody and impede planting of next sequential crop. Consider terminating several weeks prior to next crop establishment or mow to size residue to aid in planting if concerned. Check with your state’s wildlife resources department on how hunting regulations may affect planting and management.		USDA Sunflower Plant Guide

**Forage Traits**

Information	Source
<p>Sunflower plants are not typically used as a forage source for livestock, but it can be an option under adverse growing conditions (drought). It can potentially make good silage, but with lower yield and quality than other summer annuals (corn, sorghum and pearl millet).</p> <p>If crops are grazed instead of harvested as grain, check that all pesticides applied to the crop are labeled for grazing livestock.</p>	SDSU Extension

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### Sources:

Jimmy Carter Plant Materials Center Annual Reports:

[https://www.nrcs.usda.gov/wps/portal/nrcs/detail/ga/plantsanimals/?cid=nrcs144p2\\_022076](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/ga/plantsanimals/?cid=nrcs144p2_022076)

Midwest Cover Crops Council Selector Tool - Missouri data:

<http://mccc.msu.edu/covercroptool/covercroptool.php>

Southeast AgriSeeds:

<http://www.southeastagriseeds.com/wp-content/uploads/2017/07/Peredovik-Sunflower-SE.pdf>

South Dakota State University Extension:

<https://extension.sdstate.edu/soybeans-sunflowers-alternative-cattle-forages>

USDA Sunflower Plant Guide:

[https://plants.usda.gov/plantguide/pdf/cs\\_hean3.pdf](https://plants.usda.gov/plantguide/pdf/cs_hean3.pdf)