**Sunflower** (*Helianthus annuus*) is a quick growing summer annual broadleaf cover crop often used in multi-species mixes to help fight soil compaction and scavenge excess nitrogen. Sunflowers also host pollinators and beneficial insects.

### Identifying Features
- Thick stems
- Dense hairs over stems and leaves
- Large, spade-shaped leaves

### Cultural Traits
- Summer annual broadleaf
- Minimum germination soil temperature: 65°F
- Cold temperature tolerance: 25°F
- Seeding date: Early May to Early August*

### Planting Information
- **Drill** at ¾ - 1½ inch (3 lbs./acre PLS**)
- **Broadcast** (5 lbs./acre PLS)
- **Aerial** is not recommended

### Additional planting information:
- ~8,000 seeds/lb.
- Sunflower is best used in a cover crop mix, especially when planting on slopes.
- This species adds biodiversity.

### C:N (Carbon:Nitrogen) Ratio
- Sunflower 24:1

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*Planting information from Midwest Cover Crop Council (midwestcovercrops.org). Refer to local NRCS office recommendations (Iowa Field Office Technical Guide, Section 4, 340 Cover Crop) for seeding dates and rates pertinent to location specific financial assistance program requirements.

**Pure Live Seed
**Performance**

Dry matter = 1,000 - 5,000 lbs./acre per year  
(Biomass quantity is dependent on planting and termination dates and precipitation.)

**Performance Ratings**

- Cash crop interseed (*early vegetative*) Poor
- Cash crop overseed (*late seed fill*) Poor
- Grazing quality Fair
- Mechanical forage harvest Good
- Nitrogen fixer N/A
- Nitrogen scavenger Very good
- Weed suppression Fair
- Compaction fighter Excellent
- Erosion control Fair
- Lasting residue Good
- Quick grower Very good
- Drought tolerance Excellent
- Low fertility tolerance Good
- Shade tolerance Fair

**Additional Considerations**

- Sunflowers are excellent for attracting beneficial insects and pollinators. Its vertical structure and edible forage with seed production is well-suited for grazing and wildlife.
- Sunflowers have branching, fibrous roots to help with soil structure.
- Sunflowers are a minor host for root lesion nematode that attack corn and wheat.

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This fact sheet is a collaborative effort of USDA's Natural Resources Conservation Service (NRCS) and Iowa State University Extension and Outreach to provide cover crop options and information for Iowa landowners.

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