

WHEAT

COVER CROP FACT SHEET FOR IOWA

Wheat (*Triticum aestivum*) is a cool-season/ winter annual grass, effective as a cover crop for weed suppression, erosion control, and as a livestock grazing supplement. (Photo by Jason Johnson)



Identifying Features

- » Medium-sized clasping, hairy auricles
- » Leaf margins are smooth near the base and rough near the tip
- » Medium ligule, may be toothed

Cultural Traits

- » Cool-season/winter annual grass
- » Minimum germination soil temperature: 38° F
- » Cold tolerance temperature: -15° F (W) 20° F (S)***
- » Seeding date: Mid August to Mid October* (F)
- » Seeding date: Mid August to Late September* (S)

Planting Information*

- » **Drill/Plant** at $\frac{3}{4}$ - 1½ inches (60 lbs./acre PLS**)
- » **Broadcast** (66 lbs./acre PLS)
- » **Aerial** (75 lbs./acre PLS)

*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

***W=Winter S=Spring

Additional planting information:

- » ~11,000 seeds/lb. (1 bushel = 60 pounds)
- » If grazing or weed suppression is desired, increase seeding rate.
- » Broadcasting without incorporation is usually less dependable than drilling or broadcasting with incorporation.
- » Use a low seeding rate for areas with sandy soil or that are prone to dry periods in early spring.



Spring Wheat Winter Wheat



Seedling



Vegetative



Cover crop grass growth comparison

C:N (Carbon:Nitrogen) Ratios

- » Winter Wheat 20:1

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Wheat cover crop in southeast Iowa.



Winter Wheat Harvest

Performance

Dry matter = 2,000 - 5,000 lbs./acre per year
(Biomass quantity is dependent on planting and termination dates and precipitation.)

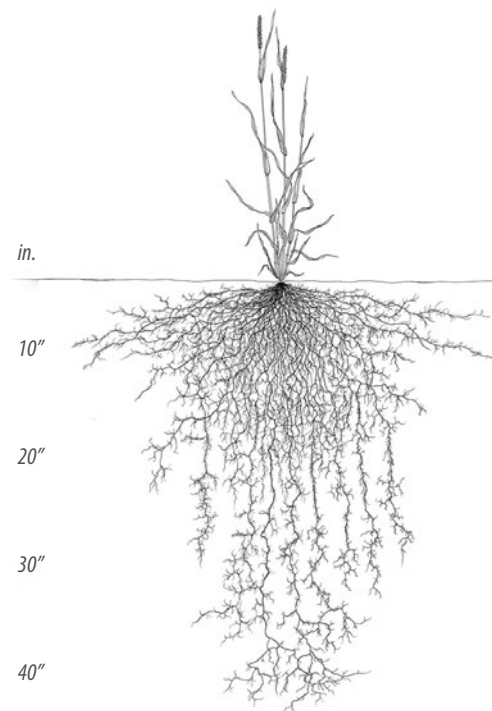
Performance Ratings

	Spring	Winter
» Cash crop interseed (<i>early vegetative</i>)	Very good	Very good
» Cash crop overseed (<i>late seed fill</i>)	Very good	Excellent
» Grazing quality	Excellent	Excellent
» Mechanical forage harvest	Very good	Excellent
» Nitrogen fixer	NA	NA
» Nitrogen scavenger	Very good	Excellent
» Weed suppression	Very good	Very good
» Compaction fighter	Very good	Excellent
» Erosion control	Very good	Excellent
» Lasting residue	Good	Excellent
» Quick grower	Excellent	Excellent
» Drought tolerance	Good	Good
» Low fertility tolerance	Good	Good
» Shade tolerance	Fair	Fair

concern. For crop insurance compliance, follow NRCS cover crop termination guidelines.

- » Wheat does not grow as aggressively as cereal rye in the spring.
- » Early season nitrogen applications can help reduce the effects of nitrogen tie-up by the cover crops.

Wheat Plant and Root Structure



Drawing provided by Conservation Cropping Systems Initiative (ccsin.org)

Additional Considerations

- » **Increased pest pressure:** Wheat could increase risk of spring cutworm; wheat is a host for penetrans root lesion nematode.
- » **Termination:** Time cover crop termination based on goals and experience level. To reduce potential negative impacts on cash crops, consider terminating earlier in the season when conditions are dry or when green bridge or nitrogen tie-up are a

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.