

Table 1. Cover crop characteristics, ability to provide various services, and recommended planting date windows.

Species	Growth Period	Growth Form	Nutrient Acquisition Strategy	N retention	N supply	Erosion Control	Alleviate Compaction	Weed Suppression	Pollinator Resources	Forage Production	Planting dates window, weeks before first killing frost ⁵
Cereal Rye	WH	SD to TO	NL	✓ ⁺	✓ ⁻	✓ ⁺	✓	✓ ⁺	✓ ⁻	✓ ⁺	4 weeks prior to 6 weeks after
Triticale	WH	SD to TO	NL	✓ ⁺	✓ ⁻	✓ ⁺	✓	✓ ⁺	✓ ⁻	✓ ⁺	4 weeks prior to 6 weeks after
Annual Ryegrass	WH	SD	NL	✓ ⁺	✓ ⁻	✓ ⁺	✓	✓	✓ ⁻	✓ ⁺	3 to 10
Oats	WK	SD	NL	✓ ¹	✓ ⁻	✓	✓	✓ ⁺	✓ ⁻	✓ ⁺	3 to 10
Sorghum-Sudan grass	WK	TO	NL	✓ ¹	✓ ⁻	✓	✓	✓	✓ ⁻	✓ ⁴	8 to 12
Red Clover	WH	SD	L	✓ ⁻	✓ ⁺	✓	✓ ⁺	✓ ⁻	✓ ⁺	✓	5 to 6
Austrian Winter Pea	WH	V	L	✓ ⁻	✓ ⁺	✓	✓	✓	✓ ⁺	✓	2 to 10
Crimson Clover	WH	SD	L	✓ ⁻	✓ ⁺	✓	✓	✓ ⁻	✓ ⁺	✓ ⁺	3 to 10
Hairy Vetch	WH	V	L	✓ ⁻	✓ ⁺	✓	✓	✓	✓ ⁺	✓	2 to 10
Fava bean	WK	TO	L	✓ ⁻	✓ ⁺ ²	✓	✓	✓	✓	✓ ⁻	8 to 10
Sunnhemp	WK	TO	L	✓ ⁻	✓ ⁺ ²	✓	✓	✓ ⁻	✓	✓ ⁻	10 to 14
Soybean	WK	SD	L	✓ ⁻	✓ ⁺ ²	✓	✓	✓	✓	✓	10 to 14
Forage Radish	WK	SD	NL	✓ ¹	✓ ⁺ ²	✓ ³	✓ ⁺	✓ ⁺	✓ ⁻	✓	3 to 10
Canola	WH	SD to TO	NL	✓ ⁺	✓	✓ ⁺	✓	✓ ⁺	✓ ⁺	✓	3 to 10
Sunflower	WK	TO	NL	✓ ¹	✓ ⁻	✓	✓	✓ ⁻	✓ ⁺	✓ ⁻	10 to 14

WH= Winter-hardy; WK= Winter-killed; SD = Short, dense; TO= Tall, open; V= Vining; L= Legume; NL= Non-legume; ✓⁺= Excellent ability; ✓=Moderate ability; ✓⁻ = Limited to no ability.

Notes

¹Winterkilled species provide no N retention in the winter and spring. ²N released rapidly following winter kill of these species is subject to leaching losses.

³Forage radish provides excellent erosion control in the fall, but soil is left bare in spring after winterkilled residues decompose. ⁴Be aware of potential for prussic acid poisoning. ⁵Planting date recommendations from Cover Crop Solutions, LLC when available and personal experience otherwise.