Indiana Cover Crop Table for Small Farms and Gardens

Marion County Soil and Water Conservation District — USDA Natural Resources Conservation Service, U.S. Department of Agriculture

Species	Type	Life Cycle	Winter Survival	Termination Methods					Growth Height	C:N at Maturity
				Freeze	Tillage	Mow	Crimp[2]	Tarp		
Barley	Grass	Winter Annual	Expected		•	•	•	•	Medium-Tall	30:1
Buckwheat	Nonlegume Forb	Summer Annual	Never	•	•	•		•	Medium	20:1
Clover, White/Ladino	Legume	Short-Lived Perennial	Expected		•			•	Short	15:1
Clover, Balansa	Legume	Cool Season Annual	Expected		•	?	•[2]	•	Short	15:1
Clover, Berseem	Legume	Summer Annual	Never	•	•			•	Short	15:1
Clover, Crimson	Legume	Winter Annual	Expected		•			•	Short	15:1
Clover, Red	Legume	Short-Lived Perennial	Expected		•			•	Short	15:1
Flax	Nonlegume Forb	Summer Annual	Rarely	?	•	?	?	•	Short	19:1
Hemp, Sunn	Legume	Summer Annual	Never	•	•	•	?	•	Tall	20:1
Kale	Brassica	Cool Season Annual	Seldom or Expected[1]		•			•	Medium	19:1
Millet, Japanese	Grass	Summer Annual	Never	•	•			•	Tall	48:1
Millet, Pearl	Grass	Summer Annual	Never	•	•			•	Tall	48:1
Oats	Grass	Cool Season Annual	Seldom	•	•	•		•	Medium-Tall	30:1
Pea, Field	Legume	Winter Annual	Rarely	•	•	•		•	Medium-Tall	25:1
Pea, Winter	Legume	Winter Annual	Seldom		•	•		•	Medium-Tall	25:1
Pea, Cow	Legume	Summer Annual	Never	•	•	•		•	Medium-Tall	20:1
Phacelia	Nonlegume Forb	Cool Season Annual	Seldom	•	•	?	?	•	Medium	25:1
Radish (Oil Seed)	Brassica	Cool Season Annual	Seldom	•	•			•	Medium	19:1
Rapeseed	Brassica	Winter Annual or Cool Season Annual	Seldom or Expected[1]		•			•	Medium	19:1
Rye, Winter Cereal	Grass	Cool Season Annual	Expected		•	•	•	•	Medium-Tall	37:1
Ryegrass, Annual	Grass	Winter Annual	Seldom or Expected[1]		•			•	Medium	25:1
Sorghum-sudangrass	Grass	Summer Annual	Never	•	•			•	Tall	52:1
Soybean	Legume	Summer Annual	Never	•	•	•		•	Medium	35:1
Sudangrass	Grass	Summer Annual	Never	•	•			•	Medium	50:1
Sunflower	Nonlegume Forb	Summer Annual	Never	•	•	•		•	Tall	35:1
Triticale, Winter	Grass	Winter Annual	Expected		•	•	•	•	Medium-Tall	35:1
Turnips / Pasja	Brassica	Cool Season Annual	Seldom	•	•			•	Medium	19:1
Vetch, Hairy	Legume	Winter Annual or Cool Season Annual	Expected		•	•	•[2]	•	Medium	11:1
Wheat, Winter	Grass	Winter Annual	Expected		•	•	•	•	Medium-Tall	35:1

? Data undetermined

[1]Variety dependent

[2]Crimping only may not fully terminate legumes

If using chemical termination, ensure proper use and species compatability

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Species	Min. Germ Temp[3]	Optimum Depth (inches)	Surface Broadcast Potential	Seeding Rate (Oz/100 sq.ft.)		
				Low	Normal	High
Barley	35F	¾-1½	+	1.5	3.0	6.1
Buckwheat	50F	½-1	-	0.5	1.0	2.0
Clover, White/Ladino	42F	¼-½	+	0.8	1.5	3.0
Clover, Balansa	42F	¼-½	+	0.1	0.1	0.3
Clover, Berseem	42F	¼-½	+	0.2	0.5	1.0
Clover, Crimson	42F	¼-½	+	0.2	0.4	0.9
Clover, Red	41F	¼-½	+	0.1	0.2	0.5
Flax	?	?	?	0.2	0.3	0.7
Hemp, Sunn	68F	½-1½	-	0.9	1.8	3.7
Kale	40F	¼-½	-	0.1	0.1	0.3
Millet, Japanese	65F	½-¾	-	0.1	0.1	0.1
Millet, Pearl	65F	½-1	-	0.1	0.1	0.2
Oats	38F	½-1	+	1.2	2.3	4.7
Pea, Field	41F	1-1½	-	1.1	2.2	4.4
Pea, Winter	41F	1-1½	-	1.1	2.2	4.4
Pea, Cow	58F	1-1½	-	0.9	1.8	3.5
Phacelia	37F	¼-½	?	0.1	0.1	0.2
Radish (Oil Seed)	45F	½-¾	+	0.1	0.3	0.5
Rapeseed	41F	¼-½	+	0.1	0.1	0.3
Rye, Winter Cereal	34F	¾-1½	+	1.0	2.0	4.1
Ryegrass, Annual	40F	⅛-½	+	0.3	0.6	1.2
Sorghum-sudangrass	65F	½-1½	-	0.7	1.5	2.9
Soybean	50F	1-1½	-	1.7	3.4	6.8
Sudangrass	65F	½-1	-	0.4	0.7	1.5
Sunflower	65F	1-1½	-	0.3	0.7	1.4
Triticale, Winter	38F	¾-1½	+	1.1	2.3	4.6
Turnips / Pasja	45F	¼-½	+	0.1	0.1	0.3
Vetch, Hairy	50F	½-1½	+	0.9	1.7	3.5
Wheat, Winter	38F	¾-1½	+	1.2	2.4	4.9

General Guidelines for Seeding Rates and Mixes

Rates are based on the broadcast seeding method and provided in ounces (weight) per 100 square feet. Normal rate is based on a single species 100% canopy cover in optimum/average conditions. Low rate is half and high rate is double the normal rate.

- Increase rates if using a seeding method that is less assured of good seed to soil contact.
- Increase rates if a primary purpose is weed control.
- Increase rates as you reach the end of the optimum seeding window.
- Increase rates as you move north due to fewer days to achieve desired biomass.
- Increase rates if you plan to terminate a cover crop earlier than maturity.
- Decrease rates as you increase soil fertility.
- Decrease rates within a more diverse seed mix.
- Pre-inoculated legume seed weighs about one-third more than raw seed. Increase rate by one-third to plant the same amount of seed.
- Certain species are highly competitive against other species in a mix, including forage radish, oats, sorghum-sudangrass, and cereal rye. Use low rates of these species to prevent them from dominating a balanced mixture.
- Legume components of a mixture, which tend to be weak competitors, are more safely kept near normal or high rates to ensure establishment.
- Seeding rates for functionally redundant species can be reduced by the number of redundant species in the mix.

[3]Minimum soil germination temperature