

Cover Crops and Their Uses

Cover crops are an essential component of every sustainable farm. They are an investment in your gardens and fields that will pay future dividends of healthier, more productive cash crops.

THE POTENTIAL BENEFITS OF COVER CROPPING ARE NUMEROUS AND IMPRESSIVE:

- Increase soil organic matter
- Increase water holding capacity
- Improve soil texture and porosity
- Fix nitrogen
- Scavenge nutrients
- Suppress weeds
- Break pest and disease cycles
- Grow your own mulch
- Provide habitat and food source for beneficial insects

5 STEPS FOR DECIDING WHAT TO PLANT, WHEN & WHERE

1. What are your goals?

Decide what you are hoping to achieve from planting a cover crop.

2. What's your timing?

What is the window of opportunity for you to plant, and for how long will the planting remain in place?

3. What are your equipment needs?

Available planting and termination tools will impact which cover crops you choose.

4. What is your growing zone?

To determine which cover crop species are going to work best for you, you must factor in your location.

5. Plant & keep records.

Put the plan in place, keep good records, and refine your systems over time.

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Cover Crops

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Farm Seed Comparison Chart

	Sowing Season	Minimum Germ. Temp.	Hardiness Zone	Growth Rate	Sow Per 1,000 sq.ft.	Sow Per Acre	Seeding Depth	Nitrogen Fixation	Bees/Beneficial Insects	Compaction Control	Erosion Control	Weed Suppression	Green Manure	Forage	Biomass (Organic Matter)
Alfalfa, Summer	Early Spring to Late Summer	45°F (7°C)	5	Fast	½ Lb.	15–20 Lb.	¼–½"	•	•	•		•	•	•	
Barley	Early Spring to Late Summer	38°F (3°C)	7	Fast	2 Lb.	60–125 Lb.	¾–1½"			•	•	•	•	•	•
Buckwheat	Spring to Summer	50°F (10°C)	NFT	Fast	2–3 Lb.	50–90 Lb.	½–1"		•			•			
Clover, Crimson	Anytime	45°F (7°C)	7	Medium	⅓–½ Lb.	12–20 Lb.	¼–½"	•	•		•	•	•	•	
Clover, Mammoth Red	Early Spring to Late Summer†	41°F (5°C)	4	Fast	¼–½ Lb.	8–12 Lb.	¼–½"	•	2Y	•	•	•	•	•	
Clover, Medium Red	Early Spring to Late Summer†	41°F (5°C)	4	Medium	½ Lb.	5–15 Lb.	¼–½"	•	•	•	•	•	•	•	
Clover, New Zealand White	Spring to Summer†	40°F (4°C)	4	Slow	¼–½ Lb.	5–15 Lb.	¼–½"	•	2Y		•	•	•	•	
Clover, Sweet	Spring to Summer	42°F (6°C)	4	Medium	¼–½ Lb.	8–12 Lb.	¼–1"	•	2Y	•	•	•	•	•	•
Manure Mix, Fall Green	Summer to Fall	45°F (7°C)	Various	Medium	1½ Lb.	50 Lb.	½–1½"	•	•	•	•	•	•		•
Manure Mix, Spring Green	Spring to Summer	38°F (3°C)	Various	Medium	5 Lb.	200 Lb.	½–1½"	•	•		•	•	•		•
Millet, Pearl	Summer	60°F (16°C)	NFT	Fast	½–1 Lb.	12–25 Lb.	½–1"			•	•	•	•	•	•
Mustard	Spring to Summer†	40°F (4°C)	7	Fast	1 Lb.	15–20 Lb.	¼–¾"		•		•	•	•		•
Oats, Common	Spring to Summer	38°F (3°C)	8	Medium	4 Lb.	100–140 Lb.	¾–1½"				•	•	•	•	•
Oats, Hulless	Spring	38°F (3°C)	8	Medium	4 Lb.	100–140 Lb.	¾–1½"				•	•	•	•	•
Peas and Oats Mix	Spring or Fall	41°F (5°C)	8	Medium	5 Lb.	120–200 Lb.	1½–2"	•			•	•	•	•	•
Peas, Field	Spring or Fall	41°F (5°C)	7	Fast	5 Lb.	200 Lb.	1½–3"	•			•	•	•	•	•
Radish, Oilseed	Late Summer	45°F (7°C)	6	Fast	1 Lb.	10–20 Lb.	¼–½"			•		•			
Rye, Winter	Anytime (Fall for Grain)	34°F (1°C)	3	Medium	2–3 Lb.	60–150 Lb.	¾–1½"				•	•	•	•	•
Ryegrass	Anytime	40°F (4°C)	6	Fast	½–1 Lb.	15–30 Lb.	0–½"			•	•	•	•	•	•
Sudangrass	Early Summer	65°F (18°C)	NFT	Fast	1 Lb.	30–40 Lb.	½–1"			•	•	•	•	•	•
Sunflower	Spring	70°F (21°C)	NFT	Medium	1,500 seeds	20,000 seeds	1–1½"		•	•					•
Sunn Hemp	Summer	60°F (16°C)	NFT	Fast	1 Lb.	30–50 Lb.	½–1"	•	•				•		
Teff	Summer	62°F (17°C)	NFT	Fast	¼ Lb.	8–12 Lb.	⅛–¼"				•	•			•
Turnips, Purple Top	Spring to Late Summer	45°F (7°C)	6	Fast	¼ Lb.	8 Lb.	½"			•		•			•
Vetch, Hairy	Anytime	60°F (16°C)	4	Slow	1 Lb.	25–40 Lb.	½–1"	•	2Y	•		•	•		
Wheat, Spring	Early Spring	38°F (3°C)	7	Fast	2–3 Lb.	60–150 Lb.	¾–1½"			•	•	•	•	•	•

† = Frost Seeding Suitable. NFT = Not Frost Tolerant. 2Y = 2nd Year.

Nitrogen Fixation

Adds nitrogen to the soil.

Bees/Beneficial Insects

Attracts and supports bees and other beneficial insects.

Compaction Control

Breaks up deep layers of compacted soil.

Erosion Control

Holds the soil in place and minimizes weather impact between primary crop harvests.

Weed Suppression

Smothers weeds.

Green Manure

Replenishes organic matter and nutrients to the soil while enhancing soil structure.

Forage

May be used for livestock feed and pasture.

Biomass (Organic Matter)

Produces high volume of organic matter.

Termination Methods

Recommendations by Crop

This chart is designed to help you determine the most effective termination method (or combination of methods) for a given cover crop. Note that the chart differentiates between termination methods used at the vegetative phase (early foliar growth) vs. the reproductive phase (when the plants are flowering).

Ease/Effectiveness Rating

1	Not effective; very difficult to manage due to crop size or persistence.
2	Limited effectiveness; difficult to manage due to crop size or persistence.
3	Somewhat effective; manageable with the right equipment and timing.
4	Effective; easy to manage.

	Tillage (vegetative)	Tillage (flowering)	Mowing (vegetative)	Mowing (flowering)	Crimping (flowering)	Tarping (vegetative)	Tarping (flowering)	Freezing (winter-kill)
Alfalfa, Summer	3	1	1	1	1	4	4	1
Barley	3	1	1	4	4	3	2	3
Buckwheat	4	4	3	3	3	3	3	4
Clover, Crimson	3	2	1	2	2	4	4	2
Clover, Mammoth Red	2	2	1	1	1	4	3	1
Clover, Medium Red	2	2	1	1	1	4	4	1
Clover, New Zealand White	2	2	1	1	1	4	4	1
Clover, Sweet	2	1	1	2	1	4	2	1
Manure Mix, Fall Green	2	1	1	1	1	3	2	1
Manure Mix, Spring Green†	3	1	1	2	2	4	2	3
Millet, Pearl	2	1	1	4	4	2	1	4
Mustard	4	3	2	4	2	4	2	3
Oats, Common	3	1	1	4	3	4	2	4
Oats, Hullless	3	1	1	4	3	4	2	4
Peas and Oats Mix	3	3	1	4	2	4	3	4
Peas, Field	3	3	3	4	2	4	3	4
Radish, Oilseed	3	3	2	4	1	4	3	4
Rye, Winter	2	1	1	4	4	4	2	1
Ryegrass	2	2	1	3	1	4	3	2
Sudangrass	1	1	1	3	1	2	1	4
Sunflower	2	1	2	4	1	2	1	4
Sunn Hemp	2	1	2	3	1	2	2	4
Teff	2	2	1	1	1	3	3	4
Vetch, Hairy	1	1	1	3	4	4	2	1
Wheat, Spring	3	1	1	4	4	4	2	3

† = Vetch will survive frost, but peas and oats will not.



New Zealand White Clover



Mammoth Red Clover



Sweet Clover



Hairy Vetch



Crimson Clover



Maxum



Spring Wheat (Bolles)



Summer Alfalfa



Teff



Ryegrass



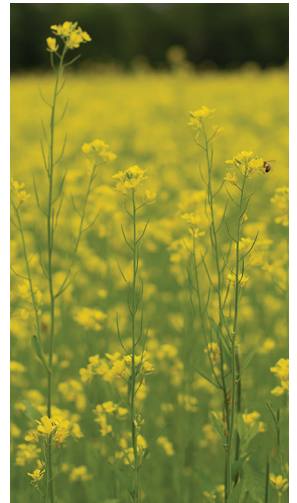
Oilseed Radish



Spring Green Manure Mix



Buckwheat



Yellow Mustard



Peas and Oats Mix



Royal Hybrid® 1121 Sunflower



Sunn Hemp

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