Choosing annual cover crops for Atlantic Canada

What are cover crops?

Cover crops are crops grown in rotation with a cash crop with the goals of sustaining, recovering or enhancing attributes within agricultural systems. Cover crops can:



Keep Soil Covered & Reduce Erosion





Scavenge & Store Excess Nutrients



Fight Weeds & Impact Soil Organisms



Increase Biodiversity



Choosing a cover crop species or mix

- Identify and rank current and future priorities for your production system.
- How will a cover crop be integrated into your production system, including when and how it will be seeded?
- Select a cover crop species or design a mixture whose traits match your goals and can fit with your production system and rotation.
- Remember, a species in mixture may not provide the same services as when grown alone.

For more information visit www.agriculture.canada.ca or call us toll-free at 1-855-773-0241 Andrew McKenzie-Gopsill; Research Scientist – Weed Science andrew.mckenzie-gopsill@agr.gc.ca This work was supported by AAFC and the Atlantic Grains Council project J-002184.

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Use the following table to select cover crop species based on known roles and functions tested in Atlantic Canada.

Species	Seeding rate (Monoculture/ Mixture)	Productivity	Volunteer Potential	Suitable in Mixture	Weed Suppression	Nutrient Capture	Erosion Control & Soil Cover	Effect on Soil Beneficials	Effect on Soil Pathogens
Brown mustard	5/2.5	++	•	+	+	++	+	•	•
Oilseed radish	9/4.5	++	•	+	+++	++	++	Decrease	Increase
Tillage radish	7/3.5	++	•	+	++	+++	++	•	•
Buckwheat	44/14	+++	+++	++	+++	+++	+	Increase	Decrease
Phacelia	9/4.5	+++	•	+	+++	++	+	Decrease	•
Sunflower	3.5/1.25	+	•	•	+	++	++	•	Increase
Annual ryegrass	18/9	++	+++	+	+	++	+++	•	•
Oat	90/45	+++	•	+	+++	+++	+++	Increase	Increase
Pearl millet	22/11	+++	•	+	+++	++	+++	•	Increase
Sorghum-sudangrass	36/18	++	•	++	+++	++	++	Increase	Decrease
Teff	9/4.5	++	+	•	++	++	+++	•	•
Crimson clover	13/6	+	+	++	+	++	+++	•	Decrease
Field pea	160/80	++	•	+	+++	+++	+	Increase	Increase
Hairy vetch	18/9	++	+	+	++	++	+++	Decrease	•
Red clover	9/4.5	+	+++	+	+	+	+++	•	Increase
White clover	9/4.5	+	+++	+	+	++	+	•	•

Table Notes – Seeding rates are in lbs/ acre; • = Poor; + = Fair; ++ = Good; +++ = Excellent



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