ORGANIC BC

# Cover Cropping 101

## WHAT ARE COVER CROPS?

A cover crop is a type of crop that is planted primarily to manage and improve the soil, rather than for harvest. These crops are typically grown during periods when the main cash crop is not in the field, between regular rotations, and can play a role in climate change adaptation and mitigation.

## WHAT ARE THE BENEFITS OF COVER CROPS?

### Improved soil structure

Increase soil carbon, soil aeration, water infiltration and water retention. Also help loosen compacted soils, provide food to soil microbes, and bind soil particles together, leading to better soil aggregation and a healthy soil structure.

*All cover crops, but especially rye, sorghum-sudan grass, sweet clovers and woolley pod vetch for general soil structure and tillage radish, cereal rye, alfalfa in particular for loosening soil compaction*

### Weed suppression

Suppress weed growth by smothering out weeds when planted in high density or by emitting allelopathic compounds on incorporation into the soil, preventing weed seed germination.

*Oats, winter rye, buckwheat, clovers, cow peas, woolly pod vetch for smothering and barley, oats, wheat, rye, canola, mustards, buckwheat, red clover, white clover, sweet clover, hairy vetch, creeping red fescue and perennial ryegrass for their allelopathic qualities*

### Nutrient enhancement & cycling

Facilitate nutrient cycling, provide nutrients to cash crops, and "fix" nitrogen into the soil by converting atmospheric nitrogen into a usable form for plants.

*Nitrogen fixers: all legumes such as clovers, beans, peas and vetches*

### Soil erosion prevention

Act as a protective layer against soil erosion caused by wind and water.

*All cover crops but especially barley, winter rye, sorghum-sudan grass and cow peas*

### Enhanced biodiversity

Increase on-farm biodiversity, providing a habitat for pollinators and predators of pests, and improve crop pollination and biological pest control.

*Many flowering species but especially phacelia, buckwheat, sunflowers and sweet yellow blossom clover*

## BENEFITS OF COVER CROPS, CONTINUED

### Grazing material

A carefully selected mix can supply a nutritionally balanced winter or summer feed for cattle.

*A mix of clovers, cereals, peas, sunflowers, turnips and radish*

### A living mulch

Planted in a growing cash crop, a cover crop can act as mulch to conserve water, build organic matter and boost soil structure.

*Clovers, woolley thyme (in perennial systems)*

### Nutrient scavenging

Act as "catch crops" to reduce nutrient loss out of fields and into waterways, especially nitrogen.

*Italian ryegrass, winter rye, oats*

### Pest & disease reduction

Contribute to pest and disease reduction through methods such as biofumigation, the off-gassing of plant compounds during decomposition which repels some pests.

*Mustards for biofumigation*

## SELECTING A COVER CROP

Cover crops can be annual, biennial, or perennial plants grown as a single crop or a well thought out mix during all or part of the year. They can be spring and summer seeded or fall seeded for over-wintering.

### 1 Cover cropping goals

Do you want to smother weeds, break up soil compaction or provide more nitrogen to your soil?

### 2 Climate and soil type

It is important to choose a cover crop that is suited to local conditions for the best chance of success.

### 3 Timing and availability

What window of time do you have for the crop to work within your growing schedule? What is its ideal growing season? What cover crop seed is readily available in your area?

### 4 Test and try!

Keep records and continue to experiment.


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