



## Cover Crops and Beyond!

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Soil is one of the most valuable resources on a farm and in order to sustain its long-term productivity it requires special management considerations. The goal of any cropping system should be to improve or at least maintain overall soil health.

Most row crops leave little residue on the soil surface after harvest; leaving fields bare and prone to erosion. Cover crops can also 'condition' soil for subsequent crops by essentially building soil organic matter stores. Organic matter can improve soil drainage, increase water holding capacity, increase biological life in the soil and be a source of nitrogen and phosphorus. Organisms living in the soil cycle nutrients which make them available to crops. A healthy soil, a soil with a sufficient organic matter stores and active biological community, can reduce the need of fertilizers.

Management strategies that should be considered for covering your soil include:

**Plant a cover crop.** There are many crops that can be used as fall cover crops or catch crops (crops that retain nutrients for spring plantings), however, winter grains, such as winter rye, may be the only option after the middle of September for adequate cover. For more information on cover crops have a look our factsheets under "Using Crops to Grow Healthy Soil" subject:

<http://nsfa-fane.ca/efp/fact-sheets/>

**Apply mulch.** If a cover crop has not had time to get established by November 1st, then hay mulch should be applied. It is recommended that hay mulching be implemented at a rate of 3.3 T/ha (1.5 T/ac). On areas of the field prone to erosion, the mulch should be applied at a rate of 4.5 T/ha (2 T/ac). At these rates the mulch will cover 85 to 100 % of the soil surface respectively. It is also recommended that mulching be done across the slope to ensure that there are no wheel ruts up and down the slope that would allow water to collect and cause more severe erosion in the wheel tracks. If fields are too wet for farm machinery, then apply the mulch when the ground is frozen.

**Plan for the future growing season.** Cover cropping is being used as a tool to help develop healthier soils between 'cash' crops. Current research trials are using crops as catch crops (crops that hold onto nutrients) and green manures (crops that make more nutrients available). There are many benefits of cover cropping depending on the crops included in the mixture. Brassicas for instance, are heavy feeders, using left over nutrients in the soil so they don't leach away. Legumes, such as peas or clover, can fix nitrogen in a deficient soil or when they are mixed with heavy feeding plants. Plants with deep roots can break up soil pans and increase soil drainage. A cover crop mixture could be seeded into a pasture or forage field that needs renovating or into a field that had an early harvest grain, fruit or vegetable crop. Fall grazing can be extended with a selection of hearty vegetation (eg. kale) which can increase gains in livestock before market. There are many opportunities in using crop mixtures to improve your soils productivity; to find information on something that might fit your operation go to our website quoted above.