

# HOW TO USE COVER CROPS (GREEN MANURE)

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*This is to follow on from 'cover crops in your vegetable garden' if you are planning to try and implement cover crops in your garden-also called green manures.then this is a good place to start and contact us for more help in your garden.*

## HOW TO USE COVER CROPS

*There are a few considerations before you go off to sow cover crops in your vegetable garden.*

- 1. What vegetable was in that area before and what will be in after the cover crop ? you want to have a different group of cover crop than of your vegetable*
- 2. What is the reason you want the cover crop?*
  - For more nitrogen, sow legumes !*
  - If you want more organic matter and to suppress weeds.  
Sow a mixture*
  - If you already have good soil and want to hold onto your nutrients (especially your nitrogen) sow grasses*
- 3. We need to choose a cover crop that will grow well in your garden.*

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## WHEN TO SOW COVER CROPS AND WHY IT MATTERS.

- Overwintering cover crops- these are in for a long period of time in the garden, sown from september into October and not cut back until May. They are an excellent source of nitrogen, plant based material (biomass), weed suppression throughout spring and are a good option to sow around late autumn crops that are dying back. Good choices are- crimson clover, hairy vetch, trefoil (both legumes ) and winter rye or winter wheat ( non legumes, grasses) note- mixing legumes and non legumes provide very good results, more on this below.
- Winter kill cover crop- While they are not in for a long period of time- from September or October to the first frost. They are beneficial to those who want to sow early spring plants such as spinach as peas. Though be aware that due to the shortened life span they won't live to their fullest, they won't give much biomass or nitrogen to the soil or give good weed suppression. Mustards or brassica cover crops are quick growing and are killed by frosts.



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- Summer cover crop, sown in summer time these act as an intermediary between your spring crops and your summer/ autumn crops. They boost your soil quality, suppress weeds and fix extra nitrogen for the next stage of crops. Keeping in mind that depending on what cover crop you use it can be about 45 days to leave them in the ground and cut back only when they reach maturity (flowering stage).  
Buckwheat, clover, phacelia, mustard.



## NON LEGUME COVER CROPS.

There are three types : grasses, brassicas and mustards, buckwheat.

Why choose non-leguminous ones ?

- Mustard - if planted after brassicas can stop the spread of club root by hardening the cysts. ( still practice good crop rotation though)
- Winter rapeseed -planted after potato crops, largely reduces verticillium wilt and rhizoctonia damage on the tubers. which are more prevalent in wet and cold soils.
- Winter rye grass for a good over winter cover that also increases soil biomass and holds nitrogen.

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*Non leguminous crops are particularly good at 'supporting' the soil structure and holding it together.*

*suppressing weeds. They're very quick growing and with a high biomass so they are very effective at creating a living mulch to cover the soil. There are even a few types such as winter-rye and brassicas that release chemicals to inhibit seed germination and growth of weed seeds !*

*While non-leguminous crops are very good at taking in and holding nutrients, especially nitrogen, the increase in their biomass ( more leaves and roots) means that they are higher in carbon. For this reason they are slow in degrading and breaking down to release the nutrients back to the soil. If you are to use them then cut back at least 2 weeks prior to using that area of land.*

## LEGUME COVER CROPS

*These include crops such as clover, vetch and cowpeas.*

*What are their benefits ?*

- *Fix nitrogen*
- *Really help to build up your soil fertility and make it better quality. Leguminous crop roots release sugars. These sugars are what make them excellent for soil conditioning. These sugars work by acting as a*

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*sticky substance that binds soil together into larger clumps and so making a fluffy and porous soil. Better for you. Holding water, nutrients and gaseous exchange.*

➤ *Lovely flowers. These attract a range of beneficial insects that will really boost your garden.*

*There are however, a few downsides to using leguminous cover crops. They are slower growing and so not as good for weed suppressing especially if you have a rich soil. They can also be more expensive.*



## LEGUME AND NON LEGUME MIXTURES

*A legume and non-legume mixture gives the benefits of both types and enhances them in some situations.*

- *Prevents nitrogen tie-up (when the bacteria take all the nitrogen from the soil to break up carbon heavy material i.e rye grass or oat*

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*grass.) This is because the non-legume will be scavenging for nitrogen in the soil while the legume will be forced to make its own nitrogen. When it comes to cutting them back- or when they are killed by frost. There is plenty of nitrogen in the soil by the legume for the bacteria to use.*

- *Excellent weed suppression, a mix will give better cover due to very different growth habits and different root types.*
- *Increased amount of plant material to be broken down for organic matter.*

*There is one drawback to a mix. It is that non-leguminous grasses can out compete legume cover crops. Make sure to sow more legume seeds in a mix if this is the case.*

*If you need help planning your vegetable garden around using cover crops then don't hesitate to email us! [CardenEden@orevalleyha.org.uk](mailto:CardenEden@orevalleyha.org.uk)*