

# Green Manures

Green manuring is an effective way of adding organic matter to the soil. The foliage helps to suppress weeds and gives cover to beneficial insects. The roots improve soil structure and prevent damage to the soil from the effects of weathering.

Some green manures 'fix' Nitrogen (N) into the soil. If there's a shortage of nitrogen plant growth can be inhibited. Most vegetables have to convert nitrogen from the soil to obtain it but nitrogen fixers, such as peas or beans (legume crops) are able to absorb it from the air. Nodules form on their roots (see example) that are then used by the plant.



Phacelia

Once the crop has finished, the stems can be removed and the roots dug back into the soil. The roots release nutrients as they decay. Subsequent crops benefit from this process, such as leafy cabbages (brassicas) as they like lots of nitrogen. This is why they often follow legumes in the crop rotation cycle.

Green manures can therefore be planned in the crop rotation and planted anywhere in soil that would otherwise be left empty for six weeks or more. Spare ground can also be sown with green manures for up to a year or more to improve and maintain fertility.

Plant	Type	Over Winter	Fix N	Sow	Rotation	Key:
Alfalfa	HP	Yes	Yes	Apr-Jul	Legume	HA = hardy annual HHA = half hardy annual HB = hardy biennial HP = hardy perennial
Field Beans	HA	Yes	Yes	Sep-Nov	Legume	
Buckwheat	HHA	No	No	Apr-Aug	Anywhere	
Clover, Crimson	HA	No	Yes	Apr-Sep	Legume	
Clover, other	HP	Yes	Yes	Apr-Aug	Legume	
Fenugreek	HHA	No	No	Mar-Aug	Legume	
Lupins	HHA	No	Yes	Mar-Jun	Legume	
Mustard	HHA	No	No	Mar-Sep	Brassica	
Phacelia	HA	Yes	No	Mar-Sep	Anywhere	
Radish	HB	No	No	Aug-Sep	Brassica	
Rye, Grazing	HA	Yes	No	Aug-Sep	Anywhere	
Rye, Grass	HA	Yes	No	Spr or Aut	Anywhere	
Tares	HA	Yes	Yes	Mar-Sep	Legume	
Trefoil	HB	Yes	yes	Mar-Aug	Legume	

**Note: Avoid problems of small seed germination that follow green manures by using sets, tubers or transplanted crops, or allow four weeks between digging in and sowing new seeds.**