



Creating a network of local food production in the Scottish Borders

INTRODUCTION TO GREEN MANURES INFORMATION SHEET

Green manures are fast-growing plants sown to cover bare soil. Their foliage smothers weeds and their roots prevent soil erosion. When dug into the ground while still green, they return valuable nutrients to the soil and improve soil structure.

Green manures sown in late summer or autumn will take nutrients from the soil as they grow. This can be valuable in wet areas as heavy winter rain can wash goodness from the soil. When the crop is dug in the following spring, the nutrients are returned to the soil. They can also be used to cover bare patches of soil in the spaces between crops, or to cover the ground during intervals between one crop and the next.

Green manures come from the pea and bean family, known as LEGUMES. These plants have the additional benefit that, via bacteria which live in nodules on the roots, they convert nitrogen from the air and *fix* it in the soil. Nitrogen is a valuable plant nutrient.

Alfalfa (*Medicago sativa*): Perennial plant which can be dug in after two or three months or left for one to two years. Especially good in alkaline soils. (It is unlikely to fix nitrogen in northern weather conditions).

Alsike clover (*Trifolium hybridum*): Perennial plant which can be dug in after two or three months or left for one to two years. Especially good for wet, acid soils.

Bitter blue lupin (*Lupinus angustifolius*): Perennial plant which can be dug in after two or three months. Especially good for sandy soils.

Buckwheat (*Fagopyrum esculentum*): This half hardy annual will only grow in spring and summer. It can be left for two or three months before digging in. Grows well on nutrient-poor soils.

Crimson clover (*Trifolium incarnatum*): Perennial plant, good for light soils. Dig in after two or three months and before flowering.

Essex red clover (*Trifolium pratense*): Perennial plant which overwinters well. Can be left in for two or three months or for one or two years. Works best with good loamy soils.

Fenugreek (*Trigonella foenum-graecum*): This plant is an annual and will only grow in the spring and summer. (It is unlikely to fix nitrogen in northern weather conditions).

Grazing rye (*Secale cereale*): Annual plant which is good for soil structure and overwinters well. Sow in autumn and dig in the following spring.

Phacelia (*Phacelia tanacetifolia*): Annual plant best sown in spring and dug in after two or three months. Later sowings may overwinter in mild areas but unlikely. Its flowers are very pretty so is good to use between beds or between crops.

Trefoil (*Medicago lupulina*): Annual (or biennial) plant which overwinters well but needs light, dry alkaline soil. It can be dug in after two or three months or left for one or two years.

Winter field bean (*Vicia faba*): Annual plant best sown in the autumn and left for two or three months (up to flowering) before digging in. Particularly good for heavy soils.

Winter tares (*Vicia sativa*): Hardy annual plant which overwinters well, even in heavy soils. Sow in spring and leave for two or three months before digging in, or sow in late summer for overwintering.

There is a very detailed document, complete with photographs here

<https://www.gardenorganic.org.uk/sites/www.gardenorganic.org.uk/files/Sort-Out-Your-Soil-Final.pdf>.

It is from a seed merchant and aimed at farmers, but the bulk holds true for small scale growing too. It also includes a few non-legume plants, like chicory.