

## Green manures

**Green manures are plants that are sown specifically to improve fertility.** They are not harvested for food, and are not allowed to flower. Any plant can be grown as a green manure although some are much better than others and are available as seed especially for the purpose.

There are all sorts of good reasons for growing green manures. They will:

- Improve soil fertility - clover and other legumes harvest nitrogen from the air.
- Keep soil fertility - mop up plant foods on empty land, so they are not washed out by the rain.
- Protect soil structure - a 'cover crop' protects the soil from damage by heavy rain.
- Keep down weeds - smother seedlings and compete for light and plant foods.
- Help control pests - provide safe cover for beetles, frogs and other predators.
- Stimulate soil biological activity - microbes and other soil organisms rapidly colonise green manure foliage dug into the soil. Increased biological activity makes for a more productive soil.
- Loosen the soil - deep rooting green manures can help to loosen and aerate the soil deep into the ground.
- Protect soil life - a living mulch protects creatures in the soil from the extremes of weather.

### Green manures for winter use

Green manures are fast growing plants that quickly cover the ground. They are often plants that are more commonly used in agriculture. Only certain types are suitable to overwinter from a late summer sowing. These are described below.

#### Winter Tares



Winter Tares

This member of the legume family is a quick growing, bushy plant with attractive foliage. It can be sown in late summer - late August is ideal, but early September is possible for warmer areas. It gives good weed control.

The luxuriant foliage rots down rapidly when dug back into the soil in the spring, producing a good supply of nitrogen.

Sow seeds every 2.5 cm, in rows 15cm apart. 160g of seed will cover 10 sq m of land.

### **Hungarian grazing rye**



Hungarian grazing rye

An excellent green manure for winter use, it can be sown as late as October in warm areas - though September is preferable. It will grow even at low temperatures, producing a thick mass of foliage that will keep weeds under control. Its extensive root system makes it one of the best for soil structure improvement and for mopping up left over plant foods.

Sow thinly in rows 20cm apart - or broadcast the seed at a rate of 16g/sq m. Sowing in rows is preferable where birds are likely to eat the seed.

### **Phacelia tanacetifolia**



Phacelia tanacetifolia

A lovely plant with feathery leaves. Sow it by late August or early September to give quick cover. Phacelia is not always winter hardy - but if the frost kills it, simply leave the frozen plants in situ to provide a protective soil cover.

Sow broadcast at a rate of 2g/sq m

### **Fitting them in**

Initially it can be difficult to imagine where you can actually fit a green manure in to your veg plot - but it is well worth trying to include them in your cropping plan.

Garden Organic members can see our [factsheet on Crop rotation](#) for more information.

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**Winter tares**, a nitrogen fixer, is a member of the pea and bean (legume) family. To maintain a crop rotation an overwintering crop of winter tares can follow summer peas, for example. When tares are dug in in the following spring, they rapidly rot down to release a good supply of nitrogen. Plant some cabbages, or other leafy crops to make best use of this free fertiliser.

**Grazing rye** has an extensive root system which is excellent at improving soil structure and mopping up plant foods in the autumn. It is one of the easiest to fit in as it can be sown as late as early October - or later in the south - and it is not closely related to any veg crop, so it can't mess up a rotation. BUT, take care sowing grazing rye where small seeded crops, such as carrots, are to be sown the following spring. As it decays in the soil, rye foliage produces toxins that inhibit germination of small seeds for a few weeks. It can be safely used before potatoes or beans.

A quick growing green manure such as **phacelia** can be grown after an early crop is harvested. It is not related to any vegetable plants so again it is easy to fit in without spoiling a crop rotation.

## Seeds

[Green manure seeds](#) are available from The Organic Gardening Catalogue.

## Further information

- Garden Organic members can see our [factsheet on Crop rotation](#) for more information.
- [Step by step booklet Green Manures](#) available from The Organic Gardening Catalogue.