

No Dig Gardening

How to prepare a new site

Dig over the ground as usual taking out as many **perennial** weeds as possible or cut down the vegetation and then cover with a light excluding **mulch** which will kill the weeds.

Suitable mulches include:

- black polythene
- cardboard boxes opened out
- newspaper, at least eight sheets thick
- carpet

Using a mulch may take some time, depending on the weeds present.

Fertilising the plot

All fertilisers and manures should be applied at the usual rate (manure—one wheelbarrow per 10 square metres). Rock minerals and other powdered materials such as lime, seaweed etc can be lightly hoed in. If plants need to be spaced widely, for example courgettes and potatoes, put the compost directly around the plants.



Remember on a no dig garden it is the worms that take the material down into the soil, so it will take longer for the material to be mixed into the soil than if you were digging it in.

Growing on the no dig system

If you are clearing the site using the mulching system you can still grow some vegetables through the mulch.

If you are going to do this then don't put the mulch on in winter. At this time the soil is cold and dry so mulching will keep the cold in, and the warmth and water out. The vegetables that you can grow will depend on the thickness of the mulch. Vegetables you can grow include pumpkins, marrows, tomatoes and potatoes.

Once the land has been cleared—which may take over a year - keep it weed free by hoeing and/or mulching. Mulching is a good idea if you can find the materials, but it is not essential.

Sowing

Seeds are sown in the normal way. Hoe and rake the soil surface to make a seed bed. If the surface of the soil is poor then a shallow **drill** can be made with a hoe and the seeds covered with a mixture of damp sand and sieved compost or soil.

Planting

Transplant seedlings by taking out a small hole to plant them into. Compost or manure can be placed around the seedling at planting time.

Growing potatoes

When using the no dig system potatoes are the only crop that are grown in a different way. The method is as follows:



- Cut down any weeds and water if ground is dry.
- Spread manure on the surface at the normal rate (one wheelbarrow per 10 square metres)

- Plant your potato seed tubers by laying them on top of the manure 60cm apart. In a cold spring it might be better to do this later as covering cold soil will keep it cold.
- Cover each row of seed tubers with a few inches of hay or old straw. Mark the rows and leave a bare path between each row.
- Check regularly for shoots coming through the mulch of hay/straw and help any that are pushing the mulch up, rather than growing through it.
- Keep adding to the mulch as the shoots grow.
- When the mulch is 6" thick and the plants are growing well, top up the mulch with grass mowings. This will form a mat which will keep the mulch in place and keep light out from the potatoes.
- Add more grass as needed.
- To harvest the crop, pull back the mulch and remove as many potatoes as you need. If you only take a few and leave the plant to grow you must replace the mulch to keep out the light.
- If you want to harvest the whole crop remove the whole mulch, harvest and then replace the mulch.
- Slugs do not seem to be more of a problem with the no-dig method. The mulch is a nice damp place for frogs or toads who will eat slugs. Mice can be a problem as the tubers are easy to get to. To stop this happening don't leave the tubers in the ground for too long in the autumn.

Green Manures

A **green manure** is a plant grown to improve the soil. Green manures are normally dug back into the soil.

However, you can't do this in a no dig system. **Annual** green manures can be cut down with a hoe or lawn mower and the plants can either be left where they are or put on the compost heap.

Grazing rye is the best over-wintering green manure but it does not work well on a no-dig system as it will grow again if hoed when young, and is rather tough to cope with when older.

In a no dig system grazing rye should only be sown where potatoes will be grown the following spring. The rye is cut down with a mower or shears and the potatoes planted on top. The covering mulch prevents the re-growth of the grazing rye.

Glossary

Annual—a plant that lasts for a year.

Drill—a shallow trench in which to sow seeds

Green Manure—a plant grown to protect the soil surface when nothing else is growing. The green manure is usually dug in to add nutrients (food) to the soil.

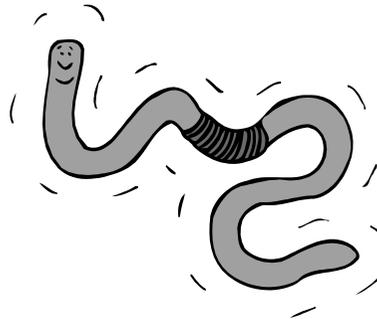
Mulch—a cover on the soil surface.

Transplant—moving seedlings (small plants) from where they are growing to another pot or site.

The advantages and disadvantages of no dig gardening

Advantages

- Better for your back.
- Protects the soil structure, especially on light soils.
- Makes a good, stable soil structure.
- Makes a friable topsoil through which seedlings can easily emerge. Soil is less likely to cap.
- Keeps fertile topsoil in its right place.
- Reduces moisture loss.
- Does not bring weed seeds to the surface to germinate.
- Worms like no-dig systems.



Disadvantages

- Some people like digging.
- Does not expose soil pests to predators.
- Takes longer to improve poor soils.
- Does not deal with compaction and hard pans.

No-dig gardening



A student's guide
to developing
a no-dig garden

No Dig Gardening

Starting a new site

You can dig over the ground as usual, taking out as many perennial weeds as possible. However, usually no-dig gardening means no digging at all. So simply cut down the vegetation, then cover with a light-excluding mulch to kill the weeds. Suitable mulches include:

- black polythene
- cardboard boxes opened out
- newspaper, at least eight sheets thick
- carpet

This method may take some time, depending on the weeds present. However, this process can be used by students to investigate the effects of excluding light from plants.

Improving fertility

All fertilisers and manures should be applied at the usual rate (manure—one wheelbarrow per 10 square metres). Rock minerals and other powdered materials such as lime or seaweed can be lightly hoed in. Remember to test soil before adding any soil amendments.



Remember, in a no-dig garden it is the worms that take the material down into the soil. It takes longer to incorporate material than if you were digging.

Growing on the no-dig system

If you are clearing the site using the mulching system, then you can still grow some vegetables through the mulch.

If you hope to do this, don't put the mulch on in winter when the soil is cold. Mulching will keep the cold in, and the warmth out.

The crops that you can grow will depend on the thickness of the mulch. Suitable vegetables are transplants such as pumpkins, marrows, tomatoes, potatoes and runner beans.

Once the land has been cleared—which may take over a year - keep it weed-free by hoeing and/or mulching. Mulch with materials such as newspaper covered with grass clippings.

Sowing

Seeds are sown in the normal way. Hoe and rake to create a seed bed. Make a shallow drill then cover the seeds with a mixture of damp sand and sieved soil or compost.

Planting

Transplant seedlings by making a small hole for planting. Compost or well-rotted manure can be placed around the seedling at the time of planting, but should not touch the transplant.

Growing potatoes

Potatoes are the only crop that require a completely different planting method when using the no dig system. The procedure is as follows:

- cut down any vegetation, and water the soil if it is dry.
- spread manure on the surface at the normal rate.



- bury your potatoes in small (4cm) holes, 60cm apart. In a cold spring it might be better to do this a few weeks later than normal as you will be covering the potatoes with cold soil.
- cover each row of seed tubers with a few inches of hay or old straw. Mark each row and leave a bare path between them.
- check regularly for shoots emerging through the mulch of hay/straw and ease through any shoots that are pushing the straw up rather than growing through it.
- keep topping up the mulch as the shoots grow.
- when the mulch is 15cm thick and the plants are growing well, top up the mulch with grass mowings. This will form a mat which will keep the mulch in place and exclude light from the potatoes.
- add more grass and hay/straw as necessary.
- to harvest the crop, pull back the mulch and remove as many potatoes as you need. If you only take a few and leave the plant to grow, you must replace the mulch to keep out the light.
- if you want to harvest the whole crop, remove the whole mulch and harvest the potatoes.
- slugs do not seem to be any more of a problem with this no-dig method. The mulch is a nice damp place for slug-eating frogs or toads.

Mice can be a problem as the tubers are easy to get to. To stop this happening don't leave the tubers in the ground for too long in the autumn.

Green manures in a no-dig system

A green manure is a plant grown to improve the soil. Green manures are normally dug into the soil, however, this is obviously not appropriate in a no-dig system. If you use annual green manures they can be cut down with a hoe or lawn mower and the plants can either be left where they are to rot or put on the compost heap.

Grazing rye is the best overwintering green manure. However, it should only be used where potatoes will be grown the following spring. Cut the rye down with a mower or shears and plant the potatoes as explained inside this leaflet. The thick mulch covering the potatoes prevents the grazing rye re-growing. Biennial and perennial green manures should be treated in the same way as grazing rye.

Further Reading

Green manures for organic soil improvement
—Garden Organic Guide

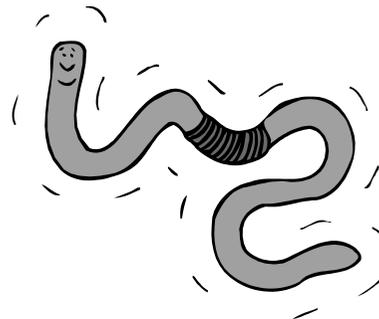
Beds— Labour-saving, space-saving, more productive gardening
— P Pears, HDRA/Search Press 1992

RHS Organic Gardening
— P Pears and S Stickland, RHS 1995

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- Better for your back.
- Protects the soil structure, especially on light soils.
- Makes a good, stable soil structure.
- Makes a friable topsoil through which seedlings can easily emerge. Soil is less likely to cap (form a hard crust on the surface).
- Keeps fertile topsoil in its right place.
- Reduces moisture loss.
- Does not bring weed seeds to the surface to germinate.
- Worms like no-dig systems.



Disadvantages

- Some people enjoy digging.
- Does not expose soil pests to predators.
- Takes longer to improve poor soils.
- Does not deal with compaction and hard pans (solid areas of soil).

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A teacher's guide
to developing
a no-dig garden



Garden Organic
for Schools