The know-how on

Growing seed potatoes

Preparing your seed potatoes You should aim to have brought you preferred seed potatoes up to 6 weeks

You should aim to have brought you preferred seed potatoes up to 6 weeks before planting out to allow them to begin to sprout. Always use certified, virus free seed potatoes to ensure you get great results and allow time for frosts to have passed, alternatively use frost cloth for protection when planting early. Remove the packaging as soon as you are home and place them in a warm, dry, airy position to begin to grow and sprout, ensure they have a reasonable amount of light as well. Leave them to produce shoots between 2 – 4 cm long and placing them in an old egg carton is a great way to store them for this phase because it provides them with everything they need and helps stop them rolling under....... well, anything they want to roll under.

Sorting out the planting area.

Potatoes are best grown in the garden, but can also do well in buckets, tire stacks or planter bags. Select a position in your garden that is sunny and free draining but reasonably sheltered from strong winds. Potatoes are hungry guys and will need plenty of fertiliser while they work to give you a pile of spuds to eat in a few weeks' time. Your local seed potato store will have special seed potato fertiliser which will give directions on application rates on the bag.

In the garden.

Avoid planting your potatoes were tomatoes were planted last season. Prepare the soil by working it up well mixing in some organic matter at the same time to help provide a rich medium to grow in. You can also add and organic fertiliser such as "Blood and Bone" at this point to help give the ultimate results at harvest time. After the soil has been thoroughly worked up, dig a trench about 15cm deep and place the seed potatoes approximately 25cm apart, if you need more than one trench space each one 80 cm apart. Lay each potato with the shoots pointing upwards and carefully cover them back over with soil without damaging the shoots.

Planting in containers.

To grow potatoes in containers or buckets etc, place about 10cm of soil or garden mix in the bottom and lay about 5 potatoes with the shoots facing upwards on the mix then gently cover with more soil or mix so that the potatoes and their shoots are completely covered (or about 5cm on top of the spuds)

During the growing season

As the shoots begin to grow above the soil, mound up fresh soil or add extra garden mix to your container each time they reach 5-10 cm above the soil. In frost prone areas give protection from frosts with frost cloth. Keep your crop weed free by regularly hoeing, but take extra care not to damage the fresh growth.

Watering

When watering aim to water only the soil and not the leaves, this is a big help in preventing diseases attacking the plants. The best and easiest way to achieve this is to use a dripper hose, lay it out along the top of the row next to the stems of your potatoes and connect it to your garden hose, turn it on long enough until the soil is well watered but not soaked. The water will slowly leak out all the way down the dripper hose watering the roots but not getting the leaves wet. Watering is especially important at flowering time.

Pests and Diseases

Pests and Diseases are always potential trouble when growing anything but you can easily fight them with a bit of help. Slug and snails will attack so spread a little palletised bait around the base of your plants, not a lot is needed but top it up as is required when it is all eaten or has been washed away with rain. Other insects such as aphids, potato tuber moth and the wire worm can create some headaches, by mounding the soil up around the plants you can prevent the potato tuber moth from laying the eggs beside the fresh potatoes and its larvae can not reach your spuds. There are a few options for protecting your plants from other insects and fungi such as using chemicals to achieve it or other organic options. Talk to your local garden store to see what they offer here, it is important to fight these pest and diseases for a bumper crop.

The tomato potato psyllid (TPP)

The tomato potato psyllid (TPP) is another particularly nasty bug that can cause great damage to your potato crop. It feeds on a wide range of crop and weed plants in the Solanaceae family, including potatoes and tomatoes causing potentially significant crop damage and yield losses. Control is very difficult as there needs to be consistently high levels, ideally as close to 100% as possible. Some of the new chemicals approved for use on this psyllid in the last couple of years are doing the job, but they require very good coverage, especially of the underside of leaves, which in crops like potatoes is very difficult, plus there are considerable concerns about resistance developing. However, research at the Future Farming Centre (FFC), part of the Biological Husbandry Unit (BHU) at Lincoln University, has found a solution that can give up to 100 per cent control of TPP, and that is already used by growers and farmers in Europe across some 50,000-100,000ha. Special mesh covers are a barrier that keeps TPP and a wide range of insects and vertebrate pests off the crop. Other bugs that can't get through include:

- flea/leaf beetles (Chrysomelidae)
- potato tuber moth (Phthorimaea operculella)

- 28-spotted potato ladybird/hadda beetle (Henosepilachna vigintioctopunctata)
- green vegetable/shield/stink bugs (Nezara viridula)
- carrot root/rust fly (Psila rosae)
- cabbage root fly (Delia radicum)
- butterflies/caterpillars, eg cabbage whites (Pieris brassicae and Pieris rapae)
- beetles, including weevils
- · birds
- · deer, possums, rabbits, cats, dogs

However, the mesh still lets through most of the sunlight (90%), air and all of the rain, irrigation and other sprays, eg for blight. The result is pest-free crops, the result of which the research at the FFC demonstrated to be a 24% increase in total yield of all tubers.

The mesh weighs just 90g per square metre so it can be laid directly over crops without support. It doesn't affect temperature, so can't be used to protect crops from frost. The key is to put the mesh in place to prevent pests getting onto a crop, ideally when it is planted out or sown. It also needs to be sufficiently well anchored to the soil to prevent pests sneaking underneath the edges of the mesh, and to stop the mesh being blown away. For small areas the most effective and easy way to do this is to use bricks and/or stones weighing 2-3kg or heavier depending how windy your site is.

The adult bug is not heat-tolerant so takes shelter under leaves, making it hard for insecticides to control it unless you are careful to apply it on the undersides of the plant. It lowers yield by feeding on the plant's phloem, and it passes on a bacteria that causes 'zebra chip' inside the potato.

To buy mesh from the BHU, <u>www.bhu.org.nz/future-farming-centre/information/miscellaneous/mesh-crop-cover-sales/order-information</u>

Flowering

Flowering is an indication that you potatoes are nearly ready to harvest, be sure to wait until the flowering is finishing before digging them up. Some varieties such as Rocket do not flower so monitor its progress by the length of time since it was planted. Rocket needs approximately 80 – 90 days to reach maturity.

Harvest Time

Early varieties are generally ready to harvest approximately 90 days (3 months) after planting or when the flowers are fully opened. The main and late crop are ready when the flowers and foliage (leaves) have died back.

Dig your fresh potatoes using a fork, carefully remove the soil from the top of the row then dig right down under them and lift up, start digging well back

