

Water on target

In dry weather, irrigating newly established plants effectively and without waste is of paramount importance. **Julie Hollobone** looks at the simple technique of shaping soil to retain irrigation water. Photography by Tim Sandall



By growing vegetables, such as celeriac, in a shallow trench, irrigation water is contained close to the base of the plant as it soaks into the soil

Whether irrigation water comes from a water butt or from the mains supply, it is always a valuable resource that should be used as effectively as possible.

Long-established plants can often survive on rainfall alone, even in periods when the supply is sparse or sporadic, but newly planted or recently moved plants need reliable moisture to encourage root growth and establishment.

Irrigation is important in ornamental and vegetable gardens. Trees and shrubs, grown for fruit or as ornamentals, require regular supplies of water through the first growing season after planting as do border perennials. Similarly, annual vegetables and seasonal bedding benefit from irrigation after planting-out to encourage growth. Extra water is also needed for established fruit bushes and vegetables at critical times in the development of the annual harvest.

Techniques for watering

When irrigating, do not try to mimic rain, which wets your entire garden. Instead, target your water more closely on key plants or crops. A simple technique is to form the soil into low ridges or shallow furrows to help direct and contain water close to plantings. It should soak down into the soil rather than running off onto other areas. Depending on the scale of your growing area, you can make a small ridge using a soil rake, or a furrow with a spade or trowel.

Directing water in this way is of most benefit on light, well-drained soils (on which repeated irrigation may well be required). Soil mounding is versatile: it suits any size of growing area; it can be used for seedbeds, individual plants or groups; and can be especially useful on sloping sites to reduce water runoff. The technique is easiest to employ where there is plenty of space and where the visual appearance is less important, such as an allotment or vegetable garden. ■

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MOUNDING SOIL TO DIRECT WATER

▽ Prepare a planting furrow

When growing vegetables in rows, whether from seed or transplants, water is only required close to the rooting zone. Therefore mound the soil on either side of the row in such a way that water goes where it is needed. If the soil is already cultivated to a good depth, it is easier to create a furrow using a draw hoe, spade or trowel and then grow the crop along the base of the trench.

- Large seeds can be sown direct at the required depth and spacing. A furrow also suits vegetable transplants, for which effective watering is important to compensate for any root disturbance.
- Vary the depth of the trench according to the crop. Smaller plants (such as radishes and salad leaves) will not benefit from sitting so deeply in

a furrow if they are shaded by its walls.

- This technique works well for leeks (below) where the young plants are transplanted into deep holes created at the base of a 10–15cm (4–6in) deep furrow. As they are watered in, the walls of soil contain the water close to roots and plants, reducing wastage. Once the plants become established the trench can be retained, although many growers would prefer to fill it in as the leeks grow taller to increase the length of blanched stem.

- To prevent the trench walls from collapsing, the space between each furrow may need to be greater than you would normally allow between rows. However, this may be offset in part by increased yield per plant due to more effective watering.



Planting leeks in a trench ensures water is contained where the plants need it



Rake soil level and form a ridge around a 'flood plain' to retain water in one area



Planting in a shallow dip allows water to puddle above the root zone and soak in slowly



A ridge of soil creates a basin to hold water on sloping ground

△ Sculpt a soil basin

Shape the soil to form a shallow basin or moat around larger individual plants, to contain any irrigation water as it soaks into the soil. Ideally, create the basin at the time of planting so that the plant sits at the correct soil level within the dip. After planting, however, you could scoop out a moat round the outer edge of the rootball; avoid exposing roots close to the soil surface.

- This technique can be employed for trees and shrubs, fruit bushes and even vegetables growing on a single stem such as courgette.
- Judge the diameter and depth of the basin according to how quickly water goes away;

the puddle should drain slowly into the soil.

- When planting on a slope, creating a stable planting hole is difficult enough, but containing irrigation water is a further problem. Scooping a planting basin out of the slope can help. Mound up soil on the downhill side to create a basin around the base of the plant; shape the lip to retain irrigation water close to the stem and prevent it running down the slope, causing erosion and possible root exposure.

◀ Fashion a flood plain

Rake level an area of soil, drawing soil to the edge to create a small ridge along the boundary. As you put water into the levelled area the ridge prevents it from running off, allowing the water to pool and slowly soak into the soil.

- You can use this technique on a large or small scale, and it is suited to the allotment or vegetable garden.

- The contained plot can be used as a seedbed or for young vegetable plants.
- It is especially useful for clay or silty soils in dry weather, where the dry surface crust is slow to wet.
- To focus watering even further, organise a large plot into several smaller 'flood plains' and plant these with crops requiring similar levels of irrigation.

WATER RESERVOIRS

Where only a few plants need localised watering, create a reservoir of water (around or by the base of the plant) that can be filled quickly and empties slowly. This can be as simple as an upturned plastic bottle with its base removed and the spout pushed into the soil next to the plant (right). This low-tech method probably best suits annual vegetable crops. An example of this on a larger scale is using a tree guard to water recently planted trees at RHS Garden Hyde Hall (below).

