



Garden practice Root cuttings

Take root cuttings of perennials when dormant - usually indicated by leaf fall, or by lack of fresh growth in evergreen perennials such as this *Acanthus*.

Think of cuttings, and stems and leaves usually come to mind. Yet raising plants from root cuttings requires minimal equipment and is an easy method that could be more widely used

Author: **Guy Barter**, RHS Chief Horticultural Advisor. Photography: **Tim Sandall**

Many garden plants (mostly herbaceous but also some alpiners, trees, shrubs and even two vegetables: sea kale and horseradish) readily regrow from root sections. Root cuttings, as these are called, are in fact easier to raise than taking cuttings of above-ground stems or leaves. This technique has a high success rate: new plants are formed quickly, and no special equipment or conditions are needed.

Despite this, judging by feedback to the RHS Advisory Service, taking cuttings from roots is surprisingly seldom considered as a propagation method. Root cuttings are usually recommended for winter (also convenient for busy gardeners) when most plants have finished flowering and are dormant, but are also taken earlier in the year for summer-dormant plants.

Successful rooting

November to January is the best time to take root cuttings, when dormant plants have transferred their reserves to their roots for winter. Cuttings thrive best with shelter, and a cold glasshouse or cold frame will greatly increase success rates. Because root cuttings need no light they can even be kept in a shed initially, but must be moved outdoors before leaves appear. Cuttings should be kept no more than moist, as wet media may lead to rotting. Although bottom heat can speed up rooting, it is not essential (and, given the cold season when root cuttings are taken, could prove expensive).

Because fairly small segments of a centimetre or two (around 1/2in) are used, there is less chance of carrying over pests and disease from the parent stock, especially any problems confined to foliage. Stem and bud eelworm, a major problem with phlox for example, can be eliminated simply by raising plants from root cuttings. However, variegated plants usually revert to green, as the new growth from roots seldom maintains the abnormal leaf structure that gives rise to most types of variegation (propagate these from stem or leaf cuttings).

From late spring the cuttings can be moved into light. Although leaves should soon appear, wait until roots emerge from the base of the containers before potting up or planting in a nursery bed, and keep moist. In a few months, plants will be big enough to take their place in borders. ●

www.rhs.org.uk For more, enter 'Root cuttings' in the search box at RHS Online.

Take root cuttings from now until spring

Using a fork, lift the whole plant, dip the rootball in a bucket of water to wash away soil and then, with a sharp knife or secateurs, select the thicker roots for use. Bear in mind that some plants, such as phlox, have thinner roots than others (see panel below). Avoid roots with any hint of a disease or pests. Leave some roots to sustain the source plant, and preserve as much fibrous root as possible. Replant the source plant before it dries out.

Cut the selected roots into 25-50mm (1-2in) sections, making a sloping cut at the base and a flat cut at the top to distinguish the two, as cuttings planted upside down often fail. Thicker cuttings are best inserted vertically into pots; thinner ones can be laid flat in seedtrays (below). Allow about 8cm (3in) between cuttings in seedtrays and about four cuttings in 9cm (3 1/2in) pots.

For a suitable rooting medium, mix equal parts of a multi-purpose potting medium (ideally peat-free) and horticultural grit. Once inserted, ensure cuttings are barely covered. No fungicides are available to home gardeners to protect cuttings, and rooting powders are not helpful for root cuttings.



Acanthus root cuttings growing away strongly.



1 Root cuttings from *Acanthus* Wash the soil off suitable dormant plants such as this *Acanthus*. Select thick roots for cuttings, preserving thinner, fibrous roots to sustain the plant when replanted.



3 Inserting cuttings Push cuttings vertically into 9cm (3in) pots, sloping cut end downwards, into gritty potting medium until the tops are level with the surface (a dibber helps avoid abrasion as the cutting is inserted).



2 Cut to show top and bottom Slice selected roots into cuttings with care, using a sloping cut to identify lower ends and straight cuts the tops, avoiding ragged cuts. Discard any damaged root material.



4 Topdressing pots Lightly cover the surface of the pot with potting medium or, as here, horticultural grit so that the cuttings are barely covered - an aerated, well-drained surface layer helps avoid rotting. Water in lightly.

Root cuttings from thin-rooted subjects

Surprisingly it is not just thick, fleshy roots that lend themselves to propagation by root cuttings, but also thinner-rooted plants, notably phlox (pictured), the roots of which are not much thicker than stout wire. It is impractical to insert such slender root segments vertically, so seedtrays are usually used and the cuttings laid horizontally. There is of course no need to worry about keeping the same orientation as on the source plant and no need to use angled cuts to indicate the bottom of a cutting. Instead, merely slice the selected roots into approximately 5cm (2in) lengths.



Select roots of reasonable thickness and carefully cut them away, leaving sufficient undamaged roots to sustain the plant after replanting. Thin roots dry out quickly, so delay is best avoided.



Arrange root cuttings evenly over a gritty potting compost, so that when covered with about 12mm (1/2in) of potting medium the tray is filled to within 12mm (1/2in) of the top. Water in lightly.

Good species for root cuttings



❖ **Anchusa (bugloss)** Young plants out-perform older ones and new stock each year is possible with root cuttings.



❖ **Crambe maritima (sea kale)** Short-lived, but plants raised from root cuttings produce new plants more quickly than from seed.



❖ **Lamprocapnos spectabilis (bleeding heart)** (formerly *Dicentra spectabilis*) Autumn root cuttings easily generate plenty of plants.



❖ **Echinops (globe thistle)** Valuable back-of-border plants with spherical blue blooms, good as cut flowers.



❖ **Eryngium (sea holly)** Spiky leaves and steely blue flowers. Root cuttings are the best and quickest way of increasing plants.



❖ **Oenothera (evening primrose)** Long flowering, good for wildlife and easily raised from root cuttings taken in spring especially.



❖ **Papaver orientale (Oriental poppy)** Flamboyant early-summer blooms; easy to increase by root cuttings.



❖ **Phlox paniculata** Great border plants for the July-August flowering gap. Root cuttings are traditionally taken after flowering.



❖ **Romneya coulteri (Californian tree poppy)** Tricky but lovely perennial. One root cutting per pot is ideal to propagate.



❖ **Verbascum (mullein)** Perennial types are not long lived, so take root cuttings to retain their tall, woolly flower spikes.

PHOTOGRAPHS: RHS

Sourcing cutting material

Young plants yield the most successful cuttings, and newly bought plants can be a valuable source. End-of-season sales at nurseries and garden centres to clear old stock before winter are an excellent, economical source of material.

When using older plants, take the younger material from the outside edges of clumps. Root cuttings can be taken in the course of dividing plants, but you get many more root cuttings than offsets, so root cuttings are usually given priority.

If a garden 'makeover' is planned in a year or two's time, consider planting stock plants into soil

improved with organic matter and sand to encourage abundant coarse roots, from which numerous cuttings can be taken the following year. Alternatively, raise stock plants in deep pots (at least 30cm/12in) of coarse potting media.

For big plants, trees and shrubs in particular, consider forking in sand and organic matter at their base to encourage root growth the year before you plan to propagate them by root cuttings.

Although lifting source plants whole is best, it is possible to scrape away soil to expose roots where digging out entire plants is inconvenient or impossible, as with many trees and shrubs.

