



A4I Making liquid feeds



Liquid feeds provide extra nutrients for plants in need, usually those growing in confined spaces or especially hungry. These feeds are not a substitute for good soil care or mixing a good growing medium for containers as described in A38, but instead a top up of nutrients in readily available form that plants can use quickly. This activity uses leaves from two easy to grow plants to make liquid feed.

Resources

- Comfrey and/or nettle leaves
- Tools including secateurs, shears, gloves, watering can, scales (optional)
- Container, eg water butt, drainpipe, bucket, etc (see below)

Activity

- 1 Obtain your plants:
 - a Comfrey: there are lots of types of comfrey. Ideally choose the 'Bocking 14' variety of Russian comfrey, *Symphytum x uplandicum*, available mail order (eg www.organiccatalogue.com). This variety makes excellent liquid feed, but doesn't spread much or set viable seeds, making it convenient for schools.
 - b Nettle: use the perennial stinging nettle, *Urtica dioica*. This regrows every year, creating a dense mat of roots, unlike the small annual nettle, *Urtica urens*. You may already have some growing in your garden that you can use, or ask for a donation from a neighbouring allotment. Don't remove plants from the wild.
- 2 Plant in spring so plants can establish for a year before the first cutting. Can also plant in September and cut late the following year. Neither plant will grow well in containers. Spread a layer of home-made compost or well-rotted manure in spring as a mulch to feed plants and conserve soil moisture.
- 3 Follow instructions on the next page for making liquid feeds.
 - a Comfrey: makes a balanced fertiliser, especially high in potassium, useful for fruit crops, eg use once a week for tomatoes after their first flowers set fruit.
 - b Nettles: makes a well-balanced fertiliser, eg use every fortnight for fast growing container plants. Liquid from nettles cut in spring has highest nutrient content, especially nitrogen rich, useful for leafy growth.

Top tip



Location, location

Choose carefully where to plant comfrey and nettles. Neither is easy to remove once established, so select a permanent site not needed for growing anything else. Sun or partial shade is preferred, with reasonably deep soil.

Health & Safety

Wear gloves to protect against rough surface of comfrey leaves and nettle sting. Comfrey and nettle liquid can smell and stain clothes. Use tools safely, especially shears, ensuring adult supervision.

See also *Health and Safety Guidelines (Section SG1.2)*

Further information

S4.5 Using liquid feeds

'Comfrey: step by step guide' available from www.gardenorganic.org.uk/publications

Instructions for making liquid feed

Nettles

- 1** Wearing gloves, cut nettles down with shears or secateurs to about 5cm above soil level. Start cutting at the top, chopping lower in small pieces. This is preferable to cutting at the stem base where tall stems can fall over and sting. Young leaves are best, not when old or with flowers/seeds on.
- 2** Weigh about one kilogram of leaves using scales. This is about a half a standard bucket full. Measuring doesn't have to be exact and can be done by eye with practice.
- 3** Add leaves to 10 litres of water (two average watering cans). Use more leaves for a larger amount of water, eg if using a waterbutt. Anaerobic bacteria will break down the nettles giving off a strong and fairly unpleasant smell, so it's best to use container with cover/lid to contain the smell.
- 4** Leave for about two weeks, stirring occasionally. Strain and dilute with water 1:10. Add residue of nettles to your compost heap.
- 5** Cut nettles up to four times a year in spring and summer. They will grow again from the extensive food reserves in their roots.



Comfrey - ready to use undiluted

- 1** Wear gloves*, cut comfrey down with shears or secateurs to about 5cm above soil level. Start cutting from April, and ideally before plants flower. If plants are flowering, be aware that bees get very defensive and may sting.
*Some people have an allergic reaction to comfrey leaves – irritation can be extensive but doesn't usually last long.
- 2** Collect leaves, chopping into small pieces if easier to handle. Let plants reach 60cm tall before cutting again. This takes about six weeks. Cut up to four times a year until September.
- 3** Weigh about one kilogram of leaves using scales. This is about a bucket full. Measuring doesn't have to be exact and can be done by eye with practice. A mature plant can yield over two kilograms per cut and regrow four times a year.
- 4** Add leaves to 15 litres of water; about three average watering cans. Scale up quantities if adding more leaves to bigger containers, such as water butts. Leave for about six weeks. It's best to use a container with cover/lid to contain the smell.
- 5** Collect liquid using water butt tap or strain off if using other containers. Use liquid undiluted. This liquid will smell strongly. Add residue of comfrey leaves to a compost heap. Don't try to store this liquid as it will ferment and may explode (concentrated feed can be stored - see next page).
Top tip: make feed regularly, eg a small amount every fortnight so you can use up what you have easily rather than letting excess liquid lose quality over time.



Comfrey - concentrated feed

- 1 Cut off leaves as steps one and two, on the previous page. Push leaves into a wide soil/drain pipe that has a cap at the bottom end.

Note: the cap should have a hole drilled through for liquid to drain. Cover the hole on the inside with fine mesh or wire to prevent blockages.



- 2 Weigh down leaves with plastic bottle filled with stones or water, attached to a piece of string.



- 3 Collect the black liquid that begins to drain out after a few weeks. This liquid will not have a strong smell until diluted.



- 4 Dilute with water before use 1:10 if brown; 1:20 if black. Aim for the colour of weak tea. This liquid will smell more when water is added.



- 5 Make larger amounts of concentrated feed by pushing leaves into a water butt without any water, weighing down. This can be stored in a jar or bottle with a loose fitting lid for up to a year.

Top tip: for small quantities, and the opportunity for pupils to make their own supply of feed, use a 2lt plastic bottle with the bottom cut off. Push in leaves and cover with cling film. Use a stone to weigh down. Put the bottle upside down in a large yoghurt pot to catch the liquid. Secure the bottle so it can't be knocked over.

