



COMFREY Fact-Sheet

(Author - Gwilym 2010)

Comfrey is one of the most useful plants you can grow in the garden or on your allotment.

It has a range of uses from a natural medicine through being a wonderful fertiliser to being an animal feedstuff.



Comfrey The Wonder Plant

'The History of Comfrey

Comfrey is a native herb in Britain and has long been known as a medicinal herb. It was cultivated by both the Greeks and the Romans. It's botanical name is *Symphytum officinale* and it is a member of the Boraginaceae family as are Borage and Forget-me-not.

The name Comfrey is a corruption of 'con firma', which ties in with its old common name of Knitbone. The botanical name, *Symphytum*, is from the Greek *symphyo* meaning 'to unite'.

Nicholas Culpepper (1616-1654), the famous herbalist, knew of comfrey and said:

"The great Comfrey restrains spitting of blood. The root boiled in water or wine and the decoction drank, heals inward hurts, bruises, wounds and ulcers of the lungs, and causes the phlegm that oppresses him to be easily spit forth.... A syrup made there of is very effectual in inward hurts, and the distilled water for the same purpose also, and for outward wounds or sores in the fleshy or sinewy parts of the body, and to abate the fits of agues and to allay the sharpness of humours. A decoction of the leaves is good for those purposes, but not so effectual as the roots. The roots being outwardly applied cure fresh wounds or cuts immediately, being bruised and laid thereto; and is specially good for ruptures and broken bones, so powerful to consolidate and knit together that if they be boiled with dissevered pieces of flesh in a pot, it will join them together again."

He also considered it beneficial in the treatment of haemorrhoids and said:

"The roots of Comfrey taken fresh, beaten small and spread upon leather and laid upon any place troubled with the gout presently gives ease and applied in the same manner it eases pained joints and tends to heal running ulcers, gangrenes, mortifications, for which it hath by often experience been found helpful."



Henry Doubleday

In the nineteenth century an Essex based Quaker smallholder, Henry Doubleday (1808 – 1875), became intrigued by the possibilities of Russian Comfrey as a useful food crop. He did a great deal of research into the use of comfrey, including the treatment of wounds on horses. Henry Doubleday spent the last thirty years of his life researching into the food values of the comfrey crops he grew. He introduced the cultivated varieties which the varieties of today are based on.

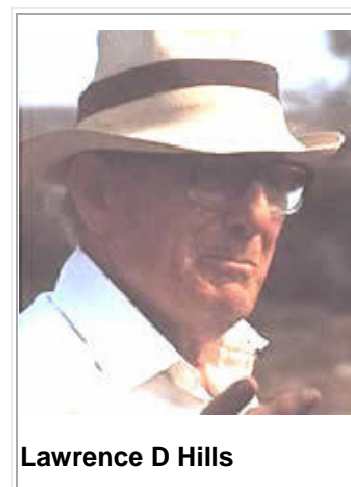
Leap forward to the 1950's and Lawrence D Hills took up the cause. Almost as a side

effect he started what has become Europe's largest organic gardening association, the HDRA.

Hills wrote two major works on comfrey:

1. *Comfrey: Past, Present and Future* (1976)
2. *Russian comfrey: A hundred tons an acre of stock feed or compost for farm, garden or smallholding* (1953)

He also ran selective breeding programs and developed the best gardener's cultivar, **Bocking 14**, named after the Bocking trial grounds where the HDRA started until moving to its present home at Ryton, Coventry.



Lawrence D Hills

Garden and Allotment Uses of Comfrey

Nutritional Values of Comfrey

Comfrey contains high levels of the basic NPK nutrients, drawn up from the deep by its extensive root system. This NPK mix makes it an ideal fertilizer for many vegetables but especially so for potatoes and tomatoes.

On the HDRA trial ground at Bocking in Essex, L D Hills developed the most valuable variety, Bocking 14. High in nutrients and sterile (you don't want comfrey popping up all over the place) Bocking 14 is exclusively propagated from root cuttings.

Nutritional Value of Bocking 14 Comfrey.

L D Hills listed the following in his book *Comfrey, Past Present and Future* –

Comparative Nutritional Analysis of comfrey, compost and manure

Material	Water %	Nitrogen % (N)	Phosphorus % (P)	Potash % (K)	Carbon - Nitrogen Ratio
Farm Yard Manure	76.00	0.64	0.23	0.32	14:1
Wilted Russian Comfrey	75.00	0.74	0.24	1.19	9.8:1
Indore Compost	76.00	0.50	0.27	0.81	10:1

Comfrey Liquid Feeds

Comfrey can be made into a wonderful liquid feed – it is quite simple. Take a butt, barrel or tub, add comfrey leaves to about a quarter way up the barrel, fill with water and leave for 3 to 5 weeks. Tip: it's best to use an old Hessian (potato) sack. Fill it with the comfrey leaves and immerse in the butt/ tub/ barre (like a giant tea bag). That way the leaves won't clog up your drain plug and the leaves will be far easier to remove when they're spent.

Warning! It will smell like an open sewer as it ferments!.

The liquid can be used as a tomato feed.

You can make a very concentrated feed by cramming a container with leaves and placing a weight on top to compress the leaves. A small hole in the base allows the brown liquor to drip through into a jar or suchlike. You can then bottle this for later use.

L D Hills did a more measured experiment of 14lbs of comfrey leaves in a 20 gallon drum (cited in Comfrey, Past Present and Future) and found the following results comparing with commercial liquid feeds made up to the manufacturer's specifications.

Comfrey Liquid Feed versus Commercial Liquid Feeds

	Tomorite	Marinure	Comfrey
Dry Matter	0.1410	0.0480	0.4090
Nitrogen	0.0130	0.0070	0.0140
Potash	0.0139	0.0019	0.0340
Phosphorus	0.0093	0.0001	0.0059

Garden and Allotment Uses of Comfrey

Using Comfrey in the Garden / Allotment Over the season you can expect to get three or four and

sometimes five cuts from an established comfrey bed.

The first cut is probably best used under potatoes. A layer of, preferably, wilted leaves placed in the trench under the potatoes will quickly rot down to provide nutrition to the potato crop.

Trials conducted by the L D Hills at the HDRA have shown that comfrey provides increased yield in potatoes compared with manure, compost or 'Growmore' artificial fertiliser. For these results you need between 1lb and 2lb of comfrey per foot of row. One side benefit is that the flavour of potatoes is supposed to be improved by using comfrey as a fertiliser – especially against chemical methods. The second cut can be used to start making liquid feed as described previously. This is especially beneficial for tomatoes.

Tomatoes grown in the ground will benefit from a mulch of wilted comfrey, a slow release into the soil as the plants get away. Ideally, a second barrel will enable more liquid feed to be fermenting as the first batch is being used. Just as with potatoes, trials have indicated an increase in yield and quality of French and runner beans when fertilised with comfrey.

The high level of nitrogen in comfrey and the low carbon / nitrogen ratio, means that it is not really suited to making compost on its own. It is, however, an ideal activator for the general compost heat. Where chickens have been kept on a deep litter system, the addition of comfrey will assist rotting down of the valuable by-product and balance the nutritional value by adding the missing potash. Mixing comfrey with compost and leafmould will create a natural compost ideal for potting on tomatoes or growing potatoes in bags organically.



Cultivation of Comfrey

Location and Preparation of your Comfrey Bed

Comfrey is a pretty tough plant that will grow from small pieces of root so do choose your location with care. It is easier to kill most weeds than comfrey. If you do need to move a comfrey bed the old bed will need to be killed off. Your best bet will be to use a weedkiller like Amicide.

Comfrey will thrive in full sun or in partial to near full shade - there is usually a disused corner that will make a great site for your comfrey bed. It doesn't like thin, chalky soils and the roots go down a fair way so dig deeply and break up the subsoil to get it off to a good start. Light sandy soils will benefit from organic matter. Being a fleshy plant it will need a lot of water and a soggy patch will be a plus.

In the wild, comfrey tends to be found in shaded boggy areas such as woodland river banks.

Turn the soil over and remove any perennial weed roots. Comfrey grows very densely and will be difficult to weed on the plus side, it does tend to shade out most weeds once established.

If you have any manure - even poultry manure - fork this into the top 6 inches of the soil. Comfrey is great for soaking up nutrients and, unlike most plants, will not burn with raw manure.

One benefit to farmers of comfrey, is the ability to use the comfrey field to dispose of raw slurry.

Sourcing, Planting and the First Year.

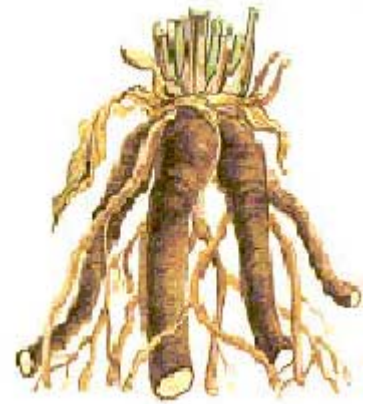
There are a number of varieties of comfrey, both cultivated and wild. The most commonly available and best for the gardener is Bocking 14.

When L D Hills was developing comfrey in the 1950's he produced a number of variants (Bocking 4, 15 etc).

These differed in such things as vitamin content etc. Bocking 14 has become the standard. Although it produces flowers, it does not set seed, which is important. Comfrey is difficult to eradicate and plants popping up everywhere would not be an advantage!

You can obtain plants from The Organic Gardening Catalogue for most of the year but, if you can, plant in March, April, May or September for best results.

The plants are started off from root cuttings, which can be from the crown or from lower down the plant. Either way they will usually take. Because of the cost of shipping root cuttings as against seeds, comfrey is not cheap to get started.



Comfrey Root

For this reason, I start the plants off in 3" pots in a coldframe - just to get them off to a good start - and then plant out. I just use general purpose potting compost and plant a little below the surface unless there are some shoots starting, in which case I plant to the shoot. You can plant out directly but I like to ensure success. Once the shoots have appeared and it is obvious the plant is growing they need to move into the bed. The roots grow very quickly so speed is important.



Comfrey Flower

Block plants around 2 to 3 feet apart and stand back. You will be surprised how quickly they grow.

Fairly quickly the plants will produce flower stalks as well as foliage and in the first year we don't want energy being wasted in producing sterile seeds. The flower stalks are cut down and added to the compost heap.

From spring plantings, you should be able to take a cut in mid to late summer. Just take a pair of shears and cut about six inches from ground level. Comfrey has little hairs on the leaves, which can irritate. Not quite a cactus but near, so wear gloves.

Manure (even poultry droppings) can be applied between plants after each cut and any weeds hoed off. Come winter the plants go dormant and lime can be applied. Because of the high level of acidic fertiliser you can apply to comfrey, liming annually may



be required to keep the soil sweet.

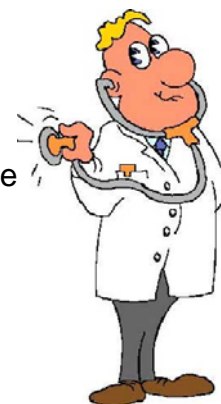
Harvesting and Propagating Comfrey

It is the second year when your comfrey patch starts to really pay off. In the spring it will leap back from its winter sleep and you can take your first cut that will get the potatoes off to a good start., After that you should get at least a further 3 cuts – perhaps even 4. To produce further plants is easy, just push your spade through the middle of a plant and lever up a portion. Take root cuttings (about 2 inches long) and away you go again. You can do this at any time but it is probably most effective to take your root cuttings in the spring. Be careful as any bits of comfrey root left over may happily root wherever they fall.

Other Uses of Comfrey

Medicinal

With most folk medicines there is a scientific basis for their use and comfrey is no different. Comfrey, especially the root, contains a substance called allantoin which appears to increase the rate of cell multiplication. Ointments containing comfrey, often made with lanolin as well, are supposed to be good for healing wounds and burns in the skin. Comfrey leaves added to bathwater are also supposed to be good for the skin. Comfrey tea used to be taken for a number of complaints but it was discovered that comfrey roots and leaves contain pyrrolizidine alkaloids, which have been found to cause cancer in rats. Comfrey tea has been implicated in liver disease (*Hepatotoxicity*), although only two such cases have been reported in the United States. In one instance, a 47-year-old woman developed a liver ailment after consuming up to 10 cups of comfrey tea a day and taking comfrey pills by the handful for more than a year in an attempt to cure her stomach pains, fatigue and allergies.



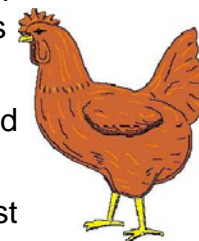
Animal Feed

Comfrey is of great value to livestock keepers as a feedstuff. Apparently pigs love it and will happily consume up to 20lbs a day! The Nihon Agricultural University in Japan stated that: 'a noticeable result was the improved health of the pigs fed on comfrey' not only from the allantoin, which banished scouring, but better mineral balance. Comfrey has been successfully fed to a wide range of animals from racehorses through sheep and cattle to exotic animals such as giraffes.

For the allotment holder and gardener who may keep poultry, comfrey can provide a useful and productive addition to their diet.

The simple digestive system of the hen contains no bacteria or stomach enzyme able to digest cellulose so the hen receives no value from high-fibre diets. In fact this is a positive disadvantage as when the crude fibre content reaches 10% or more, there may be a reduction in the digestibility of carbohydrates. This will cause a fall in egg yields and delayed maturity even if the rest of the diet is nutritious.

Comfrey provides a low fibre, high protein and high mineral feed which can effectively replace some costly concentrates in the poultry diet.



The protein : fibre ratio of comfrey is around 1.5:1.0 as against young lucernes which run around 1.0:1.5.

The additional vitamin A provided by comfrey can cause a yellowing of the flesh in meat birds, similar to the premium 'corn fed' birds available commercially.

The comfrey is best served wilted and shredded with the fibrous stalks removed to further decrease the fibre percentage. 5 plants per laying hen should provide enough comfrey for feeding purposes.

Obviously comfrey will not be available in winter (unless silaged) so should be replaced with other foodstuffs, such as kale or cabbage.