

Comfrey

by Bobby Quinn, Kerr Center intern



The following article by Bobby Quinn references human medical and nutritional uses as well as animal uses for comfrey. The reader should note that use of comfrey is controversial and care is advised. Consult a physician or livestock specialist before using comfrey..

-George Kuepper

Comfrey (*Symphytum officinale*) is a highly versatile and interesting plant. Comfrey is well known for its medicinal properties. It is famous as a wound healer, due to a chemical component called allantoin. Comfrey also has many other uses of particular interest to home gardeners and those who keep livestock

Basic uses

Comfrey has a wide range of agricultural uses. A tea made from the leaves is a very effective fertilizer. To make a fertilizer tea, fill a large bucket half to three-quarters full of comfrey leaves. Use a heavy object to weigh the leaves down and fill the container with water and cover. Let steep for four to six weeks. Dilute and side dress plants as needed.

Scientists at Moscow State University discovered that comfrey tea, applied as a foliar spray, slowed the growth of powdery mildew spores on plant leaves [1].

Comfrey also makes good mulch due to its high nitrogen and

potassium content, which is readily available to the plants as it decomposes. Comfrey is also useful as a compost activator.

As a folk remedy, comfrey is reputed to aid in the healing of sores, cut, bruises, burns, swollen areas, and broken bones. The *British Journal of Sports Medicine*, May 2009, published a study in which the stated objective was "...to show the superiority of comfrey root extract ointment to placebo ointment in patients with acute upper or low back pain." The patients were treated with an ointment of comfrey thrice daily over a period of five days. The researchers concluded that "Comfrey root extract showed a remarkably

potent and clinically relevant effect in reducing acute back pain.”[2]

In addition to ointments, a poultice of the fresh leaves or powdered root is appropriate for external use.

Comfrey can also be consumed, though there are concerns about its safety (see below). A nutritious tea can be made with the dried or fresh leaves. The young greens can be picked and cooked like spinach or eaten raw in salads.

Basic Comfrey Ointment

Crush fresh or dried herbs and blend with fat of choice (i.e. lard, olive oil, safflower oil, etc). (Typically, a ratio of 1 oz. of dry comfrey is used per 8 oz. of final product.) Simmer on top of stove in top of double boiler for several hours. Alternatively, the ingredients may be baked in the oven for several hours using a low heat. Strain and place back on heat, then melt beeswax in it. Pour into jar.

Animals relish comfrey in their diet. It is said that chickens will lay more eggs and cows produce more milk when fed comfrey. Most livestock find it unpalatable at first due to tiny hairs on the leaf surfaces. It is usually necessary to let the leaves wilt slightly before feeding them. The goats here at the Kerr Center love to munch on comfrey.

Safety

Some issues have arisen around comfrey's safety. Here, anecdote and scientific inquiry come together into one confusing morass. While comfrey has been safely used for thousands of years for a variety of ailments, recent studies find that certain pyrrolizidine alkaloids, present in the leaves and roots of comfrey, may be hepatotoxic (damaging to the liver) and tumorigenic (tumor-causing).

In a study published in the *Journal of the National Cancer Institute*, rats were fed either the leaves or roots of comfrey for 400-600 days. Comfrey made up between 8-33% of the rats' total diet for leaves, and 0-8% for the roots. Incidence of liver tumors was dose dependent and in the upper range afflicted nearly 80% of the test rodents, especially when the root was used. Note that this is a very high level of consumption. To replicate this trial in humans, one would need to consume up to a pound of comfrey leaves or four ounces of the root every day for nearly two years. [3] Other studies isolated and extracted the pyrrolizidine alkaloid and injected it into the bloodstream of the test rodents, with similar negative results.

Growing Comfrey

Comfrey is an herbaceous perennial that thrives in the full sun during cooler conditions. It is remarkably long-lived and can spread easily. Make sure to plant it in a permanent area. Although a cutting or two may be taken the first year, it isn't until its third year that leaf production really takes off.

The best time to plant is early April. Comfrey will grow in almost any type of soil, even hard clay. Recommended spacing for comfrey varies according to source, but can range anywhere from one to four feet. The plant has a deep root system that mines the subsoil for minerals. Once established, comfrey will choke out weeds. Disease and pests are generally not a problem.

If comfrey is grown for human use, mulching between the plants is a

Selected Seed Suppliers

Horizon Herbs, LLC

PO Box 69

Williams, OR 97544

(541) 846-6704

www.horizonherbs.com

Richters Herbs

357 Highway 47

Goodwood, ON L0C 1A0 Canada

www.richters.com

Sand Mountain Herbs

321 County Road 18

Fyffe, AL 35971

www.sandmountainherbs.com

good idea. I found that when it rained, dirt would splash up onto the leaves and be held in place by comfrey's tiny surface hairs. A straw mulch would work particularly well.

Sources of planting stock

The best way to propagate comfrey is by root cuttings. The recommended variety is Russian comfrey (*Symphytum x uplandicum*). It is quite vigorous but due to its hybrid status, is sterile. Fortunately, however, it is quite easy to grow from root cuttings. Watch out though! Comfrey can become invasive; it will regrow from even a tiny piece of root. Common comfrey (*Symphytum officinale*) will produce seed but is not as vigorous.

The opinions expressed in this paper are those of the author and do not imply an endorsement by the Kerr Center.

Further Reading

www.Botanical.com

www.ComfreyCentral.com

www.hort.purdue.edu/newcrop/A

FCM/comfrey.html

Comfrey Report: The story of the world's fast protein builder and Herbal Healer

by Lawrence D. Hills.

Henry Doubleday Research Association (1975).

Unusual Vegetables

by the editors of *Organic Farming and Gardening*. Rodale Press (1978).

References

[1] *Biology Bulletin* 28(4). (July 2001)

www.springerlink.com/content/v01x87535t510527/

[2] *British Journal of Sports Medicine* May 21, 2009. E-publication PMID: 19460762

[3] *Journal of the National Cancer Institute*. 61(3): 865-9. (September 1978). PMID: 278864



Bobby Quinn, from Stillwater, was an intern at Kerr Center in 2009. A botany major at Oklahoma State University, he helped to get the pastured poultry project off the ground, grew spring vegetables, and started transplants in the greenhouse for summer variety trials of squash and tomatoes. Bobby was also instrumental in getting the herb bed up and running, and researched and wrote this report on comfrey, a perennial herb.

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