



GROWING CHINESE MEDICINALS IN AMERICA :

Reflections of an Herb Grower

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For at least 50,000 years, people have moved from place to place, taking medicinal and other useful plants with them, while trading and exchanging knowledge with those they encountered; a significant time span, especially when you consider the fact that farming is believed to have originated only 10,000 years ago. The Egyptians traded with the Chinese, the Near East with Europe, and Europe with North America. We in the U.S. are the progression of this ongoing global herbal exchange.

Many of the world's similar medicinal plants share a common background, dating back to the original single continent. When this landmass drifted apart, the plants gradually evolved. This action gave us related plants on different continents, and different cultures that were able to independently discover their useful compounds. From East and West, examples are the Angelicas (of which Dang Gui, *Angelica sinensis*, and European Angelica, *Angelica archangelica*, are just two), the Discoreas or Wild Yams (hundreds from all over the world), the Leonurus (the motherworts), and the Glycyrrhizas (the licorices).

China has about 30,000 endemic species of plants, about twice the number of species as in North America, 4,000 or 5,000 of these are used in Traditional Chinese Medicine (TCM). All parts of the botanicals are used: roots, fruits, barks, leaves, flower and seeds. Although western and eastern herbal modalities are different, they can mesh nicely, each gaining from the other. Eastern herb use tends to focus on tonifying, building and clearing actions. TCM as well as in Ayurvedic herbal medicine, food plays a key role. The first line of defense is a good diet, and if an imbalance arises, herbs, acupuncture and other methods are put into service.

Chinese medicine is more than 3,000 years old, and in the past 1000 years herbs have been incorporated from other regions. Ayurvedic medicine, the well-respected herbal tradition of India, is even older. Drawing on the accumulated wisdom of these traditions and others, western practitioners are beginning to utilize herbs from all over the world. You may notice this phenomenon in your home medicine chest: herbal formulas, more and more, are making the most of the world's pharmacopia. A popular "Wellness Formula" includes the Chinese herbs Isatis (for its anti-viral properties), Astragalus and Eleuthero, sometimes called Siberian ginseng (both for their immune-enhancing capabilities). A widely available joint formula includes the Ayurvedic herbs Ashwagandha (a strengthening tonic) and Turmeric (known for its anti-inflammatory action), among the ingredients.

We in the U.S. are just beginning to build a base of valuable global herbs. As the world's herbs come to our markets, new issues emerge regarding harvesting, proper identification, and contamination. Quality control, especially the problem of improper substitutions of one herb for another, continues to plague the herbal import industry.

Over-harvesting of herbs is a big challenge in China and the U.S., as many botanical medicines are not cultivated but collected in the wild. In this country, United Plant Savers (UpS) has been founded to tackle the issue. This group has developed two working lists to identify the extent to which herbs are suffering from over-harvesting: a first-tier alert "At-Risk" list, and a secondary "To Watch" list. American Ginseng (*Panax quinquefolius*) is included on the UpS "At-Risk" list, and Spikenard (*Aralia californica*) appears on the "To-Watch" list.

With an expanding global pharmacopia, we have wider choices in our solutions to this problem. For example, there are other herbs with ginseng-like properties that may be substituted for Panax. This is a significant advantage, because the regions appropriate for growing American Ginseng and Spikenard are limited. Additional analogs that grow well, depending on conditions, are the Chinese herb

Codonopsis (*C. pilosula*) and the Ayurvedic herb Ashwagandha (*Withania somnifera*). An analog for Yerba Santa (*Eriodictyon californica*), which appears on the “To-Watch” list, is the Chinese herb called Japanese Elecampane (*Inula japonica*), which is relatively easy to grow. Some western herbs that you may be familiar with that have eastern analogs are Milk Thistle (*Silybum marianum*) with Chinese Wolfberry (*Lycium chinese*), Vervain (*Verbena officinalis*) and chamomile (*Matricaria recutita*) with Bupleurem (*B. chinense*), and Elder (*Sambucus spp.*) with Burdock (*Arctium lappa*).

To learn more about this emerging field of study, you might want to visit botanical gardens to view some of the plants. We have several excellent local resources, here in Northern California in the Quarryhill Botanical Gardens in Glen Ellen, where you’ll find many Chinese medicinals spread over 20 acres. Quarryhill is a sister botanical garden of the Royal Botanical Gardens at Kew, on the outskirts of London, which has undertaken the important task of sorting out some of the nomenclature inconsistencies. (Kew, which has an impressive Chinese medicinal herb garden, now offers an authentication service, and is currently working on creating a genetic library of Chinese medicinals.) Two other excellent places to visit are the University of California Berkeley Botanical Garden in Berkeley, and the Missouri Botanical Gardens in St. Louis.

If you are interested in exploring the growing of Asian medicinals, good sources of seeds and plants are Horizon Herbs (Williams, OR), Richters Herbs (Ontario, Canada), and the Flower and Herb Exchange, (a branch of Seed Savers Exchange in Iowa), as well as the author’s business, Chinese Medicinal Herbs. Richo Cech of Horizon Herbs has authored a number of monographs on Chinese Herbs. Steven Foster’s book *Herbal Emissaries* is the only book on growing Chinese herbs currently available.

As a grower since 1997, I have enjoyed being part of the introduction of Asian botanicals in the U.S. North America and China share the same general latitude and much of the climate is similar, so we’ve been able to do a lot of success-

ful experimentation. Some of the more important Asian herbs that we have found do well here are the Angelicas, the Artemisias, Astragalus membranaceus, Glycyrrhiza uralensis (Chinese licorice), Aswagandha and Codonopsis. Some plants that you may be familiar with, since they were first introduced to the U.S. as ornamentals, are Chrysanthemum, Honeysuckle, Daylilies, and Heavenly Bamboo. As time goes on, there are more resources available, more information on usage and cultivation, more studies being done, and more seed and plant suppliers. This year we are growing at least 40 different field crops, and many others as transplant stock or for demonstration or as germplasm repository.

Partly as a result of the efforts of UpS and sustainable agriculture advocates nationwide, I have found that there is an increasing interest in organic herbs grown with integrity toward the wild. In part this means trying to mimic nature – growing plants that are well suited to the site or location – with the conviction that plants experience fewer problems when they are given the right conditions. Most of these botanicals are wild and un-hybridized, and they will often have ongoing, erratic or cultural requirements to fulfill before they will germinate. A grower needs patience, the ability to be observant, and the willingness to experiment – recordkeeping is a must. Herbs in general like low inputs: minimal fertilizer, or elemental fertilizers and no heavy composting. Low inputs also keep labor and supply costs down. A polycultural situation like you find in nature is ideal; this is where communities of plants grow together. There are some Chinese herbs on the market that are invasive, and a good steward does not pass these plants on or educates the people who are receiving them about the ways to minimize the chances of spreading.

I've found that medicine makers are very interested in fresh and freshly dried Chinese herbs, grown locally without pesticides, herbicides and other possible contaminants – they want to offer their patients vibrant, effective, clean medicine. Since at the very least Chinese herbs are fumigated when they cross the U.S. border, TCM practitioners are keen to find better sources for their medicines. It makes sense that when you are sick, you should have the best medicine available.

Not only Chinese, but also Ayurvedic, Native American and other cultures' herbs are being actively sought after. Education is still the name of the game, and the market is young, but it is growing rapidly.

We can relieve some of the pressure from the over-harvesting and elimination of nature's wild growing grounds, by growing our own quality medicinals in our own gardens, farms and fields. Nature has spent untold years creating the substances that make up our botanically-derived medicines.....let's protect what is left of that environment, and develop a pharmacy from nature's worldwide creative intelligence.

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