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Growing Medicinal plants

Traditionally, medicinal plants were collected from nature habitats in the past with sufficient quantities to meet the market demand. Over the years, some species became scarce and endangered due to the massive harvesting.

Sea buckthorn

Milk thistle

To meet future increasing demand, medicinal plants must be cultivated. In addition to ensuring a sufficient supply, cultivation of medicinal plants following GAP guidelines will provide raw material with known identity and consistent quality.

Growing medicinal plants commercially requires consideration of environmental factors such as temperature, light intensity and photoperiod, soil condition, and water supply to determine the suitable growing area which has a substantial effect on production. Cultural practices, such as plant propagation, seed source and sowing dates, irrigation, fertilization, drainage, application of registered herbicides and pesticides, and post-harvest treatments, have a great impact on the final biomass and the contents of chemical components.

Site Selection

A farm land should remain productive for many years, therefore careful site selection is important. Site considerations include climate, water source and soil. Soil condition is one of the most important factor for a successful farming of medicinal plants. Each medicinal plant has its own preference. Previous farming practices may have effects on the growth of new crops introduced, especially some of the medicinal plants may be sensitive to residual herbicides and pesticides, weed infestations, etc.

Canada

Cultivation

The cultivation of medicinal plants is a recent and relatively new horticultural practice. The requirements vary widely. Some medicinal plants have specific environmental requirements, such as shade, winter temperature, and chilling requirements. The best method of understanding how to cultivate a plant is to grow the plant in soil and conditions resembling as closely as possible to their natural habitat. Reliable of seed sources is another major factor which directly affect the success of medicinal plants farming.

Environmental conditions play an important role in plant growth and in the formation and quantity of the secondary metabolites. Since most alkaloids are formed in young, actively growing tissues, factors that influence plant growth can also influence the production of the secondary metabolites.

Harvest and post-harvest handling

One of the most important procedures in the cultivation of medicinal plants is harvesting. The complexity of the operation depends on which part or parts of the plant is going to be harvested, such as flowers, leaves, bark, stem, rhizomes, root, or seeds. Thus, the mechanization of harvesting is difficult. Furthermore, medicinal plants usually must be harvested over a very short optimal time period, because losses of active ingredients will result over a longer period, and consequent losses in value. Therefore, most medicinal plants should only be harvested with a large number of manpower.

The time of collection of medicinal plants is most important, because the composition of the plant and the level of active ingredient varies at different times of the year. Roots and rhizomes of biennial and perennial plants should be dug in the autumn of the first year and in the autumn of the second year or after, respectively. Barks should be collected in spring when the sap begins to flow, but the process may be performed at any time during the winter. Healthy green leaves are collected in the early spring when the plant is in bloom. Where the whole green plant or herb is used, only the younger branches, flowers, and leaves should be harvested. Flowers are collected just after they open and before they begin to wither. Fruits and seeds are picked when mature with a few exceptions.

This guide was prepared following the research of Dr. **Tom Li**, Ph.D., whom is now retired. For more details, please contact:

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Lavender


Evening primrose


American ginseng


Échinacea

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