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RHUBARB GROWING AND FORCING

by

A. G. B. Bouquet

Horticulturist (Vegetable Crops)

Rhubarb is an important perennial vegetable grown for its large, thick leaf stalks which are used largely for sauces and pies, hence the plant is often commonly named "Pie-plant."

The plant itself consists of a large underground portion containing fleshy rhizomes and a fibrous root system. The rhizomes and crowns, which later develop into leaf stalks bearing large leaves, are quite resistant to cold and drying, but the leaf stalks themselves are susceptible to cold temperatures. The flower stems often develop to a height of 4 to 6 feet and should be cut off when appearing. Their growth occurs more commonly during a spring season of unusual cool temperatures. The seed, which is formed, does not produce plants that are true to type.

As is true with asparagus, the planting of rhubarb should be in a place in the garden where this vegetable will be undisturbed and not interfere with the growing of annual crops.

Values of the Crop. Rhubarb is one of the first vegetables to be harvested in the spring, hence it should be included in every farm garden. It also withstands considerable abuse, not only from the standpoint of soil conditions, but inasmuch as the plant is hardy it will stand severe winters when in the dormant state. As described in later paragraphs, the plant may also be dug up and forced during the winter, affording an excellent supply of rhubarb during the winter and early spring months. Rhubarb is both canned and frozen commercially in Oregon.

Methods of Propagation. Inasmuch as rhubarb does not come true from seed, it is desirable to start new plantings by taking divisions of old plants. These divisions should have at least one strong bud or crown and a portion of the root stock. It is most desirable to get divisions of plants of known pedigree which bear stalks of a good red color, and the plants should not be wilted or shriveled before they are ready to be set out.

Varieties. There are few varieties of rhubarb and the difference between them is oftentimes comparatively slight. Among the names of varieties which are listed are, Victoria, Riverside Giant, Wagner's Giant, Giant Crimson Winter, and Giant Cherry German wine, etc. If one can get divisions of plants from a commercial plantation that is producing well-colored stalks, this will be a desirable source of plants, regardless of the name of the variety.

Soil Type and Fertilization. Rhubarb is grown to especial advantage in warm, sandy loam soils, but it is a plant which will adapt itself to almost any type of soil of reasonable texture found in the average farm garden. Commercial

plantations are usually on the warmer alluvial types of soil, which are capable of producing stalks exceptionally early in the spring.

It is customary to fertilize rhubarb with rotted manure during the winter, and sometimes during the growing season or during the harvesting season the plants may be fertilized with some quickly acting fertilizer, such as nitrate of soda or sulfate of ammonia.

Setting Out Plants. Both fall and spring plantings may be made according to the region where the plants are set. In places where the winters are severe it would be best to postpone the planting until spring. Distances of setting the crowns are usually 4 to 6 feet between the rows and approximately 4 to 6 feet between the plants in the row. The covering of the crowns is usually 3 to 4 inches.

Maintenance of the Plantation. Weeds must be controlled by cultivation, and if possible the rhubarb plantation should be irrigated. Sometimes growers irrigate during the harvest season, but this may not always be necessary. It is desirable, however, to irrigate the plants to some extent during the season following harvesting in order to induce a vigorous growth of the plant, which will be instrumental in increasing the yield of the following season. If the plants are not watered during the dry summer period, they become more or less dormant, and are not storing up much plant food in the rhizomes for the production of stalks during the next season.

Harvesting. The first pullings of rhubarb may be expected to be made from the last week in March until the middle of July, depending upon the location in the state. Care should be taken in pulling that the stalks be not broken but separated fully from the crown. By grasping the stalk near its base and pulling with a slight twist, the stalk will be pulled with its full length.

In the spring following the second full season of growth, a harvest of 4 to 5 weeks' duration is permissible. The question of how early to pull from a plantation and how long this harvesting will take place will be dependent largely upon the soil conditions and possibility for irrigation. After the plants have been set there may be a short harvesting season which may be lengthened to a full season the second year. The length of the harvesting season will depend very largely upon the vigor of the plants and possibilities for watering during the summer. Usually the harvesting season extends about 8 weeks.

Yields and Value. Depending upon the age and vigor of the plantation, rhubarb yields will vary from 10 tons upward per acre.

During the early period of harvesting the price of rhubarb is usually about 7 or 8 cents a pound, 20-pound boxes selling at \$1.40 to \$1.50. Later on, as the crop becomes more abundant, the commercial package is usually a 40-pound box, similar to an apple box, and the price may be as low as $1\frac{1}{2}$ cent per pound, or lower.

Renewal of the Plantation. Some growers are apt to leave their rhubarb beds in the same place for too many years, with the result that the stalks diminish in size. Where this is the case, it is desirable to divide these old plants and put them in well-fertilized ground or get a new start of plants from a vigorously growing plantation.

Forcing. Rhubarb forcing is not only carried on commercially, but may be done satisfactorily by those who are growing this crop for their own consumption. Experiments have indicated that three-year-old roots and older produce larger yields than younger ones. About five weeks or so before it is desirable to have stalks for use the roots should be dug or plowed out late in the fall or early winter, and left outside until they are thoroughly frozen, after which they are ready for forcing. Freezing of roots seems to be desirable for the best production of stalks and light freezing, not lower than 20° F, is better than a severe freezing. The plants should not be allowed to freeze and thaw during this period. It seems that the plants which have a slight rest period after the freezing produce larger yields than those which are forced immediately after they have been frozen.

The frozen plants should be taken into the cellar, hotbed, cold frame, or under the greenhouse benches or wherever the plants are to be forced. The roots are placed on the floor of the forcing house and covered over with soil to the extent of two or three inches. The soil should be worked in and around the rhubarb clumps so that they are fully covered with soil, which should be moist but not wet. A temperature of around 60 to 65° F. is considered suitable for forcing rhubarb. At higher temperatures the crop is earlier, but the color and quality are not as good as when the crop is forced at 60° F. At temperatures around 50° F. growth is too slow. In commercial forcing houses a simple, hot water system is used to provide the necessary temperature. It is desirable to exclude light in the forcing place, thus reducing the size of the leaf blade and elongating the petiole or stalk, which has a delicate pink color.

Forced rhubarb is to be found offered on the market as early as the first of the new year, and continuing thereon until about the time that the first outdoor rhubarb is harvested.

It is advisable to set out some new rhubarb plants each spring in order that there may be an ample supply in the farm garden for the digging up of plants which are to be forced each winter. In this way the number of plants of rhubarb in the garden may be fully maintained.

In the field forcing the plants into earlier production may be done by covering the hills with straw or warm strawy manure, which is held in place by a covering of a barrel sawed in half through its horizontal axis.

If there are any queries concerning this or any other vegetable crop address your communication to the Vegetable Crops Section, Department of Horticulture, Oregon State College, Corvallis, Oregon, and your communication will receive prompt attention.

Other Publications on Rhubarb Growing and Forcing

Rhubarb Production.	Leaflet No. 126,	U.S.D.A.)	obtainable for 5 cents a-
" Forcing.	" " 137	")	piece from Supt. of Docu-
" "	Oregon Exp. Sta. Cir. of Information No. 75.)	ments, Washington, D. C.