

THE CAROB

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Carob is the large bean-like pod of a handsome evergreen tree. Since ancient times it has been cultivated along the shores of the Mediterranean Sea. Containing 40 per cent sugar and 6 per cent protein, it has in ancient times been used in its natural state chiefly for stock food, but also for human consumption in times of other food scarcity. More recently it is being manufactured, to an increasing degree, into various forms of human food.

From the seeds is derived a valuable gum (tragasol) which is finding many interesting uses, and is in growing demand in commerce. Importations of tragasol into the United States in 1948 were 6,791,836 pounds valued at port of export at \$1,736,266.00. Carob beans are also imported to some extent in the natural state. For the years 1944 to 1948 inclusive, imports averaged 441 tons valued at \$80.00 per ton at port of export.

For the past seventy-five years seedling carob trees have been widely grown throughout California for shade and avenue planting wherever temperatures seldom fall below 20 degrees. So far in California, this tree has no serious pests or diseases with the exception of the pocket gopher which has a fondness for the roots, and must be controlled.

The carob is noted for its great drouth resistance and its ability to produce good crops under dry farming conditions where the average rainfall is not below, 12 to 14 inches. Where rainfall is less than 15 inches, good crops will depend on soil type and a planting arrangement calculated to prevent or control runoff.

The chief reason for an awakened interest in commercial carob culture in California is in connection with soil conservation, particularly for dry lands for which there can never be a supply of irrigation water. There are many thousands of acres of hay and grain lands which are being ruined by gullies and sheet erosion. Dry farm tenants can ill afford the cost of soil conservation methods on rented land. What has been needed is some permanent tree crop which will provide a profit motive for soil conservation. The carob tree, perhaps more than any other plant, provides such a motive. The dry-farmed carob orchard when once established and in bearing, should yield at least twice as much tonnage as barley and at less annual expense. Carob is approximately the equal of barley as a stock food. In addition to the basic stock food value, there may be additional income from selected grades for manufacture into human foods. Tragasol gum, made from the endosperm of the seed, leaves the sugars and protein of the pod for use in manufacture of calf meal, pet animal foods, etc.

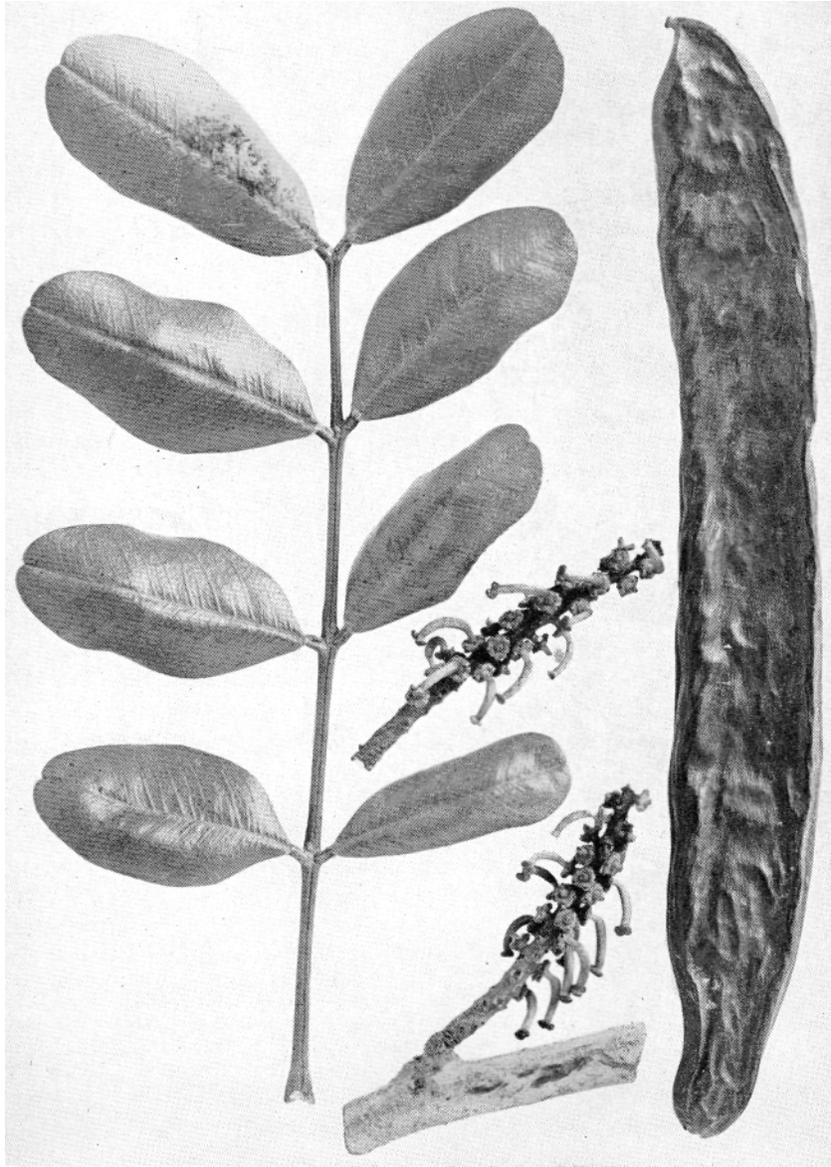
While there are many thousands of fine old bearing carob seedling trees throughout Southern California with occasional trees as far north as Butte County, there are,

unfortunately, no bearing orchards of budded varieties to indicate actual yields. Several plantings were made in the early 1920's by real estate promoters, but the trees were not budded or otherwise cared for, and for the most part no longer exist.

In the interest of soil conservation, Dr. Walter Rittenhouse of San Diego has, as a public service, provided funds for a small demonstration orchard which has been planted and will be cared for as a public exhibit of what the carob can do when given a fair chance. This orchard is located on Buena Vista Road, one fourth mile east of Pechstein Lake, between Vista and Twin Oaks Valley in northern San Diego County. At an elevation of 800 feet, the normal rainfall is about 17 inches.

After the gullies were filled and the land leveled and contoured, seedling trees were planted in the spring of 1949. The following season they were budded to the best varieties obtainable from Italy, Tunisia, Greece, Cypress and in addition all the most worthwhile varieties of California origin were included. At last there will be an opportunity to compare varieties as to yield and quality; to show when trees come into bearing, and the annual increase in yield. There will be free distribution of bud-wood to qualified nurserymen and others. The general public is invited to observe the development of this demonstration orchard.

Dr. Rittenhouse will be pleased if owners of dry lands in other locations may have sufficient interest to plant similar carob test orchards under somewhat different soil and climatic conditions. Such would greatly increase the usefulness of the demonstration work. Information and budwood will be gladly furnished.



*Corob pod, foliage and female flowers.
Natural Size. From Bull. 309, University of
California College of Agriculture.*