

## 41712 to 41717—Continued.

is much like a turnip in shape and consistency and is easily peeled like a turnip. It is usually eaten raw and may be prepared with oil and vinegar in the form of a salad. According to Dr. Edward Palmer, it is extensively cultivated in Mexico, where the natives pinch off the blossoms and seed pods, giving as a reason that if the seeds are allowed to mature the roots are not good. In Mexico the roots are much eaten raw, but are also pickled, boiled in soup, and cooked as a vegetable. As they come from the ground they are crisp, sweet, juicy, and of a nutty flavor. They are nourishing and at the same time quench the thirst, so that they are much liked by travelers. One way of preparing the raw roots is to cut them in thin slices and sprinkle sugar over them. They may also be boiled and prepared with batter in the form of fritters, and in Mexico they are often minced or grated, and with the addition of sugar, milk, eggs, and a few fig leaves for flavoring made into puddings." (*Safford, Useful Plants of Guam, p. 204.*)

## 41713. CITRUS AURANTIUM L. Rutaceæ.

Sour orange.

A small tree 6 to 9 meters in height, with a compact head, young shoots light green, thorny; leaves unifoliate, evergreen, alternate, ovate, pointed, strongly and peculiarly scented; petiole 12 to 18 millimeters long, broadly winged; flowers in small, axillary cymes, white, strongly sweet scented, somewhat larger than those of *Citrus sinensis*; fruit orange colored or frequently reddish when well matured, inclined to be rough; rind strongly aromatic, bitter; pulp acid; juice sacs spindle shaped, rather small; seeds flattened and wedged toward the micropylar end, marked with ridged lines. Native of southeastern Asia, probably in Cochin China. Hardier than the sweet orange. (Adapted from the *Philippine Agricultural Review, first quarter, 1915, p. 10, under Citrus vulgaris.*)

## 41714. CITRUS EXCELSA Wester. Rutaceæ.

Limon-real.

A tall, thorny shrub of vigorous growth, straggly habit, and interlocking branches with stout, long, sharp thorns; leaves 9.5 to 16 centimeters long, 4.5 to 7 centimeters wide, thick and leathery; petiole quite broadly winged, in large leaves the wings frequently exceeding 2 centimeters in width; flowers three to seven, in axillary, rather loose cymes, 36 millimeters in diameter; petals showing a trace of purple on the outside; fruit 5 to 7.3 centimeters, 5.5 to 7.5 centimeters in equatorial diameter, weight 115 to 225 grams; form subglobose; base rounded; apex flattened; surface smooth, greenish to clear lemon yellow; skin thin; pulp greenish to grayish, in good varieties very juicy, mildly acid, and of excellent flavor; juice cells long, slender, and pointed. Plant material of the *limon-real* has been collected in Tarlac, Bontoc, and Bohol, and the fruit is at rare intervals offered for sale in small quantities in Manila. The name of the plant, *royal lemon*, indicates the esteem in which the fruit is held by the people, and while it is unfortunately true that most of the fruits tested have been too dry to be of any value, yet in the best types the fruits surpass in quality and aroma all lemons and limes that the writer has had the opportunity to sample. Considering the robust, thorny growth, large leaves, and broad-winged petioles, together with the roundish oblate fruit with its 10 to 14 locules, and the flowers with 34 to 35 stamens, as against the 20 to 26 in the lime and lemon, this plant is apparently as distinct from these species as they are from each other. (Adapted from the *Philippine Agricultural Review, first quarter, 1915, p. 26.*)