

to be 100 years old. Mr. Watase and I, when we were talking about it, both got the water freely flowing in our mouths. "Yes," he said, "our famous deceased General Nogi used to say to his soldiers, on a hot day in the Manchurian campaign when there was no water in sight, 'Boys, how would you like to have now some nice pickled mumes,' and nobody after that complained about thirst."

43559. TACCA PINNATIFIDA Forst. Taccaceæ. Fiji arrowroot.

From Donga, Nigeria, British West Africa. Presented by Rev. C. L. Whitman, Sudan United Mission. Received November 11, 1916.

"Has very starchy tubers, said to be somewhat poisonous. Leaves irregularly lobed, resembling a potato leaf. Seed stalk 1 foot to 8 feet high. Seed pods on a whorl of small pedicels 1 to 1½ inches in length. Grows wild in light upland soil near Donga. It is not cultivated here, but in its wild state is much sought after because of its starchiness. I have not learned the process by which it is made edible. It may be useful as a starch producer if it can be grown. Possibly it might be started under glass." (*Whitman.*)

43560. PERSEA AMERICANA Mill. Lauraceæ. Avocado.

(*P. gratissima* Gaertn. f.)

From Guatemala. Cuttings collected by Mr. Wilson Popenoe, Agricultural Explorer for the Department of Agriculture. Received November, 1916, to June, 1917.

"(Nos. 54, 109, 115, 137. Avocado No. 6.) *Kanola*. This variety possesses several valuable characteristics. It is the earliest one found in the Antigua region, commencing to ripen at the end of October. This makes it of particular interest to avocado growers in California, since early-ripening varieties are much desired in that State. The tree is exceedingly productive, and the fruit, though small, is of desirable round form and attractive glossy purple color. The flesh is yellow, free from fiber, and of rich flavor, while the seed is comparatively small for a fruit of round or oblate form.

"The parent tree is growing in the sitio of Victor Garcia, who keeps a small estanco on the road from Antigua to San Antonio Aguas Calientes, just above the church of San Lorenzo del Cubo. The elevation is approximately 5,600 feet. Beneath the tree, which stands on a rather steep hillside, coffee has recently been planted. The soil is very loose, black sandy loam, doubtless of volcanic origin. Judging from the crops grown in the vicinity, it must be quite fertile. The age of the tree is not definitely known. Victor Garcia says that it was already of large size when he was a lad, so it may be considered at least 40 years of age, most likely 50 or more. It stands about 35 feet in height, with a spreading but rather open crown 35 feet broad. The trunk is a foot and a half thick at the base. The first branches are about 8 feet above the ground. The young growths are stout, shapely, and vigorous. The indications are that the variety will be a strong grower. The bud wood is excellent, having strong, well-developed eyes well placed on the young twigs, which are round, smooth, and clean. There is no tendency for the eyes to drop from the young twigs, as there is in some varieties. The wood is not unusually brittle.

"Varieties growing at this elevation in Guatemala are not subjected to severe frosts, but should be as hardy as the average of the Guatemalan race.

"The flowering season of the parent tree is from the end of October to the first of December. It flowers very profusely and in good seasons sets heavy crops of fruit. The crop which ripened at the end of 1916 was enormous. It was impossible to make an accurate count, but a conservative estimate would place the number of fruits at 1,500 to 2,000. After such a heavy crop it is to be expected that a light crop will follow. Very few fruits are being carried