Cola nitida at Singapore.

In the Gardens' Bulletin, Vol. II, No. 3, some data regarding the yield of trees of Cola nitida cultivated in the Economic Gardens, Singapore, were given. Mr. Mathieu recently had some of the trees manured, and one fruit just matured weighs 1 lb. and contains six fully developed seeds, it measures 6 in. in length and 10½ in. in circumference. This is a considerable advance on those hitherto recorded, and is to be attributed to the effects of manuring.

T. F. C.

Botanic Gardens.

The following extract from the "Agricultural News" February 7th, 1920, is reprinted from the Trinidad Guardian 1919, on the occasion of the centenary of the Royal Botanic Gardens, Trinidad. "The Trinidad Royal Botanic Gardens at St. Ann's Port-of-Spain have this year entered upon the second century of unbroken existence. There are very few Botanic Gardens in the British Dominions over seas which can boast of so long a life. Some were founded before these, it is true, but for one reason or another they were abandoned or allowed to fall into decay, to be revived in some cases at a later date when their value was once more appreciated. The Garden of St. Vincent is a noteworthy example, because it was the first of the British tropical gardens, and was drawn upon to start the Trinidad Garden. It was abandoned after some sixty years of activity, and was re-established after a resting period of about another sixty years. Jamaica founded the Bath Garden in 1774 eight years after the St. Vincent one: this was also subsequently abandoned, and restored to some extent. In the East the Garden at Penang in the Straits Settlements was started in 1800; but had a chequered history, being abandoned and restored more than once. The present Singapore Garden dates from 1878.

"Two Gardens which have already reached 100 years are Calcutta, founded in 1786, and Sydney, New South Wales, 1816. Peradeniya, Ceylon, the successor of earlier gardens in the low country will reach its century in 1921. Botanic Gardens are, however, not comparatively new developments. In Europe the old monastic institutions maintained gardens to provide pulses, vegetables, fruits, etc., and also medicinal plants.

"The Royal Botanic Gardens of Kew, to which the Colonies owe so much not only for the plants but also for the trained men it has distributed, arose as a Physic Garden. Fostered by George III and Sir Joseph Banks, Kew rapidly grew in importance as a centre of botanical activity."

The date 1878 given for our own Gardens at Singapore is the date the management was taken over by the Government. The original part of the present Gardens, the Bandstand Hill, was laid out under the Singapore Agri-Horticultural Society in 1862, the site having been acquired in 1859 when the Society was formed.

Previous to this a Botanic Garden had existed near Fort Canning, having been founded by Sir Stamford Raffles in 1822, but it was abandoned in 1829.

T. F. C.

Chrysil Rubber.

To the rubber-producing country of Malay the article appearing in the India Rubber World of January 1st, 1920 under such a title as "Three Hundred Million Pounds of Chrysil Rubber" may well draw attention. An ecological survey of the flora of Western North America provided 25 species of plants containing latex. In four of these the percentage of rubber was high enough to warrant the hope that the species may serve for the production of rubber on a commercial scale. Twenty five pounds of the product of *Chrysothamnus nauseosus*, termed Chrysil rubber, submitted for examination was stated to be "high grade and average quality, not as good as the best fine Para, but a great deal better than most Africans or low grade rubbers." The best samples carried only three per cent of rubber and most of them ran less than two per cent. The article continues, "It should be noted by the way that the *Chrysothamnus* is not a latex producing plant. The rubber is found in the individual cells of the shrub, as in guayule. Like guayule also it is found principally in the parenchymatous elements of the cortex. It may also be noted that rubber does not appear to be laid down during the first year of growth of a tissue, and, indeed, unless present in large amount, is not readily detected by the histological method in portions of the plant less than three or four years old.

"Shrubs of interest as possible rubber producers are usually of good size, measuring three to eight feet high and about as broad. The rubber is present for the most part in the inner bark of the stems, and those portions in average mature plants will weigh from five to fifteen pounds. An exceptionally large plant found near Lone Pine, California, weighed 60 pounds exclusive of the twigs, and shrubs weighing 20 to 40 pounds are not rare. This is partly because the plants reach the maximum size only under favorable conditions and partly because they are frequently burned or cut off near the base after which new stems shoot up only to be again destroyed before reaching maturity.

"Another shrub that is treated at length is the *Haplopappus*, which contains considerably more rubber than the *Chrysothamnus*, from 6 to 10 per cent. The product is, however, soft and resinous."

An extract is given showing that it is computed bushes that exist to give a yield of three million pounds of rubber.

T. F. C.