

This method can be applied on especially good soils. Also, the two methods can be combined; that is to say, one can stump once and replace once; remove old trees, manure the ground, and replant.

The extensive part of the "periodical rejuvenation" lies in the establishment of nurseries of first quality; the making of the holes is largely paid for by the increased production of the old coffee trees, which are the first to profit by it; the filling of holes takes place automatically, actually facilitating maintenance work.

Thus, at the cost of a nursery, one has a completely rejuvenated and improved plantation, and there will have been no stoppage of production.

### CHEMICAL NOTES.

In Volume 6, Number 3, of the *New Guinea Argicultural Gazette*, a recipe was given for making soap, which included 6 lb. of clean dripping. Since the publication of this recipe inquiries have been received asking whether coco-nut oil could be substituted for dripping. Coco-nut oil could be substituted for dripping but the results would not be very satisfactory. If coco-nut oil is to be used, a more satisfactory formula would be the following:—

Coco-nut oil	..	..	..	..	282 lb.
Caustic Soda (30°Bé.)	..	..	..	..	282 lb.
Caustic Potash (30°Bé.)	..	..	..	..	85 lb.
Sodium Silicate	..	..	..	..	281 lb.
Water	..	..	..	..	70 lb.

Coco-nut oil is used to a very large extent in the manufacture of soaps, but almost always in quite small proportions, as a soap made entirely or predominantly from coco-nut oil is unsatisfactory for most purposes. The glycerides of coco-nut oil are of a rather unusual nature, and yield a soap which, although it possesses very good detergent properties, dissolves too rapidly in water. The maximum proportion of coco-nut oil usually regarded as permissible for a toilet soap is from 10 to 15 per cent. Laundry soaps, and especially rapidly soluble soap-flakes, may contain up to 25 per cent. of coco-nut oil.

Soaps containing exclusively coco-nut oil are chiefly the so-called "marine" or "salt-water" soaps, and will lather in sea water, since coco-nut oil soaps are not salted out by moderate concentrations of salt.

1 ton coco-nut oil equals 8,125 fresh nuts (approximately).

1 ton copra equals 5,000 fresh nuts (approximately).

1 ton coco-nuts equals 1,400 fresh nuts (approximately).

(From "An Outline of Malayan Agriculture".)