Extracts.

Coconuts and Salt. That common salt applied at the roots of coconut palms is beneficial to the trees is a statement very often made. This, however, is the opinion of old planters. In addition to its being a good manure for the palms, the salt applied at the top around the growing point or bud was also supposed to be beneficial in keeping away "bud rot." Scientists said that salt was of no particular use to the coconut. A young and brilliant scientist of the United States Department of Agricultur. contends that the coconut is not a seaside nor a seashore-loving plant at all: that it did not originate in the islands of the Malayan Archipelago as was formerly believed, but belonged to the American continent and was orginally a desert plant.

Be that as it may, plain facts show, however, that coconuts yield most on rich soils with copious rainfall where the sea breeze reaches them.

The fact that the coconut grows most readily and naturally on almost pure sand impregnated with salt shows that the coconut must appreciate the salt, for other plants would die under such conditions.

In support of this, experiments conducted in Porto Rico are of interest. In 1915, on coconut palms two years old, experiments to determine the effect of fertilizers on the growth and production of young coconut palms were started, plots of 10 trees each receiving semi-annual applications of complete and incomplete mixtures of chemical fertilizers as well as tobacco stems and stable manure in combination with chemical mixtures.

During the first 18 months of production the best yield was made by the plot on which common salt only had been applied. Nine trees in this plot matured nuts in this period while only two did so in the check plot. From four to five trees fruited in each plot which received incomplete fertilizer. In the year 1921 the yield from the check plot averaged 11 nuts per palm, while the

salted trees averaged 45 nuts per palm. Salt has been found to be so beneficial in this test that it is being tested on a much larger scale in an old coconut grove where records have been kept of the individual yields of several hundred trees for over eight years. 3 to 4 lbs. of salt per palm applied every 6 months distributing it well throughout the range of the roots is suggested.—"*Porto Rico Agricultural Extension Notes*" *15-12-1922.*

Abstracted from the Journal of Jamaica Agri. Socy. February '23.

N. B. It is worth while to try this on our trees at the Central Farm as records of performance of individual palms have been maintained now for nearly 10 years.

S. N.

Formaldehyde.—Fixation and polymerisation of—in the dark, by green plants. CO_2 assimilation by plants. T. Sabalitschka.

Experiments on the Nasturtium and the water weed, *Elodea canadensis* showed that these plants are capable of fixing Formalde hyde and polymerising it to sugars and starch in darkness. The plants were placed in an enclosed space and deprived of CO_2. The sugar and starch content of the green leaves was determined after some decrease below the normal had occurred by reason of the exclusion of CO_2, and some of the plants were then exposed to formaldehyde either in vapour or in solution, whilst others were kept for comparison. After some days sugar and starch were again determined and the examples of the results 462 mg., of sugar and 1048 mg., of starch per 100 grms. of leaf were found after treatment with formaldehyde, compared with 144 mg., of sugar and 495 mg., of starch in the blank experiment. The quantities of sugar and starch in the formaldehyde experiment were actually higher than at the commencement, whereas in the control experiment the carbohydrates had continued to decrease. This shows that the plants were able to restore their stock of carbohydrate depleted by the absence of CO_2 by making use of formaldehyde, and that the polymerisation can take place in the absence of sunlight. Further it provides

additional evidence for the hypothesis that formaldebyde is an intermediate product of the photosynthesis of carbohydrates from CO_2 and H_2O.

H. S. R.

Dietetic Value of Cheese. Official experiments have settled the question of the digestibility of cheese. The chemists have concluded that both raw and cooked cheese are equally easy of digestion when eaten under right conditions. As cheese is a very compact or concentrated food, it is not acted on in the stomach but passed on to the intestines, where it is finally absorbed. It is this very quality of prolonged digestion that has made cheese noted for its "staying" powers, and so valued by both athlete and workman as a mid-day food.

In cheese we find proteid constituents, corresponding to eggs, meat and fish, which must be supplied with the bulk in which it is lacking in order to overcome a tendency to cause constipation. It should be used as a meat substitute rather than as an adjunct to a heavy meal,—savouries, cheese custards, soups, Welsh rarebits, souffles or fondus—offering almost unlimited combinations to the imaginative housewife. A green salad and graham or entire wheat meal bread, with a tart dessert and simple cakes are suitable accompaniments to a cheese dish.

In buying cheese as a meat substitute, food value should be considered rather than flavour.

There are certain times when cheese adds perfection to a meal—in fact, there are many who think that no matter how limited the dinner, cheese must never be omitted. Brillat-Savarin says that "a dinner without cheese is like a beautiful woman with but one eye."

Journal of Agriculture, Victoria, March 1923.

K. U. M.
