SOME RESULTS WITH COTTON CULTIVATION.

Compiled by the Imperial College Department of Agriculture, West Indies.

During the season just over, the College Department of Agriculture had an area of about three-quarters of an acre under Sea Island cotton on College lands at St. Augustine. The bulk of this was grown from Montserrat seed, planted on the last day of October, 1925. The field had hitherto been in abandoned savannah and scrub and was recognised as low in fertility, the soil being of a light silty nature. It was broken with a plough in late July, 1925. Nothing further could be done until September when it was ploughed again in the opposite direction, harrowed and banked, pen manure at the rate of ten tons per acre being worked in. Shallow drains were dug fifty feet apart. At the same time, a thick pigeon pea windbreak was sown. The banks were all made four feet apart and the field laid out in plots to enable one of our post-graduate students to carry out special work on spacing, growth development, flowering and bolling studies, &c.

It was thought desirable to adopt the bank method as previous experience had shown that where there was a likelihood of considerable observation work being done, banking would reduce the damage to plants from trampling, &c. The banks were first formed by the plough, then levelled up by hand labour. Care was taken to avoid the high, narrow type of bank which dries out easily and is prejudicial to a crop like cotton. The seed on the whole germinated well, though somewhat unevenly: it would probably have been worse on the flat, land for this type taking some time before optimum tilth can be established. A minimum of after-cultivation was practised. When the plants had made sufficient growth, two weedings with light moulding up were given. Thereafter, they were not disturbed except for measurements and observations and during the search for pests and diseases which were regularly made. By mid-April, 1926, practically the whole crop had been removed.

Of the six spacings adopted, the widest—24 in.—gave the lowest yield, and the closest—12 in.—gave the highest. These yields were at the rate of 1,210 lb. and 1,575 lb. seed cotton per acre respectively. The difference being statistically significant. The yields from the intermediate spacings were in all cases significantly better than from 24 in., but showed insignificant differences between themselves. Nor was there any marked difference between the yield obtained by direct planting at 12 in., and that obtained by continuous planting and subsequent thinning out to 12 in., on the appearance of the first flower bud.

The outstanding feature is the high yield obtained from the close spacing. Complete results on all the points studied will be available in due course, but in the meantime it is of practical interest to note that these yields were obtained over a total period of approximately five and a half months, the rainfall for the first two months of growth being 12·05 in. and for the remainder of the period 2·29 in. It may fairly be claimed that the crop has been economically produced from the point of view of both plant and planter, due, it would appear to a combination of factors, of which seed strain, late planting (for dry season maturity) and close spacing are not the least important.—Tropical Agriculture, Vol. III, No. 6.