

*COTTON AND ITS CULTIVATION IN THE WEST INDIES.*

---

The Imperial Department of Agriculture of the West Indies, in a pamphlet telling of the experiments and recommendations of Dr. Morris, the Commissioner of Agriculture for the West Indies, states that "where it is clearly evident that sugar cane cannot be produced at a profit, the cultivation of cotton would offer employment to a large section of the community; and if careful attention were devoted to growing the varieties of cotton best suited to the soil and climate, and this happened, as in the case of 'Sea Island' to command relatively high prices, the industry would have a reasonable chance of success. On large stretches of cleared land, formerly under cultivation in sugar cane, planters in the West Indies are considering the advisability of re-establishing the cotton industry, as they are well adapted for the cultivation of that staple. The varieties suitable for that section is the 'Sea Island' cotton. This is a special seed, almost identical with the Egyptian, and usually commands the highest price. The Department of Agriculture for the West Indies is in favor of a cotton industry that does not necessitate expensive machinery and buildings, and that the crop could be grown and exported within a period of six to eight months from time of planting. It is thought probable that a central ginning factory, costing in the neighborhood of one thousand or fifteen hundred dollars, would be capable of dealing with the crop produced on a comparatively large area."

From an address delivered during last year by Dr. Morris, the following interesting particulars are taken:

*Varieties of Cotton.*

The more widely cultivated variety is that known as "upland" cotton. The plants are usually low bushes, and the cotton is short-stapled, the lint being not more than two or three times the length of the seed (about .93 inch). What is known as Sea Island cotton is a special variety described as a native of the West Indies. It has a fine, long, silky lint (1.61) three or four times the length of the seed. It is cultivated on a small scale only in the islands off the coast of Georgia and Carolina. It is seldom profitable to grow this in localities more than thirty miles from the sea.

The "Sea Island" cotton is recommended for trial in the West Indies *side by side with the best varieties of upland cotton*. The return of the "Sea Island" cotton usually less than that of upland cotton, but the increased price obtained for it more than compensates for the diminished yield.

*Soil and Cultivation.*

In regard to soil there is no difficulty likely to arise, as cotton is at present cultivated on nearly all kinds of soil.

On sandy soils the yield of cotton is usually small. On clay lands, especially in wet seasons, the plants attain a large size, but yield a small amount of lint in proportion to their size. The best soils for the crop are medium grades of loam. In the United States four feet is the usual

accepted distance between the rows, and the distance between the plants is within the limits of 8 to 14 inches. Experiments made at the Georgia Experiment Station for five years to determine the best distance between cotton plants indicate that on land so rich or so well fertilized as to produce one an done-third bales (666 pounds) of lint per acre, the best distance is four feet between the rows and one foot apart in the rows.

In Carriacou, cotton is planted in rows three feet apart and two and a half feet in the rows. This is probably too far in the rows.

The planting season commences in the States in the spring of the year just as all danger from frost is over, and the time the crop takes to mature varies between 120 and 157 days. The reaping season is about thirty days more, viz: in July, August and September. That would be about twenty-six weeks, or six months for the whole crop.

In a pound of cotton seed there are about 3,800 to 4,000 seeds. At three seeds to a hole, a pound would plant from about 1,250 to 1,300 holes. For fields planted in rows four feet apart and one and one-half feet apart in the rows, from five and one-half to six pounds of seed would be required to plant an acre.

The seed, after the oil is extracted, contains a large proportion of the manurial constituents required by the plant. On the average of 204 analyses of this meal it was found to contain 6.79 per cent. nitrogen, 2.88 per cent. phosphoric acid and 1.77 per cent. potash.

Cottonseed meal is also one of the most valuable of the meals used for feeding live stock. If cottonseed meal and the hulls are returned to the soil, there will be hardly any necessity of applying other manures, and the most advantageous way of doing this is to feed the meal and hulls to the animals and to apply the resultant manure to the land.

#### *Time to Plant.*

For the West Indies it is probable that the best time to plant cotton will be in July and August. The crop should then come in early in December and January, and be completed, say, by the end of February. Close planting will have a tendency to produce an early crop, and wide planting the reverse. If local seed is intended to be used for planting, *it should be selected with great care from strong and heavy bearing plants. By this means a special race of cotton might be raised to suit local conditions.*

#### *Picking.*

With regard to picking cotton in the West Indies, the people may not be able at once to pick large quantities per day. The difficulty is to remove the lint quickly and completely. When the pickers go into the field, it is necessary to place three fingers into the pod and remove the whole of the cotton at once, leaving the pod perfectly clean. At one time it was thought that one hundred pounds a day was a fair average, but that is now considered rather small. In fact, there are keen and experienced pickers in the United States able to pick as high as 300 pounds of cotton a day. I saw women moving between the rows picking the cotton and putting it into large pockets in their aprons. When they got to the end of the rows

they emptied the cotton into bags or baskets. These were again emptied, and the cotton taken, after drying, into the ginning house. In some cases, dependent on the climate, it is necessary to give the cotton an extra drying before it is put through the gins.

*Yield and Cost.*

According to a Texas Station Bulletin, No. 26, of March, 1893, the average yield on seven farms was 392 pounds of lint, the average selling price 8 cents per pound, the expenses per acre \$16.96, and the profit \$14.60. The cost for ginning, packing, etc., being paid for by the value of the seed.

Again in Texas in 1892 the average cost of growing cotton on twelve farms was \$22.60 per acre, the lint was 415 pounds, the price of lint was 9.6 cents per pound, and the average net profit per acre \$15.77. No charge for management was made, with the exception of one farm. It is stated that "the profit was large—larger perhaps than any profit from any staple cultivated on so extensive a scale."

In these colonies the cost of producing cotton should be less than in the United States. *The estate system of cultivation for sugar cane would exactly suit cotton, and if the lighter soils, not so remunerative for sugar, were planted in cotton, the results might be of distinct advantage to the planting community. There would also be added, in some of these colonies, an important auxiliary industry to those already existing.*

*By-Products.*

The by-products of cotton comprise four separate articles, namely: (1) linters, (2) oil, (3) meal, and (4) hulls. If you obtain a return of 1,200 pounds of Sea Island cotton per acre, you will have 400 pounds of lint and 800 pounds of seed. The proportion is exactly 1 to 2 by weight. If you examine the seed of the cotton you will find that the outside of it is covered with a crust or husk. If you break this, you come to a whitish substance called the kernel. In factories dealing with cotton seeds they first of all remove the fine linters on the outside of the seed. Next, they decorticate the seed and remove the hull; that is, the hard crust on the outside. That was at one time thrown away; now it is ground into a kind of bran, which is found useful for feeding animals. The kernel contains a large proportion of oil. A ton of seed contains about fifty gallons, but at present they can only extract about forty-five gallons of oil. When they have extracted the oil, they have left a cake or meal also valuable for feeding purposes.

With regard to the percentages of the various parts of the entire seed, the meal will be 34 per cent., the oil will be 20 per cent., the linters will be 35 per cent., and the hulls 10 per cent. A more definite idea will be obtained if we calculate the amount of each which would be obtained from the average yield of an acre of cotton. This we will take as 900 pounds of seed cotton, yielding 300 pounds of lint and 600 pounds of seed.

On this basis we should obtain (besides 300 pounds of commercial lint) from one acre:—

Meal, 205 pounds.

Oil, 120 pounds, or about 15 gallons.

Hulls, 215 pounds.

Linters, 60 pounds.

---