

outlay of about \$60 would be required to keep the soil free from weeds. The extent of land mentioned, after the plantation is three years' old, would produce from sixteen to twenty bales of hemp per annum, according to the quality of the soil. It is most difficult to give an accurate estimate of the first cost of land suitable for hemp production, prices being enhanced by proximity to a shipping port. The cost of native labour is about 20c. to 25c. a day, but the principle upon which hemp plantations are worked is that the labourer gets one-half of the result of his work, the other half going to the proprietor. A labourer, under pressure, can clean about 20lb. of hemp per diem, but as a rule the quantity cleaned by one man working steadily day by day averages about 12lb.

Sisal.

(Extract from Report by H.M. Consul at New Orleans, Mr. A. de G. de Fonblanque, 3rd February, 1891.)

Cultivating, not over \$10; manufacturing, eighteen days, one boy at 50c. a day, \$9; interest on machinery and other expenses, about \$5: total, \$24, making net profit per acre \$226.

The profit to the planter at four or five years after planting is 18 tons per acre, producing not less than 2,500lbs. of fibre per ton, worth at 10c. a lb. \$250.

APPENDIX B.—PROCESS OF PREPARATION.

Manila.

(Extract from Special Report on the Manila Hemp Plant in the Philippine Islands, 14th February, 1891, by H.M. Consul at Manila, Mr. Alex. Gollan.)

THE plant thrives best in soil composed of decayed vegetable matter, the principle districts in which it is cultivated being reclaimed forest lands. The volcanic nature of the soil seems to be particularly adapted to the growth of the plant. The plant can be grown from seed, but the custom in the Philippines, after cleaning the land thoroughly, is to plant small plants of about 3ft. high, leaving a space of from 2 yards to 3 yards between each, the young shoots which spring up later on around the parent stem filling up the intervening spaces. The ground should be carefully cleaned and weeded at least twice a year. The cost of stems suitable for planting is about 1s. 6d. per hundred at their native plantation, carriage to their new destination being at the expense of the purchaser. As a rule it takes about three years to produce a full crop, but in a favourable soil a crop of about one-third the full production would be available in about two years after planting; the second crop the following year would yield about two-thirds, and by the fourth year a full crop would be obtained. The trees are ready for cutting when the first shoots begin to be thrown out. The plants must on no account be allowed to produce fruit, or they become useless for fibre. When once properly planted the trees propagate themselves, and send up shoot after shoot from the old roots. A plantation will continue to yield a good production for some fifteen or twenty years, after which the soil becomes exhausted. There is little or no disease among the trees, which are of a very hardy nature. Various unsuccessful attempts have been made to improve upon the primitive knife and board, which are, up to the present, the means used for cleaning the fibre. The great fault of the new invention has been the weight of the machine, and the additional liability to break the fibre. A necessary requirement for any machine is that it should be light enough to be easily carried about by the workmen from place to place on the plantation. When the trees have matured and are ready for cutting, they are cut down about a foot from the ground, and the labourer proceeds to strip off the layers from the trunk; these layers are cut into strips of about 3in. wide, or, say, three strips to each layer. The strips are then drawn between a blunt knife and a board to remove the vegetable matter from the fibre, which latter is placed in the sun to dry. As soon as it is thoroughly dried it is ready for the market. The appearance and consequent value of the fibre mainly depends on the care bestowed in drying it, as, should it be exposed to rain and not completely dried, it becomes discoloured, assumes a brownish tinge, and loses its strength to a considerable extent. The outside layers produce a reddish-coloured fibre, which is quite sound and easily distinguished from spoiled hemp, but fetches a lower price in the market.

Sisal.

(Extract from the Report of H.M. Consul at New Orleans, Mr. A. de G. de Fonblanque, 3rd February, 1891.)

According to the Report of the Commissioner of Agriculture, sisal hemp is attracting some attention in Florida. It has been known for many years as a valuable fibre-plant, or henequen, as it is called. It was thought at one period that the plant might to some extent take the place of cotton, as it withstands drought as well as wet. Experience proved that it would not stand frost. It is believed that, as regards the intrinsic value of the two fibres, this is far superior to cotton for many purposes, but the cost heretofore of extracting the fibre has given cotton the supremacy. The fibre, it is said, is well adapted for the manufacture of twine, cordage, seines, and binding-twine for grain, and it may be used for sail-cloth; also that the finer varieties will compare favourably with linen and other goods for domestic purposes. It has, it is said, "a fine gloss similar to that seen on linen." The former drawback to the use of the plant for commercial purposes was owing to their being no machine to successfully work out, in good condition, the fibre from the plant; but that the Van Buren machine, now being used satisfactorily in the Bahamas, is both practical and successful. It is called the "Tropical-fibre Machine," and is also used in St. Domingo. It does not cut the fibre, but takes out of the leaf all there is in it. This has been proved. When the fibre leaves the machine it is ready for market, except drying, and in all other machines the fibre has to be washed, which injures the colour, and therefore the sale. (See *Florida Times' Union Trade Report* for 1890.)