

SCIENCE:

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HEMP CULTIVATION IN THE PHILIPPINE ISLANDS.

THE Manila hemp plant, which is very similar to the banana or plantain, thrives best in soil composed of decayed vegetable matter, the principal districts in the Philippine Islands in which it is cultivated being reclaimed forest land. The yield, according to Mr. Gollan, British consul at Manila, is more abundant on hilly land than on low-lying flat ground, and the volcanic nature of the soil of the islands seems to be particularly adapted to the growth of the plant. The production is chiefly in the southern districts, where the rainfall is greater than in the vicinity of Manila. The trees suffer severely from excessive heat and drought. The custom in the Philippines is, after clearing the land, to plant small plants of about three feet high, leaving a space of from two to three yards between, the young shoots which spring up later around the parent stems filling up the intervening space. The ground is carefully cleaned and weeded at least twice a year.

As a rule it takes about three years to produce a full crop, but in a favorable soil a crop of about one-third the full production would be available in 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. When the trees have matured and are ready for cutting, they are cut down about a foot from the ground, and layers are stripped off the trunk. These layers are then cut into strips about three inches in width. 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 depends mainly upon the care taken in drying it, as should it be exposed to rain and not completely dried, it becomes discolored, assumes a brownish tint, and loses its strength to a considerable extent. The outside layer produces a reddish-colored fibre, which is quite sound, and easily distinguishable from spoiled hemp, but fetches a lower price in the market.

The cost of preparing and planting a *quinon* (about seven acres), and keeping it clean up to the time of the first crop, is estimated at from two to three hundred dollars, not including the first cost of the land; and afterwards an annual outlay of about sixty dollars would be required to keep the soil free from weeds, etc. The extent of land mentioned, after the plantation is three years old, would produce from sixteen to twenty bales per annum, according to the quality of the soil.

Almost without exception, landowners who devote themselves to the production of hemp in the Philippine Islands are European Spaniards, or natives of the islands, and a foreigner would have considerable difficulty in establishing himself, and would meet with many obstacles before he found himself in touch with his surroundings. Foreigners can only own land in the Philippine Islands under the following conditions, which are strictly enforced: (1) That they reside in the Philippine Islands, and are duly registered in the books of their respective consulates and of the government. (2) That their lands be sold, should they leave the islands and establish their domicile elsewhere. (3) That, in the event of the death of a landed proprietor, his heirs be compelled to reside within the territory of the Philippine Islands, or sell the property. The acquisition of land by foreign companies or associations is absolutely prohibited.

The cost of native labor is about twenty or twenty-five cents a day; but the principle upon which the hemp plantations are worked is, that the laborer gets one half of the result of his work, the other half going to the proprietor. A laborer, under pressure, can clean about twenty pounds of hemp per day; but, as a rule, the quantity cleaned by one man, working steadily day by day, averages about twelve pounds. Many unsuccessful attempts have been made to improve upon the primitive knife and board, which are, up to the present, the only means used for cleaning the fibre. The great faults of the new inventions have been the weight of the machine, and the additional liability to break the fibre. A necessary requirement for any new machine which would replace the present method is, that it should be light enough to be easily carried about by the workmen from place to place on the plantation. The exports of hemp from the Philippine Islands, in 1890, amounted to 63,270 tons, which, at the average price for the year, realized about ten and a half million dollars.
