Caranday—A Source of Palm Wax

Millions of these palm trees in the Gran Chaco of central South America, occupying parts of Argentina, Bolivia and Paraguay, offer an unexploited commercial source of a hard vegetable wax, potentially as great as that of carnauba palm in northeastern Brazil.

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Introduction

There exists in Paraguay a species of waxy-leaf palm, commonly referred to as “caranday” (Copernicia australis Becc.), which in many respects is similar to the carnauba palm (Copernicia cerifera Mart.) of Brazil. Both palms elaborate waxy coatings which reflect their respective environments. At first thought it would not seem that two such widely separated regions as the sertão plains of northeastern Brazil and the Gran Chaco would have much in common. To some extent this is true, but certain geographic and climatic similarities can be observed which are sufficient to account for the elaboration of the waxy coating in the palms that are indigenous to each region.

The carnauba palm, which is the source of the carnauba wax of commerce, is found principally in northeastern Brazil in the States of Ceará, Piauí, Rio Grande do Norte, and Maranhão. Although the palm is numbered in the millions and is found throughout an area of about one and one-half million square miles, the wax industry is centered in the States of Ceará and Piauí. The natural habitat of the palm is an area subject to torrential rains and floods during a part of the year, followed by scorching heat and fierce winds which dry and parch the soil to an extent that few plants are able to survive. The period of drought in Ceará may last for a year and sometimes longer. The carnauba palm is able to exist in such an unfavorable environment by virtue of the fact that it possesses an extensive root system highly adapted to garnering during the dry season the little available water, and because of its ability to elaborate an extremely effective protective coating against excessive evaporation of water through its leaves. This protective coating is the source of the carnauba wax of commerce.

It has heretofore been believed that only in northeastern Brazil could there be found an environment and a palm such as have just been described. However, portions of the Gran Chaco can be compared with the sertáo plains of northeastern Brazil, and the millions of caranday palms in that area can be compared with the carnauba palm. The primary difference is that normally the periods of drought are shorter in the Chaco than in northeastern Brazil, and until about a decade ago the caranday palm was not recognized as a commercial source of hard vegetable wax potentially as great as the carnauba palm.

Like the sertáo plains of northeastern Brazil, the Gran Chaco comprises a vast flat, semi-arid plain devoid of major topographic features. This vast plain extends from the west bank of the Rio
Paraguay to the eastern foothill of the Andes and from the Rio Salado in Argentina to the Santa Cruz plains in Bolivia, occupying parts of Argentina, Paraguay and Bolivia.

The Chaco is essentially a low-lying country of little elevation and less relief, and large areas are therefore inundated during the rainy season or are flooded by the rising Paraguay and its tributaries which back their waters into the lowlands. In contrast to the uniformity of