

Historical Research of Cinchona Cultivation and Quinine Production in Colonial Taiwan

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ABSTRACT

Cinchona bark was brought into Europe as a treatment for ague in the early 17th century. In the 19th century, cinchona was introduced to the laboratory and to the plantation. Scientists of the West extracted successfully quinine from the bark, examining how alkaloids work in the treatment of disease, and exploring artificial synthesis of quinine. On the other hand, Cinchona plantation in British and Dutch colonies raced to initiate and cultivate the best or most productive species of Cinchona. Meanwhile, Cinchona bark (幾那, 機那, 規那 or キナ皮 in Japanese) and quinine (貴尼涅, 幾尼涅, 規尼涅 or キニ一ネ) were imported into Japan, and soon enjoyed equal popularity with Ginseng. By the end of the 19th century, with the discovery of the infection mechanism of malaria, the use of quinine has been recognized not only as a therapeutic means, but also an efficient tool for prevention.

After Taiwan became the first tropical colony under the Japanese Empire, efforts had been made by the colonial government to initiate Cinchona cultivation. Since the 1920s, pharmaceutical industries that possessed the technique of quinine extraction had also tried to seek sites for setting up cinchona plantation in Taiwan. Furthermore, the experimental forests of imperial universities established the branch of study called “Kina-ology” in the 1930s. However, the causal relation between Cinchona cultivation, quinine production and anti-malaria policy in colonial Taiwan is more complicated than previously thought, and should be examined in an international context. This paper traces the history of Cinchona cultivation in Meiji Japan and colonial Taiwan, revealing that Cinchona trees were initially viewed as tropical plants, then medicinal plants since 1912, and finally plants of national policy after 1932. It also discusses the role played by the government, pharmaceutical industries and imperial universities in each stage. Moreover, the dynamic relationship between Cinchona cultivation, quinine production and anti-malaria policy is reexamined in this paper.

Keywords: Cinchona, Quinine, Tashiro Antei, Medicinal Plants, Pharmaceutical Industry, Anti-malaria Policy