

Cinchona Grows, Too, in Mt. Makiling

Beyond ecological expectations, a species of cinchona (*Cinchona succirubra* Pav.) is now thriving well in the nursery at the Makiling National Park, Los Baños. Germinated about September, 1948, the 12 seedlings which were set 6 months after at the frontage of the new nursery, have grown 7-22 centimeters (average, 13.8 cms.) in diameter and 5.6-9.9 meters (average, 7.7 m.) in height, in 3 years and 10 months (reckoned from germination), or 3 years and 4 months (reckoned from setting in the field). This growth compares favorably with that obtaining in the Bukidnon plantation—the only place proven so far where cinchona grows in the Philippines. (Some 126 seedlings potted in milk cans and set 1 meter apart under partial shade range from 2 to 11 centimeters in diameter and 2 to 6.6 meters in total height).

Several attempts in the past to grow cinchona in Makiling had failed, so that raising any species of this tree here was given up. How the Division of Forest Investigation happened to have this cinchona growth is in the nature of "just leaving it without much thought of any good outcome, until to your surprise it comes out good beyond your expectations." In 1948, Forester Rosales A. Juni, then pursuing the B.S.F. course, planned to take up the study of damping-off of cinchona as his thesis, so he ordered for cinchona seeds from Kaatuan, Bukidnon. Fearing that the seeds had lost their viability, he changed the subject of his investigation. Not having the heart to just simply throw away the precious seeds, with the aid of a nurseryman, Julian Revilleza, he sowed the seeds in seedboxes and forgot all about it thereafter. Two species of cinchona sown were: *Cinchona succirubra* Pav. (100 cc.) and *Cinchona ledgeriana* Moens var. Thin-

jiroean (700 cc.), but only the former germinated with 40% success. Chief Eugenio de la Cruz of the Division of Forest Investigation noticed that the seedlings were not doing well due to lack of care. He gave instructions to have some of them set in the open space of the new nursery, and 12 of them were planted in 2 rows at 6 meters between rows and at 4 meters between plants in a row, with the intention of just having them as specimens for instructional purposes; the other 126 seedlings potted in milk cans were set at 1 meter apart in 10 rows in another section of the nursery.

Notwithstanding the great altitudinal difference between the Makiling site—about 100 meters above sea level, and Kaatuan, Bukidnon—about 1,000 meters, the performance of this cinchona species is almost phenomenal. It does not follow one of the ecological principles that different species grow within certain altitudinal ranges.

Good examples of other ecological deviations are shown by certain tree species, such as, ipil and almaciga. Ipil is generally known to grow only at low altitudes in beaches behind mangrove swamps, but wide, wild plantations of it were found in an interior high plateau in Isabela Province, according to Professor Cruz. Almaciga, known to thrive well only at high altitudes above dipterocarp sites is found to grow well also at an elevation as low as 100 meters.

The results obtained from the trial planting of *Cinchona succirubra* may lead us to establish cinchona plantations in other reforestation projects with similar elevation, soil and climate as those obtaining in Makiling. In this way, cinchona bark production may be boosted and may bring in more dollars to the country.—M. R. Reyes.