The Cultivation of Cinchona in India

IT appears probable that we shall soon be having a big development in the cultivation of cinchona in India. Towards the end of the year 1937 it may be recalled that the Imperial Council of Agricultural Research, set on foot an enquiry into the prospects of cinchona cultivation in India and appointed Mr. A. Wilson, Deputy Director, Cinchona, Madras, to conduct the enquiry and also associated with him Dr. T. J. Mirchandani, Agricultural Chemist, Bihar, as Soil Chemist. The Report of these officers which has just been published as Mis. Bulletin No. 29 of the Council, goes fully into the subject, giving an account of the present situation and prospects and an equally interesting survey of the nature and extent of the efforts in the past. It may not be generally known that India is already a fairly large producer of quinine from locally grown cinchona bark and that in the past it was producing much larger quantities. The present annual production is put down as some 70,000 lbs. of quinine; until about the year 1880 she was a much larger producer, the estimated quantity of bark per year at that time being as much as 950,000 lbs. or an output of nearly 2 lakhs of pounds of quinine—facts which amply demonstrate that India has the soil and climate suitable for producing a large quantity of her requirements of the drug. This important factor, *viz.*, India's requirements, is estimated variously; the author estimates it at 6 lakhs of pounds, he also refers to other authorities who estimate it at 12½ lakhs of pounds or over twice the first estimate. This is further complicated by the fact that in reality India is consuming only 210,000 lbs. per year or only a third of the lesser of the above two estimates. An account is also given of the difficulties which the Government met with in disposing of their stocks; consumption fell from 80,000 to 60,000 lbs. even though prices became cheaper by 30 per cent. and the demand could not be increased even when the stock was offered for sale at a big sacrifice in price. Altogether we cannot help thinking that this matter of the quantity which India will absorb is decidedly obscure and needs to be clarified. We wish also that a statement had been furnished to show the consumption per year for a period of, say, the last 10 or 15 years. Anyhow the report takes 210,000 lbs. of quinine as the annual requirement; of this quantity local production supplies at present 70,000 lbs. and the remainder is imported. The immediate objective therefore is to grow enough cinchona in the country to produce this 140,000 lbs. of quinine that is now imported. The report further envisages the need for producing the much larger quantities referred to above and contains suggestions to that end also.

Land considered promising for cinchona cultivation in many parts of India, notably the planting districts of South India, Assam, Bengal and Orissa, and the Andaman Islands have been surveyed, soil analyses and profile studies made, and the requirements in this regard discussed. Altogether an area of some 38,000 acres have been specified as suitable and additional tracts are indicated for further similar inspection, if a much larger production should be contemplated, though for the planting programme of twelve years at the rate of 3,333 acres annually stated as required for the latter larger production, this 38,000 acres appear sufficient. Government, planters and small holders are all suggested as suitable agencies for the growing of the plants. We may point out in this connection that no information to show what money return can be expected from the cultivation of cinchona is available in the report although this is an all-important factor, at least as far as the private planter is concerned whether large or small. The cost of production is however given in detail; a statement of the prices paid for bark, or the unit prices that have ruled for the last ten years or so will have greatly added to the usefulness of the report. We should also like that analyses had been given of the soils of certain Anaimalai estates where bark with a high quinine content of 11% was being produced, and likewise of the soils of the Tavoy plantations which are stated to have been a disastrous failure although the area was selected by one of the greatest experts in cinchona.

The species *ledgeriana* is the one recommended to be grown. It is gratifying to learn that 72% of the cinchona grown in India at present is *ledgeriana*, and that among these some extraordinarily good areas may be seen. The need for research is emphasised on the famous Java model and a strong plea put in for a research station for isolating better performing strains of *ledgeriana*, for their multiplication as plants on their own roots or grafted on to *succirubra* stocks, for much nursery technique and so on. Such a station is in our opinion long overdue.

Much has been accomplished even as the result of grafting the *ledgeriana* on to the less-exacting *succirubra* in Java, a comparatively easier line of work which we are told is being done with great facility by ordinary coolies trained for the work, at the rate of some 300 to 500 grafts per day for a set of two coolies; it should be possible to undertake this work at least straightaway on the present Government plantations themselves. It is stated that this was attempted but was not persisted in. The point is further stressed that unless this better species and better yielding types among it are grown it will not be possible to reduce the cost of production. This cost of production will probably be the rock on which schemes of expansion and continuance will split; motives of self-sufficiency are not likely to stand the strain of the ever-present and insistent claims for economy, especially if large supplies of cheaper quinine should be available from Java or other foreign sources. The lines of expansion indicated in the report are cautious and sound; we hope suitable action will soon be taken to give effect to the recommendations.

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