M.R.O. 1—89,000—16-10-29.

MADRAS RECORD OFFICE.

Government of Madras.

Revenue **DEPARTMENT.**

G.O. No. 2971 Press / Mis.

159-160

Dated 16th November 1989

Not to be folded or roughly handled

No. 159. Read the following letter from Major R. H. BEDDOME, Officiating Conservator of Forests, to the Acting Secretary to Government, Revenue Department, Fort Saint George, dated Camp at Ootacamund, 27th August 1869, No. 1,665 :—

With reference to the Government Order, No. 2,019, dated 13th July last, I have the honour to forward the following observations on the growth of the Teak-tree in our Presidency, and the localities in which it is found. It will be seen that there are some facts much at variance with Mr. Dalzell's paper on the subject.

2. Teak grows in our Presidency to perfection on elevated plateaus in the Annamallays, Wynaad, and Travancore, at an elevation of 1,500 to 2,500 feet in these localities. It attains its maximum girth and height; and I have measured trees 21 feet in circumference and 80 feet to the first bough; and numerous examples are to be found 16 to 19 feet in girth. It occasionally ascends to an elevation of somewhat over 4,000 feet, but at these higher elevations it is always of small growth and generally stunted. I have seen trees on a plateau on the Bolarungums at 4, 300 feet: they were of small growth, but not particularly stunted. Teak also grows well all down the western side of the chain of ghauts—the side exposed to the south-west monsoon—from South Canara to Cape Comorin, quite in the plains about the foot of the hills. This style of teak, however, is quite different in size and growth to the mountain-teak above alluded to, and seldom exceeds 7 feet in girth. In Travancore it is known by quite a different name. It also grows up the slopes of these mountains, but is generally of poor growth in these localities. The tree is also found on the eastern side of the chain, as in the Tinnevelly and Madura Districts, but it is there generally of very poor growth, though in the same soil as that on the western side, and though much less exposed. The reason is that it does not get the proper amount of rain and moisture necessary for the favourable development of the tree. The tree is also found of good growth in the Godavery forests in our Presidency, where it attains a large girth, but not nearly the same height as in the western forests. It is also to be found in the mountains in the Kurnool, Cuddapah, and Salem Districts; but here it is of very poor growth and hardly worthy of the name of teak.

3. The tree requires perfect drainage, and will not grow in swampy ground. In the Annamallays, Wynaad, etc., it loves high-raised knolls in the forests, and generally avoids ravines and gorges in which most other trees delight and attain such large dimensions. Not that I take it from the light being from above, but from the richness of the soil and the increased moisture and non-exposure to the wind.

4. Teak grows in great variety of soils and geological formations in this Presidency, and its favourable growth seems to depend more upon the rain-fall than any other cause.

5. In our plantations the outside trees are of larger girth, branch lower down, form larger heads, and are the handsomest specimens: the trees inside are of greater height.

6. The growth of teak from coppice quite depends upon the age: ripe or even middle-aged trees will generally show no growth; young saplings grow very readily and rapidly. A sapling several years old, if coppiced close to the ground, will throw out a shoot in one year of 20 feet high and 3 inches in diameter; and a year old sapling, if coppiced, will grow 12 feet in height and 2 inches in diameter;

whereas seedlings do not average more than 18 inches in height and half-an-inch in diameter. Young saplings when cut down for thinning out in our plantations continue to grow for some years from the stools, though cut over twice every year: they however die out under this treatment in eight or ten years.

7. With regard to working up the soil to a great depth before planting out the seedlings, it may be remarked that this plan would greatly increase the expense of planting. On this subject Mr. Ferguson, at Nellumbore, who has had nine year's experience in planting this tree, remarks as follows:—"The smaller the plant the "smaller the pit required; the deeper and wider the pit, the more rapid the growth, "until the root and fibres reach the limit of the worked-up soil: the growth of the "plant then becomes arrested until the root and fibres undergo a change for pene- "trating new soil; and during this arrest plants in smaller pits will gain upon it, "and often ultimately surpass it." On the same grounds Mr. Ferguson is opposed to planting in trenches. He states that though the growth is much more rapid at first, the roots run along the trenches instead of at once penetrating the subsoil, and the trees are ultimately not equal to those planted in pits.

8. With regard to the selection of seed for planting Mr. Ferguson informs me that he finds it most important to collect seed from the finest full-grown trees, and this always yields the healthiest plants; and he finds that seed from small trees often will not germinate.

9. At Nellumbore all our Teak-seed is steeped in water for forty-eight hours before planting. The nursery beds are covered with straw, and copiously watered; and if the seed is recent with the spongy covering (enlarged calyx) fresh, it germinates in eight days. The young plant may often be seen springing up, bearing on its point the spongy covering quite fresh, only one of the four seeds having germinated; and there is no doubt that if this spongy covering was again sown, it might germinate from any of the remaining three seeds.

10. Mr. Ferguson informs me that he finds that the seed does not germinate so rapidly if the spongy covering is removed, even if the seed is fresh.

Seed kept one and even two years will germinate well, but takes longer than fresh seed. Some two-year old seed, from which the covering was removed, took from eighteen to twenty-five days to germinate.

No. 160.

ORDER THEREON, 16th November 1869, No. 2,971.

Forests, No. 7.

RESOLVED that the foregoing letter be communicated to the Government of Bombay, with reference to their letter, under date 23rd June 1869, No. 2,526.

(True Extract.)

(Signed) R. A. DALYELL,
Acting Secretary to Government.

To the Officiating Conservator of Forests.

Ed. E. C. Shunker.

Revd. Department
No. 2971-73

Proceedings of the Madras Government
under date the 16th November 1869.

Read the following
letter from the Officg. Conservr.
of Forests.

Forwarding observations
on the growth of Teak trees
with Reference to the foregoing letter
of the Dy. Collr.

Ordered that
the foregoing letter be com-
municated to the Govern-
ment of Bombay, with re-
ference to their letter under
date 23d June 1869 No. 252 Lo.

Read the letter from Government of Bombay No. 1760 dated 4th August 1869 with enclosure.

Ordered that the Officiating Conservator of Forests be requested to report on the subject of the letter from Government of Bombay.

Govt. of {1869} Madras.

REVENUE.

To

THE OFFICIATING CONSERVATOR
OF FORESTS,

Dated November, 16th.

Recd. *Encl.*

G. O., 16th November 1869, *No* 2,971.

NOVEMBER.
Nos. 159-160.

Growth of Teak-trees in Madras Presidency.—Major Beddome's observations on this subject, ordered to be forwarded to Government of Bombay.