

California tree-lupin (*Lupinus arboreus*) harvested, threshed, and sown: 10th March, 1920, to 24th March, 1920, 160 sacks (in pod); 3rd January, to 15th March, 1921, 500 sacks. 160 sacks were threshed, producing 16 cwt. of clean seed. 16th January, 1922, to 11th February, 1922, 10 cwt. 3 qr. 23 lb. threshed seed. 13th February, 1922, to 31st March, 1922, 10 acres of sand-drift reclaimed by planting branches of lupin with seed attached. 22nd September, 1921, 50 lb. wattle-seed (*Albizzia lophanta*) sown on the coastal dunes.

Progress of Work, and a General Description of the Growth of the Plantations.—From the 1st April to the 15th September five workers were employed, and on that date three workers were discharged; the other two workers carried on to the 31st October, and at that date were discharged also. From the 16th January, 1922, to the 11th February, 1922, the Maoris at Woodhill harvested lupin-seed by contract, the contract price being at the rate of 4d. per pound threshed and ready for shipment. From the 13th February, 1922, to the 31st March, 1922, two Maori workers were employed harvesting and sowing lupin-seed at the unemployment rate of 10s. per day, and were discharged on the 31st March.

At intervals between April and September an area of about 38 acres of marram-grass plants was planted. A new marram plantation of 10 acres was planted at the "Gap," joining up with Gregory's plantation. An extension of Monk's marram plantation of 20 acres was made, and the "Pa" plantation was increased by 8 acres. Two acres of Gregory's marram plantation was replanted—1 acre replanted at the "Pa" marram plantation, and $\frac{1}{2}$ acre replanted at the Kopuronui marram plantation. At intervals between April and September the workers carried out the following work: The fixation of the "Gap" in the vicinity of the "Eagle's Nest," and the formation of a protecting dune to protect the fierce sand-drift caused by the prevailing south-west gales directly towards the "Pa" marram plantation.

The Reclamation of the "Gap" and the Formation of a Protecting Dune.—The "Gap" has been a menace to the fixation of the sand-drift in this locality, and the danger lies in the fact that if not stopped the time will come when it will endanger the railway-line. Therefore it was imperative that the matter should be dealt with at once. The fixation of the sand-drift through the "Gap" has been checked by heavy tea-tree fascines, some 4 ft. in height, in six sections, commencing at the entrance of the "Gap," 1 chain in length, and extending across the "Gap" a distance of 3 chains. The spaces between the tea-tree fascines are irregular, the fascines being placed in positions suitable for checking the drift, and now, from protecting the dunes, the sand building up on them from day to day. Although a portion of the marram-grass planted has been blown out close to the fascines, the plants under shelter are growing luxuriantly, and will in time provide marram-plants for the permanent fixation of the sand-drift areas in this locality.

The Protecting Dune to Protect the "Pa" Marram Plantation, &c.—The formation of this protecting dune, trending in a westerly direction, was put in as a barrier against the fierce south-west sand-drift blowing into the "Pa" plantation. The fixation of this protecting dune was developed by planting toetoe-plants closely together. There are two rows of the toetoe-plants, extending westerly for a distance of 50 chains, spaced $\frac{1}{2}$ chain apart. The dune has held up the sand-drift, and throws the drifting sand to the south-west, and not only affords great protection to the marram plantation easterly, but also provides on the south and south-west ample protection for future reclamation work in the direction of the Kopuronui marram plantation.

General Remarks.—The development of the marram-grass plants in the plantations established on the Kaipara sand-dune areas is as follows: At the "Eagle's Nest," the "Gap," Kopuronui, Gregory's and Monk's plantations the plants are making fairly good growth, but in no case are the plants ready for transplanting; while the plants in the "Pa" plantation are, generally speaking, making fairly good progress, but on part of it the growth has not been as good as was expected.

*The California Tree-lupin Plantation (*Lupinus arboreus*).*—The lupin plantations established on the Kaipara sand-dune areas are making splendid growth, particularly so at the "Eagle's Nest," where the plants have grown to 8 ft. high. Opportunity was taken to test the advisability of cutting off branches carrying seed and using them for fascines on the surface of the sand; the object in view was to check the drift and to provide protection for the young plants. The success of this method will enable a more rapid progress in dealing with the reclamation of sand-dune areas. The lupin-plants established along the coast-line approximately for a distance of twelve miles have grown remarkably well, and next season should provide an abundance of seed to sow for any reclamation required on the sand-dune areas immediately lying along this route of the coastal sand-dunes.

The Northern Wairoa Sand-dune Reclamation.

California tree-lupin (*Lupinus arboreus*) seed sown: On the 28th April last 4 cwt. of lupin-seed was shipped from the Kaipara sand-drifts to Aratapu, Northern Wairoa, to establish lupin plantations on sand-dune areas near the west coast. The seed was sown in suitable localities, extending for a distance of about twelve miles. Commencing at Chadwick's Aoroa Block and Oturi Block, seed was sown on Harding's, Aoroa Block 53, north of Chadwick's and south of Chadwick's, on the sand-drifts abutting on to the said lands; Sanford's Block (57); Lendrum's Block (52); Glink's Block (90); Leggett's (44); L. Bassett's Block (35A); R. Leggett's Block (46). With the exception of Harding's and Chadwick's, the seed was sown on sand-drifts known as the "Crown reserve." The germination of the seed was good, and on the 15th September last the lupin-plants were making as much growth as could be expected.

Marram-grass plantations established: Lendrum's marram plantation, 3 acres; 3-chain lake plantation, $3\frac{1}{2}$ acres; Bassett's marram plantation, 1 acre; Glink's marram plantation, $3\frac{1}{2}$ acres: total, 8 acres.

These marram plantations are approximately two miles and a half apart, and three are adjacent to small lakes. 40 lb. of wattle-seed (*Albizzia lophanta*) was sown in the sheltered heights along the coastal dunes, the seed being sown on the dunes north and south of "Glink's Gully."

General Remarks.—Work on the marram plantations commenced on the 18th May and was completed by the 15th September. At this date the plantations put in first were commenced to come away, and since that date (the last time they were inspected by me) Mr. J. Glink, of Red Hill, Te Kopuru, has reported that both the lupin and the marram plantations are making good progress.