Hardwoods.—Raising of the hardwoods—oak, ash, sycamore, walnut, chestnut, &c.—is a comparatively easy matter when compared with the system adopted for *Coniferae*, as already explained; but, nevertheless, deep tillage is essential if successful results are to be anticipated.

On roughly raking the whole length of the plot to be sown to a width of about 3 ft., a line is tightly stretched and attached to pegs at each end. Along this line a uniform drill the exact width of the spade is formed, varying in depth according to the variety and size of the seed being sown. On completion of this drill, the seeds are deposited therein, and the surface-soil, which had by this time become hard through employees moving about, is thoroughly stirred up again by the aid of a one-horse Planet cultivator.

The levelling-process is now repeated, and the line brought forward about 20 in., which provides for an alleyway of about 12 in. in width between the drills. Again a drill is formed as before, and the soil removed therefrom is now used to cover the exposed seeds in the previously prepared drill.

In the following table information is disclosed relative to the cost of the principal varieties of seed sown in the South Island nurseries, number of seedlings raised per pound, &c. Although results for some years past have been reviewed in arriving at these figures, and a fair average is presented, the inconsistency both of seed-vitality and variation in size renders the compilation of a thoroughly incontestible estimate impossible:—

Variety of Seed.	Price of Seed per Pound.	Number of Seeds in a Pound.	Number of Seedlings raised per Pound.	Seed-cost per One Thousand Plants.	Number of Seeds sown per Square Inch.	Where sown.	Where procured.
	s. d.			s. d.			
Larix Europaea	2 9½	72,300	3,200	0 10¼	38	T, R, H	Europe.
,, leptolepis	9 6	98,800	3,800	2 6	24	T	,,
Pinus Laricio	3 3½	28,900	6,400	0 5¾	18	T, R, H	,,
,, austriaca	3 11	19,320	5,800	0 8	14	T, R, H	,,
,, strobus	12 5	21,520	1,200	10 4	19	T, R, H	America.
,, ponderosa	11 1½	9,800	4,600	2 3½	12	T, R, H	,,
,, Benthamiana	14 10	3,840	2,740	4 4¼	6	T, R, H	,,
,, muricata	15 9	24,250	8,300	1 10¾	17	T, H	New Zealand.
,, radiata	3 6	18,250	6,800	0 6¼	11	T, H	,,
Picea excelsa	1 8½	50,310	9,200	0 2¼	29	T, H	Europe.
,, sitchensis	19 4	187,000	17,100	1 1¾	32	T, H	,,
Pseudo-tsuga taxifolia	13 7	37,320	3,900	3 5¾	18	T, R, H	America.
Fraxinus excelsior	1 4	6,250	1,500	0 10½	5	T	New Zealand.
,, americanus	3 6	8,500	1,800	1 11½	6	T	America.
Quercus pedunculata	0 0½	120	90	0 5½	1	T, H	New Zealand.
Fagus sylvatica	6 9	995	886	5 3	3	T	,,
Betula alba	1 11	500,000	4,200	0 5½	52	T, R, H	,,
Juglans regia	0 5½	40	30	13 10½	0¼	T	,,
Castanea vesca	0 4½	104	80	4 2	0¾	T	,,
Acer pseudo-platanus	0 8	4,890	1,600	0 5	6	T	,,
,, saccharum	1 6	5,376	500	0 9	6	T	America.
Thuja plicata	4 2	325,500	32,000	0 1½	34	T	New Zealand.
Cupressus Lawsoniana	8 6	115,300	14,500	0 7	20	T, H	,,
Alnus glutinosa	0 10	120,400	7,540	0 1¼	34	T, R, H	,,
Robinia pseudo-acacia	1 3	18,365	2,800	0 5¼	12	T, R, H	,,
Averages	5 8½	67,098	5,622	2 3¾	16¾	..	..

T = Tapanui Nursery; H = Hanmer Springs Nursery; R = Ranfurly Nursery.

Tending Seed-beds.

As may be expected, the greatest care and discretion must be employed in executing the various items of labour directly associated with the tending of forest plants up to the yearling stage. During the currency of a dry season occasional applications of water are necessary, and this is conducted by means of water-pipes, with conveniently situated standpipes, to which are attached hoses with fine-spray nozzles. In this connection, however, it is wiser to moisten the ground thoroughly at limited intervals than adopt a practice of almost incessant surface-watering, which experience proves not only accelerates the formation of a hard, crusty surface, but induces "damping-off."

The removal of weeds from among seedlings is generally repeated two or three times during the season, and is undertaken preferably when the ground is in a thoroughly moist condition. Small pocket-knives after the Pampa style are used, and by keeping a keen edge on them it is an easy matter to sever the weeds a little below the collar, without disturbing the seedlings. It is often advantageous to pull up gently by the spreading roots such weeds as sorrel after the young trees are well advanced, although the adoption of this method during the period of seed-germination would give rise to unquestionable failure. By February the young plants should be growing vigorously, and all scrim-covering may then be dispensed with. To minimize the risk of an abrupt cessation in the progress of seedling-growth, a simple "hardening-off" system is adhered to. Seed-frames are tilted up on one side, and held in that position by specially made bars or blocks of wood. A greater circulation of air is thus permitted to encompass the germinating-ground, and, after about a fortnight of such treatment (or early in March) the permanent removal and stacking of frames may be carried on with perfect safety.

Wrenching.

The success we have achieved in transplanting young pines, evergreens, and seedlings generally that produce lengthened tap-roots is attributed largely to a system of wrenching, which is performed by two employees, who are provided with specially sharpened spades. Each man stands on opposite sides of the drill being lifted, and by brisk foot-pressure drives the spade full depth at such an angle