

feet is generally recommended to be between each row and each plant, because closer planting might impoverish the soil; but it should be kept in view that flax needs shelter, and the proximity of the plants to each other would afford this, and assist in drawing up the leaves and making finer fibre. If suitable land is chosen, it is thought that impoverishment of soil will not result from the close planting.

With the view of still further economizing space, it is suggested that about ten or twelve rows should be planted, then a break of 10 or 12 feet should be left for drays to pass along and collect flax when cut. Then other ten or twelve rows should be planted, then another break, and so on. The size of the ground to be planted must however regulate this.

About 1,000 roots planted six feet apart each way will cover an acre of land, but if the land is planted 4 feet by 3 feet, as recommended above, about one-third more will be required for an acre.

In one bush of flax there will be from 20 to 50 roots for transplanting.

The Returns differ also as to the number of roots that should be planted together; one, two, and three, are variously recommended. If two or three are planted together, a larger space of ground would require to be left around. Care should be taken to avoid planting the roots from which a seed stem has been thrown out, or planting the centre portion of an old plant, which is not so productive as young shoots, and has a tendency to run to flower, when it requires more nourishment than all the leaves do. The flower-stalk should therefore be cut down as early as possible, and when this is done the cut part should be rubbed over with a little earth to prevent "bleeding," or better still, twisted off.

But if the close planting be adopted, only one root should be planted at one place.

The time it takes for maturing and for cutting the leaves is still an unsettled question. It is pretty certain that flax grown from seed will not be ready to cut sooner than three years; but where suckers are planted, the leaves will be ready in about two years. The quality and position of the soil will greatly affect this question. In favourable circumstances some will be ready in twelve months. Messrs. Rees and Gibson, of Rangitiki, mention in their Return that leaves cut in August were replaced by others in February following, about 4 feet in length; and Messrs. Cummings, Finnimore and Co., Wanganui, after three years' experience, say that succeeding leaves are ready in about eight months after previous cutting. They have even cut one entire bush growing in swamp land, and could cut again in that time. Mr. Jenkins, of the Lower Waikato, says that he has had four crops in two and a half years, even though he cuts down the whole bush. This flax, however, grows on the banks of a river, and so cannot be a guide to others differently situated. Messrs. Jones and Co., of Woodend, Canterbury, showed Mr. Potts flax which had grown from 5 to 6 feet in three months. This was owing to the rich moist soil, as flax cut at the same time from higher and drier soil had not attained more than half the length of the other.

When the rotation of cropping shall be established, from two to six leaves may be cut from each root every six, eight, or twelve months, according to soil, care, and attention.

The maturity of the leaf is ascertained by its texture and firmness, or by its being split at the point, or by the recurving of the blades from the central midribs. The leaf of the best flax should be over five feet in length excluding the butt. The top of the leaf, says Mr. Locke, should feel soft to the touch and droop a little; this occurs in winter.

The Natives say that the flax should not be cut from the time the flowering-stalk shoots until it dies again, as the fibre is then brittle, and of a red tinge; and during winter they carefully preserve their flax swamps. But if a permanent supply is to be kept up, it will be difficult, if not impossible, to comply with their notions; and hence it has been suggested, as one mode of remedying this, that the flower-stalk should be cut, but the best time for cutting it requires experience; it is thought, the sooner the better.

The general understanding is, that in cutting flax only the outer leaves should be cut, and that in doing so great care should be taken not to injure the leaves which enclose the centre shoot. With this view the knife should be inserted at the leaf enclosing the centre shoot, and the outside leaves, two or three on each side, cut downwards and slanting outwards; but no leaf should be cut before maturity, as this also weakens the plant and makes it liable to go to flower.

Another Return says that in uncultivated swamp land all the plant may be cut down, and that in twelve months thereafter there will be an entire new crop ready, and if the land shall be drained, a second crop may be got in eight months; but this probably may be explained by the previous existence of undeveloped plants in the land, which take the place of those destroyed. The same Return says that in cultivated flax only the outside leaves should be cut, and that in four months thereafter another supply could be got. But it will require very favourable circumstances to secure this.

Good soil does not require manure in order to make flax grow, but after the second or third year a top-dressing of refuse of flax, preserved for the purpose and thoroughly decomposed, would keep down weeds, and assist roots by sheltering them from the sun, and by supplying the exact mineral constituents required by the plant. Well-fermented stable or other manure would assist greatly, if the question of expense is of no importance. Bone dust is also very suitable. About twenty tons of decomposed manure would be required for each acre cultivated; but, as already stated, if the land can be periodically inundated by the overflow of running streams carrying sediment, no manure whatever need be used. The Natives do not use manure though they prepare the soil with great care.

A supply of the best kinds of seed may be procured at Whanganui, Taranaki, Hawke's Bay, Waikato, and indeed almost anywhere in the North Island. The Natives, under proper supervision, should be employed to procure these, and roots too, if required. Some assert that the seeds of the different varieties are gradually being blended together by the action of the bees, so that by-and-by it will be difficult to get supplies of any distinct kind. It is also stated that there is a triennial development of the flower-stalks and seeds, which only then reach maturity, and that during the two intermediate years it would be extremely difficult to get the seed in quantity. During the last year the supply has been remarkably abundant all over the country.

It is difficult to name the best kinds of flax for cultivation, as different tribes and localities have different names for the same variety; most probably soil, climate, and cultivation have more to do with the quality of flax than is generally believed.