

crops. The produce of grain from 25 cents of land was 35 paras measured with an ordinary para (one para=6 madras measures) and the outturn of straw was 200 hand bundles. I am cultivating personally the above land for the last 4 years and, so far as my experience goes, there was never such an outturn from this land. The average yield was 7 paras per 1 paraland or 10 cents. Generally the above fields were irrigated with river water, but this year, as there was sufficient rain, no watering was required. An equal plot of field near the above plots was cultivated in the ordinary way and the outturn was 20 paras of paddy and 170 hand bundles of straw. This land was manured with 1 cart load of cowdung manure. The wages required for transplanting the former 25 cents were one and a half times more than what is required in the ordinary planting, whereas the quantity of seeds required for the former plots is nearly half of what is required to the other plots. In planting in rows there is the advantage of having greater interspace in weeding for the coolies to move about without damaging the plants. Having come to know the advantages of single planting I give out the results of my personal experiences so that others may derive similar benefits.

I therefore entreat all the cultivators to bestow their careful attention on all these points and to adopt in practice this good and profitable method of single planting in green manured lands without entertaining any doubts in their minds.

Parai }  
1-3-1915. }

V. PONNAN PILLAI.

---

### The Coconut Palm.

---

It has been said that there are as many uses for the Coconut Tree as there are days in the year and, though perhaps this is not quite accurate, there is no doubt it is one of the most useful trees in existence and no part of it from the leaf to the root is wasted. The cultivation, therefore, of such a useful tree is worthy of more attention than is usually given to it.

*Seed Selection*:—To consider the cultivation from the commencement, we must begin with the planting of the nuts. It is probably not recognised that the selecting of the nuts for planting is a most important matter. One can readily understand that inferior nuts will produce inferior trees, and nuts from healthy, matured and good bearing trees are likely to produce a similar class of trees. Large nuts are not usually the best as they are composed so largely of fibre. Medium sized, round nuts contain more copra, and copra is the better paying product.

*Planting*:—The usual method is to plant the nuts where the tree is ultimately wanted but planting in nurseries and transplanting out about a year later has many advantages. The young trees can thus get greater attention—artificial watering is facilitated and shade is more easily arranged. In the nursery, plants may be kept only a few inches apart. When planting out, it is advisable not to place trees too close, or, in due course, growth is hindered and the yield reduced. Planting should of course be done during the Monsoon and transplanting during the following Monsoon.

*Soil*:—Coconuts grow best in the ground with a damp sub-soil, but stagnant water is derimental as the feeding area of the roots is limited to the surface and the palms are more readily blown over by the wind.

*Growth*:—Trees usually commence to bear at the age of 7 to 8 years but, under favourable circumstances, it may be a year or two earlier and in 10 or 12 years trees should be fully matured and bearing plentifully.

*Manuring*:—The bringing of the tree into bearing at as early a date as possible is an important matter and it has been found that the best way to accomplish this is to manure the trees. Cattle and Green Manures which are widely used have beneficial effects but they do not provide the whole plant food of the tree and it is necessary, if the best results are required, either in mature or immature trees, to manure on a more scientific scale by adding potash to the phosphoric Acid and nitrogen which the above mentioned manures supply. The best source

of Potash for the Coconut tree is Kainit which is a whitish salt and it can be applied alone or along with other manures—preferably it should be made up in the mixture with suitable proportions of the other plant foods and an application of such a mixture is sure to well repay the cultivator.

*Application of manures*:—The manure should be applied round the tree about 2 or 3 feet away from the stem and lightly worked into the soil at the rate of 1 lb. for every year of the tree's age—the maximum application at one time is from about 10 or 12 lbs., but for old trees which require a strong reviving manure, 15 lbs. is necessary. Specially in the case of old and unhealthy trees the benefit of manure cannot be expected to appear all at once as if by magic, and one application of manure is usually not sufficient to revive the vitality but, after 2 or 3 years, the industrious cultivator will reap a rich reward. This is no myth as it is being proved every day in Malabar and there is no reason why you should not benefit.

*Results obtained from manures*:—Theory is not always fully supported by experience. However, in the manuring of the coconut, experience shows that the benefit exceeds what theory would lead one to expect and the following instances fully prove this.

Six years ago a certain paramba contained 48 old trees, probably about 20 years of age which were in a poor state, many of them not bearing more than 3 or 4 nuts only, and no manure was being applied. Since then these trees have been receiving an annual application of manure and we give below a note of the nuts actually harvested each year:—

	nuts.	
1907	516	average per tree $10\frac{1}{2}$ .
1908	861	
1909	1598	
1910	1424	
1911	1849	average per tree $38\frac{1}{2}$
1912	943	*Shortage caused by unfavourable
1913	2083	weather.
1914	2298	average per tree 48.

The increase in yield from 10 to 48 nuts per tree is very large and was secured at an outlay of manure of about 6 to 8 annas per tree. The enormous profit made is at once visible.

The undernoted figures represent the yield obtained by another cultivator. Presuming that the nuts were sold @ Rs. 5/- per 100, the increased income in 1914 was Rs. 125/- against the cost of manure applied Rs. 62/- which leaves an *increased* profit of Rs. 63/:-

1912 nuts gathered	4011	-	average per tree	62.
1913 do.	4405	-	" " "	69.
1914 do.	6512	-	" " "	101.

The above mentioned results were obtained from Messrs. Peirce, Leslie & Co. Ltd's., Special Coconut mixture and there is little doubt but that any one can obtain a similar increase in his coconut crop by applying this manure.

[*Note by Editor* :—The above contribution was sent by the agent of Messrs. Peirce, Leslie and Co, Calicut, and we shall be glad to publish actual experiences by individual cultivators. We may, however, state that Kainit which is imported from Germany may well be replaced by saltpetre and to a lesser extent by plant ashes.]

---

### Notes.

---

“No single advantage could be afforded to the vast rural population of India that would equal the introduction of an improved system of agriculture”.—Court of Directors in the Educ. Despatch of 1854.

---

The great European war and the consequent dislocation of sailings throughout the world has created a novel situation in the Hawaiian islands. The sugar factories are experiencing serious shortage in bags (gunny?). About 11 millions of bags are annually imported into Hawai for the Sugarcane crop alone while coffee, rice and other industries take up another million. To get