

an interesting example of one of the many cases when the Engineer can be of service to the Agriculturist.

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Burnt Earth.

Manure supply is a vexed question in Agriculture. In many districts, particularly in Malabar the manure supply is very limited. The ryots as a class almost everywhere are very reluctant to invest money for the purchase of manure, though the fact remains that the investment of money for the proper manuring of crops is almost the best, one can think of.

To quote an instance, one, Pondiat Kelu Nair of Perungulam (Kottayam Taluk) spent Rs. 10 for manuring $\frac{1}{2}$ an acre of his paddy land with fish. He got Rs. 22 worth of paddy more than the usual yield. His next door neighbour who is not a poor ryot and who has been closely watching the crop of Kelu Nayar, when questioned why he is not copying the practice, says "Well, Sir, fish manure is good. I have no money to purchase it."

The endeavour of all the persons interested in the cause of Agricultural improvement must therefore be to find out the cheapest manure. It must take time before common ryots go in generally for costly manures.

South Canara ryots are famous for shrewdness and careful farming. Burnt earth is one of their most favourite manures. It is prepared in a simple way. Alternate layers of earth, very often clay soil, and combustible matters such as any kind of dried leaf, useless paddy, ragi or any other straw or stumps or chaff are heaped.

The layer of soil will generally be about a span high and there is no fixity about the thickness of combustibles. The total height of the heap is about 4 to 5 ft. and the diameter of the heap about as much. The heap is fired. It burns slowly and well. Very powdery earth, mixed with ashes and unburnt particles of organic matter, thus

obtained is called "Sadumannu" or burnt earth. It is used for manuring all kinds of crops such as sugarcane, chillies, brinjals and other vegetables and paddy nursery—and all with very good results.

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Report on Single seedling Planting in green manured lands.

In the beginning of June '14 (end of Edavam) $2\frac{1}{2}$ edangalis of cowgram ($1\frac{1}{8}$ madras measure) were sown on 25 cents of single crop land and 5 edangalis arigan seed were sown on 5 cents of nursery. The only operations done to the seed bed were that 5 baskets of cow-dung manure were applied and the nursery was ploughed twice. The nursery was treated quite similar to broad casted fields and one hand weeding was given to it. The other 25 cents of land were ploughed twice before sowing the cowgram, with an idea that the seedlings would be sufficient to transplant the 25 cents of land. I had ploughed the field twice and levelled after the lapse of 36 days and kept the land ready for planting. After 40 days the seedlings were pulled and tied into bunches. At the time of pulling the seedlings, it is the practice to get the nursery filled by water in order to remove the small lumps of earth which clings to the roots of the seedlings and then tie them into bunches. The seedlings were planted singly in rows of 9 inches to 1 foot apart in the aforesaid field. The crop was better in appearance than the ordinarily planted crops. The seedlings were sufficient to plant the whole plots. The planted seedlings began to tiller in a fortnight and put forth 8 to 12 tillers in 20 or 25 days. Ever since the crop was transplanted, there was rain enough for paddy crops. It came up well, improving in appearance day by day. This crop as well as other crops were affected with grasshopper which usually attack paddy, especially in this year. Even then the plants grew well with dark green appearance. The ears began to come out almost in all at the same time and ripened with well filled appearance and the crop was ripe enough for harvest one week before the ordinarily transplanted