Manuring Tea Under a Cover Crop.

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IN March, 1927, six acres of tea under a thick cover of *Indigofera endecaphylla* were manured with artificials according to scheme in vogue before the planting of the cover crop in November, 1925.

Manures are applied annually, but in March, 1926, the Indigofera had not made sufficient growth to necessitate any special measures, and the manure was spread over the ground between the Indigofera plants and forked in with envelope forking in the normal manner. By March, 1927, however a thick continuous cover was formed all over the ground and the following procedure was adopted:—gangs consisting of one man and one woman were put into alternate rows. The man was provided with a small grass knife—such as is used for cutting fodder for cattle—and with this made a single vertical cut through the tangled mass of creeper down the middle of the row. The woman who followed was provided with a mamoty fork and with this dragged away the creeper from the centre to both sides of the row. This operation was first done by hand, but a mamoty fork was found easier—a crooked stick would also serve the purpose.

The effect of this operation was to drag away most of the creeper from the row to be manured, leaving a certain number of roots undisturbed in the middle.

The soil thus exposed was covered with a layer of decaying leafy material and appeared to be in a good and friable condition, immensely superior to the hard baked appearance of neighbouring clean weeded plots.

Although no rain had fallen for a week and the soil in bare places was getting hard, a fork penetrated easily in the Indigofera plots, and it was possible to proceed with the application of the manure at a time when, if not for the cover crop, postponement would probably have been necessary.

The subsequent application of the manure was by the normal method and calls for no comments.

After applying the manure the creeper was dragged back into place again by hand. This work was done by women.

To cut and drag back the indigofera from alternate rows over 6 acres took 30 men at 60 cents and 30 women at 35 cents—Total cost Rs. 28·50 = Rs. 4·75 per acre. To lay back the creeper took 26½ women at 35 cents—total cost Rs. 9·20 Rs. 1·53 per acre.

A good deal of the creeper that had been dragged back died; though not all.

It would be quite possible to dispense with the operation of relaying the creeper since it is certain that a fresh cover would fairly soon be formed by the creeper growing in from the undisturbed rows and by fresh growth from the roots left in the bared rows. Relaying the creeper however accelarated the formation of a fresh cover.

In addition then to the normal cost of manuring, an expenditure of Rs. 6·28 per acre was incurred, of which Re. 1·53 could be avoided without any great disadvantage. No attempt was made on this occasion to cut up and bury in the creeper and it is thought that owing to its habit and tangled growth this operation would involve considerable additional expenditure.

It was obvious that without this operation the soil was gradually gaining a considerable amount of additional humus, apart from the obvious improvement in physical texture.

Further, an improvement in nitrogen content may be anticipated from forking among and breaking up the Indigofera roots.