

ORIGINAL ARTICLES.

PREVENTION OF SOIL EROSION IN NEW CLEARINGS.

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A good deal has been written on soil erosion and many systems have been advocated, but few suggestions seem to have been advanced for its prevention in the first instance. It is evident that the initial mistake was made when the land was first opened. The system of draining adopted tended to encourage both wet and dry wash and it had another distinct disadvantage inasmuch as the subsoil cut from the drains filled the interval between them and smothered the active soil bacteria which are so essential to the growth of the plant. The tendency for the soil to travel downwards was increased every time the drains were cleared and the holes for planting were, more often than not, filled with subsoil. Soluble organic matter, together with the finer soil, was swept away in the drain water, and, in course of time, bare washed hillsides remained. It seems incredible that terracing has only come into favour of late years, more especially as such excellent examples, which have stood the test of time, surround the planting districts.

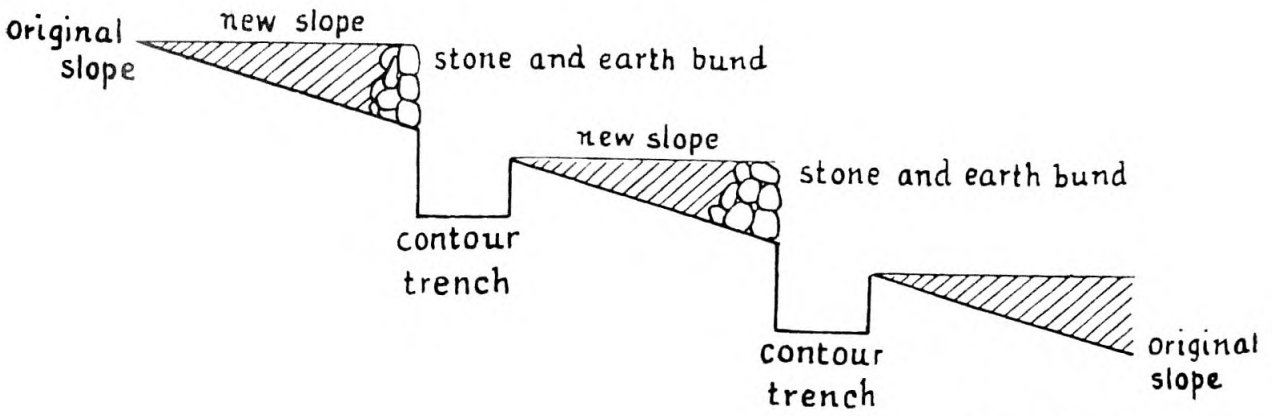
The writer, after a series of experiments, has evolved a system of opening land which has proved so successful that he is tempted to give a short account of his work in the hope that it may be of some value to the planting community.

Contouring the hill sides with level trenches, as opposed to drains, the earth from which is made into a bund on the upper side of the trench, is the plan adopted. If stone is available in quantity the terraces can be built and the contour trenches cut one foot below each terrace, the earth being banded up above the terrace. This is of course a stronger method and greatly tends to decrease the incidence of slope between the terraces. The distance between contours depends entirely on the lie of the land but the general rule is to measure off equal distances down the greatest slope. In making the bunds the coolie is careful to pile the earth neatly above the trench or terrace, if stone has been available, and this is hammered and consolidated. These bunds will be found

capable of holding all rain water and there will be no movement of the soil. Humus is carefully preserved and no soluble matter is lost in drain water.

In dealing with grass land, burning should not be allowed, the grass being merely uprooted and allowed to remain *in situ*. This will protect the surface from wash until contouring has been finished and will in time rot down and form good mould which is, of course, a valuable plant food. If seed-at-stake is to be planted no holing will be necessary, the ground being prepared with a fork. The young plants grow better this way as their roots get rapidly into the surrounding loose earth.

The cost of opening, including cost of seed, works out at Rs. 245 per acre. A small 5-acre clearing, opened in 1925, came into bearing this year and has already given 500 lbs. made tea per acre.



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