

KILLS THE CERM THAT CAUSES DANDRUFF!

## TO PLOUGH OR NOT?

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produced; even when out at pasture the heaviest producers were given supplementary feed. In New Zealand, where the herd is at pasture all the year round, the cows must be taking a heavy and continuous toll of the fertility in the pasture.

## **Fertilisers**

Another interesting point in the above illustration touches on manuring. Faulkner says "Forget you ever heard of fer-tilisers." In Yorkshire it was possible to do this (though they did use some). The yards were bedded down with fresh straw each night and towards the end of the winter it was carted out into big heaps to rot. Moreover, it was estimated that the concentrated feeding greatly enriched the manure. Later on, the well-rotted manure was carted on to the land at the rate of about 20 tons to the acre, so you see we firmly believed in returning to the soil what was taken out of it. In New Zealand it is not possible to do this and some form of fertiliser is a necessity, but mineral fertilisers do not add humus to the soil as does green manuring.

Faulkner also blames the plough for erosion of the land, but I do not think he is quite correct in his surmise here. While it may apply in some measure to the open prairies of America, the experience of many countries, including New Zealand, is that the chief cause of erosion is the denuding of the forests.

## India and China

This brings me to the last point on which I wish to comment. Truog takes Faulkner to task for quoting the examples of India and China, and says that "a large portion of the Chinese population suffers from malnutrition due to an exhausted soil, much of which they have hand-cultivated, rather than ploughed, for centuries." I disagree with him here. Chinese rural districts support a denser population than any country in the world. Dr. Ehrenfried Pfeiffer in his book Biodynamic Farming and Gardening estimates it at 1750 to the square mile. "In the province of Shantung, for instance, a family of twelve, plus a donkey, a cow, and two pigs, is normal for a farm of two and one-half acres . . . To enlarge the surface area, everything is planted in between, and upon ridges . . . As many as six different kinds of plants in various states of growth utilise the mutual action of plant groups upon one another . . . A crop failure in this soil is a rare phenomenon . . . Mineral fertilising is still unknown there . . . It has been possible to keep land in its original state of fertility by the oldest cultural methods of humanity-humus conservation and manual labour."

The only regions in China in which erosion of the land and impoverishment of the people has taken place is where deforestation has taken place.

## How About Weeds?

Summing up, then, we may say that Faulkner has conducted an interesting experiment. His practice is good—as far as it goes—but it does not go far enough and some of his deductions are false. Incidentally, we are not told how he would deal with such weeds as couch and docks which, if cut to pieces by the discs, would grow again, whereas, after ploughing, they can be brought to the surface by the harrows and removed.

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