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methods are more thoroughly demonstrated. In the meantime the next best thing for him is green manuring. This is a complex subject on which there is still room for further research, but agriculturists are generally agreed that it should not be ploughed in too deeply because the bacteria which aid the work of decomposition work near the surface of the ground, and when they are ploughed in deeply decomposition takes longer.

Faulkner's method, therefore, is good, but his deduction is wrong. His success was due, not to the shallow cultivation, but to the land being supplied with the needed humus.

### The Presence of Worms

Another point in connection with green manuring is this: good healthy land depends to a large extent on the presence of earth-worms, which, in turn, depend on there being plenty of humus in the soil. I had a good illustration of this in my own garden four years ago. The land on which the house was built was described as "worm-out pasture," and it certainly was. The grasses—what was left of them—were exceptionally poor, and while I was digging the garden hardly a single worm was to be seen. Yet after humus was added to the soil it was swarming with worms. If there are plenty of earth-worms at work in the soil it will be more friable and open, and crop-roots will be able to find their way to the desired depth.

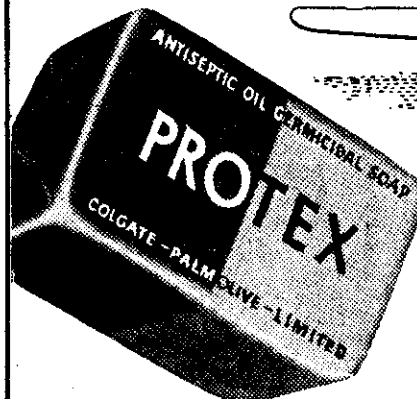
As to Faulkner's contention that residue ploughed in deeply formed a "sponge layer" which interfered with capillary action, I will leave this for agricultural experts to argue out. I am not a scientific farmer, in the college sense of the term, but I would just like to pass one remark about it. I do believe that light land can be too open, so much so that capillary action is interfered with, and if such land is deeply and thoroughly cultivated, then it is necessary to have it heavily rolled to get it properly consolidated again. On the other hand, clay soils rarely require much rolling, except for the purpose of breaking down clods. In Yorkshire we would periodically, but not every year, plough deeply, with a "duck's foot" cultivator attached to the back to open up the subsoil without bringing it to the surface. This is one reason why I say Faulkner's assertions are too sweeping: you cannot treat all lands alike. I may say our average furrow was only 6in. to 8in. deep.

### The Argument from Nature

His statement that "Nature has done very well without ploughing, as witness her giant redwoods and tropical jungles," is pretty well answered by Truog and there is not much I need add. Moreover, every farmer realises that crops and animals are constantly removing fertility elements from the soil, and what is taken from the soil must be replaced in some form or other. May I draw on my Yorkshire experience again for a very practical example. We used to carry a fair number of high-yielding pedigree cows, Shorthorns and Friesians. For at least six months of the year these animals were fed in the yards, being given roots, meal, and cake (mostly linseed and cotton) in addition to hay and straw. These rations were worked out, not by any reference to the size of the animal's frame, but to the amount of milk she

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