6. GREEN MANURING AND ITS APPLICATION TO AGRICULTURAL PRACTICES

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The results secured from green manuring depend upon the rôle of organic matter in the soil. The previous papers have discussed the place of organic matter in the soil; and while the presence of nitrogen and the decay of organic matter offer scientific explanations for the value of green manures, their utilization by the farmer depends and will continue to depend on increased yields following the use of green manures. Fortunately, it can be shown that increased yields do follow the use of green manure and the knowledge of this fact is gradually extending, and with it the practice of turning under green crops. While this knowledge exists and the data at hand enable us to feel confidence in the broad statement that under favorable conditions green manuring will increase yields, it unfortunately is true that there is a great dearth of exact experimental data.

By green manuring as here discussed the writers mean the incorporating into the soil of green, or more or less mature crops, sown for this purpose. While a second crop of red clover turned under is, in effect, a green manure crop, this is a secondary, rather than a primary use of the crop.

Work has been done by many of the state experiment stations and by the United States Department of Agriculture, but we still await comprehensive, as well as exact data, as to the effect of green manuring on the permanent increase in the nitrogen and organic matter content of soils. Our information as to the yield increases following this practice is much fuller than is the evidence that permanent improvement of soil can be effected. Indeed in some cases, as on the poor Norfolk sands of Florida, such evidence as has been secured by the Florida Experiment Station points to the impossibility of permanent improvement. The organic matter oxidizes too rapidly.

Much of our information as to the yield increases due to green manuring comes from the experience of farmers, and while in a broad way such data are thoroughly reliable, they naturally lack the exactness to be expected in controlled experiments. In the present paper will be presented a general survey of the green manuring practices in the United States, together with some of the problems that need solution.

Green manuring was first practiced in Maryland and Virginia in the latter part of the eighteenth century but never spread widely. Today the use of green manure crops, or cover crops if you will, on the Atlantic Seaboard is mainly confined to orchards and truck crops.

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985