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## SOILS AND THE MAINTENANCE OF THEIR FERTILITY THROUGH THE GROWTH OF LEGUMES.

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*(Continued.)*

The chief value of green manuring, as the system of ploughing under a growing crop of clover is called, lies in the addition of nitrogen, otherwise unobtainable. By the subsequent decay in the soil of the turned-under clover, this nitrogen is set free and converted by nitrification into available food for future crops of grain, fruit trees, roots, etc., as the case may be. The growth and harvesting of the nitrogen-consumers leave the soil poorer in nitrogen, the growth of clover and other legumes—even when the crop has been harvested and the roots only left—leaves the soil invariably richer in this constituent. But there are other advantages, though of less importance, to be obtained by this method. Humus in large amounts is formed in the soil from the organic matter of the clover. To the great value of this constituent we have already referred to in detail. All that we have said respecting its functions and importance might be repeated with emphasis for this method of manuring with clover. There is the mechanical as well as the chemical improvement of the soil, the addition of food materials, and the encouragement of microbic life within the soil.

Further, considerable amounts of potash, phosphoric acid and lime are during the growth of the clover absorbed and built up into its tissues. These, in part at least, are obtained from depths of the soil not reached by the roots of other farm crops,