SULFUR AND PERMANENT SOIL FERTILITY IN IOWA.  

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INTRODUCTION.

Sulfur has long been known to be one of the essential plant food constituents. It has always been believed, however, that there was sufficient present in all soils for the optimum growth of crops. This assumption has been very largely based on Wolff's analyses of the ashes of various crops, which showed the presence of very small amounts of sulfur.

The recent work of many investigators has demonstrated, however, that the amount of sulfur in plant materials as determined in the ash is, in most cases, entirely too low. There is a considerable loss of sulfur in the process of igniting, and the amount found in the ash, therefore, may be a very small part of that originally present in the plant tissues.

INVESTIGATIONS IN WISCONSIN.

Hart and Peterson have summarized the work of previous investigators and have themselves made analyses of numerous farm products for sulfur content, using the Osborne method. A comparison of their results with the earlier analyses of Wolff showed definitely that by the old method a large portion of the total sulfur in all plants was volatilized in the ignition, in some instances as much as

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2 Wolff's Aschen Analysen.