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CHEMICAL WORK IN CANADIAN AGRICULTURE.

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In bringing before you an epitome of the work accomplished for Canadian agriculture by the Chemical Division of the Experimental Farms during the past eight years, it may be advisable by way of introduction to say something of the important relationship that exists between Chemistry and Agriculture. And in order to make this relationship clear we may first consider briefly the character and scope of these two great sciences.

Chemistry busies itself with the study of the composition of all matter, solid, liquid and gaseous—living and inert—and endeavours to ascertain the laws that govern the changes which such matter is continually undergoing in the animal, the vegetable and the mineral kingdoms. Thus, chemistry has found out the nature of plant constituents and the source whence plants obtain them. It indicates the various food elements and the proportions in which plants take them from the atmosphere and from the soil respectively. Hence, not only soil exhaustion and diminished yields resulting from the practice of continually cropping without any concomitant return of soil plant food, become easily understood with the aid of chemistry; but the way for a more or less speedy return to fertility is indicated. In other words, by analysis and vegetation experiment (the latter practically a synthetical method) the