Fertilizer experimentation for determining the specific needs of any particular soil type or crop is one of the big problems before American agriculturists. It is not our purpose here to dwell upon the shortcomings of many efforts in this direction, but we must say in passing that the popular conception, even among agricultural specialists, that this problem can be solved by a soil, or a plant, or an ash analysis is a vain hope which has not and cannot be realized. Much can be learned from such work, but not the fertilizer requirement of the soil or plant to increase the yield, quality, appearance, or freedom from disease. Experimentation direct with soil and plant have thus far been the only means to give this answer and in this connection the soil has nearly always been ignored and the fertilizer combinations tested have always been so restricted that a full and complete answer to this complicated question is yet to be reached. There have been some excellent fertilizer experiments, especially the long-term systems at several of the experiment stations, but by far the greater number of tests made from time to time on this land or that land, this crop or that crop, the country over, have been so lacking in plan and in thoroughness that they have served only a temporary purpose. How-