

taining free citric acid, neutralizes this lime, and thus the difficulty is overcome. 11. The chemist of the Dominion Experimental Farm is of the opinion that a method by which the free lime is first got rid of or neutralized would be, to all concerned, a fair one to use in the analysis of basic slag. He also considers that the fineness of the Thomas' phosphate powder should be taken into account when estimating the fertilizing value of this material. Dr. Bernard Dyer has shown (Journal of Chemical Society, March, 1894), that the solvent action of the exudation of plant rootlets is practically equivalent to 1 per cent solution citric acid. It, therefore, seems that the process using such a solvent, after the neutralization of the free lime, would show the amount of phosphoric acid present in a more or less available condition. 12. The chemist of the Dominion Experimental Farm is aware of the details of the Wagner process. He has a knowledge of the chemical reputation of Professors Wagner, Maret and Delattre, and Dr. Augustus Voelcker & Sons. 13. He is not aware that the analysis quoted was sent to the Department of Inland Revenue, as stated. 14. These chemists are well and favourably known, and their work is accepted in Europe as reliable. 15. It must be supposed that they adopted the Wagner method for the reason already stated, viz., that it takes cognizance of the free lime present in the basic slag. 16. If by the methods said to be in use in the United States' is meant the neutral citrate of ammonia method, then it must be stated that owing to the presence of free lime in the basic slag, such a method is not strictly applicable when the percentage of phosphoric acid more or less available is sought. 17. Its largest producers are firms in England and Germany. 18. Yes, in Pottstown, Pa., U.S. 19. Basic slag or Thomas' phosphate powder is sold *per se*, i.e., unmixed with other fertilizers, and consequently does not contain any nitrogen or potash. 20 and 21. With regard to the analyses quoted, it is impossible to make a statement without further information respecting the same. 22. Yes, that is, when the percentage of a certain constituent falls below a stated standard, the material is classed as adulterated. 23. No. 24. The words quoted are in the clause, as stated. 25. The chemist of the Experimental Farms has no knowledge that the chief analyst of the Inland Revenue Department made the report, as stated in the question. 26. It could not, if the so-called available phosphoric acid were determined by the neutral citrate method. 27. The Fertilizers Act was framed many years ago, and he has no knowledge as to the reasons for the adoption of 8 per cent available phosphoric acid. 28. He is not aware of any reason, save that it allows the Thomas' phosphate powder to be analysed by the neutral citrate method. 29. Basic slag or Thomas' phosphate powder, when pure and finely ground,

Mr. FISHER.

has proven itself to be a useful source of phosphoric acid for crops, especially on peaty and sour soils and soils deficient in lime. 30. There is as yet, comparatively speaking, but little Canadian data as to the value of basic slag as compared with other phosphatic fertilizers, but it is certainly worthy of a trial, especially on such lands as mentioned in answer 29. Any proposed alteration of the Act that would have the effect of lowering the standard would, naturally, require very careful consideration. 31. A fair method of analysis of basic slag would, in the opinion of the chemist, be one that took into consideration the basicity of this fertilizer; in other words, one that dissolved out or neutralized the free lime before applying the solvent for the so-called available phosphoric acid. Dr. H. W. Wiley, chemist to the Department of Agriculture at Washington, D.C., U.S., says: 'A slag rich in calcium oxide (lime) would deport itself differently with a given ammonium citrate solution from one in which the lime had been chiefly converted into carbonate. If possible, therefore, all samples should be reduced to the same state of basicity before the action of any given solution is determined.' 32. There is no good reason why the importation or sale of basic slag should be prohibited. 33. Provided that the nature of the solvent used for dissolving out the so-called available phosphoric acid was clearly stated, there is apparently no reason why the adoption of the Wagner method or a modification thereof should lead to confusion. 34. The laboratories of the Experimental Farms are equipped to make analyses of all fertilizers. 35. As far as possible the analyses should be made by methods giving results in accordance with those obtained by agricultural practices. 36. The chemist believes the hon. Minister of Inland Revenue made the statement. He is of the opinion that a series of methods for the analysis of fertilizers, &c., approved of and issued with the authority of the Society of Public Analysts of England would be of great value to Canada. 37. He is not aware of any such protest. 38. He is not aware of any such steps having been taken. 39, 40, 41, 42, 43. (Evidently not for the chemist of the Experimental Farms to answer.) 44. Dr. J. Augustus Voelcker. 45, 46, 47. (Evidently not for the chemist of the Experimental Farms to answer.) 48. In determining the relative agricultural value of Thomas' phosphate powder it would be necessary to estimate the so-called available phosphoric acid by some method which took into account the basicity of the sample.

INSUFFICIENT POSTAGE ON LETTERS.

Mr. PRIOR asked :

Has the Postmaster General come to any reciprocal arrangement with the United States post office authorities in regard to the collection of