

*By Mr. Carpenter :*

Q. How many bushels to the acre would be a fair dressing of lime?—A. On some soils two tons of lime would give good returns though in some cases six and eight tons may be used. I should be in favour of applying the lime in small quantities, that is, not too much at once, and especially so in connection with heavy clay soils. I do not think it would be at all wise to dress land heavily with lime, but from time to time to have it present in some form or other in the fertilizers we use; not forgetting that it must be combined with other forms of fertilizers.

*By Mr. McMillan :*

Q. What fertilizers would you use in connection with lime?—A. Any fertilizers that would supply nitrogen, potash and phosphoric acid, e.g., barnyard manure, potash salt and superphosphates.

Q. My experience is that lime is a very dangerous constituent to mix with manure?—A. I do not mean to mix with the manure before applying the manure to the land. It would be very poor economy and bad method to mix sulphate of ammonia with wood ashes, but nevertheless we can apply both to the soils and get good results. It would be folly to mix lime with any manure rich in nitrogen, especially barnyard manure. When mixed in the soil no deleterious effect would follow.

*By Mr. Sanborn :*

Q. Do you use any lime on the Experimental Farm?—A. There is lime used, I believe, but I cannot give any results of the effect of lime on the soils at the Farm without reference to the report.

*By Mr. Carpenter :*

Q. Would you recommend sowing plaster on the land?—A. Yes; especially for clover and other leguminous plants. Clover, pease and beans all belong to one botanical family known as the leguminosæ, and we have found ground gypsum is particularly beneficial for the growth of such crops.

*By Mr. McMillan :*

Q. What soils would you apply gypsum to particularly?—A. All soils, in the first place, which are deficient in lime. That, of course, can be ascertained by analysis. When the percentage of lime falls below one per cent it is certain that an application of lime would be beneficial. Agricultural chemists are generally of the opinion that the lowest margin should be placed at one per cent.

Q. What makes me put this question is because my land is a heavy clay loam. We have used gypsum frequently and never derived any benefit, in comparison with a light soil from which great benefit is derived?—A. That is true of light soils. There is a more ready response to fertilizers in light soils. Heavy soils are exceedingly retentive. Probably lime on the heavy soil would give you better results than gypsum. Looking to the future and permanent results you should improve the tilth of heavy soils, and for this there is nothing better than a judicious application of lime which flocculates the clay and helps, in conjunction with the turning under of green manure, to bring about that mechanical condition from which the best results are obtained. As soon as the mechanical condition of your soil is improved you will get the benefit.

Q. There is one thing about getting this soil into fine tilth and that is to never plough it in a wet state?—A. That is quite true.

*By the Chairman :*

Q. What do you think of the use of salt on light soils?—A. The value of salt is a disputed question. It does not furnish any food which ordinary soils are deficient in. As you know, it contains sodium and chlorine and most of our soils contain quite