ON THE PREPARATION OF AMMONIUM CITRATE SOLUTION.

By Rudolf De Roode.

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MANY times in preparing a solution of ammonium citrate, I have observed a fact which seems to indicate that the preparation of a strictly neutral solution is an extremely simple matter. If some citric acid is treated with ten per cent. ammonia until dissolved, the solution becomes quite hot, and if it is now diluted to nearly the proper specific gravity, made decidedly alkaline with ammonia, and allowed to stand over night in an open dish, it will be found in the morning to be strictly neutral.

Being warm and in an open dish the excess of ammonia escapes completely, leaving it neutral. For the last four or five times which I have had occasion to prepare an ammonium citrate solution, I have observed this fact and each time have found it unnecessary to alter the neutrality in the least degree. I find it very convenient. I also find it advantageous to add a small quantity of salicylic acid to the solution (about one gr. for five liters of solution is sufficient). This is added before neutralization, so that the salicylic acid is also neutralized by the ammonia. The salicylic acid prevents the growth of fungus in the solution and it remains unchanged a long time. Some solution six months old when used in fertilizer work, gave results practically identical with those obtained by the use of a freshly prepared solution.

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THE DETERMINATION OF POTASH IN MANURES.

By W. E. Garrigues.

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THE following method for the determination of potash in fertilizers, has been in use in the writer's laboratory for some months, and in view of its ease, quickness, and comparative accuracy is believed to be a decided improvement on that of Lindo-Gladding.

It depends upon: 1. The ignition of the material with sul-