special fertilizer for garden plants and vegetables, is prepared at huge synthetic ammonia works at Leuna and Oppau, Germany. This substance has been registered in the Dominion for the past four years, but seems hardly to have emerged locally from the experimental stages.* A sample analysed in the Department of Agriculture's Chemical Laboratory yielded 53 per cent. of phosphoric acid and 21 per cent. of nitrogen.

Without going into the question of landed costs compared with other fertilizers produced or imported here, it may be mentioned that the use of diammonium phosphate as a general-purpose fertilizer is limited on account of its extraordinarily high concentration. Moreover, it tends to cake very hard if stored in a moist atmosphere for any length of time. The material in small airtight packets retailed under the name of Floraphos has a good mechanical condition, and from all accounts is very successfully employed in local home gardens.

OTHER CONCENTRATED FERTILIZERS CARRYING AMMONIUM PHOSPHATE.

Nitrophoska I.G.—This is the proprietary name given to a group of so-called complete fertilizers sold in several commercial grades. The manufacture of this novel type of concentrated compound was first accomplished by the producers of Diammonphos I.G.; briefly, it is the product of the direct combination of diammonium phosphate with ammonium nitrate and potassium chloride or sulphate.

The following represents the quality of the article imported for local consumption: Nitrogen soluble in water, 16·5 per cent.; phosphoric acid soluble in water, 15·2 per cent.; phosphoric acid insoluble in water, 1·3 per cent.; potash (K_2O) as chloride soluble in water, 20 per cent. Particulars of another grade formerly registered for sale may be seen in the table (opposite page). The analysis of EnPeKay, manufactured in similar fashion to Nitrophoska and registered for sale in the Dominion, is also shown in the table.

Almost all the Nitrophoska brought into the Dominion has been delivered for use in orchards, tobacco-plots, and market gardens; small quantities have also been used for top-dressing pastures and for field experiments. Considerable success has attended the latest efforts of the makers to surmount the caking difficulty by packing this and other crystalline concentrated fertilizers in granular form in special waterproof bags. If the mechanical condition is good, a cyclone seed-sower is reported capable of distributing light dressings uniformly on areas of land that are not available to horse-driven distributing machines.

Leunaphos I.G., another compounded chemical plant-food of German origin, is prepared by mixing 40 parts of diammonium phosphate with 60 parts of sulphate of ammonia, and contains 20 per cent. of nitrogen and 20 per cent. of phosphoric acid. Leunaphos has been sold here in experimental amounts only, and is registered for sale under our Fertilizers Act.

Potassium Ammonium Phosphate.—The recent development on a semi-commercial basis of this product, bearing nearly 80 per cent.

* References: (1) Bell, J. E., "Manuring of Early Potatoes: Experiments at Pukekohe in 1930." *N.Z. Journ. Agric.*, Vol. 42, 1931. (2) Cawthron Institute Pasture Research Publications Nos. 3 and 5.