

meal, 208; and for that receiving cotton-seed meal, 55. On reversing the rations in the cottonseed-tankage and cotton-seed pens, the egg production was reversed, showing that the difference in production depended on the ration. All pens received oyster shell, grit and charcoal.

*The seed corn situation in Kentucky:* W. D. VALLEAU, Kentucky Experiment Station. Investigations carried on at the Kentucky Experiment Station indicate that practically all seed corn in the corn belt is infected with *Fusarium moniliforme* Sheldon, and that this organism is capable of causing a root and stalk rot of corn. Infection on an ear appears not to be localized. Slightly infected seed may show no signs of infection, if grown only for a period of seven or eight days. Reddish discolorations developing in the seed coats during germination are an indication of infection. Seed studied was obtained from Kentucky, Georgia, Mississippi, Tennessee, Kansas, Arkansas, Missouri and Minnesota.

*Veterinary science:* W. W. DIMOCK, Kentucky Experiment Station. The author stressed the pressing necessity for research upon the nature and causes of diseases in live stock. He showed that the future of animal industry depended upon the control of animal diseases and that control can be secured only after the cause is known. He cited as an example the need for exact knowledge of the life histories of the internal parasites known as nematodes and showed how extensive are their ravages in horses. He believes that here, in their life history and in their effect on the host, is a field holding great promise to the investigator.

*Notes on the rapid analysis of magnesian limestone:* S. D. AVERITT, Kentucky Experiment Station. A differential method for the analysis of relatively pure magnesian limestone, without an actual determination of either Ca or Mg, which is quite rapid and sufficiently accurate for agricultural and most other purposes, is described. Determinations to be made are, A, neutralizing power of the limestone against  $N/2HCl$ , expressed as  $CaCO_3$ ; B, weight of insoluble matter +  $NH_4OH$  precipitate, from the same portion. Then

$$100 - B = \% CaCO_3 + MgCO_3,$$

and

$$5.35 (A - (100 - B)) = \% MgCO_3.$$

*Notes on light and light pressure:* C. C. KIPPLINGER, Mt. Union College, Alliance, Ohio. Some evidence is presented indicating that mass is not a universal property of light and certain photo-

chemical absorption experiments are described which show no measurable increase in weight of the reagents, following the action of light.

*Experiments with lime, acid phosphate and soil fungicides on land infested with root-rot disease of tobacco:* G. C. ROURT, Central Experimental Farm, Ottawa, Canada. Experiments are described looking to the possible control of the root-rot disease by applications of lime, acid phosphate, mixtures of lime and sulfur, dilute sulfuric acid, land plaster, copper sulfate, potassium polysulfid, gas lime, ferrous sulfate and formaldehyde. Acid phosphate seemed to be very beneficial in some instances, as did sulfuric acid, but the majority of the experiments gave negative results. The author concludes that the disease can not be controlled in this way.

*Plant growth:* G. D. BUCKNER, Kentucky Experiment Station. Comparative study was made of the translocation of the ash, phosphorus, calcium and magnesium from the cotyledons of germinating garden beans, *Phaseolus vulgaris*, when grown in distilled water culture and in garden soil. In the distilled water culture 55 per cent. of the original ash, 57 per cent. of the phosphorus, 25 per cent. of the calcium and 59 per cent. of the magnesium was translocated to the seedling, while, in the seedlings grown in garden soil, 91 per cent. of the ash, 92 per cent. of the phosphorus, 78 per cent. of the calcium and 83 per cent. of the magnesium was utilized by the seedling. The abnormal condition caused by the distilled water culture is shown and that less calcium than any of the other elements studied was removed from the cotyledons by the growing seedling is suggestive of its insoluble form in the cotyledons and its structural function.

ALFRED M. PETER,  
Secretary

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