

**Effect of Return of Crop Residues on Yield of Crops.** On the Lexington soil experiment field, in a rotation of corn, soybeans, wheat and clover, no increase of crops was obtained by the return of cornstalks, soybean and wheat straw to certain fertilized and unfertilized plots, the differences between residue and no residue plots being easily within the limits of experimental error. In the latter half of the period the residues seemed to depress the yield of corn.

During the last six years of the foregoing experiment, manure has been used in various ways in a rotation of corn, wheat and clover. Six tons of manure per acre increased the yield of corn an average of 5.6 bushels per acre; of wheat following corn, 4.8 bushels. The increase of clover following the wheat was small, being only 128 pounds per acre. On unmanured ground, the yields were: corn, 52.5 bushels; wheat, 24 bushels, and clover, 3,468 pounds. The yields of the untreated plots in the four-year rotation were practically the same as these.

**Japan Clover in Legume Mixtures.** In the spring of 1925, Japan clover was introduced into the clover and grass mixtures used on the experiment fields, using 5 pounds in a 15-pound mixture per acre. In case of failure of other clovers, it was thought that the Japan clover might reseed itself and produce a crop of hay at least on the better plots and also provide a legume for the check plots and unlimed plots where red and alsike clover make little or no growth. Altho the period of the trials has been short, some very promising results have been obtained. On account of drouth, the general mixture was a failure on most of the fields, with some Japan clover persisting but not making enough seed for a satisfactory stand the next year. On the Campbellsville field, where the general mixture was a failure, enough Japan clover persisted to form a good seed crop in the fall of 1925. A good stand appeared in 1926, giving the following hay yields which are averages of all comparable treatments: no treatment, 1,770 pounds; acid phosphate, 2,304 pounds; limestone and acid phosphate 3,600 pounds; rock phosphate, 3,724 pounds. The effect of rock