

4. Effects of antibiotics on growth of corn seedlings.

Preliminary experiments have been conducted to determine the effect of soil treatment with various antibiotics on the growth of corn seedlings.

Treatment consisted of daily watering with a solution of the specific antibiotic. Height measurements were taken every three days for a period of 15 days, and green and dry weights determined at the end of this period.

Treatments with 7 ppm of procaine penicillin G and streptomycin sulfate have resulted in no significant differences in plant height, green weight, or dry weight of the field corn single cross B8 X Oh51A. Solutions of these antibiotics were applied to both sterilized and unsterilized soil. Terramycin, applied in concentration of 5 ppm, has resulted in a slight decrease in plant height and green weight.

Further studies are being planned to investigate the effects of concentration and amount of antibiotic applied, condition of soil, treatment of seed with disinfectants, and seed stock used for treatment.