

---

# Effects of Soil, Soil Treatment, Seasonal Variation, and Variety on Yield and Composition of Corn Crops Grown on Kentucky Soil Fertility Plots

By M. E. Weeks and  
E. N. Fergus



Kentucky Agricultural Experiment Station  
University of Kentucky  
Lexington

## CONTENTS

	Page
EARLIER STUDIES IN KENTUCKY .....	4
1888 and 1889 Experiments .....	4
1928-1930 Experiments .....	8
1935 Experiments .....	11
PLAN OF PRESENT EXPERIMENTS .....	13
ENVIRONMENTAL CONDITIONS .....	14
Soil .....	14
Soil Treatment .....	15
Weather .....	15
VARIETAL DIFFERENCES IN YIELD .....	17
SEASONAL VARIATION IN YIELD .....	19
EFFECT OF SOIL AND SOIL TREATMENT ON YIELD .....	19
VARIETAL DIFFERENCES IN COMPOSITION .....	21
SEASONAL VARIATION IN COMPOSITION .....	21
EFFECT OF SOIL AND SOIL TREATMENT ON COMPOSITION .....	29
Ash .....	29
Silica .....	29
Calcium .....	31
Magnesium .....	32
Potassium .....	33
Phosphorus .....	34
Nitrogen .....	35
Iron and Manganese .....	36
Sulfur and Chlorine .....	36
Fat and Fiber .....	36
SUMMARY .....	50
LITERATURE CITED .....	52