East Central Kansas Experiment Field

Introduction

The research program at the Kansas State University East Central Kansas Experiment Field is designed to keep area crop producers abreast of technological advances in agronomic agriculture. Specific objectives are to (1) identify top performing varieties and hybrids of wheat, corn, soybean, and grain sorghum; (2) establish the amount of tillage and crop residue cover needed for optimum crop production; (3) evaluate weed and disease control practices using chemical, no chemical, and combination methods; and (4) test fertilizer rates, timing, and application methods for agronomic proficiency and environmental stewardship.

Soil Description

Soils on the field's 160 acres are Woodson. The terrain is upland and level to gently rolling. The surface soil is a dark gray-brown, somewhat poorly drained silt loam to silty clay loam over slowly permeable clay subsoil. The soil is derived from old alluvium. Water intake is slow, averaging less than 0.1 in./hour when saturated. This makes the soil susceptible to water runoff and sheet erosion.

2024 Weather Information

2024 weather was closer to average for the area than generally observed for many measurements but did have a longer frost-free period. Precipitation during 2024 was 2.36 inches under the average, with 4 months having rainfall over the average (Table 1). The summer of 2024 had 39 days exceeding 90°F, with one exceeding 100°F, which is average for exceeding 90°F the last 5 years. There were 11 days with low temperatures in the single digits, compared to an average of 10.4 days in the previous 5 years. The last freezing temperature in the spring was April 5 (average, April 18), and the first killing frost in the fall was October 16 (average, October 21). There were 194 frost-free days, greater than the long-term average of 185.

Drier soils and warmer temperatures until the last week of April allowed for timely corn planting, but rainfall delayed soybean and grain sorghum planting until the end of May. There was generally adequate moisture to get the crops through the growing season without too much stress. The corn and grain sorghum hybrid trials did well, averaging 184 and 126 bu/a, respectively. Soybean yields were very respectable after getting some rain in August, with the soybean variety trial averaging 54.7 bu/a.

Table 1. Precipitation at the East Central Kansas Experiment Field, Ottawa

Month	2024	30-year avg. 1991-2022	Month	2024	30-year avg.
	---------- in. ----------			---------- in. ----------	
January	2.14	1.22	July	3.62	3.75
February	0.95	1.57	August	3.16	4.63
March	1.39	2.29	September	3.64	4.05
April	5.82	3.79	October	0.82	3.08
May	4.39	5.82	November	4.64	2.39
June	6.45	5.55	December	0.47	1.17
			Annual total	37.49	39.85