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Kansas River Valley Experiment Field

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Kansas River Valley Experiment Field

Abstract

The Kansas River Valley Experiment Field was established to study management and effective use of irrigation resources for crop production in the Kansas River Valley (KRV). The Paramore Unit consists of 80 acres located 3.5 miles east of Silver Lake on U.S. Highway 24, then 1 mile south of Kiro, and 1.5 miles east on 17th street. The Rossville Unit consists of 80 acres located 1 mile east of Rossville or 4 miles west of Silver Lake on U.S. Highway 24.

Keywords

Kansas River Valley soil, Kansas River Valley weather, Kansas River Valley precipitation

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Kansas River Valley Experiment Field

Introduction

The Kansas River Valley Experiment Field was established to study management and effective use of irrigation resources for crop production in the Kansas River Valley (KRV). The Paramore Unit consists of 80 acres located 3.5 miles east of Silver Lake on U.S. Highway 24, then 1 mile south of Kiro, and 1.5 miles east on 17th street. The Rossville Unit consists of 80 acres located 1 mile east of Rossville or 4 miles west of Silver Lake on U.S. Highway 24.

Soil Description

Soils on the two fields are predominately in the Eudora series. Small areas of soils in the Sarpy, Kimo, and Wabash series also occur. Except for small areas of Kimo and Wabash soils in low areas, the soils are well drained. Soil texture varies from silt loam to sandy loam, and the soils are subject to wind erosion. Most soils are deep, but texture and surface drainage vary widely.

2015 Weather Information

While May was very cool and wet, the year was not as cold as the previous year. The frost-free season was 204 days at both units (average = 173 days), and there were 19 and 18 days in single digit temperatures at Paramore and Rossville, respectively, compared to 30 and 31 days in 2014, respectively. The last spring freeze was April 4 (average = April 21), and the first fall freeze was October 25 (average = October 11). There were 43 and 35 days above 90°F at Paramore and Rossville, respectively, and none of those days were above 100°F. Precipitation was above normal at both fields for the year (Table 1) and was above average for all the months during the growing season except April. Irrigation requirements were less than 6 inches for the corn and 1 inch for the soybeans. The corn performance trials averaged 216 bu/a for the irrigated and 193 for the dryland. The soybean performance trials averaged 67 bu/a for the irrigated and 80 for the dryland. The cool/wet May was the major yield-limiting factor in the irrigated corn, and Sudden Death Syndrome (SDS) was not as severe as in previous years in the irrigated soybeans at KRV.

Table 1. Precipitation at the Kansas River Valley Experiment Field

Month	Rossville Unit		Paramore Unit	
	2015	30-year avg.	2015	30-year avg.
	----- in. -----		----- in. -----	
January	1.13	3.18	0.87	3.08
February	0.70	4.88	0.45	4.45
March	0.76	5.46	0.59	5.54
April	1.60	3.67	2.28	3.59
May	10.28	3.44	10.31	3.89
June	6.89	4.64	4.40	3.81
July	9.50	2.97	6.07	3.06
August	3.30	1.90	2.72	1.93
September	3.90	1.24	5.52	1.43
October	0.73	0.95	0.78	0.95
November	4.20	0.89	3.54	1.04
December	2.08	2.42	2.27	2.46
Total	45.07	35.64	39.80	35.23