

INVESTIGATION OF SPRING RYE CULTIVATION POTENTIAL IN THE SOUTHERN GREAT PLAIN

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The increasing frequency and severity of drought periods pose a significant challenge to crop production, particularly in the Southern Great Plain region, as a consequence of climate change. The aim of our research was to investigate the potential of spring rye as an alternative crop in this region, with a particular focus on the challenges posed by climate change. The selection of the ‘SM Stefano’ spring rye variety, bred in Poland, was based not only on its novelty but also on its outstanding adaptability and low input requirements. The field experiment was conducted in 2023 and 2024, with trials set up at three locations in the first year and two locations in the second year. Prior to harvest, plant samples were collected from one meter per replication and subjected to laboratory analysis. This publication examines the effects of different growing sites and years on the yield and yield components of spring rye. The results were processed using statistical methods. Our findings indicate that under certain conditions, spring rye can serve as a viable alternative crop in the region and may even exceed the national average yield of winter rye. Due to its short growing period and low input requirements, it can play a crucial role in sustainable farming and crop diversification.