

# **Effect of Seed Storage on Germination of Wheat (*Triticum aestivum* L.), Corn (*Zea mays*), and Soybean (*Glycine max*)**

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Seed germination is an essential stage in the plant cycle for growth and development, resulting in the yield's quantity and quality. It is a complex process that is influenced by various biotic and abiotic factors. The storage of seeds leading up to planting is an essential management practice of crop production, as it directly impacts seed quality and viability. To understand how storage conditions, affect the germination success of wheat (*Triticum aestivum* L.), corn (*Zea mays*), and soybean (*Glycine max*), this study was enacted. The study was completed as a randomized complete block design under controlled conditions and was conducted in the laboratory of the Hutson School of Agriculture. Seed germination for the three staple crops was tested using a warm germination test. Three storage conditions were investigated for each crop: room temperature (68-70°F), elevated humidity/heat (88-100°F with 20 to 40% relative humidity), and cool storage (32°F). Results from this study indicate that storage conditions are important indicators of germination success. Also, variability exists between seed types and the effect of stress during storage. There were significant differences found in the germination of wheat and corn in all the storage conditions while there was no significant difference in the germination of soybean in all the storage conditions. The statistical data were analyzed using ANOVA and t-test in Microsoft (MS) Excel.

**Keywords:** Seed quality, Seed viability, Warm germination test