EFFECTS OF SOIL MOISTURE STRESS ON GERMINATION OF 'HOMESTEAD SELECTION' PAWPAW (CARICA PAPAYAL.) SEEDS

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The effects of soil moisture on the germination of 'Homestead Selection' pawpaw seeds were investigated under six moisture regimes created by withholding water for various durations. The objective was to determine the critical soil water potential for germination of pawpaw seeds. Soil moisture stress delayed and retarded seed germination. It also decreased seedling size and seedling survival. The critical soil water potential for germination decreased from -0.01MPa during the exponential phase to -0.20MPa during the lag phase. These water potentials were created by withholding water for 3 and 5 days respectively. Although water use efficiency was highest in the soil water potential regime of -0.20MPa obtained by withholding water for 5 days, -0.01MPa was considered as critical soil water potential for germination of 'Homestead Selection' pawpaw seeds since lower soil water potentials delayed and retarded seed germination.

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