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## 264. EFFECTS OF APPLYING VARIOUS LEVELS OF NITROGEN ON MOTHER PLANTS ON THE RESISTANCE TO SALINITY STRESS IN ACHIEVED SEEDS IN TRITICUM AESTIVUM L. CV. GASKOJEN AT GERMINATION PERIOD.

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In order to investigate the effects of nitrogen rates that applied on mother plants, on the germination and early seedling growth of produced seeds of wheat vc. Gascogen in the salinity stress, both field and laboratory experiments were carried out. Field experiment was conducted at Complete Randomized Block Design with four replicates and four levels of 0, 120, 240 and 360 kg/ha urea. Experimental design at laboratory was two factors factorial (4×5) arranged in a Completely Randomized Design with 4 replicates of 25 seeds. First factor consists levels of salinity (0, 121.5, 243, 364.5 and 486 mMolal NaCl that gives 0, -0.4, -0.8, -1.2, -1.6 MPa water potential respectively) and the second one levels of nitrogen on mother plants. Germination rate, germination percentages, root and shoot length and dry weight, root number and abnormal seedlings were studied. Significantly effect of salinity stress and nitrogen was observed. Salinity reduced significantly percentage and rate of germination, root and shoot length and dry weights. The effect of nitrogen rates on the germination characteristics in salinity was negative, to some extent. Interaction results showed that, the effects of nitrogen rates at low salinity levels was positive or ineffective, while at high levels of salinity the seeds produced at high nitrogen levels on the mother plants were more sensitive to salinity stress.

Keywords: Germination, Nitrogen, Salinity, Wheat.

## 265. STRUCTURAL EFFECTS OF STORAGE IN GERMINATED SEEDS OF *Sesbania virgata* (CAV.) PERS.

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Germinated seeds of *Sesbania virgata* (Fabaceae) with 1 mm long protruded radicles were able to resume growth and develop into normal seedlings (91%), after being dried and rehydrated. However, when dried, stored for 90 days at 5 °C and rehydrated, the survival rate dropped to 75%. The aim of this study was to analyze the effects of storage of germinated seeds on the ultrastructure of radicle cells in germinated seeds dried and stored for 90 days, and in fresh (non-stored) germinated seeds. In both treatments only germinated seeds with 1 mm long protruded radicles were used. The analyses were done through Scanning Electron Microscopy (SEM) in four to six excised radicles per treatment. In both treatments it was possible to observe multifaceted cells from the starchy parenchyma, with periclinal diameter greater than the anticlinal, thin primary wall, without intercellular spaces. The general aspect of the cells of the non-stored radicles was not different from the stored ones, which means that the ultrastructural characteristics were conserved, with no ruptures or cytoplasmic leakage. Thus, the difference in the survival rates following rehydration of stored and non-stored seeds cannot be explained by some ultrastructural damage.

Keywords: SEM, desiccation tolerance, radicle ultrastructure
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