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412. EFFECTS OF SEED PRIMING BY BIOFERTILIZERS ON THE GROWTH CHARACTERISTICS OF THREE WHEAT CULTIVARS AT THE EMERGENCE PERIOD UNDER GREENHOUSE CONDITION.

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In order to investigate the effects of plant growth promoting bacteria on the growth characteristic of wheat, an experiment was conducted at the Research Greenhouse, Faculty of Agriculture, Ferdowsi University of Mashhad, Iran, in year 2009. Experimental design was two factors factorial (3×6) arranged in a completely randomized design with using 3 replications. The first factor consist three cultivars of wheat (Chamran, Sayonez and Gaskogen) and the seconds one was biofertilizer types (phosphate suloblizing bacteria, biophosphore, nitroxin, nitragin, mixed and control). Results showed that the effects of biofertilizers were significant about of leaf area, root volume, shoot and root length. Moreover the difference between cultivars about of emergence rate, leaf area, leaf number per plant, leaf dry weight, total dry weight and leaf to root dry weight, was significant. The highest and the lowest of emergence rate was observed at Gascogen (0.8 seed per 12 hour) and chamran (0.56 seed per 12 hour) cultivars, respectively. The interaction effects were significant about all of the characteristics (emergence rate, leaf area, specific leaf area, leaf number per plant, leaf dry weight, root dry weight, total dry weight, leaf to root dry weight, shoot length, root length, root to shoot length, mean leaf length and root volume) unless emergence percentage. Overall, our result indicated that biofertilizers had a useful and effective function on the improvement of growth characteristics of wheat.

Keywords: Nitroxin, Nitragin, Biophosphore, Plant growth promoting bacteria

413. PHYSIOLOGICAL QUALITY OF MANDACARU (*Cereus jamacaru)* SEEDS STORED IN DIFFERENT ENVIRONMENTS AND PACKAGES.

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The cactus presents high economic value due to it utilization as an ornamental, forage, medicinal and food. Seed storage can be conducted in environmental conditions that allow the maintenance of physiological potential without the loss of vigor. In this work we aimed to evaluate the physiological quality of mandacaru seeds stored in two different environments and three packages during six months. The treatments were applied in a split-plot arrangement, in a completely randomized design with four repetitions of 50 seeds each. The plots received a combination of two environments of storage (cold chamber and natural environment) and three packages (paper bag, raffia bag and glass), while the subplots consisted of the periods of storage (0, 2, 4 and 6 months). After each stored period, we evaluated the percentage, velocity index and average time of germination. The cold chamber environment is the most suitable for the storage of seeds of mandacaru, during the six month period, when compared with natural environments. In this environment the use of packaging: paper bag, plastic bag or glass, are effective in maintaining the physiological quality. It was observed that the mandacaru seeds stored in paper bag were stronger than those packed in other containers in the natural environment, maintaining the germination (88%) and speed (6.4) high, with a shorter average germination (7.1 days) until the end of the experiment. In natural environment the use of permeable packaging, paper bag, is the ideal storage condition for the maintenance of viability of seeds of mandacaru.

Keywords: *Cereus jamacaru*, germination, physiological potencial, viability.
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