

**P-17 (120)****SEED DORMANCY-BREAKING AND GERMINATION REQUIREMENTS OF ORNITHOGALUM CUSPIDATUM**

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Bulbous medicinal plants are part of the rich biodiversity of indigenous plants in Iran with horticultural potential. The genus *Ornithogalum* L. belongs to the subclass Monocotyledonae and was originally classified in Liliaceae, but was later transferred to Hyacinthaceae. *O. cuspidatum* is an Iranian species which its apoptotic effect on Fibrosarcoma cells has been previously studied. *Ornithogalum* spp. seeds have morphophysiological dormancy with underdeveloped embryos. The objective of this study was to determine the effects of after-ripening storage time, KNO<sub>3</sub> and stratification treatment on the germination of *O.cuspidatum* seeds. After seed collection the 0, 30 and 60-day-old seeds were soaked in 0%, 1%, 2% (w/v) KNO<sub>3</sub> for 12, 24, 48 h. Also for stratification treatment, the 0, 30 and 60-day-old seeds were stored in humid and dark conditions at 4°C in a laboratory refrigerator for 0, 1, 2 and 3 months. Our results indicate that the seeds of *O. cuspidatum*, responded positively to the after-ripening, KNO<sub>3</sub> and stratification treatment with improved germination percentage and mean germination time. The highest germination percentage achieved in 60 days after-ripening storage in combination with 90 days stratification (99.33%). Our results indicate that this treatment drives to lowest mean germination time (1.45 day).

**Keywords:** *Ornithogalum cuspidatum*, dormancy, seed germination, after-ripening, KNO<sub>3</sub>, stratification