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**EFFECT OF PEG-INDUCED DROUGHT STRESS ON SEED  
GERMINATION OF DIFFERENT WILD POPULATIONS OF TWO  
ACHILLEA SPECIES**

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*Achillea millefolium* and *A. fillipendulina* are important medicinal species that are grown in a variety of climates in Iran. Different germination characteristics compared among different wild populations of two species to determine the superior populations in each species under drought stress. Water potential between 0 and -0.9 MPa were obtained using polyethylene glycol 6000 (PEG-6000) solutions. Results indicated that in both species a significant reduction was obtained on the most germination parameters including: percent and rate of germination, vigor index, dry weight, radicle length, radicle to shoot ratio and seedling length. The percentage and rate of germination, shoot length and radicle to shoot ratio were significant among different populations. These results indicated a strong genetic potential for drought tolerance during germination within each species. Population 17255 from *A. millefolium* and population 18043 from *A. fillipendulina* showed the highest amount of germination characteristics, which could be suggested for arid and semi-arid areas. Overall, Population 17255 from *A. millefolium* and population 18043 from *A. fillipendulina* were able to express greater drought tolerance and consequently could be used as a valuable resource for breeding programs.

**References**

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