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## **A COMPARATIVE STUDY OF THE GERMINATION CHARACTERISTICS OF WILD FLOWER SEEDS IN COMMERCIAL SEED PRODUCTION**

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The demand for, and production of, wild flower seeds has increased in recent years, but there has been little attempt to test germination and breaking dormancy of cultivated seeds of these species. Therefore, the germination of seeds from sixty species of cultivated wild flowers produced in Scotland was examined for two years of seed production (2001 and 2002). The seed moisture content (MC) and laboratory germination were determined and four methods of breaking dormancy: prechilling, scarification, scarification with high temperature and gibberellic acid (GA<sub>3</sub>) were used depending on the species. The seed MCs ranged from 4 to 12% and were higher in most species in 2002 when seed had been stored at a higher relative humidity (45% compared with 35% in 2001). The total germination and percentage normal seedlings of species ranged between 0-100% (2001) and 0-91% (2002)

although overall the number of normal seedlings was higher in 2002. Scarification increased germination in some Fabaceae species, whilst GA<sub>3</sub> increased germination in other species. Seed surface sterilisation, to eliminate pathogens from the seed surface, and prehydration treatments, to eliminate imbibition damage during germination, also improved the germination in some cases. Individual species differed in their germination and dormancy in the two years of production. These differences are discussed in relation to differing weather conditions, methods and timing of harvesting, methods of seed cleaning and seed storage conditions.