

**Title** Postharvest storage and handling of *Ranunculus asiaticus* dried tuberous roots  
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### **Abstract**

*Ranunculus asiaticus* is an ornamental flowering plant with potential to be more widely used by the floriculture industry. Unfortunately, growers are faced with many challenges when producing these plants from their dry tuberous roots following storage; including poor sprouting, non-uniform growth, disease issues upon planting, as well as inconsistent cultural recommendations and lack of proper storage and handling protocols. Several experiments were conducted to determine the influence of temperature and relative humidity during storage on growth and quality of *R. asiaticus* plants. From our experiments it can be concluded that *R. asiaticus* tubers store best under low relative humidity and cool temperatures (above freezing). Also important from a storage perspective, unlike other flower bulbs, we show that *R. asiaticus* tuberous roots are not susceptible to ethylene damage while in the dry state. Prior to planting, tubers should be submerged in room-temperature water at around 20 °C, for 24 h, and then provided a fungicide treatment. We have shown that proper hydration temperature for *R. asiaticus* tuberous roots is critical for optimal growth. By following the protocol generated from our experiments, many of the production challenges associated with *R. asiaticus* tuberous roots may be avoided.