

**Title** Effect of temperature and gas composition on quality of garlic bulbs  
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#### **Abstract**

In order to supply high quality garlic cloves (*Allium sativum* L.), effects of storage temperature and gas composition on quality changes of the bulbs were examined. In general, respiration rate of fresh produce is increased with higher temperature, but garlic bulbs showed higher respiration rate during storage at 5 and 10°C than that at 25°C. Promotion of elongation of sprouts and roots at 5 and 10°C were confirmed. Therefore, energy required for elongation as a result of breakage of dormancy would enhance the respiration rate. On the other hand, the higher the temperature, the greater the respiration rates of garlic bulbs pre-stored at -2°C after harvest. Low oxygen content (3% of oxygen) effectively inhibited respiration rates and elongation of sprouts and roots of the bulbs.