

Title            Low-temperature storage of garlic for spring planting.  
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Citation        HortScience Vol: 39 (2004); 571-573

### **Abstract**

Garlic (*Allium sativum*) bulbs harvested in the summer are often stored at room temperature between the time of harvest and curing and either consumption or planting in autumn. The quality of these bulbs usually deteriorates dramatically by 6 months after harvest. Bulbs of garlic cultivars California Early, California Late, Chinese, Spanish Red, Inchelium Red, Silverwhite, Chesnok Red, German Porcelain, GSF65, Polish Hardneck, Romanian Red, Siberian, Spanish Roja and Zemo were placed at -3, 0 or 5 deg C for approx equal to 6 months to determine if bulbs could be maintained for spring planting. Response to cold-storage conditions was cultivar dependent. We found that most cured garlic bulbs stored at -3 deg C for 6 months successfully formed cloves within bulbs when planted in the following spring. Unlike the high-quality bulbs formed after -3 deg C storage, bulbs stored at 0 deg C for 6 months often formed side cloves and had loose wrappers. In another study, garlic bulbs stored at 0, 5, 15 or 23deg C exhibited a higher rate of shoot elongation within the cloves during storage than bulbs stored at -3 deg C. After 9 months of -3 deg C storage, bulbs then held at room temperature retained the quality characteristics of freshly harvested garlic (firmness, taste) for at least 2 months. These studies suggest that cured garlic can be spring planted and consumed year-round when bulbs are stored at -3 deg C.