

#### Abstract:

Witloof chicory is grown as a biennial. Chicory roots are harvested in autumn and then stored in cooling rooms. After storage the chicory roots are usually forced hydroponically to produce chicons. The quality of the chicons depends to a large extent on the storage conditions of the roots. Chicory roots were stored at -1°C for 8 months. The roots were stored in different CA conditions for 1, 4 and 7 months. The CA storage was followed by a period of respectively 7, 4 and 1 month to complete the 8 months storage. After storage chicory heads were produced. Four months storage in moderate CO<sub>2</sub> followed by storage of 4 months in air resulted in the best yield and quality at harvest. The higher the CO<sub>2</sub> concentration in storage, the shorter the storage time in CA to achieve the same results. High CO<sub>2</sub> concentration during the storage of the roots gave the best quality with respect to red discoloration. Long storage in high CO<sub>2</sub> conditions resulted in the least amount of red discoloration. However, extremely high CO<sub>2</sub> concentrations resulted in significantly more chicory root decay than the other storage conditions and should therefore be avoided.