

Abstract

During the years 1983-85 different quality parameters and factors affecting the postharvest quality of sweet cherries and plums were investigated. Size (weight and diameter) and soluble solid contents were measured for several sweet cherry cultivars forming the basis of a quality grading of the cultivars. Some sweet cherry cultivars were graded according to resistance both to cracking (Verner/Christensen method) and to discolouration. The effect of preharvest fungicide sprays on grey mould of sweet cherries was investigated showing highly variable results. The benzimidazole fungicides were inefficient in controlling grey mould due to the presence of benzimidazole-tolerant strains of this fungus in the actual orchard. Fungicides from the dicarboximide group controlled grey mould satisfactorily. Respiration measurements (carbon dioxide and ethylene evolution) of fruits during growth and ripening showed that sweet cherries were typical non-climacteric fruits, while plums had typical climacteric respiration patterns. In storage experiments the deterioration caused by spoilage fungi proved to be the main problem both in sweet cherry and plum storage. The storage temperatures were the main factors affecting the deterioration rate and the postharvest losses. A storage temperature close to 0°C were recommended for sweet cherries, 3-4°C for plums. Respiration measurements during storage showed that the respiration rate increased significantly with increasing storage temperature. A method of estimating the storage potential of sweet cherries and plums based on respiration measurements was introduced and discussed.