

Abstract

1-MCP (0.14%) has been tested in I.V. Michurin Research Institute of Horticulture since 2003 for prolongation of pear fruit storage. The pears of a summer cultivar Avgustovskaya rosa and an autumn cultivar Pamyati Ykovleva were treated with 1-MCP shortly after harvesting and stored in air (t- 0..-1°C) and in CA (t- 0..-1°C, O₂-2-3%, CO₂-2-3%). The untreated fruit was used as control. Fruit was assessed for commercial quality in 90-140 days of storage. 1-MCP treatments resulted in a reduction of the development of several physiological disorders (senescence browning, senescence breakdown, internal browning of tissue, core browning, breakdown of tissue caused by mechanical injuries) and fungous rot during storage in air and in CA. The treated fruit had more prolonged shelf-life compared with the control. Therefore ethylene inhibitor reliably protected pear fruit from premature ripening and senescence during storage and shelf-life.