

Title Packaging of farm fresh produce: the PerfoTec EMAP system
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Citation ISHS Acta Horticulturae 804:135-138. 2008.
Keywords modified atmosphere packaging; laser microperforation; produce packers

Abstract

In October 2004 the Dutch company PerfoTec developed a special laser perforation system for EMAP of vegetables and fruits on packaging machines, the Online Laser Perforation System. This concept is based on the principle that the knowledge about EMAP technology and the micro perforation process is important for the packers to maintain good quality of their products. EMAP technology should not and cannot be the responsibility of the flexible packaging industry. The PerfoTec System allows packers to perforate the film themselves during the packing process. In this way they are able to make the best possible film permeability for the actual respiration of each product and the temperature regime in the trading chain of their customers, throughout all seasons. The actual respiration of vegetables and fruits depends on many variables, like product temperature, product, variety, growing circumstances, Harvest damage, quantity per pack, season, soil and fertilization, storage duration, etc. With the PerfoTec System, it is possible to accurately fine tune the permeability of the packaging film in balance with all these variables. Packaging film with micro perforations can attain a wide range of very precise gas transmission rates. The diameter of micro perforations generally ranges from 40 to 200 micron and by altering the size and number of the micro perforations, the packers are able to alter the gas permeability through a package to meet well-defined product requirements, for example for export or retail chains. The best way to implement EMAP technology for fresh produce in Asia in a fast and successful way is to micro perforate the packaging film during the packaging process, while in the mean time the cool chain is developed by the packers together with their (retail-) customers and trading partners.