

Title Commercial applications of “Shemer” for the control of pre- and post-harvest diseases

Author D. Blachinsky, J. Antonov, A. Bercovitz, B. El-ad, K. Feldman, A. Husid, M. Lazare and M. Keren-Zur.

Citation Journal of Plant Pathology Volume 90 (2, Supplement) August 2008, Book of Abstract, 9th International Congress of Plant Pathology, August 24-29, 2008 Torino, Italy, . 507 pages.

Keywords biofungicide; yeast; postharvest disease

Abstract

“Shemer” is a biofungicide based on the yeast *Metschnikowia fructicola*. Its mode of action is believed to be mainly through competition. The commercial product is stable under ambient storage, and can be applied by spray or drench application in the field or in packing houses. “Shemer” treatments in commercial packing houses significantly reduced the development of *Penicillium digitatum* on oranges, and of *Rhizopus stolonifer* and *Fusarium* sp. on sweet potatoes. Similarly, significant reduction was achieved in the development of *R. stolonifer* on peaches, *Botrytis cinerea* on pepper and *Sclerotinia sclerotium* on carrots in pilot-scale tests. Application of “Shemer” in the field also proved useful in protecting fruits after harvest, where post-harvest treatments are not practiced. Weekly “Shemer” application on strawberry reduced rot development in the field and also the incidence of grey mould (*B. cinerea*) and Rhizopus fruit rot (*R. stolonifer*) during storage. In table grapes, application of “Shemer” 24 h before harvest, significantly reduced the number of decayed berries caused by *B. cinerea*, *R. stolonifer* or *Aspergillus* after storage. In most of the trials, the level of decay control was comparable to that of the most common chemical fungicides currently used by the industry. These results demonstrate the suitability of “Shemer” to a wide range of crop-pathogen, agricultural practices and climatic conditions.