

O_{EED8}

Black spots caused by *Rhexocercosporidium carotae* on cold stored carrots in Sweden

Wikström, M.¹; Ragnarsson, S.¹; Jönsson, B.¹; Köhl, J.²; Arvidsson, A.K.³; Burgers, S.L.G.E.²; Groenenboom-de Haas, B.H.²; Lombaers-van der Plas, C.H.²

¹Swedish Board of Agriculture, Plant Protection Centre, P.O. Box 12, S- 230 53, Alnarp, Sweden

²Plant Research International, P.O. Box 16, NL- 6700 AA Wageningen, The Netherlands,
e-mail: jurgen.kohl@wur.nl

³Findus R&D AB, P.O. Box 530, S-267 25 Bjuv, Sweden

Black spots on carrots are a major problem in cold stored carrots leading to significant postharvest losses. Black spot symptoms can be caused by different pathogens. In Sweden, *Rhexocercosporidium carotae* (syn. *Acrothecium carotae*) was identified as the most important storage pathogen of carrots. The pathogen was first described in Norway and recently has been reported also from Sweden, The Netherlands, Canada, and Denmark. Knowledge on *R. carotae* is very limited and important information is lacking. Therefore, a joint Swedish-Dutch project started in 2006 with the goal to gain more information about the biology of the pathogen and to develop a forecasting method for the disease. A TaqMan-PCR for detection and quantification of the pathogen in field samples has been developed and applied to identify inoculum sources of the pathogen in the field. Inventories of carrot lots have been done during 3 years to identify pre- and postharvest factors which favour disease development. Multiple regression analysis of data from the inventories of Swedish carrot crops and the stored lots indicated that damage by *R. carotae* may be linked to harvest conditions resulting in different degrees of surface damage of the carrots. Also the presence of umbelliferous plants in the neighbourhood of the crop seemed to increase the prevalence of the disease, while clayish calcium-rich soils on the other hand might suppress the disease.

Kastelein, P.; Stilma, E.; Elderson, J.; Köhl, J. 2007. Occurrence of *Rhexocercosporidium carotae* on cold stored carrot roots in the Netherlands. *European Journal of Plant Pathology*, 117: 293-305.