



Redefining Pest Management - a Holistic Approach

Practice Abstract N° 20

BMPs for *Alternaria* leaf blight in carrots

Alternaria leaf blight caused by the fungus *Alternaria dauci* is the major foliage disease of carrots in most areas of production, responsible for important economic losses worldwide. *A. dauci* causes severe defoliation in carrot crops, especially under conditions of high moisture and temperature. While foliar symptoms are the most common, *A. dauci* can also infect stems, inflorescences and seeds developing in umbels. Foliar symptoms appear as small, green-brown lesions. The lesions enlarge and infected tissue becomes dark brown to black. OPTIMA project developed best management practices for controlling this disease, after evaluating the efficacy of novel plant protection products. The control strategy is based on the use of highly resistant varieties and a mixing route including the bio-PPPs/PRI's Sonata® (*Bacillus pumilus*), Heliosoufre® (Sulphur+co-formulant based on derivatives Terpenes from pine), LBG-01F34® (Potassium phosphonates) alternated with the new generation PPPs Luna Sensation® (fluopyram+trifloxystrobin) and then Dagonis® (fluxapyroxad + difenoconazole). It is recommended to use the normal suggested dose of each PPP to prevent the development of *A. dauci* fungicide resistant isolates and to avoid the curative use of bio-PPPs/PRI's under high disease pressure. Other practical recommendations are the use of commercial treated seeds, no excess of nitrogen fertilization and avoid leaving crop residues in the field. It is highly recommended the use of disease forecast models to optimize PPPs use and application timing. In organic farming, it is recommended to combine multiple doses of the bio-PPPs/PRI's Sonata®, Heliosoufre®, LBG-01F34® (Potassium phosphonates) and varieties offering intermediate level of resistance or use varieties with a high level of resistance only.



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