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## **STEMPHYLIUM, A NEW FOLIAR DISEASE IN SUGAR BEET**

**Stemphylium, une nouvelle maladie foliaire des betteraves sucrières /  
Stemphylium, eine neue Blattkrankheit in Zuckerrüben**

### **ABSTRACT**

In the summer of 2007, yellow leaf spots were observed for the first time in sugar beet in the Netherlands. Since then, every year infestation of fields were reported and samples were sent to the diagnostic service of the IRS (Institute of Sugar beet Research, Bergen op Zoom, NL). In the beginning (2007) yellow spots were mainly reported from the North eastern sandy soils. In the following years, a fast spread over all other regions of the Netherlands was reported.

The infestation appears in July-August on the leaves of sugar beet. The first infestation is characterised by small, irregular, yellow spots on the leaves. Subsequently the yellow spots necrotise from inside out into a brownish tissue. The spots spread over the leaves and infest the whole plant. Heavily infested leaves die and on the newly formed leaves new yellow spots appear. Due to the loss of leaves the canopy falls open and in case of a severe infestation the soil becomes visible in August-September. Research was conducted to identify the causal agent having either a viral, bacterial, fungal or nutrient deficient nature.

The causal agent of this yellow spots being the fungus stemphylium was confirmed by research conducted by the IRS. In field trials for the efficacy of fungicides a sugar yield loss up to 42% (financial yield loss 51%) was found. Beside the damage done by stemphylium, from those trial fields, it became clear that it is hard to control stemphylium with the common fungicides registered for sugar beet in the Netherlands and that fungicides with active ingredients belonging to the same class differ in efficacy.

The aim of this contribution is to describe the emergence of the yellow spot disease in sugar beet production in the Netherlands, research on and the identification of the causal agent stemphylium, the symptoms and the opportunities of control.

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