Influence of temperature on hatch of beet cyst nematodes (*Heterodera schachtii* and *Heterodera betae*)

Bart A. B. Vandenbossche¹, Björn Niere¹, Stefan Vidal²
¹Julius Kühn-Institute, Institute for National and International Plant Health
²Georg-August-University Göttingen, Department for Crop Sciences, Section Agricultural Entomology
bart.vandenbossche@jki.bund.de

Temperature influences the life cycle biology of nematodes. The active part of the life cycle of cyst nematodes starts when the second stage juvenile hatches from the egg and leaves the cyst. Cyst nematodes exhibit considerable variation in temperature preferences for hatching. The aim of this study was to investigate the differences in minimal and optimal hatch temperatures of the beet cyst nematode species *Heterodera schachtii* and *H. betae*. Hatching dynamics were observed at 6 temperatures (5, 10, 15, 20, 25 and 30 °C) during a period of 6 weeks. Results showed that *H. schachtii* hatched between 10 and 30 °C with the highest hatching rates at 25 and 30 °C. Hatching of *H. betae* only started from 15 °C onwards and highest hatching rates were attained at 25 °C. *H. betae* still hatched at 30 °C, but hatching rates were lower than for *H. schachtii*. The results suggest different temperature preferences for hatch for both beet cyst nematode species.