

Morfometrična in molekularna analiza krompirjevih ogorčic iz Srbije

Morphometric and molecular analysis of potato cyst nematodes from Serbia

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Izvleček

Krompirjevi ogorčici (PCN) *Globoderarostochiensis* in *G. pallidaspadata* med glavne škodljivce krompirja v zmernem pasu. Njun karantenski status ureja EU direktiva 2007/33/EC. Morfološke značilnosti teh dveh sestrskih vrst se lahko prekrivajo, natančna identifikacija pa je ključna za fitosanitarni sistem v vseh državah vključno s Srbijo. *G. rostochiensis* in *G. pallida* sta prisotni v Srbiji od l. 1999 oz. 2005. Obe vrsti sta bili najdeni v vzorcih zemlje z njiv semenskega krompirja na treh območjih (Zlatibor, Mačva in Moravica) med uradnim nadzorom. Od l. 2009 na teh območjih dalje poteka program pregledovanja njiv jedilnega krompirja na prisotnost PCN v skladu s fitosanitarnimi ukrepi za preprečevanje njihovega nadaljnega širjenja. V obdobju 2009-2011 smo populacije PCN najdene v vzorcih zemlje z njiv jedilnega krompirja v Srbiji identificirali glede na morfološke značilnosti, identifikacijo pa smo potrdili z metodo PCR v realnem času. Morfološko smo analizirali pet populacij PCN z lokacij Gojna Gora (območje Moravica), Tabanovići in Ponikve (območje Zlatibor). Morfometrična analiza desetih cist in desetih ličink druge stopnje je potrdila prisotnost vrste *G. rostochiensis* na teh območjih. Vrednosti meritev morfoloških značilnosti teh različnih populacij so si zelo podobne. Še najbolj raznolike so meritve za naslednje značilnosti: dolžina telesa in hialini del repa ličink druge stopnje ter razdalja med vulvnim obročem in anusom pri cistah. Analiza vseh teh vzorcev z metodo PCR v realnem času je potrdila identifikacijo *G. rostochiensis*.

Abstract

Potato cyst nematodes (PCN) *Globoderarostochiensis* and *G. pallida* belong to the major potato parasites in temperate regions. These quarantine pests are regulated by EU directive 2007/33/EC. The morphological characters of these sibling species may overlap and a precise identification is crucial for the phytosanitary system of every country including Serbia. *G. rostochiensis* and *G. pallida* are present in Serbia since 1999 and 2005 respectively. Both species were detected in soil samples originated from seed potato fields in three districts (Zlatibor, Mačva and Moravica) during official surveys. In accordance with phytosanitary measures for prevention of their further spreading, an official program for control of ware potato fields has been carried out for the presence of PCN in these quarantine districts since 2009. During 2009-2011, the PCN originated from ware potato fields from Serbia were analyzed by morphometric method and their identity was confirmed using real-time PCR method. The morphometrical characters of five PCN populations from locations of Gojna Gora (district of Moravica), Tabanovići and Ponikve (district of Zlatibor) were studied. Morphometric analyses of ten cysts and

ten second-stage juveniles originated from these locations established the presence of *G. rostochiensis*. All morphological values from these different populations are very close. The characters that vary most are J2 body length, hyaline part of tail and distance from vulval basin to anus of cysts. Real-time PCR analyses confirmed morphometric identification of all samples as *G. rostochiensis*.