LABORATORIJSKA DIAGNOSTIKA BAKTERIJSKE PEGAVOSTI NA PARADIŽNIKU IN PAPRIKI

Maja RAVNIKAR, Tina DEMŠAR, Tanja DREO
Nacionalni inštitut za biologijo, Oddelek za rastlinsko fiziologijo in biotehnologijo, SI-1000 Ljubljana, Slovenija

IZVLEČEK

Xanthomonas campestris patovar *vesicatoria* (Dodge) Dye 1978 je povzročitelj bakterijske pegavosti paradižnika in paprike. Bolezen povzroča velike škode zlasti v toplih in vlažnih klimatih. Čeprav je splošno razširjena v Evropi se nahaja na A2 karantenski listi, zaradi držav severne Evrope, kjer plodovke gojijo le v zaprtih prostorih in je zato njeno zatiranje možno. Bakterijska pegavost se razvije na sejančkih in na odraslih rastlinah. Na sejančkih lahko povzroči močno odpadanje listov, na odraslih rastlinah pa pege na listih, steblih in plodovih. Poleg bakterijske pegavosti, ki se v Sloveniji nahaja na A2 listi, lahko papriko in paradižnik okužujeta še dve bakteriji, ki jih le po bolezenskih znakih ne moremo ločiti med seboj: *Clavibacter michiganensis* patovar *michiganensis* (karantenska lista A2) in *Pseudomonas syringae* patovar *tomato* (gospodarsko pomemben povzročitelj bolezni). V Sloveniji smo bakterijsko pegavost prvič laboratorijsko diagnosticirali leta 1999 na rastlinah paprike, nabranih na Goriškem in v okolici Kostanjevice. Bakterijo smo izolirali iz rastlin z izraženimi bolezenskimi znaki na splošna gojišča: NGA, KB in YDC, ter selektivno gojišče Tween B. Serološko smo jo dokazali z imunofluorecenčnim testom. Identifikacija je bila potrjena v Central Science Laboratory v Yorku, Velika Britanija, z analizo profila maščobnih kislin.
Bakterija lahko prezimi na ostankih rastlin ali na plevelih, prenaša pa se tudi s semenom, še posebno pri paradižniku, kjer lahko doseže 60% okužbo semena. Najboljše varstvo pred bakterijo je uporaba zdravega semena, toplotno tretiranje ali sterilizacija semena, na voljo pa so tudi rezistentni kultivarji. Za zatiranje bolezni se lahko uporablja baktericide - bakrove pripravke. Pomembno je predhodno ugotoviti odpornost izolata na baker, ki lahko variira, povezujejo pa jo z zastopanostjo 200 kb plazmida.

ABSTRACT

LABORATORY DIAGNOSIS OF BACTERIAL SPOT ON TOMATO AND PEPPER

Xanthomonas campestris pv. *vesicatoria* (Dodge) Dye 1978 is the causal agent of bacterial spot of tomato and pepper. The disease causes significant loss, particularly in warm and humid environments. Although it is spread in the Europe, it is listed on A2 quarantene list. In the northern European countries tomato and pepper are grown only in glasshouses, what enables the control of disease. Bacterial spot develops on seedlings and mature plants. On seedlings, infections may cause severe defoliation, on older plants, spots occur on leaves, stem and fruits. Beside bacterial spot, which is listed on A2 in Slovenia, tomato can be infected also with two bacteria, which is impossible to

distinguish only due to the symptoms: *Clavibacter michiganensis* pv. *michiganensis* (EU list A2) and *Pseudomonas syringae* pv. *tomato* (harmful organism). In Slovenia, bacterial spot was first identified by laboratory methods in 1999, on pepper plants, grown in Nova gorica and Kostanjevica regions. Bacteria was isolated from plants with symptoms on common media: NGA, KB, YDC and selective Tween B medium. Serologically it was identified by immuno fluorescence. Identification was confirmed in CSL in York, Great Britain, with analysis of fatty acids profile.

The bacterium persists from one season to the next in crop debris or on weed hosts. It is seedborne, particularly in tomato, the incidence in seeds was as high as 60%. The most efficient control is the use of healthy seed, heat treatment or chemical sterilization of seeds, or the usage of resistant cultivars. Bactericides with copper can be applied, although it is important to establish whether selected isolate carry the resistance against copper, which can vary and is related with the presence of 200 kb plasmid.

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