DRUŠTVO ZA VARSTVO RASTLIN SLOVENIJE

Detekcija virusov v selekcioniranih linijah nizkega fižola (*Phaseolus vulgaris* var. *nanus* Martens) z ELISA testom

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Rastline iz roda *Phaseolus*, vključno z navadnim fižolom (*Phaseolus vulgaris*), okužujejo virusi, ki lahko povzročijo znatno gospodarsko škodo (zmanjšanje pridelka in kakovosti). Nekateri najpomembnejši virusi fižola so Bean Common Mosaic (BCMV), Bean Common Mosaic Necrosis (BCMNV) in Bean Yellow Mosaic Virus (BYMV). Pri žlahtnenju fižola je zelo pomembno, da ugotovimo viruse pri novih linijah, zlasti viruse, ki se prenašajo s semenom. V programih žlahtnenja je uporaben zlasti rastlinski material, ki je toleranten na virusne okužbe. V 4-letnih raziskavah smo z vizualnim pregledovanjem znamenj okuženosti novo vzgojenih linij *P. vulgaris* L. var. *nanus* Martens na polju, v biotičnih testih in z ELISA testom, spremljali pogostnost virusnih okužb naštetih virusov. Rezultati teh analiz omogočajo, da ustvarimo fond novih linij dwarf dry bean, ki so manj dovzetne za virusne okužbe. Zdravstveno stanje teh linij nizkega fižola bo, poleg ugodnih agronomskih lastnosti, odločilno pri nadaljnjem žlahtnjenju za pridobivanje novih kultivarjev.

ABSTRACT

Detection of the viruses on selected lines of dwarf dry bean (*Phaseolus vulgaris* L. var. *nanus* Martens) using ELISA-test

Plants from the genus *Phaseolus*, including *Phaseolus vulgaris*, can be infected by viruses that can cause significant economic damage (reduction of yield and quality). Some of the most important viruses of beans are Bean Common Mosaic (BCMV), Bean Common Mosaic Necrosis (BCMNV) and Bean Yellow Mosaic Virus (BYMV). In breeding it is very important to determine presence of viruses in newly bred lines, especially viruses which are transmitted through bean seed. Plant material tolerant to viral infection is favoured in breeding programs. During four years of study through visual examinations of the symptoms on newly bred lines of the bush dry beans, *Phaseolus vulgaris* L. var. *nanus* Martens, in the field, in biotests and in ELISA test frequency of viral infections of above mentioned viruses were monitored. Results of these analysis enable us to form pool of newly bred lines of the dwarf dry bean which were less susceptible to viral infections. Determined health conditions of these lines of dwarf dry bean would be, in presence of the satisfactory agronomic characteristics, decisive for further breeding in order to produce new cultivars.