

SSR MARKERI I GENETSKA ČISTOĆA SJEMENA

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Testiranje genetske čistoće sjemena inbred linija i hibrida kukuruza može se provesti na tri načina: 1) sjetvom tzv. kontrolnih parcela, 2) testiranjem mladih biljčica, i 3) uz pomoć molekularnih markera. Izoenzimi su bili među prvim molekularnim markerima, a našli su primjenu i u testiranju genetske čistoće sjemena. Jedan od osnovnih nedostataka ovih markera bio je nedostatak polimorfizma. Danas su SSR markeri sistem od izbora za mnoge namjene, a mogu služiti i za testiranje genetske čistoće sjemena. Bc Institut Zagreb, započeo je raditi na projektu uvođenja SSR markera u sjemenarstvo kukuruza. Cilj projekta je unaprijediti visoku genetsku čistoću proizvedenog sjemena roditeljskih komponenata i komercijalnih Bc hibrida kukuruza. Do sada je gotova genotipizacija seta inbred linija kukuruza na 8 SSR lokusa. Po završetku genotipizacije očekuje se primjena SSR markera u testiranju genetske čistoće sjemena.

SSR MARKERS AND GENETIC PURITY OF MAIZE SEED

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Testing of genetic purity of inbred line seed and hybrid maize seed can be conducted in three ways: 1) by planting of field growouts, 2) by using seedling growout test, and 3) by using molecular markers. Isoenzymes were one of the first type of molecular markers, and they found application in testing of genetic seed purity. One of the basic problems of these markers was the lack of polymorphism. Nowadays, SSR markers are the system of choice for a lot of different purposes, and they can be used for testing of genetic seed purity, too. Bc Institute Zagreb has started the project on integration of SSR markers into maize seed production. The goal of the project is to improve genetic purity of produced parent seed and commercial Bc maize hybrid seed. Until now, genotyping of a set of maize inbred lines on 8 SSR loci has been done. When complete genotyping is finished, it is expected that SSR markers will be applied in testing of genetic seed purity.