“LORENA” A NEW CV. OF BERSEM (TRIFOLIUM ALEXANDRINUM L.) FOR MEDITERRANEAN AREAS

F. CALCAGNO, T. SOARE, G. SOARE, L. CALCAGNO, A. BOZZINI, F. CALCAGNO

Eurogen S.r.l.

Trifolium alexandrinum, berseem, genetic improvement

Berseem (T. Alexandrinum) is an annual self-sterile forage legume, original from Near East and Egypt, introduced in Italy in early 1900. It is adapted to poor and alkaline clay soils of subtropical dry areas, but can be grown as a spring sown forage crop, eventually with irrigation, also in temperate areas. It gives a good quality forage and it is now being diffused in the Mediterranean area, in south USA, Mexico etc. In 1991 EUROGEN started a programme of improvement of an adapted central Sicily local population, using the recurrent selection method.

Besides general agronomic traits, the selected characters were: early flowering and plant height, since both of them are connected with resprouting ability (for obtaining 2-3 cuts), total biomass and higher seed production. After a first cycle of selection a substantial improvement was achieved. A subsequent second selection cycle obtained only a rather modest improvement for the selected traits. In the presentation are discussed: the genetic control of the 2 traits, their heritability and the efficiency of the adopted methodology for the improvement of this crop.

The selected population, after 10 years of multiplication and field trials, originated the cv Lorena, released officially in 2002. In field trials performed in 2002 the cv Lorena, in comparison with the original population, increased forage production by 46.09% and seed production by 64.36% in Sicily (south Italy) and of forage by 31.42% and of seed by 42.53% in Emilia-Romagna (north Italy).

The area cultivated with the new cv in Italy has been 23 Ha in 2003 and 112 Ha in 2004. Also in Spain, Lorena has been giving very interesting results in field trials conducted in 2003.