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BIOLOGICAL EFFECTIVENESS OF CREATING AND USING FORAGE PERENNIAL AGROPHYTOCENOSES UNDER RIGHT BANK STEPPES

The results of comparative studies evaluate the performance of mixed crops of alfalfa with *Arrhenatherum elatius*, *Bromopsis riparia*, *Festuca orientalis*, *Agropyron pectinatum*, *Elytrigia intermedia* with single-species crops based on criteria of relevant land equivalents, coefficients of relative density, aggression and competitiveness.

In determining the value of land equivalent ratio (LER) is established that biological effectiveness of the alfalfa-cereal grass mixtures has changed over the years of researches. In the first year of life, phytocenosis efficiency of the cultivated land area was lower comparing to single-species crops of cereal grasses and alfalfa, land ratio was 0,79 – 0,95. The biological effectiveness of the grass mixes second and third year of life significantly increased, land equivalent was 1,23 – 1,99 and 1,41 – 2,18 respectively. On average over the three years – 1,22 – 1,68. Most effectively was used sowing acreage of alfalfa with *Arrhenatherum elatius* and *Bromopsis riparia* where the land equivalent was, on average per years of use, respectively – 1,49 – 1,68.

When determining the coefficient of competitiveness is found that in the first year of use of alfalfa-grass mixtures, alfalfa appeared to be the most competitive component, CR = 3,6 – 10,3, and on the second and third years of use – the most competitive among the cereal grasses was *Bromopsis riparia* and *Arrhenatherum elatius* in which the factor of competitiveness amounted 4,52 – 5,63 and 3,91 – 4,28 respectively, namely the competitive ability of these species was in 4,5 – 5,6 and 3,9 – 4,3 times higher in relation to alfalfa.

The highest competitive ability of alfalfa marked in compatible sowings with *Agropyron pectinatum* and *Elytrigia intermedia* in all the years of researches. In average years of researches, competitiveness factor was respectively 5,30 – 3,41.

Key words: monoculture, yield, land equivalent ratio, relative ratio of density, coefficient of aggressiveness, competitiveness.