

Streszczenie po angielsku rozprawy doktorskiej
„Ocena tolerancji mieszańców owsa z kukurydzą
na stres suszy glebowej”

Breeding programs in oat is aimed at creating high-yielding varieties with the desired, depending on the direction of use, grain chemical composition, and at the same time characterized by high resistance to biotic and abiotic factors. Considering the growing problems of water shortages in agriculture, research was carried out to determine the effect of soil drought on selected biochemical parameters, chlorophyll fluorescence parameters, biomass and selected yield elements of the OMA lines and the cv. Bingo as a control plant. OMA lines are effect of wide crossing oat with maize, which has lower transpiration rates compared to oats, and performs C4-type photosynthesis. In the first stage of the research, with molecular methods application and marker sequences of maize retrotransposon Grande 1, OMA lines were detected in a group of plants created by crossing oats with maize, these lines have elements of the maize genome incorporated into the oat genome, then using the SSR-PCR technique retained in oat genome certain maize chromosomes were detected. In order to determine the tolerance of the OMA line to drought stress, a greenhouse and tunnel experiment was carried out with simulated soil drought, in which the rate of water loss, selected biochemical parameters and parameters of the PSII photosystem during the stem elongation phase, and then the selected yield components were examined. Based on the obtained results and analyzing the correlations that existed between the tested parameters, the most promising OMA lines for further work on the search for sources of resistance to drought stress in oats were selected.