



## THE USEFULNESS OF RAPD AND AFLP MARKERS FOR DETERMINING GENETIC SIMILARITY IN RYE (*SECALE L.*) SPECIES AND SUBSPECIES

ANNA ĆWIKLIŃSKA<sup>1\*</sup>, ZBIGNIEW BRODA<sup>1</sup>, JAN BOCIANOWSKI<sup>2</sup>,  
AND AGNIESZKA DOBRZYCKA<sup>1</sup>

<sup>1</sup>*Department of Genetics and Plant Breeding, Poznan University of Life Sciences,  
ul. Wojska Polskiego 71c, 60-625 Poznań, Poland*

<sup>2</sup>*Department of Mathematical and Statistical Methods, Poznan University of Life Sciences,  
ul. Wojska Polskiego 28, 60-637 Poznań, Poland*

Received March 4, 2009; revision accepted February 1, 2010

In this work we searched for genetic similarities in twelve wild rye species and subspecies and a control (*S. cereale* ssp. *cereale*, cv. Walet), using RAPD and AFLP markers. AFLP is useful for distinguishing homo- and heterozygotes but is not recommended for evaluation of codominant markers. We assessed the usefulness of the applied methods for examining genetic similarity in rye. RAPD yielded four groups of genetic similarity, with similarity values between 0.32 and 0.81. AFLP markers distinguished two groups of genetic similarity, ranging from 0.49 to 0.79.

**Key words:** *Secale L.*, molecular markers, AFLP, RAPD, genetic similarity.

e-mail: [anna-cwiklinska@wp.pl](mailto:anna-cwiklinska@wp.pl)

e-mail: [zbroda@up.poznan.pl](mailto:zbroda@up.poznan.pl)