

2. KORUBIN-ALEKSOSKA A.; GVEROSKA B.; DIMITRIESKI M.; ALEKSOSKI J.
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Breeding for drought tolerance in tobacco

Today we are witnessing continuous spreading of drought as a result of global warming. The need for irrigation increases for all crops, including tobacco. The Oriental sun-cured tobacco does not require large quantities of water, but certain amounts of precipitation during the growing season are still necessary for obtaining a good quality raw material. The shortage of rain and possibilities for irrigation can be overcome by selection of varieties tolerant to drought. Tobacco Institute-Prilep has developed programmes for investigation of the assortment and improvement of the existing varieties and creation of new genotypes. The investigation included nine varieties belonging to different types of tobacco, a part of which have been commercially used in the Republic of Macedonia and others are kept for further breeding. The trial was set up in the experimental field of the Institute during 2012 and

2013 in randomised blocks with three replications. Each variant was investigated in conditions with and without irrigation. The aim of the paper was to study the Oriental varieties in order to obtain data on their tolerance to drought and to supply material for further selection. Drought tolerance was determined by classical breeding methods based on phenotypic expression of morphological and production traits. For this purpose, modern breeding programmes are using molecular markers in different stages of the selection process. The highest degree of tolerance to drought was observed in genotypes P-84 (type Prilep) and P-2 (type Djebel). These genotypes can be included in the