

UTILIZATION OF *IN VITRO* ANDROGENESIS IN CR LTD.'S CROP BREEDING PROGRAMS

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The importance of doubled haploid (DH) plant production is incontrovertible in modern plant breeding. The methods (chromosome elimination, anther- and isolated microspore culture) serve the quickest way for production of homozygous lines to accelerate the plant breeding and applied research.

CR Ltd.'s laboratory, the improvement of *in vitro* androgenesis of cereals have been in the focus of research for more decades. Nowadays, we use the method of anther culture for DH plant production in cereals (common and spelt wheat, triticale, barley and rice), while isolated microspore culture is under improvement in rapeseed. In the last few years, the flow cytometric analyses have been established in our laboratory, which method offers a quick and simple way for identification of individuals with different ploidy level.

The produced DH lines have been integrated in CR's breeding programmes. After a strong selection system, the best lines can take part in Hungarian national tests (NÉBIH). In 2019, a new DH variety 'GK Déva' have been released based on these results.

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