



## APOMIXIS IN THE SUGAR BEET REPRODUCTION SYSTEM

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Received August 19, 2009; revision accepted March 3, 2010

Research on five lines of sugar beet with a tendency towards apomixis showed the presence of facultative apomicts among the studied plants (2.4%). Facultative agamospermy was detected by isozyme analysis and by nuclear DNA amount estimation using flow cytometry. Genetic segregation according to isozymes in seed progenies showed the presence of meiotic agamospermy; its probable mechanism was normal meiosis in tetraploid cells of the female archesporium. The occurrence of cytologically unreduced male gametophytes was confirmed in 21% of the plants by the indirect method of determining ploidy level from the number of pore regions in mature pollen grains. These studies identified homozygotic sublines with a tendency towards apomixis, proposed for practical breeding at the Kutno Sugar Beet Breeding Company Ltd., to be included in breeding experiments as components of heterotic hybrids.

**Key words:** *Beta vulgaris*, facultative agamospermy, diplospory, parthenogenesis, flow cytometry, isozymes.

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