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**HISTORICAL ANALYSIS OF FORMATION PERIOD OF MONOGERM
SUGAR BEET RESEARCH
(early 30's - late 50's of the 20th century)**

Resume

The scientists were searching for various ways of obtaining monogerm beet forms: some of them paid attention to selection work with this culture, others were developing ways how to use crushed glomeruli of polyspermous beet. The lack of coverage in Ukrainian historiography of evolution of methodological approaches to the nascence of monogerm sugar beet, caused purpose and assignment of this article, mostly to analyze the stage of the monogerm forms beets' nature research in the early 30's - a late 50's of the 20th century.

The first attempts to explore and create monogerm beet forms were taken by American scientists Tausend and Retyu in 1903. They selected and planted few hundred of monogerm instances (which were chosen from polyspermous beets). And then, they took up to 75% of monogerm material out of this plantation, but they failed to create completely constant monogerm form. Research was restored after a long period, but in the former Soviet Ukraine. It can be taken roughly, that scientific research of the natural features of the beets began in 1932 when United Scientific Research Institute of Sugar Beet (USRISB) employee Mrs. Kolomijets found monogerm forms at a plantation of Verhnyats'ka Selection Station (Cherkasy

region). In 1935, the work on selection of sugar beets on monogerm feature was held at 10 selection stations of USRISB. Mrs. Bordonos developed genetic study of new materials in USRISB. Having analyzed hybrids of the first and second generations, she established and proved in practice that feature of monogerm beet is a recessive one, which made it possible for scientists to form an appropriate method of working.

Besides of selection, scientists have proposed another solution of polyspermous beets problem – usage of segmented (crushed) seeds while planting. In 1933, Russian scientist Tishchenko proposed a new agronomic technique - planting of crushed (segmented) sugar beet seeds. Crushing was carried out in a machine designed by engineer Gudzenko. By the beginning of the war, constant monogerm forms of sugar beet were researched by Mrs. Bordonos in USRISB, by Mrs. Kolomijets at Belotserkivs'ka experimental selection station (BESS), by employees Fedorovych and Mogan at Yaltushkivskiy selection point. In 1945 the research of segmented seeds was restored at USRISB (7 experimental selection stations, 14 research points and 16 farms) and US-branded machine "Merrifield " was used for crushing glomeruli of polyspermous beet. Experiments carried out in 1945-1946, showed that the use of the crushed seed can reduce the costs of manual labor and the opportunity to increase productivity by reducing the negative impact of plants on each other (flow). However, monogerm forms were not used commonly in crops, because almost half of them went to seed wastes, and farmers could not afford to reduce seeding rate for 50%.

Most completed selection work began in 1946-1947 years, when one of the branches of BESS and Yaltushkivskiy selection point were fully directed for research of monogerm sugar beet, and laboratory of USRISB was involved also. Mrs. Kolomijets and her assistants at the BESS used individual and pair-group method with related reproduction while creating monogerm forms. As a result of the hard work in 1953, the world's first sort of monogerm sugar beet "Belotserkivskiy odnonasinnyy" was created, and in 1956 it was zone-fixed. The second sort, "Yaltushkivskiy odnonasinnyy" was created in 1958 at Yaltushkivskiy selection point

by A. Popov and G. Mocanu. A. Popov has developed and put into practice a new method of group selection of roots by the energy of their growth and accumulation of sugar in them.

Thus, for the period of 1932-1958 years, scientists have studied the features of monogerm forms of sugar beet and grown a new sort. This period can be considered as a formation stage of monogerm sugar beets selection, because a thorough study of the biological and agronomic characteristics of monogerm beets was taken these years.