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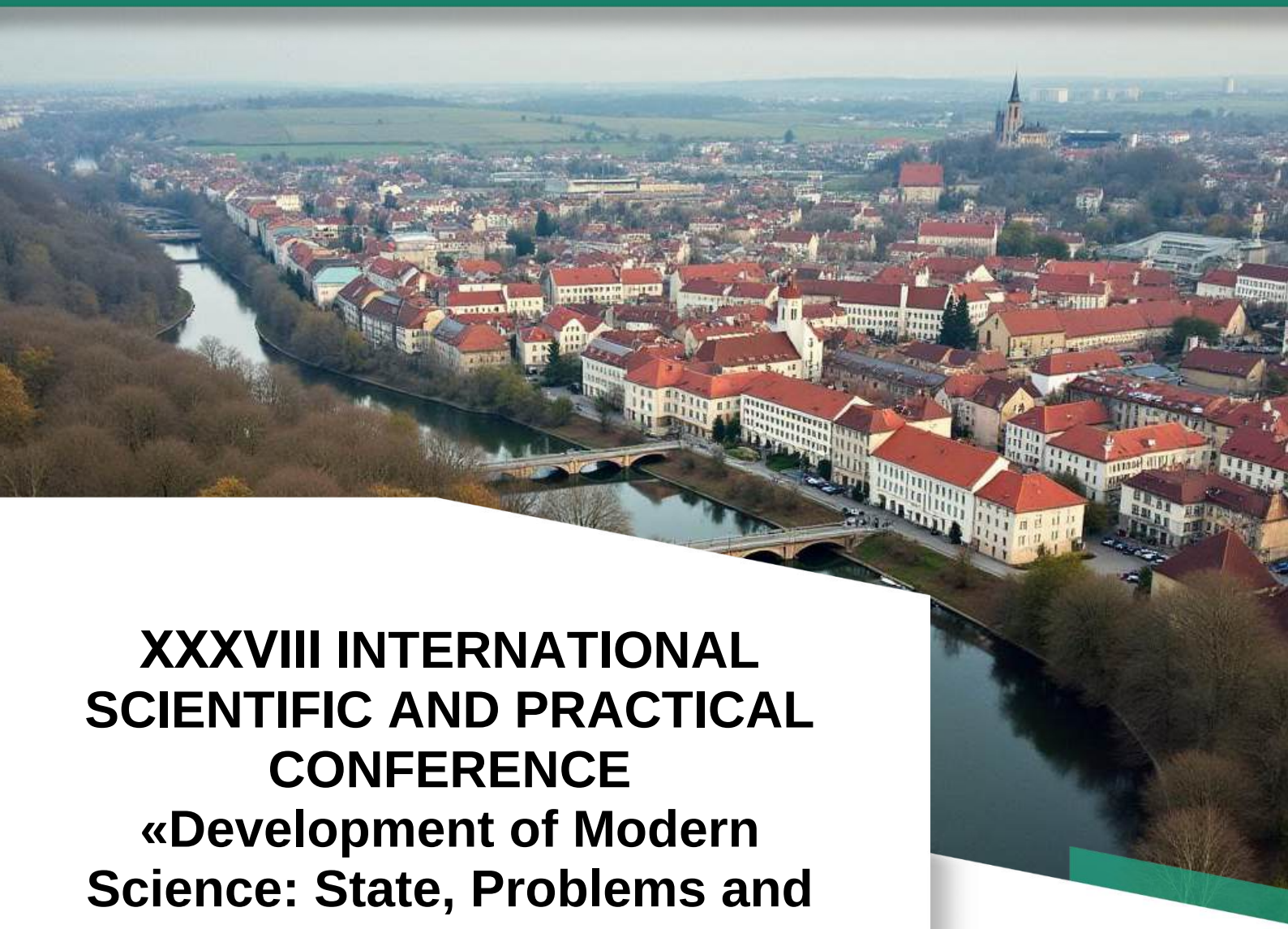

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CONTENT

SECTION: AGRICULTURAL SCIENCES

STUDYING OF THE SOUR CHERRY GENE POOL THE CONDITIONS OF THE UKRAINIAN SOUTHERR STEPPE

Shkinder-Barmina Anna
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As a result of combined work conducted in the Melitopol Research Fruit Growing Station named after M.F.Sydorenko Institute of Horticulture of National Academy of Agrarian Sciences by the breeders V.A. Turovtseva, N.I. Turovtsev and A.M. Shkinder-Barmina in the field of sour cherry breeding using the method of interspecific and intraspecific crossing it a whole range of new sour cherry cultivars and sour sweet cherry hybrids have been developed [1]. New sour cherry and hybrid cultivars possess the valuable economic and biological characteristics and are being the good addition to sour cherry gene pool in a whole.

The genetic collection of sour cherry in the Melitopol Research Fruit Growing Station named after M.F.Sydorenko Institute of Horticulture of National Academy of Agrarian Sciences numbers 113 varieties and forms of Ukraine, Great Britain, Belgium, Denmark, Bulgaria, Hungary, Germany, Italy, Poland, Romania, USA, France, Czech Republic breeding [2]. The experimental cherry orchards of the Melitopol Research Fruit Growing Station named after M.F. Sydorenko are located 20 km south of the city of Melitopol, Zaporizhzhia region, and belong to the fruit-growing zone of the southern steppe. The soil of the experimental site is dark chestnut, slightly saline, with a light loamy mechanical composition, formed on loess. The trees of the researched varieties were grafted on Cerasus Magaleb seedlings, planted according to the scheme of 6 x 4 m. Growing conditions are rainy.

As a result of studying varieties in economic and biological indices some sources of such valuable signs have been detected:

- early period of entry into fruiting – Ozhydaniye, Prymitna, Amulet, Izbrannitsa, Prizvaniye, Rassvet, Vdochnoveiye, Reksele, Imperial, Malishka saratovskaia, NochkaII, Shpanka donetska;
- early – ripening ability – Melitopolska Radist, Rannii desert, Chudo vyshnia;
- late – ripening – Kapriz and Griot Turovtsevoy;
- attractiveness of the fruits – Melitopolska novinka, Amulet, Melitopolska Purpurna, Rassvet, Griot Melitopolskyy, Vidrodzhennia;
- high tasting qualities of the fruits – Vstrecha, Ihruska, Ozhydaniye, Melitopolska novinka, Amulet, Vydumka, Vdochnoveiye, Vzglyad, Rassvet, Siyanets Turovtsovoi,

Sputnytsia, Chudo vyshnia, Donetskyi veleten, Diuk Turovtsovoi, Liubitel'ska, Nariadna;

- large – fruitness (with average fruit weight more than 6g) - Ihruska, Vstrecha, Melitopolska novinka, Prizvaaniye, Solidarnist, Siyanets Turovtsevoy, Melitopolska Purpurna, Vidrodzhennia, Griot melitopolskyi, Donetskyi veleten, Diuk Turovtsovoi, Elehiia, Erudytka, Krasnodarskaia sladkaia, Melitopolska desertna, NochkaII, Rannii desert, Sputnytsia, Chudo vyshnia;

- field resistance to monilial burn - Siyanets Turovtsevoy, Griot melitopolskyi, Solidarnist, Vidrodzhennia, Nariadna;

- high resistance to coccomyces – Rannii desert, Vstriecha, Prizvaaniye, Vestnitsa

- cultivars which are able to resist lowering of temperature in winter period to 29°C below zero with minimum freezing of generative buds – Expromt, Prymitna, Izbrannitsa;

- high yield - Amulet, Vzglyad, Vidrodzhennia, Vospominaniye, Griot melitopolskyi, Ihruska, Melitopolska Purpurna, Ozhydaniye, Prymitna, Siyanets Turovtsevoy, Shalunya, Cigany, D-076, Erdi biterma, H-172, Koreu hipalimeggy, Morascone Rosso, Nabella, Parasf, Ujfehertoi jurtes.

The selection of valuable breeding samples made it possible to submit applications to the National Center for Plant Genetic Resources of Ukraine (NCPGRU) for obtaining "Certificates of Registration of a Plant Gene Pool Sample in Ukraine" for 13 cherry varieties, with certificates already received for 7 varieties: Shalun'ya, Vstrecha, Ranniy Dessert, Vidrodzhennia, Solidarnist, Melitopolska Purpurna and Melitopolska Radist.

As a result of studying the collection, identifying standard varieties and sources of biological and economically valuable traits, "Certificates of Registration of a Plant Gene Pool Sample in Ukraine" were obtained. This allowed the formation and registration of a cherry characteristic collection at NCPGRU based on distinctive traits. The samples were grouped according to 41 characteristics and 138 levels of their expression. Grouping was carried out based on morphological features, length of the growing season, productivity, and resistance to monilial burn and coccomycosis. The authors-collectors are V.O. Turovtseva, M.I. Turovtsev and A.M. Shkinder-Barmina.

Constant study of the gene pool collection of cherries is carried out for effective breeding work. Varieties-sources of valuable characteristics are identified, the involvement of which in the breeding process will allow to obtain the forms that combine the complex of economically valuable characteristics in the same genotype.

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