

Systematical scientific research work in the fruit growing sphere in Belarus got wide development in the twenties of the XX<sup>th</sup> century. Its beginning was connected with the creation of the first in the Republic specialized scientific research organization in the fruit growing sphere, nowadays it is the RUE 'Institute for Fruit Growing'. It was created by the initiative of N.I. Vavilov, an academician, on the 10<sup>th</sup> of October 1925 near Minsk city in the state farm 'Loshitsa-I' of the Belarusian division of the All-USSR Institute of the Applied Botany and New Crops which was the first specialized scientific-research organization in the fruit growing sphere in the Republic. The division played a great role in the study of the world collections of fruit and small fruit plants and their congeners. For the period from 1925 to 1931 breeds and varieties which belonged to different ecological and geographical groups and also representatives of wild and mother forms all together more than 3000 variety samples including 500 on apple tree from major fruit regions of USSR and 47 ones from foreign countries were collected by A.E. Syubarov and E.P. Syubarova.

**Fruit crops breeding.** On the basis of deep and detailed study of generic and species diversity of fruit crops, their economic and biological peculiarities against the background of different ecological conditions, breed and variety regional assignment of fruit and small fruit crops in the Republic was worked out and was carried out for the first time as state procedure in 1932.

In organized by A.E. Syubarov, E.P. Syubarova and N.I. Mikhnevich work of new varieties breeding of all major seed and stone fruit crops in the fifties-eighties the following researches and scientists have been involved: G.A. Bavtuto, N.M. Melnik, V.A. Matveev, G.K. Kovalenko, E.V. Semashko, L.V. Bondar, V.I. Sikora, R.M. Sulimova, M.P. Malukevich, M.G. Myalik, N.A. Konovalova, V.A. Kononikhina, Z.A. Kozlovskaya, M.I. Vyshinskaya, D.V. Grakovich, V.M. Evdokimenko, G.M. Marudo, T.P. Kurdyuk, A.A. Taranov, O.A. Yakimovich, T.A. Gashenko and V.S. Volat.

**Fruit growing technology.** From the middle sixties a big volume of investigations on agrotechnology of commercial orchard has been carried out, evaluation methods of orchard suitability of lands and bonitation of fruit plantations have been worked out by the professor A.S. Devyatov together with A.F. Radyuk, V.A. Rezvyakov, A.M. Tolochko, G.V. Shchurok, I.M. Statskevich, N.G. Kapichnikova and E.S. Borovik. Geographical regions of promising concentration of commercial fruit growing were singled out according to the complex of natural and working conditions.

**Nursery growing.** In the first half of the eighties the investigations in nursery growing were

livened up (V.N. Balobin, V.A. Samus, R.F. Matveeva, A.I. Putsilo, T.A. Fedurko, G.K. Solonets, T.A. Soboleva, S.G. Gadzhiev, I.E. Zhabrovski and N.N. Drabudko) covering complex of questions of introduction, estimation and selection of seed and clonal stocks of fruit crops for intensive fruit growing and production technologies of high-quality planting material of fruit crops.

**Breeding of small fruit crops.** In the middle thirties a systematic breeding of small fruit crops was initiated by A.G. Voluznev. Afterwards that work was continued by his followers and apprentices such as G.P. Rainchikov, N.A. Zazulina, A.V. Panteev, T.M. Andrushkevich and V.T. Gumenyuk. The creation of 184 varieties of fruit and small fruit crops including 36 apple, 17 pear, 10 cherry, 18 sweet cherry, 11 plum, 8 diploid plum, 6 apricot, 24 black currant, 5 red currant, 15 gooseberry, 14 strawberry, 3 raspberry, 2 sea buckthorn, 1 cranberry, 2 black chokeberry, 4 walnut, 4 vine ones and seed stocks of pear - 1, plum - 2 and sweet cherry - 1 became the result of the institute breeding work.

**Small fruit technology.** At the institute the investigations were started in 1957 and have been carried out till the present on agrotechnology of small fruit crops, technologies working out on their propagation and breeding (A.G. Dushchinskaya, N.S. Tikhonovski, A.F. Radyuk, E.M. Malashenko, E.K. Kotlo and A.I. Bachilo); separate problems of planting and fertilizing of black currant have been studied there (T.I. Shkurko); biological peculiarities of causative agent of American powdery mildew of black currant have been investigated and measures control for diseases have been grounded there (A.M. Dmitrieva).

**Storage and processing.** Working out low cost-based technologies of fruits and small fruits storage and processing, creation new kinds of tinned food with medicinal and preventive properties, determination of optimal terms of apple fruits harvesting for long-term preservation and prediction of their keeping capacity (which are determinative in investigations begun from the seventies) have being carried out by R.E. Loiko, V.A. Radyuk, M.G. Maksimenko, L.M. Yarokhovich, A.M. Krivorot and O.G. Zuikevich. Significant investigations directed on the study of biochemical fruit and small fruit composition were carried out by T.S. Shirko, I.V. Yaroshevich, O.I. Kamzolova and S.L. Lipskaya.

**Biotechnology.** At the beginning of the nineties there was started the investigation work on biotechnology by M.P. Malyukevich, N.V. Kukharchik and M.S. Kastritskaya with the aim of speeding up the breeding process applying the biotechnological methods and cytoembryological analysis. At the present time in the department the intensive work is conducted by S.E. Semenas, E.V. Kolbanova and T.A. Krasinskaya on clonal micro propagation of fruit and small fruit crops, diagnostic of pathogen viruses and virus-like organisms, varieties

sanitation and creation of virus-free basic collections.