

comparable resistance of grapevine varieties to grape berry moths are aromatic constituents, which are contained in the flowers and act as attractants to these pests.

5) Laboratory, vegetative and field evaluation methods for selection of genotypes resistant to fungal diseases and to pests were developed; in this case 5-score scales were used for mathematical processing of the obtained data. The results showed that in the F_1 generation resulting from different crossing combinations of interspecific hybrids and high quality European grape varieties, resistances vary within wide limits and are inherited polygenic dominantly independently (in many cases) from each other exposing heterosis and transgression.

In general it may be concluded that there are no absolute genetic limits for obtaining varieties recombinants having complex field resistance to abiotic and biotic factors in combination with fruit quality similar to that of European varieties. Selection practice of resistant varieties which is carried out in different regions of the USSR and countries of Council for Mutual Economic Assistance (CMEA) testify to this. As a result of resistance breeding, the following varieties are being cultivated or undergoing advanced testing: table grape varieties: Moldova, Juravel's Jubilee, Kodryanka, Frumoasa alba, Suruchensky bely, Vierul-59, Vostorg, Agat donskey, Lanka, Tayr, Muscat odessky; wine varieties: Vioryka, Muscat de Yaloveny, Plai, Negru de Yaloveny, Golubok, Rubin tairovsky, Karin, Adysy, Pervenets Magaracha, Antey, etc. These varieties may be cultivated using one to two pesticide sprayings, or without chemical protection, are resistant to low temperatures down to -26°C , regenerate fruiting shoots after severe winters, have stable annual yields equal in quality to those of regionalized varieties, some of them are tolerant to root phylloxera and may be grown in own-rooted culture.

In the USSR, work in grapevine selection is done in close collaboration with scientists of Bulgaria, Hungary, Romania, Czechoslovakia. An active exchange of selection material and new varieties takes place.

The results of resistance improvement in Eger

L. BEREZNAI¹⁾ and L. OLAH²⁾

¹⁾ Research Institute for Viticulture and Enology, P. O. Box 25, H-6001 Kecskemét, Hungary

²⁾ Egervin Research Centre, P. O. Box 83, H-3301 Eger, Hungary

A b s t r a c t: The two-thirds of Hungary's vine-growing area is endangered by the winter and spring frosts. As far as the traditional varieties are concerned, the risk of production is rather great. Moreover, environmental conservation has become one of the key questions of the last few decades. Thus resistant and tolerant grapevine varieties are attracting more and more interest.

From 1948 within the frame of resistance improvement we have tested 125 crossing combinations in Eger. The interspecific hybrids are characterized as follows:

- good hardiness
- good resistance to *Plasmopara viticola*
- excellent tolerance against phylloxera
- loose clusters that make them less susceptible to botrytis
- good sugar production
- suitable for large-scale production and mechanical harvesting
- their wine quality corresponds to that of the traditional varieties.