International Journal of
Biological Engineering and Agriculture

ISSN: 2833-5376
Volume 2 | No 5 | May -2023

Primary Sources for Selection of Creating Exportable New Grape Varieties in Uzbekistan

Ochildiev Utkir Ollanazarovich [1], Adilov Hikmatilla Abdukhalilovich [2]

[1] Scientific Research Institute of Horticulture, Viticulture and Vine growing named after Academician M. Mirzaev Head of the Department of Viticulture and Micro-wine making Doctor of Philosophy of Agricultural Sciences Senior Researcher, otkirochildiyev79@gmail.com

[2] Doctor of agricultural philosophy. (PhD), dosent. Tashkent State Agrarian University

Abstract: : The article revealed that in recent years crossbreeding in grape breeding is carried out in very rare cases, and the reasons for this are discussed in terms of approaches. Breeding research requires at least 10-12 years. Since it was a long time ago, scientists did not pay much attention to breeding work. In addition, there is interest in in vitro grape varieties imported from abroad. There are 1820 grape collections in our republic. Here are some ideas on how to work with existing collections and how to use varieties that are not appropriate for the region.

Here are some ideas on how to work with existing collections and how to use varieties that are not appropriate for the region. Academician M.Mirzaev HV and WSRI carried out breeding work on 10 varieties in 2022. The purpose of the research is to identify grape varieties that are resistant to heat, cold and soil salinity, as well as large-fruited.

Keywords: Breeding, hybridization, selection, isolator, gauze, cardboard, filter, suitable, castration, general assessment, maternal, paternal, flower cut, isolation, creation, local, calcium chloride, pollen.

Introduction. In recent years, there has been very little work in the Republic of Uzbekistan to increase the yield of grapes and implement the collection of vines.

The selection works on 10 varieties have been carried out in HV and WSRI named after Academician M. Mirzaev in 2022. It is necessary to carry out a selection of grape varieties, or it is advisable to introduce into production the most productive of the 1820 grape varieties.

When crossing grape varieties, gauze or parchment insulators which are 15-20 cm wide are used, their length depends on the type of crop: 15 x 10 cm, such insulators completely protect flowering branches.

Pollens are made from matured buds; this work should be done on clear days after the dew has disappeared. Pollen does not collect on foggy or rainy days

Table 1 Data on the selection (hybridization) work carried out in the grape collection at Tashkent Scientific Station named after Academician M.Mirzaev HV and WSRI

№	♀ Grape varieties	Vine's paternal name	Paternal lines	Maternal lines	Day, month, year (castration)
1	Kishmish sogdina	Khusayni krasniy	1 a 12 series	2 a 21 series	*15.05.22 Partenal flower opened 16.05.22 (castraton)09.*[18]

2.	Kishmish sogdina	Sovetskiy stoloboy	1 a 6 series	2 a 21 series	*15.05.22 .Partenal flower opened 16.05.22 (castraton)09.*[25]
3	Kishmish sogdina	Kadu khusayni	1 a 11 series	2 a 21 series	*15.05.22 .Partenal flower opened.16.05.22(castraton)09.*[31]
4	Muskat aleksandrskiy	Ak kaltak	1 a 22 series	2 a 1 series	*15.05.22 .Partenal flower opened 16.05.22 (кастрация) 09.*[18]
5	Muskat aleksandrskiy	Khun kamtar	1 b 25 series	2 a 1 series	*15.05.22 .Partenal flower opened 16.05.22 (castraton) 09.*[37]
6	Kishmish batikan	Khusayni safed kaznaki	1 a 20 series	2 a 3 series	*15.05.22 .Partenal flower opened 16.05.22 (кастрация)09.*[42]
7	Kishmish chorniy	Muskat aleksandrskiy	1 b 20 series	2 a 1 series	*15.05.22 .Partenal flower opened 16.05.22 (castraton)10.* [15]
8	Khalim beliy	Kishmish sogdina	2 a 21 series	2 b 22 series	*15.05.22 .Partenal flower opened 16.05.22 (castraton) 10.*[24]
9	Kishmish sogdina	**Ichkemar**	**1 a 16** series	**2 a 21** series	***15.05.22** .Partenal flower opened **16.05.22 (**castraton **10.*** [52]
10	Kishmish sogdina	**Ichkemar beliy**	**1 a 19** series	**2 a 21** series	***15.05.22** .Partenal flower opened **16.05.22 (**castraton**) 10.***[58]

During the selection process, we conducted experiments a total of 10 varieties of grapes, mostly large seedless varieties. The goal is to find out large head grapes which are resistance to hot, cold and saline soil conditions.

1. Kishmish sogdiana ♀ Khusayni krasniy ♂ Pollination gave the expected result 75-80 % seeds were obtained.
2. Kishmish sogdiana ♀ Savetskiy stolovoy ♂ Pollination gave the expected result 60-65 % seeds were obtained.
3. Kishmish sogdiana ♀ Kadu khusayni ♂ Pollination gave the expected result 70-75 % seeds were obtained.
4. Muskat aleksandrskiy ♀ Ak kaltak ♂ Pollination gave the expected result 25-30 % seeds were obtained.
5. Muskat aleksandrskiy ♀ Khun kaptar ♂ Pollination gave the expected result 85-90 % seeds were obtained but grape heads were smaller than standard.
6. Kishmish batikan ♀ Khusayni safedkaznaki ♂ Pollination gave the expected result 45-50 % seeds were obtained.
7. Kishmish chorniy ♀ Muskat aleksandrskiy ♂ Pollination gave the expected result 90-95 % seeds were obtained.
8. Khalim beliy ♀ Kishmish sogdiana ♂ Pollination gave the expected result 35-40 % seeds were obtained.
9. Kishmish sogdiana ♀ Ichkemarp ♂ Pollination did not give the expected results, no seeds were obtained.
10. Kishmish sogdiana ♀ Ichkemar beliy ♂ Pollination did not give the expected results, no seeds were obtained.

			
Selection of seedless and with seed varieties with high yield	Selection process	Paternity disclosure process	Use filter paper for crossing

In order to keep pollens, soft rubber pierced with filter paper was used. For selection, a well-developed first group of branches on the sunny side of the vine was chosen. Those which were closer to the bunch, on the side, were removed.

Conclusion

Scientific research has been carried out on the selection of 10 different varieties of grapes, according to which good progress has been made in a total of 70-72% pollination of the main 8 different varieties.

1. Varieties Kishmish Sogdiana ♀ Ichkemar ♂ found that the male and female pollination did not compatible with each other when crossing, the seeds in the bunch were not formed, did not give the expected result, the seeds were not obtained.
2. Kishmish Sogdiana ♀ Ichkemar beliy ♂ varieties of cross-pollination, paternity and maternal origin are recognized as incompatible, the seeds were not formed on the grape bunch, did not give the expected result, the seeds were not obtained.

It is concluded that it has been proven that any grape varieties can give good results when carrying out agrotechnical measures.

In the scientific results, we reduced the need for water by agrotechnical measures in two seedless varieties to 60%, therefore, it was calculated, but the bunches were not formed.

It can be concluded that it is important to carry out full agrotechnical measures in the selected vineyard.

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