THE EFFECT OF GROWING SUBSTANCES ON THE FORMATION OF THE LEAF SURFACE OF VINE SEEDLINGS

Amanturdiyev Ilkhom Kholmuminovich
assistant professor of Samarkand Institute of Agricultural Innovations and Research,
Isroilova Mukhayyo Muzaffarovna
Master degree student of Samarkand Institute of Agricultural Innovations and Research
https://doi.org/10.5281/zenodo.10102504

Abstract. The article presents the information of the leaf surface by treating vine seedlings with growing substances. The information obtained on the formation of the leaf surface in the white raisin, black raisin, Sogdiana raisin and Batir raisin cuttings of which is presented types of Kishmish grape.

Key words: raisin grape varieties, ripe branch, cutting, seedling, "Kornevin", rooting substance, leaf surface.

Introduction. Total production of grape by country: China (14,842,680 thousand tons), Italy (8,241,914 thousand tons), USA (7,097,723 thousand tons) and France (6,247,034 thousand tons) is leading.

The development of viticulture in our country is currently receiving special attention within the framework of the government. "league has become an important basis for the further expansion of the area of industrial vineyards in recent years. The expansion of highly profitable vineyard areas, for this purpose, the increase in the supply of high-quality vine seedlings is also highlighted in the priorities of the Action Strategy for the further development of the Republic of Uzbekistan. Therefore, it is important to develop effective methods of growing vine seedlings and breeding valuable red grape varieties that allow for the establishment of high-yielding vineyards.

In the conditions of the Samarkand region, the expansion of the vineyard area depends on the selection of high-yielding grape varieties suitable for this soil and climate and the cultivation of their quality seedlings. That's why it is theoretically and practically important to select varieties of crops suitable for each specific condition, the main elements of the technology of obtaining high and high-quality harvest from them, that is, to grow high-quality, healthy, strong and cheap seedlings.

The main part of the vine is the leaf, which produces plastic substances as a result of photosynthesis. The more leaves on the bush, the stronger the photosynthesis process. A lot of nutrients are produced and the result is an

abundant harvest of good quality. The leaves of the vine are simple, the leaf surface is wide, and the edges are deeply and superficially cut depending on the variety. One hectare of vineyard has an average of 2-5 hectares of leaf surface. The transpiration process is strong in the leaves. Approximately two thousand cubic meters of water evaporates from the leaf surface of one hectare of vineyard (for example, in the White Raisin variety) during the entire growing season. Vine leaves grow for up to two months, and during this period photosynthesis takes place strongly. Then photosynthesis slows down and the leaf becomes physiologically old. Therefore, old leaves are also removed during the cold season. On average, each head of grapes should have 5-6 leaves [3].

Materials and methods used. Taking into account the above, during the years 2022-2023, in the conditions of the meadow gray soils of the Samarkand Institute of Agricultural Innovations and Research, located in the Okdarya district of the Samarkand region, autumn-ripened cuttings of the white raisin, black raisin, Sogdiana raisin and Batir raisin varieties of the raisin grape "Kornevin" Field experiments were conducted to study the effect of the growth and development of the above-ground part of the cuttings in different standards of the fertilizer.

Our field experiments were conducted in the greenhouse in 4 variants, 4 replications. In this case, the cuttings of kishmishbop grape varieties taken from the branches ripened in the fall were planted on February 25 in "Kornevin" for 10 hours at different standards, and on March 1, they were planted in a greenhouse in a 70x20 cm scheme.

In experiments, phenological observation and biometric measurements of grape varieties on the growth and development of seedlings of young grape varieties were carried out based on the methods of Kh.Ch.Buriyev (2015). 20 plants were selected from each option.

The appearance of callus and shriveled roots in cuttings was determined by counting their total amount for 15 days and recounting in individual plants every 2 days.

Determining the level of leaves was carried out by weighting method. For this, 20 leaves were separated from 10 plants, circles were cut out of them using a calibrating drill and weighed. The leaf area of the plant was determined by the ratio of the weight of the cut circles to their area and the total weight of the leaves, cm^2.

The obtained results and their analysis. It is propagated from vine seeds and vegetatively. In production, the vine is propagated mainly vegetatively

(from cuttings, grafting and grafting). When propagated from seeds, the vine develops slowly, comes to harvest late (7-8 years) and loses the signs and characteristics of its previous generations. Therefore, in the conditions of our country, it is propagated only vegetatively from cuttings [3].

When the cuttings of Kishmishbop grapes, White Raisin, Black Raisin, Sogdiana Raisin, and Botir Raisin, were grown using different standards of stimulants, the formation of the leaf surface varied from 414 to 702 m^2 by the last days of the growing season (1- table).

In the experiment, the results of the effect of growth stimulators at different rates on the formation of the leaf surface of kishmishbop grape varieties show that the growth of kishmishbop grapes White raisin, Black raisin, Sogdiana raisin and Batir raisin varieties when grown at different rates of raisin stimulators during the period, when measured on April 15-17, according to experimental options, the leaf area of one seedling was 85-115 cm^2 in the White raisin variety, 111-154 cm^2 in the Black raisin variety, and 103-142 cm^2 in the Sogdiana raisin variety. and in the Batir raisin variety it was 98-126 cm^2.

When measurements were carried out on May 15-17 of the growing season, the change in the level of leaves in one seedling was 152-185 cm^2 in the White raisin variety, 184-319 cm^2 in the Black raisin variety, Sogdiana raisin according to the experimental options. 167-260 cm^2 in the variety and 161-223 cm^2 in the Batir raisin variety, on June 15-17, July 15-17 of the growing season, the leaf level in the seedlings increased according to the law, and on 15-17 - when measured in August, the leaf level of the studied varieties is 414-492; 492-702; It was found to be 460-657 and 434-645 m^2.

The highest leaf area (492 cm^2 in the White raisin variety, 702 cm^2 in the Black raisin variety, 657 cm^2 in the Sogdiana raisin variety and 645 cm^2 in the Botir raisin variety per seedling) was recorded when cuttings were treated with 15 g of Kornevin in 10 l of water for 10 hours. A relatively high leaf level (485 cm^2 in the White raisin variety, 694 cm^2 in the Black raisin variety, 654 cm^2 in the Sogdiana raisin variety, and 641 cm^2 in the Batir raisin variety) was observed in vine cuttings treated with 10 g of Kornevin in 10 l of water for 10 hours.

In the varieties studied in the experiment, the lowest leaf level (414 cm^2 in the White raisin variety, 492 cm^2 in the Black raisin variety, 460 cm^2 in the Sogdiana raisin variety and 434 cm^2 in the Botir raisin variety) was recorded in the cuttings treated in normal water for 10 hours.

According to researches, the highest level of leaves in raisin grape varieties was observed in the variant where vine cuttings were treated with 15 g of Kornevin in 10 l of water for 10 hours, that is, when compared to the control variant, the leaf level of one plant was determined on the 15-17th it was found to be higher by 69 cm^2 in April, 167 in May 15-17, 204 in June 15-17, 255 in July 15-17, and 288 cm^2 in August 15-17.

Table 1. Changes in the surface of the leaf when vine cuttings are grown in a stimulator under greenhouse conditions (2022-2023 years)

T/r	Options	Leaf area of one seedling, cm^2									
		Measurement periods									
		01-03.04	15-17.04	01-03.05	15-17.05	01-03.06	15-17.06	01-03.07	15-17.07	01-03.08	15-17.08
White raisin											
1.	Plain water (control)	72	85	119	152	216	275	310	371	407	414
2.	5 g of Kornevin per 10 l of water	83	99	128	164	228	294	335	396	439	447
3.	10 g of Kornevin per 10 l of water	95	112	141	182	249	312	363	427	476	485
4.	15 g of Kornevin per 10 l of water	96	115	143	185	254	318	368	433	487	492
Black raisin											
1.	Plain water (control)	92	111	140	184	242	315	376	440	485	492
2.	5 g of Kornevin per 10 l of water	104	128	170	214	281	343	409	497	572	585
3.	10 g of Kornevin per 10 l of water	119	151	222	314	401	473	549	621	679	694
4.	15 g of Kornevin per 10 l of water	121	154	226	319	404	479	457	626	690	702
Sogdiana raisin											
1.	Plain water (control)	84	103	128	167	223	295	343	404	452	460
2.	5 g of Kornevin per 10 l of water	94	117	152	197	261	333	396	479	545	554
3.	10 g of Kornevin per 10 l of water	107	139	190	257	346	415	491	569	645	654
4.	15 g of Kornevin per 10 l of water	111	142	193	260	349	420	496	572	647	657
Botir raisin											

1.	Plain water (control)	81	98	124	161	218	287	346	395	426	434
2.	5 g of Kornevin per 10 l of water	90	115	148	192	256	327	379	458	515	522
3.	10 g of Kornevin per 10 l of water	98	123	161	218	305	383	466	549	632	641
4.	15 g of Kornevin per 10 l of water	103	126	163	223	309	387	470	552	637	645

Conclusions. The formation of the leaf surface of raisin grape varieties was significantly affected by different rates of growth stimulant, the highest leaf surface was obtained when cuttings were treated using Kornevin at the rate of 15 g per 10 l of water. However, it is possible to use 10 g of Kornevin per 10 l of water to obtain economically inexpensive seedlings.

References:

1. Buriyev X.Ch va boshqalar. Mevali va rezavor mevali o‘simliklar bilan tajribalar o‘tkazishda hisoblar va fenologik kuzatuvlar metodikasi. Uslubiy qo‘llanma. – Toshkent, 2015. 95. B.
2. Mamatov U.I. Uzum yetishtirish. Qo’llanma – Toshkent, 2021. 95. B.
3. Sanayev S.T. Uzumchilik. O‘quv qo‘llanma – Toshkent, 2021. 25. B.
4. Isroilova M.M., Tuychiyev D.A., Amanturdiyev I.X. Tok ko‘chatlarining ildiz tizimi rivojlanishiga o‘stiruvchi moddalarning ta’siri – Samarkand, 2023. 1067-1073. B.
5. Astanakulov, T. E., Kh, K. K., & Kh, A. I. (2018). Productivity and adaptability of potato varieties in early and two-crop crops. The Way of science. International scientific journal. The path of science. International Scientific Journal, 11(45), 31-34.
6. Amanturdiyev, I. (2022). DETERMINING THE WATER-SAVING IRRIGATION REGIME AND FERTILIZATION STANDARDS FOR TOMORROW'S POTATOES. 湖南大学学报 (自然科学版), 49(01).
7. Normakhmatov, R., & Amanturdiyev, I. K. (2022). POSSIBILITIES OF USING GENETICALLY MODIFIED FOODS. Academic research in educational sciences, 3(Speical Issue 1), 39-42.
8. Остонакулов, Т. Э., Шамсиев, А. А., Амантурдиев, И. Х., & Турсунов, Г. С. (2022). Оценка сортов батата и разработка технологии их возделывания в Узбекистане. Международный научно-исследовательский журнал, (4-1 (118)), 162-169.

9. Остонакулов, Т. Э., & Шамсиев, А. А. (2020). Сорта сладкого картофеля и особенности технологии их возделывания. Картофель и овощи, 12, 18-20.
10. Ostonakulov, T. E., & Shamsiev, A. A. (2020). Varieties of sweet potatoes and peculiarities of their cultivation technology. Potatoes and vegetables, 12, 18-20.
11. Xolmuminov, S. E., & Amanturdiyev, I. X. (2022). HIMOYALANGAN YERLARDA SHIRIN QALAMPIRNING O ‘SISHI, RIVOJLANISHI VA HOSILDORLIGIGA O ‘G ‘ITLASH ME’YORLARINING TA’SIRI. Academic research in educational sciences, (Conference), 877-883.
12. Sanaev, S. T., Kh, K. K., & Kh, A. I. (2021). Yield and marketability of potato varieties with different numbers of irrigation schemes and fertilizer standards in case of Uzbekistan. European Journal of Agricultural and Rural Education, 2(8), 5-8.
13. Shamsiev, A., Ubaydullaev, S., & Ostonakulov, T. (2020). Selection of the variety of sweet potato and features of their cultivation technology. Rastenievadni nauki, 57(3), 23-27.
http://statinformation.ru/sel/vinograd.html