CORRELATION RELATIONSHIPS BETWEEN VALUE-ECONOMIC CHARACTERISTICS OF COTTON RIDGES PLANTED IN DIFFERENT REGIONS

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ABSTRACT

Based on determining the degree of variability, correlative dependence and wilt tolerance of introgressive ridges in different soil-climatic conditions, ridges with high yield, fast ripening, fiber output of 41.0-43%, quality indicators and high adaptability were selected.

Keywords: cotton, length of growing season, adaptability, geographical long hybridization, introgressive forms, variety testing, correlation.

ҒЎЗА ТИЗМАЛАРИНИНГ ТУРЛИ ХИЛ ҲУДУДЛАРДА ЭКИЛГАН ТИЗМАЛАРИНИ ҚИММАТЛИ-ХЎЖАЛИК БЕЛГИЛАРИ ЎРТАСИДАГИ КОРРЕЛЯЦИОН БОҒЛИҚЛИКЛАР

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АННОТАТЦИЯ

Интрогрессив тизмаларнинг турли тупроқ-иқлим шароитида қимматли-хўжалик белгиларининг ўзгарувчанлик даражаси, коррелятив боғлиқлик ва вилтга бардошлилигини аниқлаш асосида ҳосилдор, тезпишар, тола чиқими 41,0-43%, сифат кўрсаткичлари ҳамда мослашувчанлик имконияти юқори бўлган тизмалар ажратиб олинган.

Калит сўзлар: ғўза, вегетация даври давомийлиги, мослашувчанлик, географик узоқ дурагайлаш, интрогрессив шакллар, нав синаш, каррелатция.

RELEVANCE OF THE TOPIC

The analysis of the effectiveness of the selection work carried out in the selection of agricultural crops in many countries of the world shows that the selection methods used in this process should be adapted to the local soil-climate, weather and technological and socio-economic conditions of each country. Therefore, in the creation of new varieties of agricultural crops, evaluating the potential of genotypes in several geographical locations at the same time, identifying forms with the possibility of wide adaptability is one of the promising directions. At this point, it is of great scientific and practical importance to create productive and promising varieties based on introgressive ridges that are productive, have high quality indicators and economic efficiency, and are resistant to adverse environmental factors.

REVIEW OF LITERATURE

The development and use of the scientific basis of the ecological methods of selection of agricultural plants is associated with the name of Academician N.I. Vavilov. The follower of his ideas, E. N. Sinskaya, was one of the first to define "ecological selection" and pointed out a number of problems of ecological selection of perennial fodder grasses. Today, the theoretical foundation of ecological selection and its effective implementation is N. P. Dubinin, Ya. P. Glembovsky "Population genetics and plant selection" (1976), A. A. Zhuchenko "Ecological genetics of cultivated plants" (1980). , A.V. Kilchevsky, L.I. Khotyleva "Ecological selection of plants" (1985, 1987), N.G. Simongulyan "Genetics of quantitative traits of cotton", G.S. Shakhmedova "Adaptability of cotton cultivars to the conditions of southern Russia" developments and works. An important direction of adaptive selection is to concentrate resistance to abiotic and biotic stresses in varieties and hybrids with high potential productivity. It is covered in the works of researchers such as Juraev (2022).

RESEARCH RESULTS

We determined the correlation coefficients between the length of the growing season and some valuable economic traits in ten rows of Gossypium hirsutum L. medium fiber cotton grown in three different regions of Uzbekistan.

It is known that for purpose-oriented selection processes, it is necessary to study the correlation between various characters. Thus, the researchers found a close relationship between yield and the number of bolls in cotton (from 0.84 to 0.91), an average positive correlation was observed between boll size and yield (r = 0.32 to 0.61). A moderate to weak positive correlation (from 0.28 to 0.39) was observed between productivity and seed weight, and a weak negative correlation was observed between productivity and fiber yield. A high degree of correlation was observed between yield and 1000 seed weight. Average positive correlation between pod size and plant height; weak positive correlations were noted between seed weight and fiber length. Seed weight and fiber yield are generally negatively correlated [ibid]. By identifying forms that embody different interactions, researchers influence the recombinogenesis that occurs in hybrids.

During 2019-2020, a weak positive correlation was observed between the duration of the growing season and the weight of raw cotton in one bag (r = +0.21 - +0.48) (see Table 5.1). In 2018, a different level of correct correlation between the indicated characters was shown in

the tested ridges, from 0.19 (in Tashkent region) to 0.94 (in Fergana region). Close correlation was also observed in Kashkadarya region r = 0.54. That is, as the length of the growth period increased, the pod weight increased. It should be noted that the breeder is interested in a negative correlation between speed and some character.

In most cases, the correlation between length of growing season and 1000 seed weight was absent (r= -0.07 - +0.03), or both inverse and positive were weak (r= -0.21 - +0.28). The groups tested in Fergana region in 2018 were an exception and showed a high correlation r = 0.50. A moderate to strong positive correlation was found between length of growing season and fiber yield in all regions during the three-year trial (0.28 to 0.60).

A very weak correlation was observed between growth period duration and fiber length: from no correlation (r= -0.05, r= -0.07) to a weak positive correlation (r=0.35). Very close correlations were observed between the speed and the specific tensile strength of the fiber (from 0.12 to 0.59). Correlation relationships between speed and fiber microneuri were shown differently in different test years - from weakly negative (r= -0.24), absence of correlation (r= -0.02), to strong positive (r=0.74 in the tested ridge groups in Tashkent region in 2018). A high correlation was also found between the duration of the growing season and the fiber microneurium in the ridge groups tested in Kashkadarya region in 2018 and 2019 (r=0.48 and r=0.54, respectively)

In most cases, a weak positive correlation was observed between the length of the growing season and productivity (from 0.15 to 0.38). We observed a strong correlation between them in the ridge groups of Fergana region in 2020 (r = 0.54) and 2018 (r = 0.91). In the experiments in Kashkadarya region in 2020, there was no correlation between these signs (r = 0.03).

A weak inverse relationship between the duration of the growing season and productivity was found in Tashkent and Kashkadarya regions in 2018 (r= -0.75 and r = -0.73, respectively). That is, fast-growing forms showed high productivity. In a three-year trial in Fergana region, it was observed that the correlation between the indicated characteristics was weak (r = 0.19 and r = 0.35) or non-existent (r = 0.08).

CONCLUSION

It was found that fiber yield, productivity, relative tensile strength of fiber, weight of raw cotton in one boll are strongly related to the increase in the length of the growing season. It has been shown that there is no correlation between early ripening and 1000 seed weight in most cases. A very weak correlation was found between cooking speed and fiber length. Correlations of various degrees and directions were noted between the duration of the growth period and fiber microneuria. A negative correlation between the duration of the growing season and productivity was characteristic for the studied ridges.

REFERENCES

1. Доспехов Б.А. Методика полевого опыта / Б. А. Доспехов. - М.: Колос, 1985. - 351с.
2. Кильчевский А.В. Экологическая селекция растений / Институт генетики и цитологии АН Беларуси, Белорусская сельскохозяйственная академия.-Минск: Техналогия, 1997.- 372 с.
3. Juraev, S. T. (2022). Changes in the weight of raw cotton in one box in varietary cotton hybrids. Spectrum Journal of Innovation, Reforms and Development, 10, 18-21.

4.   Jurayev, S. T. (2022). Yield of cotton lines in different climatic-soil conditions of Uzbekistan. International Scientific Journal Theoretical & Applied Science, 11(1), 310-313.

5.   Xolmurodova, G. R., Tangirova, G. N., Jo'rayev, S. T. (2022). Селекция и семеноводство сои. LESSON PRESS, 1(1), 88.

6.   Jo'rayev, S. T., Xudarganov, K. O. (2022). Qishloq ekinlari urug'chiligi va urpug'shunosligi. LESSON PRESS, 1(1), 167.

7.   Jo'rayev, S. T. (2022). Go'za seleksiyasi va urug'chiligi. LESSON PRESS, 1(1), 288.

8.   Jo'rayev, S. T., Ashurov, M., Narmatova, G., Toreev, F., Akhmedov, D., Mavlonova, N., Ergashev, J., Baratova, A. (2022). Cotton breeding and seed production. LESSON PRESS, 1(1), 224.

9.   Jo'rayev, S. T. (2022). G'o'zaning introgressiv duragay va tizmalirning O'zbekistondagi xar xil tuproq sharoitlarda bo'lgan adaptiv patinsolidan foydalanish. LESSON PRESS, 1(1), 211.

10.   Jo'rayev, S. T. (2022). G'o'za genetikasi. LESSON PRESS, 1(1), 96.

11.   Jo'rayev, S. T., Ergashov, J. A. (2022). Moyli ekinlar seleksiyasi va urug'chiligi. LESSON PRESS, 1(1), 120.

12.   Жураев, С. Т. (2022). Оценка волокна гибридов хлопчатника, выращенных в различных регионах Узбекистана. Министерство сельского хозяйства и продовольствия Республики Беларусь учреждение образования «Гродненский государственный аграрный университет», 1(52-55), 5.

13.   Djonibekova, NE, Jo'raev, ST, Inoyatova, MH (2022). Effect of bap concentration and content of food environment on "in vitro" regeneration of rizamat (vitis vinifera l) cultivar. European Journal of Agricultural and Rural Education (EJARE), 3(2), 75-78.

14.   Joraev, S. T., Ismoilov, A. A., Dilmurodov, Sh. D. (2022). Yasmiq nav va tizmalarining o'suv davri. Xorazm Ma'mun Akademiyasi, 22(6), 5-11.

15.   Joraev, S. T., Raimova, D. (2022). Взаимосвязь периода вегитации линий хлопчатника с Некоторыми хозяйственно-ценными признаками в зависимости от регионов возделывания. Tafakkur manzili ilmiy-uslubiy jurnali, 1(1), 4-14.

16.   Juraev, S. T., & Rakhmatullayeva, R. A. (2023). Organization of Primary Seeding of Pumpkin (Cucurbita Pepo L.) Orbita Variety. Web of Agriculture: Journal of Agriculture and Biological Sciences, 1(7), 35-43.

17.   Juraev, S. T., Shaikhova, D. D., & Akhatov, X. X. (2023). Effectiveness of Creating Vitamin-Rich Local Varieties of Lemon. Web of Agriculture: Journal of Agriculture and Biological Sciences, 1(7), 1-7.

18.   Jurayev, S. T., & Karimov, R. A. (2023). Selecting Initial Breeding Sources for Morning Varieties from The Potato Variety Sample Collection. Web of Agriculture: Journal of Agriculture and Biological Sciences, 1(6), 7-12.

19.   Juraev, S. T., & Sobirova, D. Z. (2023). Assessment of the value characteristics of local" sochilmas" and" nafis" varieties of soy. Galaxy International Interdisciplinary Research Journal, 11(9), 65-71.

20.   Jo'raev, S. T., Mirzaeva, B. K., & ugli Shukurov, A. A. (2023). Correlationships between value-economic traits in different ecological areas of new cotton ranges. Galaxy International Interdisciplinary Research Journal, 11(7), 178-184.

21.   Turdiqulivich, J. S., Nazarovna, B. N., & Bobokulovna, J. M. (2023). Selection of High Photosynthetic Productivity Of Broad Bean (Vicia Faba L.) Lines. Diversity Research: Journal of Analysis and Trends, 1(4), 6-9.

22.   Ismoilov, A. A., & Jurayev, S. T. (2023). Selection of varieties and ranges of lens (lens culinaris) with high grain yield and high protein content. European International Journal of Multidisciplinary Research and Management Studies, 3(05), 157-162.

23.   Juraev, S. T. (2023). Correlation relationships between the main value-economic characteristics of cotton grown in different regions of Uzbekistan. Open Access Repository, 9(2), 131-137.

24.   Juraev, S. T., Shukurov, A. A., & Jabborova, N. O. (2022). Analysis of value-economic characters of cotton introgressive hybrids in different soil-climate conditions in Uzbekistan. Galaxy International Interdisciplinary Research Journal, 10(11), 828-835.