

**CORRELATIVE RELATIONSHIPS BETWEEN SOME VALUABLE AGRONOMIC TRAITS
IN SOYBEAN FAMILIES**

Erkayeva S. A.

Tashkent Branch of the Samarkand State University of Veterinary Medicine,
Animal Husbandry and Biotechnologies 3rd Stage Basic Doctoral Student

Madartov B. Q.

Tashkent State Agrarian University
Doctor of Agricultural Sciences (DSc), Professor

Xolmurodova G. R.

Tashkent State Agrarian University
Doctor of Agricultural Sciences (DSc), Professor

Pulatov S. M.

Samarkand State University of Veterinary Medicine, Animal Husbandry and
Biotechnologies Doctor of Agricultural Sciences (DSc), Professor

ABSTRACT

This article discusses the relationship between protein and productivity, protein and fat content. Among the selected families, in the O-3/6 family, the correlation between traits was strongly positive, and the expediency of using this family in genetic breeding processes to increase yields, protein and fat content was highlighted.

Keywords: Soybean, family, correlation coefficient, economically valuable trait, protein, oil, yield, positive correlation, pleotropic effect.

**SOYA OILALARINING AYRIM QIMMATLI XO'JALIK BELGILARI ORASIDAGI
KORRELYATIV BOG'LIQLIKLAR**

Erkayeva Saodat Abdinayimovna

Samarqand davlat veterinariya meditsinasi, chorvachilik va
biotexnologiyalari universiteti Toshkent filiali 3-bosqich tayanch doktoranti

Madartov B.Q.

Toshkent davlat agrar universiteti
Qishloq xo'jaligi fanlari doktori (DSc), professor

Xolmurodova G.R.

Toshkent davlat agrar universiteti
Qishloq xo'jaligi fanlari doktori (DSc), professor

Po'latov Sarvar Mustafaevich

Samarqand davlat veterinariya meditsinasi, chorvachilik va biotexnologiyalari universiteti Qishloq xo'jaligi fanlari doktori (DSc), professor

ANNOTATSIYA

Maqolada oqsil va hosildorlik, oqsil va moy miqdori orasidagi o'zaro bog'liqliklar keltirib o'tilgan. Ajratib olingan oilalar orasidan O-3/6 oilasida belgilar orasidagi korrelyativ bog'liqliklar kuchli darajada ijobiy bo'lib, ushbu oiladan hosildorlikni, oqsil va moy miqdorlarini oshirishda genetik-seleksion jarayonlarda foydalanish maqsadga muvofiqligi yoritilgan.

Kalit so'zlar: soya, oila, korrelyatsiya koeffitsienti, qimmatli xo'jalik belgi, oqsil, moy, hosildorlik, ijobiy bog'liqlik, pleotrop ta'sir.

INTRODUCTION

Enrichment of the genetic resources of agricultural crops, including the soybean gene pool, will provide the country's population with protein-rich food, nutritious feed for poultry and livestock farming, as well as improve soil microflora and increase soil fertility.

The gene pool of soybeans preserved in Uzbekistan - the growing attention to a new crop in the regions of our country - will become the basis for the successful development of soybean farming. It is an inexhaustible resource for the transfer of useful traits to cultivated varieties and the creation of promising varieties on a new genetic basis.

The presence of rich genetic potential in the soybean gene pool and its study create opportunities for the development of new priority areas in soybean growing, the creation of varieties that meet the requirements of the national economy and are competitive on the world market.

Accordingly, using the gene pool, hybrids were obtained by crossing local and Krasnodar soybean varieties. From existing hybrids, we selected families and analyzed their economically valuable traits. In this article, we present correlative relationships between some economically valuable traits.

RESEARCH RESULTS

It is known that the interdependence of traits is carried out by a pleotropic effect and the combination of genes, which causes a change in several traits due to a change in one gene. The correlation coefficient of characteristics is denoted by r and varies from -1 to $+1$. If the correlation is weak, it varies from 0 to 0.33 , if medium - from 0.33 to 0.66 , if strong - from 0.66 to 1 , and the correlation coefficient is indicated by positive (+) and negative (-) signs.

According to the analysis of the literature, it was noted that the correlation between protein and yield was of varying degrees and also changed depending on the genotype of the organism and agrotechnological measures.

When analyzing the correlative relationships between protein and yield in the isolated families, in our experiments, mainly strong and moderate positive relationships were noted

(see table). Strong positive correlations were noted in the families O-2/6 ($r=0.89$), O-11/6 ($r=0.84$), O 5/6 ($r=0.82$) and O-3/6 ($r=0.75$), and in the standard variety Orzu, a strong positive correlation was also observed, with the highest correlation $r=0.90$.

Table

Oilalar	Oilalarning kelib chiqishi	Oqsil va hosildorlik orasidagi o'zaro korrelyativ bog'liqligi		Oqsil va moy orasidagi o'zaro korrelyativ bog'liqligi	
		r=	t _r	r=	t _r
O-17/20	F ₄ Liniya x Selekt 302	0,37	2,29	0,33	2,14
O-5/6	F ₄ Baraka x Selekt 302	0,82	2,33	0,57	1,15
O-11/6	F ₄ Madina x Selekt 302	0,84	1,78	0,66	1,09
O-7/6	F ₄ Raduga x Selekt 302	0,41	1,03	0,28	1,02
O-3/6	F ₄ Nafis x Selekt 302	0,75	2,53	0,72	2,19
O-2/6	F ₄ Parvoz x Selekt 302	0,89	2,57	0,49	2,06
Orzu (andoza)		0,90	2,10	0,41	1,46

In families O-7/6 and O-17/20, moderate positive correlations were noted, respectively $r=0.41$ and $r=0.37$, and it should be noted that it is advisable to conduct selection processes on them to improve traits.

The results of the analysis of the correlation between protein and fat showed that the O-3/6 family showed a positive indicator compared to other families, and a strong positive correlation was noted between the traits ($r=0.72$, respectively). In families O-11/6, O-5/6, and O-2/6, respectively, $r=0.66$, $r=0.57$, and $r=0.49$, a moderate positive correlation was observed. In the O-17/20 family, $r=0.33$ and in the O-7/6 family, $r=0.28$, although a weak positive correlation was found. In the standard variety Orzu, the correlation between the traits was equal to $r=0.41$, and a moderate positive correlation was observed.

CONCLUSIONS

In conclusion, it should be noted that the correlation between protein content and yield, protein content and oil content in soybean families showed that in the O-3/6 family, the correlation between traits is strongly positive, and it is advisable to use this family in genetic breeding processes to increase yield, protein, and oil content. It is also advisable to use in breeding processes families O-2/6, O-11/6, O-5/6 and O-9 with strong positive correlations in increasing protein and yield, as well as families O-7/6 and O-17/20 with moderate positive correlations in improving the above traits.

In improving the protein and oil content of soybeans, it is advisable to use the family O-3/6 with a strong positive correlation, O-11/6, O-5/6 and O-2/6 with a medium positive correlation, and O-3/6 with a medium positive correlation in breeding processes.

REFERENCES

1. Xolmurodova G.R., Rasulov I.M., Jo'raev S.T., Toreev F.N. G'o'za genetikasi, seleksiyasi va urug'chiligi. Darslik. Lesson press nashriyoti. Toshkent, 2021 y. 320 b.
2. G.R.Xolmurodova, G.N.Tangirova, S.T.Juraev. Seleksiya i semenovodstvo soi. Uchebnoe posobie. Tashkent, lesson press nashriyoti. 2022. 160 b.
3. Xolmurodova G.R., Tangirova. Soya seleksiyasi va urug'chiligi G.N., Jo'raev S.T.Soya seleksiyasi va urug'chiligi. O'quv qo'llanma. Lesson press nashriyoti Toshkent 2021 y. 115 b.
4. R.A.Yuldasheva R.A., G.R.Xolmurodova Noan'anaviy ekinlar seleksiyasi va urug'chiligi. O'quv qo'llanma. Agroinform nashriyoti Toshkent 2024 y. 214-b.