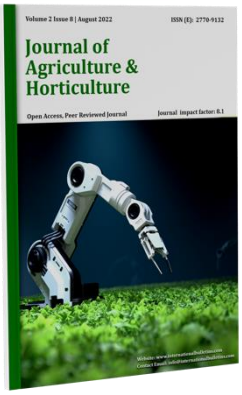

DETERMINATION OF SEED VIABILITY IN NEWLY CREATED RIDGES OF COTTON.

Abdurakhimova Anorakhan Rustamboevna
PhD, Andijan Institute of Agriculture and Agro-Technology
https://doi.org/10.5281/zenodo.11124564

Abstract: The cotton lines differ sharply in the oil content of the seed. The sign of oil content does not correlate with the length of the fiber and other valuable technological qualities of cotton fiber.

Key words: oil content, quality, fibers, technology, cotton, length, kernels, breaking load, metric number.

Today, cottonseed oil is produced for consumption and for technical purposes. According to some literary sources, the proportion of oil in the chemical composition of the seed compared to other substances, especially protein, has a positive effect on its seed quality.
In the first year of our research (2015), according to the results obtained from the ridges, the seed with the highest fertility was obtained from the harvest of the T-14 and T-17 ridges (22.4 and 20.9 percent), compared to the indicator of the T-14 model variety by 4.5 percent, T -17 was distinguished by its 3% capital. In this year, the lowest indicator refers to the T-1 seed moisture level, which was 18.2 percent.
In the second year of the study (2016), according to the results obtained for the same sign of the ridges, T-14 with the highest fertility, again repeating the result of the previous year, had an indicator of 22.5 percent. This, in turn, means that it showed a 4.5% higher result compared to the standard version. In this year, T-17 showed the result of 22.2%, T-30 (22.3%), T-76 (22.2%) of the rows with the highest seed fertility. This is 4.8 compared to the standard; 4.4; showed that it is 4.2 percent higher.

In 2017, the indicators obtained on the moisture content of ridge seed are also similar to the results of previous years
That is, the ridge with the richest seed was T-17, which was found to have 23.3 percent oil content. The T-14 seed also had a slightly lower oil content than the T-17 ridge, but showed a significantly higher result than the other ridges. These T-17 and T-14 ridges, in turn, gained an advantage with 4.8 and 4.5 percent higher oil content compared to the model type.
According to the average three-year results of the years of the research, when analyzing the moisture content of the seed taken from the ridges, the highest indicator was 22.8% in the seed taken from the T-14 ridge, while the seed taken from the T-17 ridge showed a moisture index of 21.8%. These two ridges, in turn, compared to the oil content of the seed extracted from the model Andijan-35 variety, T-14 seed is 4.5; It was found that T-17 seed is 3.8 percent.

Fertility of the seed of the ridges involved in the experiment Andijan ITS 2015-2017

Options	Fat, percentage			Average over the years	Difference from the seed moisture content of the control variety, %
	2015	2016	2017		
Андижон-35 *(template)*	16,9	18,9	18,1	18,0	-
T-1 *(ridge)*	19,2	17,8	19,4	18,8	+0,8
T-3	18,9	19,4	19,9	19,4	+1,4
T-4	19,5	21,6	20,2	20,4	+2,5
T-6	18,7	20,1	20,6	19,8	+1,8
T-8	20,3	21,0	20,9	20,7	+2,8
T-11	19,7	18,6	17,8	18,7	+0,7
T-14	22,4	23,0	22,1	22,5	+4,5
T-15	19,3	20,6	20,0	20,0	+2,0
T-17	22,2	22,9	23,3	22,8	+4,8
T-30	22,3	22,4	22,5	22,4	+4,4
T-76	22,2	22,4	22,1	22,2	+4,2

According to the average three-year results of the years of the research, when analyzing the moisture content of the seed taken from the ridges, the highest indicator was 22.8% in the seed taken from the T-14 ridge, while the seed taken from the T-17 ridge showed a moisture index of 21.8%. These two ridges, in turn, compared to the oil content of the seed extracted from the model Andijan-35 variety, T-14 seed is 4.5; It was found that T-17 seed is 3.8 percent. It was found that other ridges participated in the experiment had a slightly higher level of fertility compared to the model variety. The results obtained from the field experiments and laboratory analyzes performed at the Fergana and Namangan ITS of PSUEAITI also repeated the results obtained from our research without significant differences.

When used for industrial purposes for oil extraction, cottonseed has the same importance as sunflower seeds. Even the waste of oil factories is valuable food for animals, and the work directed to oil production is one of the important conditions for the implementation of the food program.

The difference in the moisture content of seeds of different families reaches 6-8%. The effect of agrotechnical activities, climatic conditions on fat accumulation is not very clear and does not exceed 1-3%.

Experimental evidence shows that cotton cultivars and lines differ in seed mass, kernel yield and oil content. The materials for the analysis were taken from the experience of the selection department of the Andijan scientific-experimental station. Samples were taken from

the middle part of the cotton bush, from the first places of 3-4 sympodia according to the generally accepted guidelines for determining the technological quality of the fiber.

These families are widely used by station breeders in creating varieties. The yield of kernel content of seeds of different families ranges from 54.5 to 63.0%. According to our data, a direct relationship between the nuclear output and the absolute mass was determined.

These ridges with different lengths of fiber do not differ significantly in terms of moisture content, and in some cases, the seed of fine fiber cotton has low moisture values.

References:

1.Duysynov T. K., Satorov B.Kh. A collection of articles based on the reports of the international theoretical and practical conference on the topic "K vaprosu maslichnosti khlopchatnika vida G. barbadse L. Water and resource-saving agrotechnologies in the agriculture of the Republic of Uzbekistan". Tashkent, 2008, pp. 412-414.

2.Rakhmonkulov S., Rakhmonkulov M., Tozhibaeva U., Abdurakhmonova Y. “Determination of oil content of seeds by organoleptic method” Abstracts of reports of the International scientific and practical conference “Theoretical and practical foundations of prospects development of cotton selection and seed production.” Tashkent, 2002