

## The Effect of Nodule Bacterial Strains on the Quality Indicators of Soybean Grains of "Nafis" and "Nurafshon" Varieties

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**Annotation:** "The effect of nodule bacteria strains on the quality indicators of soybean grain of the "Nafis" and "Nurafshon" varieties was studied and the results of the research were presented.

**Keywords:** Symbiosis, soybean, biopreparation, phenology, nodules, pods, flowering, biochar, nodule bacteria, protein, oil, strain.

**4-table. The effect of nodule bacterial strains on the quality indicators of soybean grains of the "Nafis" and "Nurafshon" varieties**

Option	Variety name	Grain quality indicators		
		Protein, %	Oil, %	Crude protein, %
Nazorat	Nafis	36,1	21,8	34,18
	Nurafshon	34,02	21,98	33,1
Br.sp 1	Nafis	36,45 +0,65	22,14 +0,34	31,57 -2,61
	Nurafshon	36,55 +2,48	23,51 +1,53	32,33 -0,77
Br.sp 2	Nafis	37,92 +0,82	21,83 +0,03	33,5 -0,68
	Nurafshon	38,16 +4,14	21,5 +0,48	33,92 +0,82

The research was conducted at the experimental field of the Cotton Research Institute. The study material included soybean varieties “Nafis” and “Nurafshon”, as well as nodule bacteria strains Br.sp-1 and Br.sp-2.

The seeds of the soybean varieties “Nafis” and “Nurafshon” were used as a control in their pure form, and also with inoculation of nodule bacteria strains. In the control variant, the seeds of the “Nafis” variety contained 36.1% protein, 21.8% oil, and 34.18% crude protein, while the “Nurafshon” variety seeds contained 34.02% protein, 21.98% oil, and 33.1% crude protein.

The seeds of the soybean varieties were also sown after inoculation with the Br.sp-1 nodule bacteria strain. As a result, in the harvested seeds of the “Nafis” variety, protein content increased by +0.34%, oil content increased by +0.34%, and crude protein decreased by -2.61%. In the “Nurafshon” variety, protein content increased by +2.48%, oil content increased by +1.53%, and crude protein decreased by -0.77%.

Similarly, the seeds of the soybean varieties were inoculated with the Br.sp-2 nodule bacteria strain and sown in the experimental field. As a result, the harvested seeds of the “Nafis” variety showed a protein content increase of +0.82%, oil content increase of +0.34%, and crude protein decrease of -0.68%. In the “Nurafshon” variety, protein content increased by +4.14%, oil content increased by +0.48%, and crude protein increased by +0.82%.

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