

# AGROSTEMIN<sup>®</sup>



*Dr. Danilo Gajić*



## **THE REPORT ON THE INFLUENCE AND EFFECTS OF AGROSTEMIN® APPLICATION ON SOYA WITH STATISTIC DATA ANALYSIS**

*(Glycine hispida)*



In 2010 the experiment was set on Vale do Curu experimental estate owned by the Federal University of the State of Ceara, in the town of Pentecoste – CE.

BRS Sambaíba variety was used.

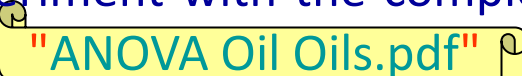
A part of sowed quantity of seed was previously treated with **AGROSTEMIN**<sup>®</sup> in the proportion of 30 g of **AGROSTEMIN**<sup>®</sup> on the quantity of seed required to seed one hectare.

Both treatments were carried out with the same quantity of fertilizer, 350 kg per hectare of NPK (20-10-20), and were irrigated.

## STATISTICAL DATA ANALYSIS

The experiment was set according to the principle of Completely Randomized Block Design. The data obtained were submitted to ANOVA (ANalysis Of Variance) and compared by means of F-test, mean values were compared by means of Tukey test at the level of 5% probability.

The subject of statistical data analysis were the differences in the total seed yield and their quality from the point of view of percentage of oil content, i.e. mass of 1000 seeds.

The results of the experiment with the complete statistic data analysis are given in the document  "ANOVA Oil Oils.pdf"



It can be seen on the photographs enclosed that the plants treated with **AGROSTEMIN**<sup>®</sup> are more powerful, with the developed both canopy and the root, whereas they are characterized by the satisfactory yield. The control plants are weaker, the cycle is premature and with less yield.



## STATISTICAL ANALYSIS

Based on table results of statistical data analysis of differences occurring after the applications of goal treatments and their interactions are statistically (highly) justified for all three monitored parameters (yield, oil content and the weight of a thousand grains). The fact that **AGROSTEMIN®** really represents a factor of high significance both for the quantity and quality of yield has been confirmed.

C.V. <sup>1)</sup>	d.f. <sup>2)</sup>	M.S. <sup>3)</sup>		
		Yield	% oil	mass of 1.000 grains
<b>AGROSTEMIN®</b>	1	3322055,24**	26,713**	1056,20**
FERTILIZER	2	751602,13**	6,882**	310,78**
<b>AGR</b> x FERTILIZER	2	19521,44 *	0,679 *	32,52**
RESIDUE	18	4646,73	0,175	1,33
C.V. <sup>4)</sup> (%)		3,46	2,01	0,85

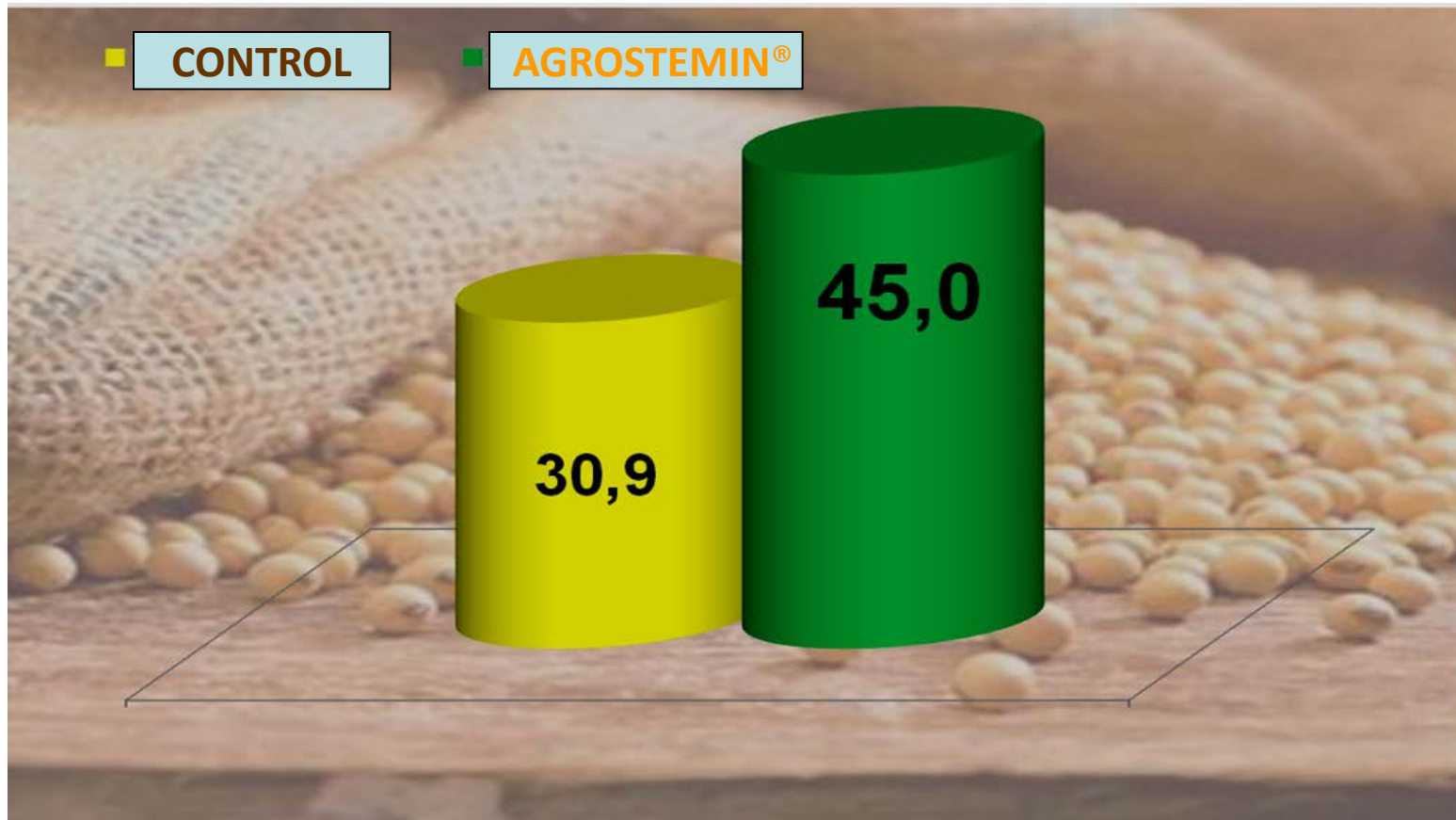
<sup>1)</sup> C.V. – Cause of Variation

<sup>2)</sup> d.f. – degree of freedom

<sup>3)</sup> M.S. – Mean Square

<sup>4)</sup> C.V. – Coefficient of Variation

## YIELD ( in bags of 60kg /ha )



## **YIELD ( statistical analysis )**

The table below shows the comparison of mean values of yield by Tukey test at the level of 5% probability. The data suggest the significant yield increase, 45% more than the control group.

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<b>CONTROL</b>	<b>(with fertilizer)</b>	<b>30,9B</b>
<b>AGROSTEMIN<sup>®</sup></b>	<b>(with fertilizer)</b>	<b>45,0A</b>

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**TABLE OF COMPARED VALUES  
( grain yield )**

TREATMENT			YIELD per HECTARE	
			60 kg sack	%
without Agrostemin	X	with AGROSTEMIN®	+14,1	+45,5

## OIL CONTENT ( statistical analysis )

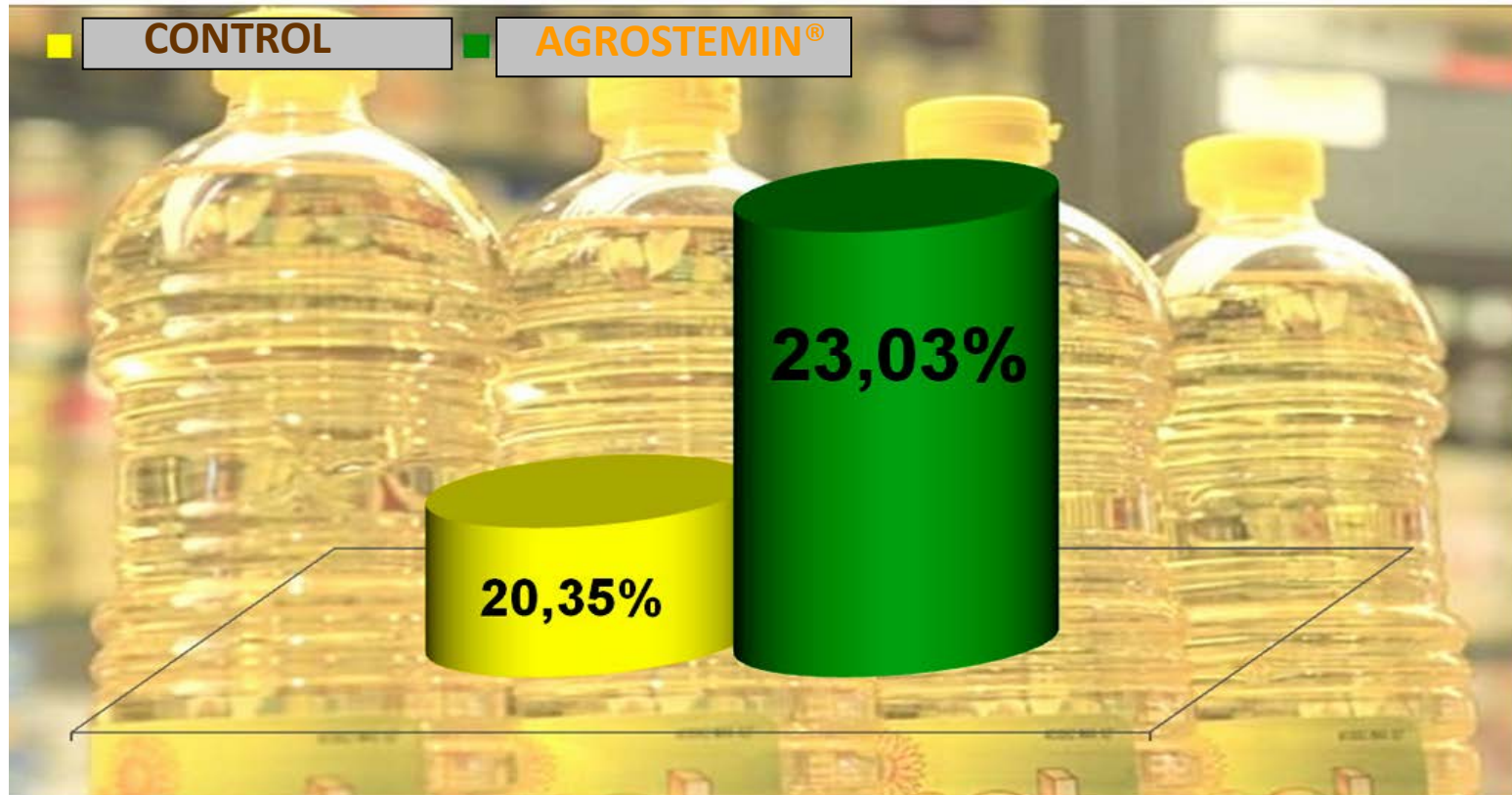
The table below shows the comparison of mean values of oil content quantity by means of Tukey test at the level of 5% probability. It can be noticed that the treatment with **AGROSTEMIN**<sup>®</sup> increased the oil content by 13% in comparison with the control group.

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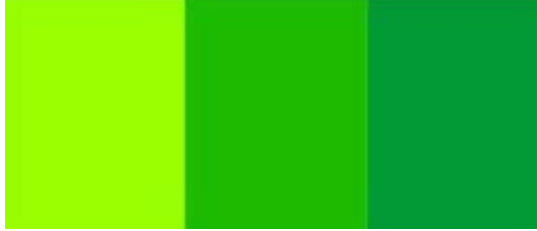
<b>CONTROL</b>	(with fertilizer)	<b>20,35B</b>
<b>AGROSTEMIN</b> <sup>®</sup>	(with fertilizer)	<b>23,03A</b>

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## OIL CONTENT ( % )



The oil content was increased by 13 %



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