AGROSTEMIN

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THE EFFECT OF FOLIAR APPLICATION OF AGROSTEMIN ON ONION PLANT
(II experiment – Result analysis)

(Allium cepa)

The experiment was conducted in the municipality Baraúnas – RN Brazil in period time from September to December 2010 year.

Type IPA 11 was used.

AGROSTEMIN® was applied to onion garden beds by spraying water solution eight days following the sowing in concentration of 30g per hectare.

Treatment of garden beds with AGROSTEMIN®

Onion beds 53 days following the sowing

END OF SEASON:

onion was picked on the 87th day from the seeding

Picking the onions (harvesting)

Separation / Categorization

BULBS CATEGORIZATION

Onions are classified according to the bulb size into the following categories: Type 01 – small, Type 02 – medium, Type 03 – large and Type 04 – extra large. The financial effect on the producer depends directly on the representation of individual categories within the structure of the entire yield, particularly Type 03, which is the most valued one.

TYPE 1 (small) **TYPE 2 (medium)** **TYPE 3 (large)** **TYPE 4 (extra large)**

The comparison was made in such a way that the first two identical (non-neighboring) areas – garden beds were determined, each 20 m long and 0.5 m wide, and AGROSTEMIN® was applied on one (the other was control garden bed – untreated). The entire yield from each of them was collected individually, the bulbs separated, put into bags and measured per categories, as it can be seen from the table.

The yield from a 20 m x 0.5 m garden bed

CATEGORY (bulbs)	CONTROL (kg)	AGROSTEMIN (kg)	CONTROL (bags of 20 kg each)	AGROSTEMIN (bags of 20 kg each)
TYPE 1 (small)	7,6	4,60	0,38	0,23
TYPE 2 (medium)	33,46	33,76	1,673	1,688
TYPE 3 (large)	53,51	82,74	2,6755	4,137
TYPE 4 (extra large)	0	0	0	0
TOTAL	**94,57**	**121,1**	**4,73**	**6,05**

Based on the data from the previous one, the table below was made with the results sorted per categories and the yield reduced to the area of one hectare. It can be seen that the total yield increased by 28,05% when AGROSTEMIN® was used, i.e. 6.632,50 kg/ha (331 bags of 20 kg each).

Reduced to the yield per hectare

CATEGORY (bulbs)	CONTROL (kg/ha)	AGROSTEMIN (kg/ha)	CONTROL (bags of 20 kg/ha)	AGROSTEMIN (bags of 20 kg/ha)
TYPE 1 (small)	1.900,0	1.150,0	95,0	57,5
TYPE 2 (medium)	8.365,0	8.440,0	418,3	422,0
TYPE 3 (large)	13.377,5	20.685,0	668,9	1.034,3
TYPE 4 (extra large)	0,0	0,0	0,0	0,0
TOTAL	**23.642,50**	**30.275,00**	**1.182,13**	**1.513,75**
Gain		**6.632,50**		**331,63**

The structure of increase of total yield (28,05%) per categories

CATEGORY (bulbs)	GAIN (per hectare)		
	kg	bags of 20 kg	%
TYPE 1 (small)	-750,0	-37,5	-39,5
TYPE 2 (medium)	75,0	3,8	0,9
TYPE 3 (large)	7307,5	365,4	54,6
TYPE 4 (extra large)	0,0	0,0	0,0
TOTAL	**6632,50**	**331,63**	**28,05***

* * total yield increased by 28,05 %

It is important to point out the economic aspect of the differences obtained. Only Types 02, 03 and 04 are of market value, whereas the highest price is achieved by Type 03. Type 04 achieves the lowest value (extra large bulbs) because there is less demand for this type. Economic interest of onion producers is for Type 01 and Type 04 to be as low represented as possible and to have type 03 represented as much as possible since it is more profitable financially.

The results obtained confirm that AGROSTEMIN® influences both the increase of the entire yield and the improvement of its structure. Measurements determined the difference of 331 bags of 20 kg each per hectare (28% increase), mostly the Type 03 bulbs, in other words almost the entire yield consisted mostly of the bulbs of this size. These two factors mentioned ensure that the investments into AGROSTEMIN® are profitable even under the conditions when the price of onion at the market is low.

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