Trakia Journal of Sciences, Vol. 8, No. 1, pp 42-44, 2010

Available online at:
http://www.uni-sz.bg

ISSN 1313-7050 (print)
ISSN 1313-3551 (online)

Original Contribution

THE EFFECTS OF ANIMAL MANURES AND NITROGEN FERTILIZER ON QUANTITY AND QUALITY YIELD ON VARIETY OF RGS003 ON AUTUMNAL CANOLA (BRASSICA NAPUS)

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ABSTRACT

The experiment was conducted as randomized complete block designed in 4 treatments and 3 Replication in research center, faculty of agriculture Zabol University in year 2007-2008 in the Iran. To study four type treatment such as: Hen, Ostrich, Cow and Chemical manure were tested. Therefore: on experiment mentioned above used 40 t/ha animal manure, 350 kg/ha nitrogen manure, 200 kg/ha phosphorous and potassium.

Animal manure, phosphorous and potassium and 1/3 of nitrogenous before cultivation and all other, when crop become to start flowering stage, height of shrub and number of lateral branches were measured. With this regards also after harvesting, number of nodes in shrub, number of seed in sheath, weight of one thousand of seed, economic and biological yield as been measured. Percentage amount of oil as been measured and extracted by Soxhlet method.

The results as been shown, number of nodes in shrubs and economical yield, chemical manure treatment compared with other treatment show significant difference 5%>P. with this regards also results from analyzing oil showed percentage amount of oil in chemical manure treatment show significant difference 5%>P, but there is not significant difference between hen and ostrich manure. The result from statistical analyzing of data regarded on shrub height and number of lateral branches and number of seed, thousand seed weight and biological yield indicate that, between the various treatment of manures in 5% > P level there is not significant differences.

The Result of the canola plant compare with the chemical manures show a more suitable respond and the hen manures mostly used for amending and the improving the soil and for obtain the majority of quality and quantity of canola can use the chemical manures.

Key words: Canola, Soxhlet , Economic yield, Biological yield.

INTRODUCTION

Canola is the main oil plant in the world. Mean of oil canola is depended to kind of canola and it variable between 40 to 49 percentages. Canola is cultivated in the more region country. Shortage of nitrogen is the main factor restricted for growth of this plant, because require of canola to nitrogen is rather than of all elements (1).

Effects of consumption of animal manure similar to chemical manure to yield increased no significant in primitive years (2).

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In this Research goal is survey effects of chemical manure and animal manure on yield and component of yield on the canola with kind of RGS003 canola in the Sistan Region.

MATERIAL AND METHODS

This research Implementation in center research of Zabol that be allocated far from 35 Km of Zabol that be named Chahnimeh. By means of Analysis of Animal manure and determined of percentage Nitrogen, Phosphorus and Potassium can be used set that it name is kejeldal. And by means of measurement of potassium percentage that be exist in the sample we used set that it name is flame photometer and by means of

measurement of phosphorus percentage we used set in name is spectrophotometer.

This experiment used with RCBD design in 3 replication and 4 kind of manure of hen manure , ostrich manure and cow manure with balance 40 t/ha and be used Nitrogen manure with balanced 350 Kg/ha.

Randomly electing 10 plant of ever plot and measurement high plant, secondary branches and Number of seed. By means of measurement economic and physiological yield be cultivated 2.4 m^2. Then of separating of seeds , others of plants be allocate in the Oven set for 24 hr with 78 degree of centigrade and then weight them.

Statistics Analysis Consist of, variance analyzing and Mean Comparison conduct with MSTAT-C and Duncan Test in level 5%.

RESULTS AND DISCUSSION

The results as been shown, number of nodes in shrubs and economical yield, chemical manure treatment compared with other treatment show significant difference 5%> P.

With this regards also results from analyzing oil showed percentage amount of oil in chemical manure treatment show significant difference 5% > P ,This results was similar to other researcher (3, 4) but there is not significant difference between hen and ostrich manure. The result from statistical analyzing of data regarded on shrub height and number of lateral branches and number of seed, thousand seed weight and biological yield indicate that, between the various treatment of manures in 5% > P level there is not significant differences but chemical fertilizer have the highest amount of Biological yield that Nitrogen fertilizer was caused that green cover was development for receipt light.

Table1. *Analysis of Variance factors in quantity yield*

Factor	df	MS
High	3	328.33^{ns}
Number of secondary branch	3	39.436^{ns}
Number of pod in plant	3	4321.23^{*}
Number of grain in pod	3	6.079^{ns}
Weight 1000 seed	3	0.02^{ns}
Biological yield	3	3.716^{ns}
Ecological yield	3	1.61^{*}
Oil percentage	3	472.75^{**}

ns = Not significant , *and ** significant at 0.05 and 0.01 level of probability , respectively

Table . *Comparison of Means for factors in canola*

Treatment	Oil Percentage	EY	BY	Weight 1000 seed	Number of silique in plant	Number of seed in silique	Number of secondary branches	High plant
Chemical manure	48.4a	2.6a	15.8a	3.3a	173.1a	25.5a	13.2a	113.9a
Cow manure	28.3b	1.4ab	13.36a	3.6a	94b	25.9a	11.9a	88.4a
Ostrich manure	22.1c	1.7ab	13.34a	3.3a	104.8b	24.4a	13.8a	113.6a
Hen manure	22c	1.33b	13.51a	3.2a	94.8b	22.7a	20.1a	118.6a

Any two means not sharing a common letter differ significantly from each other at 5% probability.

Table 3. *Comparison of percentage element in manures*

Treatment	Cow manure	Hen manure	Ostrich manure
Nitrogen	1.2	1.25	1.37
Phosphorus	0.512	1.43	1.8
Potassium	0.34	0.78	0.36

The Result of the canola plant compare with the chemical manures show a more suitable respond and the hen manures mostly used for amending and the improving the soil and for obtain the majority of quality and quantity of canola can use the chemical manures.

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