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SCREENING OF THREE VARIETIES OF PEPPER (CAPSICUM SPP) IN DELTA STATE POLYTECHNIC, OZORO NIGERIA

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ABSTRACT: This project work took place at school of agriculture teaching and research farm in Delta State Polytechnic Ozoro. Ozoro is located in Isoko North local government Area of Delta State. There are different varieties of pepper in Ozoro the need to screen the yield of three varieties of pepper becomes necessary. Three varieties of pepper seeds were bought from the market and were nursed for about 3 weeks before they were transplanted into the main field at a spacing of 60cm x 60cm and planting depth of 5cm. the seedling were replicated four times, in a randomize complete block design. The parameters measured are member of leaves, plant height number of branches and number of fruits at hearvest. These were taken at the interval of two weeks. Data collected were subjected to analysis of variance (ANOVA). Table 1: reveals the number of leaves of three varieties of pepper. The result shows that mexi-bell hot pepper had the highest number of leaves of 17.5, 60.25 and 63.0 as against 16.75, 31.25,33.0 and 16.25, 58.35 and 60.0 for sweet bell pepper and serano hot pepper respectively. Table (2) shows the plant height (cm) of three varieties of pepper that is planted, mexi-bell hot pepper had a plant height of 8.5, 20.5 and 23 as against 6.75, 16.78, 18 and 5.77, 16.75 and 20.25 for serano hot pepper and sweet bell pepper. Table (3) shows the number of branches of three varieties of pepper. The result shows that mexi-bell hot pepper had more or highest number of branches of 3,6.5, 8 and 2.5, 4.75 and 6.25 for serano –hot pepper and sweet bell pepper. Table (4) revealed that mexibell hot pepper had more number of fruit at harvest of 67.7, 74.7 and 33.7 against 39.3, 49.0, 26.3, 43.7, 65.3 and 31.3 for sweetbell pepper and serano hot pepper respectively. It is therefore recommended that since there was significant difference among the three varieties, mexi-bell hot pepper should be cultivated in Ozoro and it's environs to increase the profit margin of pepper farmers in this area.

KEYWORDS: Mexibell, Serano, Number of Leaves Number of branches, Fruits at Harvest.

1 INTRODUCTION

Pepper belongs to the solanacous family. It originated from central and South American and can be grown throughout the year (Kabura et al, 2008). The crop is ranked third most important vegetable crop after tomatoes, onions in the world (Islam et al, 2011; Belel et al, 2011). Juroszet and Tsai (2009) reported that pepper fruits are good sources of many essential nutrients including vitamins A, C, E and carotenoids minerals e.g calcium, and iron and other secondary plant compounds. Studies conducted by chellemi and Rosskoff (2004) and Delate et al, (2008, 2003) concluded that, that yield of pepper were similar in organic and confectionary production system. Pepper when consume in right quantity aid digestions, decrease perspiration and increases physical endurance (Norma, Jill 1990). Pepper taken in form of tea have been credited for relieving arithritis, nauseas, fever, headaches and poor digestions (Pernezny, et al, 2003) and (Hung, 2004) strep throat and even coma. It has also been used for non medicinal application as an insecticides. Pepper is a favorite spice of cooks because of it's pungent aroma and flavor (Piror, 2003).

There are different varieties of pepper.

The need to evaluate the best yielding variety necessities the study. The main object of the study is to screen the yield of three varieties of pepper.

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The specific objectives are as follows;

1. Determine the number of leaves
2. Determine the plant height
3. Determine the number of fruits at harvest.

There are different varieties of pepper which include sweet bell pepper, sarano hot pepper, Habanero hot pepper, pobalano hot pepper, Jalapeno hot peppers, mexibell hot pepper cayenne hot pepper and Charleston pepper. For the purpose of this study emphasis should be more on the three varieties under investigation.

Jalapeno hot pepper are the most favorite pepper. They are high yielding plants and have a high disease resistance. Mexibell hot pepper are small and can only get to the height of 1.79 feet. It matures from green to red colour. (Chrustian, 2005)

They are ready to eat when they are green but if you leave them until they are red, they will be sweeter. Serrano hot pepper. are hotter than Jalapenos. They grow to a height of about 2-5 feet tall and each plant can give you up to fifty fruits of pepper (Drost, 2010 and Jarani 110 et al 2001).

2 MATERIALS AND METHODS

This project was conducted in school of agriculture research and teaching farm in Delta State Polytechnic, Ozoro in Isoko North Local Government Area of Delta State of Nigeria. The temperature of the area ranged between 28^0c-50^0c while the animal rainfall rays between 2500mm-3000mm.

It's atitudinal position is below 5meters above sea level (Ofunne, 1999). The seeds of the different varieties of pepper were bought from the local market and were raised in the nursery before they were transplanted into a randomized complete block design which was replicated three times. They were transplanted at a planting distance of 60cm x 60cm and planting depth of 5cm. The growth parameter measured are number of leaves, plant heighted number of fruits at harvest. The parameters were taken at the interval of two weeks expect for the number of fruits at harvest which was collected only 0 times before the expiration of the experiment. Data collected were subject to analyzed of variance (ANOVA).

3 RESULTS AND DISCUSSIONS

3.1 RESULTS

Table 1: Reveals the number of leaves of three varieties of pepper. The result shows that Mexibell hot pepper had the highest number of leaves of 175,60.25 and 63.0 as against 16.75,31.25, 33.0 and 1625, 58.25 and 60.0 for sweet bell pepper and Serrano hot pepper respectively

Table 2: Reveals the plant height (cm) of three varieties of pepper it shows that maxi-bell not pepper had a better height of 8.5, 20.5 and 23 as against 6.75, 16.78, 18 and 5.77, 16. 75 and 20.25 for Serrano –hot pepper and sweet botl pepper.

Table 3: Shows the number of branches of three varieties of pepper. The result shows that maxi-bell hot pepper had highest number of branches 5, 6.35 and 7.75 as against 3, 6.5,8 and 2.5, 4.75 and 6.5 for Serrano-hot pepper and sweet bell pepper.

Table 4: Shows that mexi bell hot pepper add better number of fruits of 67.7, 74.7, 33.7 as against 39.3, 49.0, 26.3 and 43.7, 65.3 and 31.3 for sweetbell pepper and serano respectively.

Table 1: number of leaves of pepper at 4-9 Wap

Treatment	4^{th}	6^{th}	8^{th}
Sweet –bell pepper	16.75	31.25	33.0
Maxi-bell hot pepper	17.5	60.25	63.0
Serano hot pepper	16.25	58.25	60.0
F cal	2.0	0.1	0.3
Ftab	0.5	0.5	0.5

Table 2: plant height (cm) of pepper at 4-9wap

Treatment	4th	6th	8th
Sweet –bell pepper	5.77	16.75	33.0
Maxi-bell hot pepper	8.5	20.5	63.0
Serano hot pepper	6.75	16.78	60.0
F cal	1.31	1.5	1.3
Ftab	0.5	0.5	0.5

Table 3: number of branches of pepper at 4-9 wap

Treatment	4th	6th	8th
Sweet –bell pepper	2.5	4.75	6.25
Maxi-bell hot pepper	3	6.25	7.75
Serano hot pepper	3	6.5	8
F cal	0.9	0.9	0.9
Ftab	0.5	0.5	0.5

Table 4: Mean number of fruits at harvest

Treatment	1st	2nd	3rd
Sweet –bell pepper	39.3	49.0	26.3
Maxi-bell hot pepper	67.7	74.7	33.7
Serano hot pepper	43.7	65.3	31.3
F cal	30.0	2.9	3.0
Ftab	0.5	0.5	0.5

3.2 DISCUSSIONS

Table (1) revealed that mexibell hot pepper had better number of leaves than the other varieties of pepper. This could be attributed to the fact that mexi-bell is an hybride which possess both characteristics of serano pepper and hot mexi bell. However, there was significant (wap) difference among the three varieties of pepper at ($p>0.05$).Table (2) revealed that mexibell hot pepper had superior plant height compared with other varieties of pepper planted.

This finding agreed with (normal jii, 1990) who reported that mexi-bell grows to the height of about 1.79 feet. Table (3) shows the number of branches of the three varieties of pepper. The results shows that mexibell has more number of branches throughout the period of the experiment.

Table 4: reveals that mexibell hot pepper performed better items of yield throughout the experimental period. However, there was significant different among the three varieties of pepper ($p> 0.05$).

4 CONCLUSION

In conclusion mexi-bell hot pepper performed better in terms of number of leaves, plant height, number of branches and number of fruit at harvest. However, there was significant difference among the three varieties of pepper at ($p>0.05$).

RECOMMENDATION

Since there was significant difference among the three varieties, it is there recommended that mexi-bell hot pepper should be cultivated in Ozoro and it's environs to increase the profit margin of pepper farmer in this area.

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