THE INFLUENCE OF THE TYPE AND DOSE OF MANURE TOWARDS GROWTH AND CROP YIELD OF ONION (*ALLIUM CEPA* VAR. ASCALONICUM) ON DRY LAND

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ABSTRACT

Plant onion (*Allium cepa var*. *ascalonicum*) is one of the vegetables that are very well known by the public as a flavoring condiment cuisine. To increase the production of onion then the very need for fertilization fertilizer organic, among others. Organic fertilizer has a role in providing the nutrients needed by plants. The use of organic fertilizer is an of the efforts to improve soil fertility, because organic fertilizers is porous, raising the ability of the soil in the hold (tie) water. The application of organic fertilizer in the system cultivation can increase the content of organic matter or C-organic and N content of total land. The purpose of this research is to know the type and dosage of organic fertilizer and their interaction towards growth and crop yield of onion. Experimental design was a randomized Complete Design Group (RAK) consists of two factors and arranged in Factorial, i.e. the first factor is the type of fertilizer treatment consisting of organic: PKS: Cow Manure, PKK2: Goat Manure, PKA: Chicken Manure and the second Factor is the dosage of organic fertilizer, which consists of: DPO0:0 t ha-1 (0 kg swath-1), 10: DPO1 t ha-1 (1.20 kg swath-1): 20 DPO2, t ha-1 (2.40 kg swath-1), DPO3:30 t ha-1 (3.60 kg ha-1). Observation of the growth component, measurement results, results as well as supporting multiple variables. The collected data were analyzed with the analysis Variant (ANOVA) according to the experimental design was used. If there is a real interaction influence against the observed variable is then continued with a different test studies on average use the test double distance Duncan (DMRT) on levels 5% and if only a single factor in a real influence, then proceed with the average difference test with test BNT on levels 5%. Based on research results that different types of manure, not influence against growth and crop yield of onion while given doses of manure increases would boost growth and crop yield of onion Red on the treatment dose of chicken manure with a dose of 30 t ha-1 (3.60 kg/compartments). Not found the interactions between types and doses of manure towards growth and crop yield of onion. It is because this type of fertilizer have not given the decomposition of perfect so that interaction has not occurred.

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INTRODUCTION

Plant onion (*Allium cepa*var. *ascalonicum*) is one of the vegetables that are very well known by the public as a flavoring condiment cuisine. Tuber onion contains essential oils that are known to be able to cause the typical aromas and flavors of savory on the cuisine (Suriani, 2011). Tuber onion contains 1.5% protein, fat and carbohydrate 9.2% 0.3%. Other nutritional components contained in the red onion, among others, 50 IU β carotene 30 mg thiamin, 0.04 mg riboflavin, niacin 20 mg, 9 mg Ascorbic acid, 334 mg potassium, 0.8 mg iron and 40 mg of phosphorus (Meditation and Cahyoo, 2005 in Ida Nur, 2016). In addition to the herbs, shallot bulbs are also sold in the form of processed food such as powdered onion, extracts, essential oils, fried onions even as drugs to lower cholesterol levels, blood sugar, prevent blood clotting, lowering blood pressure and improve blood flow also prevent magh, because onion contains allincompounds and acidic allisin bactericide (Rukmana, 2005). In the last decade the demand for consumption and red onions seedlings in the

country has increased, so that East Timor must import to meet those needs. To reduce the volume of imports, an increase in production and the quality of the results of the onion always enhanced through intensification and extensification. In order to meet the needs of onion increasing then the need for breakthrough technology capable of increasing production cultivation of onions through the organic technology approach. Organic farming is capable of increasing productivity of red onion. One of the problems decreased the production of onions which were affected by fertilizer. One of the alternatives that can be done to improve the growth and production of the onion are doing the fertilizing appropriately. Therefore, an alternative to increase productivity of onion that is by using organic fertilizer. Organic fertilizer has a role in providing the nutrients needed by plants. The use of organic fertilizer is one of the efforts to improve soil fertility, because organic fertilizers are acusticus, raising the ability of the soil in the hold (tie) water. The application of organic fertilizer in the system cultivation can increase the content of organic matter or C-organic and N total in the soil (Zulkarnain *et al*., 2013).

One of the sources of organic materials that are widely available around the farmer is manure. Manure contains a complete nutrient required for plant growth because it contains macro nutrient elements such as nitrogen, phosphorus, and potassium, and micro elements such as calcium, magnesium, and sulfur (Jedeng, 2011). Based on the type of animals there are many different kinds of manure that can be utilized, among others, the manure cows, goats, sheep, horses, and chickens. The fifth such manure has advantages of each of them the content of the elements N, P K which is pretty high. Granting of manure can also improve the physical properties of the soil, that is the capacity of a soil to retain water, the density of the soil mass, and total porosity soil aggregate stability fix and improve the content of humus soil that is desired by the plant (Salvitia *et al*,. 2016). Adimihardja *et al*., (2000) States that the granting of the appropriate doses of fertilizer will give a good influence against the growth of plants. However, in General, to increase the production of horticultural plant require organic materials with high doses. Hidayat and Rosliani (1996) States that the granting of manure production can increase significantly in plants of onion with the use of dose 10-30 ton hectares. The low fertility of the land is not offset by the optimum fertilization then will the occurrence of land degradation. One of the efforts to increase the productivity of land is through the addition of organic fertilizers. Therefore, this research needs to be done to know the influence of the granting of this type of organic fertilizer and the dose against growth and crop yield of onion.

RESEARCH METHODS

This experiment was carried out in the plant nursery located in the hamlet of NCBA Malinamuk, Vilage Comoro, Sub District Dom Aleixo, Municipality Dili. Based on the Data Collection Point Geo location On is located at latitude: 8o33 ' 53 "S. Longitude: E 125o31 ' 50 ". Height ± 82.95 m above sea level (A.S.L.) and precision 4 m. the land is low-lying land dry climate. The experiment was carried out starting on June 14, 2018 until 27 October 2018. The results of the analysis of the soil before the experiment the pH of the Alkalis, N a total of lace and organic C-low. The materials used in the experiment was obtained from onion seed Shops, the village of Boaventura BidauAkadiru-Hun, Subdistrict Cristo Rei, District of Dili, cow dung manure by as much as 3600 g Company Coop obtained from NCBA, fertilizer Chicken Coop retrieved from corporate grace FarmaRailaco 5400 grams and as much manure goats taken from the enclosure in Metinaro goat breeders as much as 7200 grams. The tools used include; plow, hoe, sickle, marker, plastic bucket, a flush (gembor), shovels, measuring cup, scales, analytical scales, meter, a ruler, a rope, a plastic pouch of Raphia, handcounter, stationery writing, soil pH and a digital camera. Observation of variable growth; high plant on four plant samples and the amount of onion leaf plant red onion/sample, the variable component of the result; fresh weight on four plant samples, summing the saplings, fresh heavy economical per hide, on four plant samples, heavy dry performed on four plant samples. The data were analyzed statistically observations with analysis of variants in accordance with the draft used i.e. Full Group of Random Design (RACK). If the influence of real interactions ($P < 0.005$) of the observed variables, then continued with a different test average value by using the double distance test Duncan 5%. When only a single factor in a real influence, then continued with test Duncan Multi Range Test 5% and LSD 5% (Gomez and Gomez, 1995).

RESULTS AND DISCUSSION

The number of leaves of Plants of onion (strands)

The results of the analysis of the multiform prints (Anova) against the number of leaves of onion plants (Appendix 7. f) suggests that the type of manure treatment does not provide any real influence ($P > 0.05$) on the number of leaves of plants of onion at age 2, 4, 6 and 8 PM MST, the number of leaves While the results of the analysis of variance analyst (Anova) against the treatment doses of manure gives a very real influence ($P<0.01$) on the number of leaves of plants of onion at age 2, 4, 6 and 8 pm MST. the interaction between the types and doses of manure does not give different real influence ($P\geq0.05$) in the amount of leaf plant red onion 2, 4, 6 and 8 MST. To be more clear on table 1.

Table 1. Average number of Leaves Per plant (strands), due to a combination of different types of Manure (JP) and a dose of Manure (DP) At Some Age a different onion Plants

Sample Code	2 MSPT	4 MSPT	6 MSPT	8 MSPT
PKS D0	4.00a	5.83ab	8.25a	10.83a
PKS D1	4.67cde	7.25d	9.25abcde	15.58d
PKS D2	4.50abcd	6.58cd	9.25abcde	13.92abcd
PKS D3	4.75cde	6.67cd	10.00 abcde	14.75abcd
PKK D0	4.08ab	5.83ab	8.33ab	11.25abc
PKK D1	4.83cde	6.67cd	8.67abcd	15.67d
PKK D2	4.67cde	7.00cd	9.92abcde	15.08bcd
PKK D3	4.58bcde	6.92cd	10.33cde	15.50cd
PKA D0	4.33abc	5.50a	8.42abc	10.75a
PKA D1	5.00de	6.25bc	10.08bcde	14.50abcd
PKA D2	4.67cde	6.58cd	10.50de	15.42cd
PKA D3	5.08e	6.83cd	11.00e	17.17d

Description: a number that is followed by the same letter in every different column not reality test DMRT 5%.

From table 5.2 shows that kind of treatment doses of manure are not real influence against the amount of leaf plant red onion per sample at 2 MST, 4 MST, 6 MST and 8 MST, number of leaves most 8 MST on the type of chicken manure (Pa) of 17.17 strands, while on the type of cow manure (Ps) in the fewest number of leaves can namely 13.92 strands. Treatment doses of manure influence very real against the number of leaves at 2 MST, 4 MST, 6 MST and 8 MST the most number of leaves, at 2 MST, 4 MST, 6 MST and 8 MST,

the largest leaves at 3.60 kg per dose swath 17.17 strands while the lowest amount of leafNPA 0 kg per dose treatment (a D0) swath i.e. 10.83 strands. This is supported by the theory of Latarang (2004) added that the establishment of a number of very determined by leaf size cells, also in influence by the number of elements of the absorbed by the plant nutrient, nitrogen used plants to form amino acids so that produce chlorophyll used for the process of photosynthesis is absorbed by the roots to serve as food ingredients, chicken manure contain elements N, P, and K and also Ca and Mg. In tighten up by Sumarno (1993) States that nitrogen is indispensable for vegetative growth of plants like roots, stems and leaves as well as stimulating shoots and can add high plants.

High Plant Shallots (cm)

The results of the analysis (Anova) variety fingerprints against height plant shallots (attachment 11. f.) indicates that the type of manure treatment gives a real influence on the 4 MST but gives no real influence on plant shallots at the age of 2, 6 and 8 MST, high plant while the results of the analysis of variance analyst (Anova) against the treatment doses of manure gives a very real influence (P<0.01) at the height of the plant the onion at age 2, 4, 6 and 8 MST. the interaction between the types and doses of manure does not give different real influence (P≥0.05) in high plant onion at age 2, 4, 6 and 8 MST. For more details can be seen in table 2.

Table 2. Average high Per plant (cm), due to a combination of different types of Manure (JP) and a dose of Manure (DP) At Some Age a different onion Plants

Sample Code	2 MSPT	4 MSPT	6 MSPT	8 MSPT
PKS D0	24.17a	33.17a	46.67a	50.25a
PKS D1	26.25abc	34.00a	49.33ab	60.92bc
PKS D2	27.17abc	35.83ab	50.25abc	61.17bc
PKS D3	28.17abcd	36.75abc	53.08abc	63.67c
PKK D0	24.83ab	34.50ab	47.42a	51.33ab
PKK D1	29.25bcd	42.08bc	54.92abc	57.50abc
PKK D2	29.08bcd	42.33bc	55.08abc	60.17bc
PKK D3	30.25cd	44.08c	55.92bc	63.42c
PKA D0	24.42ab	36.42abc	46.58a	52.08ab
PKA D1	27.25abcd	40.67bc	56.75bc	59.75bc
PKA D2	28.32abcd	41.58bc	56.83c	60.00bc
PKA D3	32.08d	44.13c	57.08c	65.08c

Description: a number that is followed by the same letter in every different column not reality test DMRT 5%.

Of table 3 shows that the type of treatment doses of fertilizer effect of higher plants against real onion at age 4 MST type manure treatment but is not real influence against high red onion crop plants per sample at age 2 MST, 6 PM MST and 8 PM MST, plant shallots with the highest value there are 8 PM MST on the type of chicken manure (Pa) of 65.08 cm (table 5.3) and on the type of goat manure (Pk) in high crops can be low with the average value of Onion plants high 52. 08 cm. Treatment doses of manure influence very real high against the plant at 2 PM MST, 4 PM MST, 6 PM MST and 8 high-most plants on MST dose 3.60 kg per cm of height whereas the swath of 65.08 plant onion low without treatment doses of 0 kg per (a D0) swath i.e. 50.25 strands (table 5.3). This is supported by the theory of Sumarno (1993) States that nitrogen is indispensable to the growth of vegetative plants like roots, stems and leaves as well as stimulating shoots and high plant and may add to this theory also commands the reinforced by Lakitan (1996), there is a synchronization between the availability of nutrient needs of the plants so that it can help the speed of growing plants. It is also supported by Syarief (1993), which States that the organic fertilizer which is inserted into the ground will be decomposed by microorganisms and nutrient elements released from the decomposition becomes available and are absorbed by plants, thus rooting plant growth will increase especially tall plants.

The Weight of the Fresh Onion Plants

The results of the analysis of the multiform prints (Anova) of the weight of fresh plant onion bulbs per sample (attachment 12b) shows that the type of manure treatment gives a real influence (P < 0.01) on the weight of fresh tuber crop onion and also the results of the analysis Analyst prints range (Anova) against the treatment doses of manure gives a very real influence (P < 0.01) on a fresh weight of tuber crops of onion on a per sample. The interaction between the types and doses of manure does not give different real influence (P > 0.05) on a fresh weight of economical plants of onion/sample after harvest. For more details can be seen in Table 3.

Table 3. The value of Different of LSD Results 5% Against the weight of the Fresh Onion Plants/Total Samples At each of these Factors At Age 8 MSP (gr)

Types of Manure (Gr./plant)	Doses of Manure (Gr./plant)			
	0 kg/plot (D0)	1.20 kg/plot (D1)	2,40 kg/plot (D2)	3,60 kg/plot (D3)
8 MSP	----------	----------	gr ----------	----------
Cow Manure (PKS)	43.83a A	51.50a A	53.39a A	56.29a A
Goat Manure (PKK)	44.46a A	59.06a A	61.04a A	63.91ab AB
Chicken Manure (PKA)	45.66a A	67.46a A	74.04b B	87.08c B
BNT 5%	24.94			

Description: Based on variance effect, the effect of the interaction of different types of fertilizers and Manures Dosage. Average followed a similar letter on a line (a, b, c) and columns (A, B, C) of the same is no different of BNT assay based on levels 5%. JPK = Type Of Manure, DPK = Doses of Manure

From table 3 shows that the type of manure treatment effect is significant P 0.01) against heavy < fresh tuber plant shallots and fresh weight of tuber plant red onion kg/plot of ... Types of chicken manure treatment (Pa) against the weight of fresh tuber crops of onion per sample. The weight of the fresh plant onion bulbs 3.60 kg/compartments provide the highest weight is 87.08 g/samples while the lowest found in cow manure treatment (PS) with a weight of 51.50 g/sample. Treatment doses of manure very real effect against the weight of fresh tuber plant onion/sample and kg/swath. The weight of fresh tuber onion plants the highest achieved in dose 3.60 kg/swath (D3) 87.08 g while low on dose 0 kg/plot (a D0) with a weight of 43.83 g Table 5.4. This theory is supported by Rukmana, 1997, with grant of fertilizer N, P and K fertilization is in improving crop production and in theory strengthen Widowati et al. (2005) stating that in research of application of manure gives plants the best response on the first season which occurs because the chicken manure decomposes more quickly and have a relatively nutrient elements are larger compared with the other manure. Besides the quality of manure is very influential towards the response of plants and also this theory played by Thompson and Kelly (1957) States that N encourage vegetative growth and stimulate the development of stem and leaves. The development of the stems and leaves can we see from the height, number of branches, and also the weight of dry and wet leaves and rod.

The number of saplings of Plants of onion (siun)

The results of the analysis (Anova) variety fingerprints against a heavy amount of economical fresh saplings "suing" plants of onion per sample (Appendix 13. b.) indicates that the type of manure treatment gives a real influence (P<0.01) On the weight of fresh economic number of saplings of plants of onion and also the results of the analysis of the multiform variance analyst (anova) against the treatment doses of manure gives a very real influence (P < 0.01) on a fresh weight of economical amount of onion plants/saplings sample. the interaction between the types and doses of manure does not provide a distinct influence is real (P≥0.05) on a fresh weight economical number of saplings of plants of onion/samples after harvest. For more details can be seen in Table 4.

Table 4.The value of Different of BNT Assay Results and 5% Against number of Chicks Plant Onion/Swath on each Factor At Age 8 MSP (siun)

Types of Manure (Gr./plant)	Doses of Manure (Gr./plant)			
	0 kg/plot (D0)	1.20 kg/plot (D1)	2,40kg/plot (D2)	3,60kg/ plot (D3)
8 MSP				
Cow Manure (PKS)	3.17a	3.25a	3.58a	3.58a
	A	A	A	A
Goat Manure (PKK)	3.08a	4.08a	4.42a	4.83b
	A	A	A	B
Chicken Manure (PKA)	3.08a	4.58a	5.08b	5.50b
	A	A	B	B
BNT 5%	1.59			

Description: based on yout effect, the effect of the interaction of different types of fertilizers and Manures Dosage. Average followed a similar letter on a line (a, b, c) and columns (A, B, C) of the same is no different of BNT assay based on levels 5%. JPK = Type Of Manure, DPK = Doses of Manure.

From table 5.5 shows that the type of manure treatment effect is significant P 0.01) against heavy < fresh number of saplings of plants of onion and fresh weight of the number of saplings of Red bawng kg/plant compartments. Types of chicken manure treatment (Pa) against the weight of fresh fresh economic number of plantlets per onion plant samples. The fresh weight of the number of saplings of plants of onion 3.60 kg/compartments give highest weight 5.50 gr/samples while the lowest found in cow manure treatment (Ps) weighing 3.25 grams/sample (Table 5.5). Treatment doses of manure very real effect against the weight of the amount of fresh onion plants/saplings samples and kg/swath. The fresh weight of the number of saplings of plants of onion the highest achieved at doses of 3.60 kg/swath (D3) 5.50 grams while the lowest on dose 0 kg/swath (a D0) weighing 3.08 g table 5.4. This is supported by the theory of Setyamidjaya (1986) absorption of nutrient elements during the period of growth is not the same, so it needs to be given to the amount gradually to suit the needs of the plant and research Mayun (2007) use of can increase the weight of bulbs on the onion. The number of leaves and broad leaf associated with formation of plantlets and number of bulbs then this effect on the fresh weight of the dry weight of the plant and total plant. The more the number of leaves produced then the chance to produce a dry weight to fresh weight and total plant is also high.

The weight of the Fresh Plant Onion Bulbs/swath (gr)

he results of the analysis of the multiform prints (Anova) of the weight of fresh onion plants bulbs economical/plot show that the type of manure treatment gives a real influence (P<0.01) On the weight of fresh tuber onion crops economically and also the results of the analysis of the multiform variance analyst (anova) against the treatment doses of manure gives a very real influence (P < 0.01) on a fresh weight of economical amount of plant tuber onion/swath. the interaction between the types and doses of manure does not give different real influence (P≥0.05) on the weight of fresh tuber onion plants economically Red/swath after harvest. For more details can be seen in Table 6.

Table 5. The value of Different of BNT Assay Results and 5% Against the weight of Fresh Tuber Plant Onion/Swath on each Factor At Age 8 MSP (g)

Types of Manure (Gr./plant)	Doses of Manure (Gr./plant)			
	0 kg/plot (D0)	1.20 kg/plot (D1)	2,40 kg/plot (D2)	3,60 kg/plot (D3)
8 MSP				
Cow Manure (PKS)	2478ab	30.52abcd	34.55abcd	37.88bcde
	A	A	A	B
Goat Manure (PKK)	25.69abc	38.57bbcde	39.80bcde	41.49cde
	A	B	B	B
Chicken Manure (PKA)	19.07a	42.82de	43.20de	46.87e
	A	B	B	B
BNT 5%	15.81			

Description: based on variance effect, the effect of the interaction of different types of fertilizers and Manures Dosage. Average followed a similar letter on a line (a, b, c) and columns (A, B, C) of the same is no different of BNT assay based on levels 5%. JPK = Type Of Manure, DPK = Doses Of Manure

From table 5.6 shows that type of manure treatment effect is significant P 0.01) against heavy < fresh number of tuber plant shallots and fresh weight of the number of tubers plant red onion kg/plot. Types of chicken manure treatment (Pa) against the fresh weight of the economical amount of bulbs plants of onion/swath. The fresh weight of the number of tubers plant onion 3.60 kg/compartments provide the highest weight is 46.87 gr./compartments while the lowest found in cow manure treatment (Ps) with a weight of 30.32 grams/plots (table 5-6). Treatment doses of manure effect very real amount of fresh tuber weight against plant onion/plot and kg/plot. The fresh weight of the number of tubers plant onion highest achieved at doses of 3.60 kg/swath (D3) 46.87 g/compartments while the lowest on dose 0 kg/swath (a D0) with a weight of 19.07 grams table 56. This is in accordance with statement Napitupulu and Winarto (2009) stating that potassium plays a role in improving the vegetative growth of plants such as the formation of tuber enlargement and enlargement, as well as influential in increasing weight of onions Red. Additionally supported by the Damanik et al (2010) stating that potassium is necessary for the process of formation of photosynthesis and can increase the weight of the tuber.

Dry weight of plant Tuber Onion/sample (g)

The results of the analysis of the multiform prints (Anova) against the dry weight of plant onion bulbs per sample (Appendix 15. b) shows that the type of manure treatment gives a real influence (P < 0.01) on a dry weight of plant onion bulbs and also the results of the Analysis Analyst prints range (Anova) against the treatment doses of manure gives a very real influence (P< 0.01) on a dry weight of plant tuber onion/sample. The interaction between the types and doses of manure does not give different real influence (P ≥ 0.05) on

tuber crops economically heavy onion/sample after process dry with sun rise. For more details can be seen in Table 7.

Table 6. The value of Different of BNT Assay Results and 5% against the dry weight of plant Tuber Onion/Swath on each Factor At Age 8 MSP (gr)

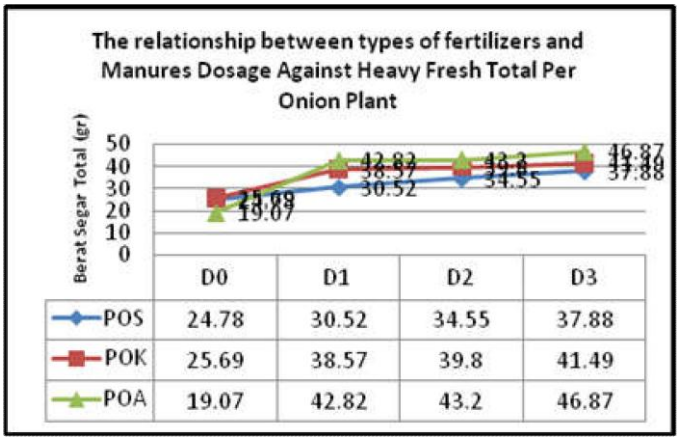
Types of Manure (Gr./plant)	Doses of Manure (Gr./plant)			
	0 kg/plot (D0)	1.20 kg/plot (D1)	2,40 kg/plot (D2)	3,60 kg/plot (D3)
8 MSP				
Cow Manure (PKS)	21.67a A	27.33a A	29.75a A	33.17a A
Goat Manure (PKK)	22.58a A	36.00a A	37.33b B	42.08b B
Chicken Manure (PKA)	22.75a A	40.42b B	41.00b B	48.25b B
BNT 5%	15.07			

Description: based on variance effect, the effect of the interaction of different types of fertilizers and Manures Dosage. Average followed a similar letter on a line (a, b, c) and columns (A, B, C) of the same is no different of BNT assay based on levels 5%. JPK = Type Of Manure, DPK = Doses of Manure

From table 7 shows that the type of manure treatment effect is significant P 0.01) against heavy <keirng economical plant onion bulbs and dry weight of plant tuber red onion economical kg/plot. Types of chicken manure treatment (Pa) against the weight of the fresh plant onion bulbs economical per sample. The weight of the dry economical plant onion bulbs 3.60 kg/compartments provide the highest weight of 48.25 g/samples while the lowest found in cow manure treatment (Ps) with a dose of 2.40 kg/compartments with heavy 27.33 g/sample (Table 5-4). Treatment doses of manure very real effect against dry weight plant onion bulbs/sample and kg/swath. The weight of the dry tuber onion plants the highest achieved at doses of 3.60 kg/swath (D3) 48.25 g while the lowest at doses of 0 kg/swath (a D0) with a weight of 21.67 grams of table 5.4. This is supported by the theory of Gardner, et al, (1991) plant growth associated with the power plant produces dry weight, i.e. in terms of the efficient energy capture sunlight and convert it into carbohydrates in the process of photosynthesis. According to Gardner, et al, (1991) with increased photosynthesis then it will have an effect on the formation of plant tissues in the form of roots, stems, and leaves, all of which it is a major component of the dry weight of the plant.

The relationship between types of fertilizers and Manures Dosage Against Heavy Fresh Total Per Onion Plant (Graphic)

The results of the relationship between the dose of fertilizer weighing fresh tuber plant onion/swath on each type of manure (Ps), (Pk), and Pa), is differently to weight fresh total per plant onion/swath served on (graph 5.1) analysis results showed that chicken manure dosing 3.60 kg/swath can produce fresh weight of total plant onion/hide registration (46.87 g), while give doses of cow and goat manure with the same dosage but the results are different too, namely fertilizer goats produce fresh onion plants total weight/swath of 41.49 g and cow manure produce fresh heavy total of 37.88 Gr. for results can be seen more clearly the relationship between the dose of the fertilizer by weight Fresh bulbs of plants of onion/swath on each type of manure (PS), (PK), and the (PA), on the graph 5.1 below. According to research Napitupulu and Winarto (2009) Nitrogen plays a role in increasing protein synthesis, manufacture of chlorophyll of leaves become more green, leaf color can add rate of photosynthesis, as well as increasing the ratio of the root tip. According to Defensebaseactcomp (2011), a large number of leaves that form a broad meaning the leaves become wider, then the ability to receive light leaves in the process photosynthesis be larger in yield and carbohydrate will goto the translocations bulbs thereby affecting the large and heavy bulbs.



Conclusion

1. The different types of manure does not effect against growth and crop yield of onion while administering doses of manure increases would boost growth and crop yield of onion on the treatment dose of manure cows, goats and chickens.
2. Not found the interactions between types and doses of manure towards growth and crop yield of onion

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