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EFFECT OF *EICHHORNIA CRASSIPES* ZUCC. LIQUID GREEN MANURE AND POTASSIUM ON GROWTH AND PRODUCTION OF *SOLANUM MELONGENA* L. IN INCEPTISOL SOIL

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Abstract. *Green Eggplant (Solanum melongena L.) is a plant that is in great demand by all people. This green eggplant belongs to the solanaceae family and contains nutrients such as Vitamins A, B, C, Potassium, Phosphor, Iron, Protein, Fatty Acids and Carbohydrates. One of the ways to get good production results in Inceptisol and Inceptisol soil is to use forage fertilizer that has been composited into liquid due to complete nutrients such as N_2 (2.2%), K_2O (2.2%), P_2O_5 (3.65%), C (6.45%) and other nutrients, as well as the use of potassium nutrient fertilizer (60%) to be sufficient for the development and production of green eggplant plants. The indication of the research is because the Inceptisol soil has sufficient nutrients applied liquid green manure as much as 600 ml.polybag^{-1}, and the soil has sufficient potassium nutrients as much as 15 g.polybag^{-1} and plants produce better green eggplant fruit than more or less potassium nutrients applied.*

Keywords: *Green Eggplant, Green Manure, Potassium, Phosphorus.*

Abstrak. Terong Hijau (*Solanum melongena* L.) adalah tanaman yang sangat diminati oleh semua orang. Terong hijau ini termasuk dalam keluarga Solanaceae dan mengandung nutrisi seperti Vitamin A, B, C, Kalium, Fosfor, Besi, Protein, Asam Lemak, dan Karbohidrat. Salah satu cara untuk mendapatkan hasil produksi yang baik di tanah Inceptisol dan Inceptisol adalah dengan menggunakan pupuk kandang yang telah diolah

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menjadi cairan karena kandungan nutrisi yang lengkap seperti N_2 (2,2%), K_2O (2,2%), P_2O_5 (3,65%), C (6,45%), dan nutrisi lainnya, serta penggunaan pupuk nutrisi kalium (60%) yang cukup untuk perkembangan dan produksi tanaman terong hijau (*Solanum melongena* L.). Indikasi penelitian ini adalah karena tanah Inceptisol memiliki nutrisi yang cukup dengan aplikasi pupuk hijau cair sebanyak dengan dosis 600 ml.polibag^{-1}, dan tanah memiliki nutrisi kalium yang cukup sebanyak dengan dosis 15 g.polibag^{-1}, sehingga tanaman menghasilkan buah terong hijau yang lebih baik dibandingkan dengan aplikasi nutrisi kalium yang lebih sedikit atau lebih banyak.

Kata Kunci: Terong Hijau, Pupuk Hijau, Kalium, Fosfor.

INTRODUCTION

Green Eggplant (*Solanum melongena* L.) is a type of vegetable that is favoured by all people (Jumini and Marliah, 2019). The consumed eggplant contains protein, vitamin A, vitamin B, vitamin C, potassium, phosphorus, iron, fatty acids, and carbohydrates (Haryoto, 2009; Saparinto, 2017; Pratama, 2020). According to Kandoliya *et al*. 2015 that green eggplant or eggplant is used as a medicine for health, including cancer, hypertension, hepatitis, diabetes, arthritis, asthma, and bronchitis (Pratama, 2020). Eggplant fruit contains a lot of nutrients which are quite high where the nutrients contained in 100 g.fruit^{-1} eggplant are 24 kcal, 1.1 g protein, 0.2 g fat, 5.5 g carbohydrates, 15.0 mg calcium, 37.0 mg phosphorus, 0.4 mg iron, 4 vitamin A, 5 mg vitamin C, 0.04 vitamin B1, and 92.7 g water. The high potassium and low sodium levels in green eggplant plants are very beneficial for humans on health in hypertension (Sakri, 2015 in Afiati *et al*., 2020). According to Afiati *et al*. (2020), too frequent use of chemical fertilizers into the soil makes the soil infertile, so it can damage the soil ecosystem and the environment. The alternative that is needed to break down the soil is the use of organic fertilizers, namely green fertilizers, one of which is from *Eichhornia crassipes* Zucc. which is rich in minerals N_2 (2.20%), K_2O (2.20%), P_2O_5 (3.65%), C (6.45%) and other nutrients (Lubis *et al*., 2023; Lubis, 2026).

Inceptisols are soils that have soil problems, as well as low organic matter and low macronutrients, and very low phosphorus availability (Fitriani *et al*., 2017). The problems with Inceptisol soils are similar to Ultisol soils. The difference is that Ultisol soils are prone to binding mineral nutrients with toxic metals such as aluminium (Al) and

magnesium (Mg), so that nutrient levels are very low and no horticultural crops can grow. The way to release the toxic metal bonds is by applying organic fertilizers such as *Eichhornia crassipes* Zucc. *Eichhornia crassipes* Zucc. is a plant that grows in ponds or rivers. And the *Eichhornia crassipes* Zucc. plant is cultivated as a storage place for fish eggs. The application of the *Eichhornia crassipes* Zucc. plant in the soil can be applied both in and liquid and the application to be more effective, liquid green manure *Eichhornia crassipes* Zucc. is added with the use of inorganic fertilizers. The continuous use of inorganic fertilizers will damage soil fertility (Lubis *et al*., 2023). So, the use of liquid green manure *Eichhornia crassipes* Zucc. is one of the alternatives to increase the fertility and health of Inceptisol soil which is very lacking in macro nutrients, and the increase in micro nutrients in Inceptisol soil which can be used for *Eichhornia crassipes* Zucc. plants. (Lubis, 2026).

Eichhornia crassipes Zucc. plants always experience increased growth when rainfall increases (Wardiah *et al*., 2019). According to Tuak (2022), converting *Eichhornia crassipes* Zucc. plants into liquid green fertilizer is very useful for transforming infertile soil into fertile and healthy soil. In line with Yunindanova's (2020) opinion, green plants such as river plants or *Eichhornia crassipes* Zucc. can be used as an alternative to liquid-based organic fertilizers that can be applied to nutrient-deficient soil. According to Lubis (2025), the application of liquid green manure from *Eichhornia crassipes* Zucc. plants has a very effective impact on Inceptisol soil, thereby affecting the growth and yield of *Solanum melongena* L. plants. The yield of the plants is also affected by the application of potassium fertiliser, which can produce maximum results. This is also in line with the statement by Anggraeni (2021) that the use of soil media from the application of liquid green manure from *Eichhornia crassipes* Zucc. will have an impact on the growth and yield of tomato plants (*Solanum lycopersicum* L.) using polybags. According to Afiati *et al*. (2020), that soil CEC, KB and soil C-Organic are low, as well as high Al content, high P fixation and iron and manganese content close to plant toxins (Lubis, 2020). The use of liquid green fertilizer from *Eichhornia crassipes* Zucc. facilitates the growth of green eggplant plants in Inceptisol soil. K fertilizer is applied to stimulate the growth of vegetative and generative phases of plants. This study aims to determine the effect of *Eichhornia crassipes* Zucc. liquid green manure application combined with K fertilizer on green eggplant yield.

METHODS

This research was conducted on land located in the village of Pinang Sebatang Timur, Tualang District, Siak Regency. This research was conducted for 5 months from June to November 2024. This research has 2 factors, factor 1 on Liquid Green Fertilizer *Eichhornia crassipes* Zucc. with 3 experimental levels, experiment H_1 = 200 ml.polybag^{-1}, H_2 = 400 ml.polybag^{-1}, H_3 = 600 ml.polybag^{-1}, factor 2 on Potassium Fertilizer with 4 experimental levels, experiment K_0 = 0 g.polybag^{-1}, K_1 = 5 g.polybag^{-1}, K_2 = 10 g.polybag^{-1}, K_3 = 15 g.polybag^{-1}. The research used Factorial Randomised Group Design (RGD) with a combination of 3 x 4 treatments. Green eggplant (*Solanum melongena* L.) seedlings were used in the Hitavi-1 variety with an age of 3 weeks, *Top Soil* with *Inceptisol Soil* type taken in the garden of PT Surya Intisari Raya (SIR) Perawang, beach sand as a mixture of planting media, Potassium fertilizer with Potassium Chloride (KCl) type with a nutrient percentage of 60%.

Research observations consist of parameters and indicators: initial soil testing includes Soil Texture (%), C-Organic (%), N-Total (%), P_2O_5-avl (P-Bray I) (ppm), Potential K_2O Ex. HCl 25% (me.100 g^{-1}), CEC (me.100 g^{-1}), MnO (%), Soil H_2O pH, exchangeable cation parameter, Al-dd (me.100 g^{-1}), Ca-dd (me.100 g^{-1}), K-dd (me.100 g^{-1}), Mg-dd (me.100 g^{-1}) and final soil including is a N-Total (%), P_2O_5-avl (P-Bray I) (ppm), Potential K_2O Ex. HCl 25% (me.100 g^{-1}), CEC (me.100 g^{-1}), Soil H_2O pH, Plant Height (cm), Number of Plant Branches (twigs), Number of Plant Fruit (fruit), Plant Fruit Weight (g), Percentage of Marketable Fruit (%).

RESULTS AND DISCUSSION

Initial Soil Analysis, Inceptisol Growing Media Characteristics

The soil used in this study is Top Soil type Inceptisol soil as a planting medium for green eggplant (*Solanum melongena* L.). The following test results of the initial soil analysis of Inceptisol soil type are shown in Table 1 as follows:

Table 1. Preliminary Analysis of Soil as a Planting Media

Texture	Method of Analysis	Units	Results	Description
Sand	Hydrometer	%	88,90	Loam Sandy
Dust			18,22	
Clay			2,89	

C-Organik	Spectrofotometry	%	5,12	h
N-Total	Kjedhal	%	0,59	h
P_2O_5-avl (P-Bray I)	Spectrofotometry	ppm P	1,72	vl
K_2O Potential Ex. HCl 25%	AAS	me.100 g^{-1}	0,30	vl
MnO	Spectrofotometry	%	0,08	l
CEC	Volumetry	me.100 g^{-1}	42,19	h
pH H_2O	Elektrometry	------	6,60	h (A bit Sour)
Al-dd	Titrimetry	me.100 g^{-1}	0,0	nm
Ca-dd	AAS		4,39	l
K-dd			0,21	l
Mg-dd			2,10	h

Description: Criteria for Planting Media, h = High, l = Low, m = Medium, sl = Slightly Low, vl = Very Low, vh = Very High, nm = Not Measurable

In the laboratory analysis results, it is known that the soil texture of Inceptisol soil is dusty clay texture. Where the results of the analysis on the texture of sand 88.90%, dust 18.22%, clay 2.89%. Inceptisol soil has a very low potential phosphorus content, and potential potassium content also has a very low to low content. Inceptisol soil is also classified as a soil that has low productivity material content and nutrient content contained in analyses such as N-Total which is low, P_2O_5 which is very low, K_2O nutrient content which is very low, low organic matter content and low organic matter content due to the decomposition process running fast, especially in tropical areas (Lubis, 2020).

The content of nutrients in the initial analysis of the soil, there are organic carbon nutrient levels (C-Organic) with a result of 5.12% with high criteria, total soil nitrogen nutrient levels (N-Total) with a result of 0.59% high criteria, but phosphorus and potassium nutrients with very low criteria, where phosphorus levels (P_2O_5-avl (P-Bray I)) with a result of 1.72 ppm P and potassium levels (K_2O Potential Ex. HCl 25%) with a result of 0.30 me.100 g^{-1} soil. On the content of Cation Exchange Capacity (CEC) in Inceptisol Soil, it is known that the results of soil analysis are 42.19 me.100 g^{-1} soil with high criteria. This is due to sufficient and available organic matter nutrient levels so that organic carbon levels are also available, the same as the availability of cation exchange rates that are high carbon levels and high nitrogen levels (Damanik *et al*., 2010). The

natural fertility of Inceptisol soils is generally only found in the Horizon A soil layer which has low organic matter content. Macro-nutrients such as phosphorus and potassium are often deficient, as well as acidic to very acidic soil reactions, and aluminium saturation which inhibits plant growth (Subagyo *et al*., 2004; Prasetyo and Suriadikarta, 2016; Lubis, 2020).

Plant Growth

1. Vegetative Plant

1) Plant Height

The following table of plant height of green eggplant seedlings (*Solanum melongena* L.) is shown in Table 2 as follows:

Table 2. Average Plant Height (cm) 5 MAP (Months After Application)

Treatment		Average of Plant Height					
Potassium Nutrient Fertilizer (KCl 60%) (g.polybag^{-1})	Liquid Green Manure *Eichhornia crassipes* Zucc. (ml.polybag^{-1})	Month					Average
		1	2	3	4	5	
0	200	33,40	38,90	43,00	60,00	79,00	**50,86 a**
0	400	33,60	39,20	44,30	64,00	79,90	**52,20 a**
0	600	33,70	39,90	44,80	67,00	84,30	**53,94 a**
5	200	38,40	42,00	49,00	69,00	87,00	**57,08 b**
5	400	38,70	42,50	50,40	73,00	89,00	**58,72 b**
5	600	38,90	43,00	52,00	74,50	89,00	**59,48 b**
10	200	39,00	44,80	55,00	76,00	93,60	**61,68 b**
10	400	39,70	49,00	58,90	80,00	98,00	**65,12 c**
10	600	39,95	49,00	59,00	82,00	**102,50**	**66,49 c**
15	200	42,50	49,90	60,30	84,00	**111,00**	**69,54 c**
15	400	44,00	52,20	62,00	93,00	117,00	**73,64 d**
15	**600**	**45,20**	**58,00**	**64,60**	**99,50**	**124,00**	**78,34 e**
Total		467,05	548,40	643,30	922,00	1154,30	
Average		**38,92**	**45,70**	**53,61**	**76,83**	**96,19**	

Description: Number followed by the same index in the same row or colomn showed no the significant difference according to the DMRT test (Duncan's Multiple Range Test) 95% confidence level (α = 0,05)

From the results of testing the average plant height from the age of 1 month after application (MAP) to 5 months after application (MAP), it can be seen that the average application of potassium nutrient fertilizer (KCl) at the 60% level and the application of liquid green manure *Eichhornia crassipes* Zucc. is significantly

different. The highest average plant height in the application of potassium fertilizer 15 g.polybag^{-1} and 600 ml.polybag^{-1}.

The application of *Eichhornia crassipes* Zucc. liquid green manure at a dose of 600 ml.polybag^{-1} with 60% KCl nutrient fertilizer at a dose of 10 g.polybag^{-1} was not significantly different from the application of *Eichhornia crassipes* Zucc. liquid green manure at a dose of 200 ml.polybag^{-1} and 60% KCl nutrient fertilizer at a dose of 15 g.polybag^{-1} and also *Eichhornia crassipes* Zucc. liquid green manure at a dose of 400 ml.polybag^{-1}. This proves that the application of *Eichhornia crassipes* Zucc. liquid green manure to soil media will have an impact on increasing soil fertility, especially in Inceptisol soils which experience very low phosphorus and potassium content in the soil.

It is suspected that the content of the Inceptisol Soil has been fulfilled by the organic matter given, namely liquid green manure from *Eichhornia crassipes* Zucc. and the addition of 60% potassium nutrients. This can be suspected because green manure as organic matter releases the bonds of bound phosphorus, and releases aluminium which can poison plants, and the content of potassium nutrients given to plants and the content of nitrogen and phosphorus nutrients in *Eichhornia crassipes* Zucc. liquid green manure is absorbed in plants and used as the beginning of plant vegetative growth. The applied fertilizer will be directly absorbed by the plant. According to Taufika (2016), the application of liquid organic fertilizer from *Eichhornia crassipes* Zucc. is a complete nutrient organic material content and can provide nutrients that meet the needs of plants in the soil due to its liquid form.

2) Number of Plant Branches (twigs)

The following table of number of plant branches of green eggplant seedlings (*Solanum melongena* L.) is shown in Table 3 as follows:

Table 3. Average Number of Branches 5 MAP (Months After Application)

Treatment		Average Number of Branches					
Potassium Nutrient Fertilizer (KCl 60%) (g.polybag^{-1})	Liquid Green Manure *Eichhornia crassipes* Zucc. (ml.polybag^{-1})	Month					Average
		1	2	3	4	5	

0	200	9,00	13,00	16,60	18,00	21,50	**15,62 a**
0	400	9,00	13,60	17,00	18,80	22,00	**16,08 a**
0	600	10,00	14,70	17,20	19,00	22,10	**16,60 a**
5	200	12,00	15,70	17,40	19,90	22,70	**17,54 a**
5	400	13,00	16,90	18,00	20,80	24,00	**18,54 a**
5	600	13,60	18,00	20,20	21,80	25,00	**19,72 b**
10	200	17,00	19,90	20,20	23,00	26,80	**21,38 c**
10	400	17,00	20,40	22,20	24,00	**29,00**	**22,52 d**
10	600	17,90	21,80	24,60	25,60	**29,70**	**23,92 d**
15	200	19,00	22,67	24,70	27,80	**30,40**	**24,91 d**
15	400	20,00	24,00	26,80	29,00	32,00	**26,36 e**
15	**600**	**20,70**	**27,50**	**29,40**	**32,00**	**37,00**	**29,32 f**
Total		178,20	228,17	254,30	279,70	322,20	
Average		**14,85**	**19,01**	**21,19**	**23,31**	**26,85**	

Description: Number followed by the same index in the same row or colomn showed no the significant difference according to the DMRT test (Duncan's Multiple Range Test) 95% confidence level (α = 0,05)

In the research results in Table 3, that the application of *Eichhornia crassipes* Zucc. liquid green manure at a dose of 600 ml.polybag^{-1} and 60% KCl nutrient fertilizer at a dose of 15 g.polybag^{-1} is able to increase the number of leaves on green eggplant (*Solanum melongena* L.). The application of liquid green manure *Eichhornia crassipes* Zucc. at a dose of 200 ml.polybag^{-1} and 60% KCl nutrient fertilizer at a dose of 15 g.polybag^{-1} was not significantly different from the application of liquid green manure *Eichhornia crassipes* Zucc. at a dose of 400 ml.polybag^{-1} and 60% KCl nutrient fertilizer at a dose of 10 g.polybag^{-1}. This is due to the role of the nutrient potassium (K) which causes the growth of leaves and twigs or plant branches. The increase in the number of leaves or twigs is due to an increase in potassium nutrients that distribute to the body of the plant. Potassium (K) nutrient which plays a role as plant growth which in addition to supporting the growth of plant height, producing plant yields, also increases the number of branches or plant fronds. According to Lubis *et al*. (2023) that, Potassium (K) nutrient levels are very important for plant growth, which plays a role in the formation of starch, and the transport of carbohydrates and the activity of enzymes in the plant body so that potassium helps strengthen stems and leaves,

increase the number of leaves and stems, so that they are more upright and not easily collapsed, and also the role of opening stomata on leaves, increasing plant resistance to drought and improving fruit quality.

In the results of the study, it was seen that it was significantly different analysed using the DMRT (*Duncan's Multiple Range Test*) test at the 95% level. In the treatment of potassium fertilizer as much as 15 g.polybag^{-1} and the treatment of liquid green manure *Eichhornia crassipes* Zucc. significantly different from the treatment of liquid green manure below the treatment level. This is because liquid green manure applied to the soil has been decomposed well by microorganisms in the soil, its low C/N ratio value results in rapid decomposition, because the soil ratio used C/N is 15.90. This indicates that the lower the soil C/N value, the easier the organic matter in the soil will be decomposed, as well as the liquid green fertilizer, the faster it is decomposed by soil bacteria so that it is easily absorbed or accepted by plants (Lubis, 2020). According to Lubis (2026), the level of nutrients applied to the soil and absorbed by plants in an available form will influence plant growth and production responses to be more optimal.

2. Generative Plant

1) Number of Plant Fruits (fruit)

The following table of number of fruits of green eggplant seedlings (*Solanum melongena* L.) is shown in Table 4 as follows:

Table 4. Average Number of Fruits After 5 MAP (Months After Application)

Treatment		Average Number of Fruits
Potassium Nutrient Fertilizer (KCl 60%) (g.polybag^{-1})	**Liquid Green Manure *Eichhornia crassipes* Zucc. (ml.polybag^{-1})**	
0	200	**30,2 a**
0	400	**31,4 a**
0	600	**33,0 a**
5	200	**34,4 a**
5	400	**35,0 a**
5	600	**36,8 a**
10	200	**39,1 b**
10	400	**39,9 b**
10	600	**40,2 b**
15	200	**40,3 b**
15	400	**44,3 c**
15	**600**	**47,9 d**
Total		452,5
Average		**37,7**

From Table 4 above, it can be seen that the number of fruits in the treatment of potassium nutrient fertilizer as much as 0 g.polybag^{-1} and 5 g.polybag^{-1} is not significantly different. This is because without the application of potassium nutrient fertilizer, the same fruit yield is produced with the use of potassium fertilizer. While potassium nutrient fertilizer as much as 15 g.polybag^{-1} is significantly different from other treatments. This is because potassium nutrients that function as plant growth, also function as the generative development of plants, one of which is the growth and germination of fruit in plants.

The number of fruits on green eggplant seedlings (*Solanum melongena* L.) on the application of liquid green manure *Eichhornia crassipes* Zucc. at a dose of 600 ml.polybag^{-1} and a mixture of Potassium (KCl) 60% nutrient fertilizer application at a dose of 15 g.polybag^{-1} proved that the number of green eggplant fruits (*Solanum melongena* L.) was 47.9. However, the application of liquid green manure of *Eichhornia crassipes* Zucc. at a dose of 200, 400 and 600 ml.polybag^{-1} and potassium (K) 60% nutrient fertilizer at a dose of 10 g.polybag^{-1} produced 39.1, 39.9, and 40.2 fruits, not significantly different from the application of liquid green manure of *Eichhornia crassipes* Zucc. at a dose of 200 ml.polybag^{-1} with potassium 60% nutrient fertilizer at a dose of 15 g.polybag^{-1} which was 40.3 fruits. According to Isnaini *et al*. (2024) that, the availability of sufficient nutrients allows the photosynthetic process of plants to run well and optimally and produce sufficient food reserves for plant growth and development, so that the food reserves formed in the tissue will be the formation of more fruit.

2) Plant Fruit Weight (g)

The following table of plant fruit weight of green eggplant seedlings (*Solanum melongena* L.) is shown in Table 5 as follows:

Table 5. Average Fruit Weight of Plants After 5 MAP (Months After Application)

Treatment		Average Fruit Weight of Plants
Potassium Nutrient Fertilizer (KCl 60%) (g.polybag^{-1})	Liquid Green Manure *Eichhornia crassipes* Zucc. (ml.polybag^{-1})	
0	200	**2,20 a**
0	400	**2,10 a**
0	600	**2,20 a**

5	200	**2,90 a**
5	400	**2,90 a**
5	600	**3,00 a**
10	200	**3,00 a**
10	400	**3,10 a**
10	600	**3,30 a**
15	200	**3,90 b**
15	400	**4,00 b**
15	600	**4,15 b**

Description: Number followed by the same index in the same row or colomn showed no the significant difference according to the DMRT test (Duncan's Multiple Range Test) 95% confidence level (α = 0,05)

In the observation of plant fruit weight at harvest, the fruit weight did not appear significantly different. This is because liquid green manure from *Eichhornia crassipes* Zucc. can increase the absorption of soil nutrients that are needed by plants such as N, P, K, Ca, Mg, Cu, and Zn. One alternative to overcome plant nutrient deficiencies is the use of organic fertilizers, one of which is liquid organic fertilizer from green manure. The higher the weight of the resulting plant, it can be concluded that the more active microorganisms from liquid green manure are applied to the soil and expand the absorption of water and nutrients in the soil (Afiati *et al*., 2020; Lubis *et al*., 2023). According to Lubis (2025), fruit weight growth depends on the nutrients provided to the plants through the application of liquid green fertilizer, which has a very positive impact on production, including fruit weight.

3) Percentage of Marketable Fruit (%)

The following table of percentage of marketable fruits on green eggplant seedlings (*Solanum melongena* L.) is shown in Table 6 as follows:

Table 6. Percentage of marketable fruits After 5 MAP (Months After Application)

Treatment		**Percentage of Marketable Fruit**
Potassium Nutrient Fertilizer (KCl 60%) (g.polybag^{-1})	**Liquid Green Manure *Eichhornia crassipes* Zucc. (ml.polybag^{-1})**	
0	200	**60,00**
0	400	**62,00**
0	600	**62,40**
5	200	**71,00**
5	400	**71,20**
5	600	**74,50**
10	200	**74,70**

10	400	**75,40**
10	600	**75,00**
15	200	**82,00**
15	400	**82,70**
15	**600**	**83,80**

Description: Number followed by the same index in the same row or colomn showed no the significant difference according to the DMRT test (Duncan's Multiple Range Test) 95% confidence level (α = 0,05)

From Table 6, the largest percentage of marketable fruit in the combination treatment of potassium fertilizer (KCl) 60% at the level of 15 g.polybag^{-1} and liquid green manure *Eichhornia crassipes* Zucc. at the level of 600 ml.polybag^{-1} makes the level of marketable percentage of 83.80%. This makes the green eggplant fruit good and good and suitable for sale

Final Soil Analysis, Inceptisol Growing Media Characteristics

The soil used is Top Soil of Inceptisol soil type as a planting medium for green eggplant (*Solanum melongena* L.). The following are the results of the final soil analysis test of Inceptisol type shown in Table 7 as follows:

Table 7. Final Soil Analysis Results

Analysis	Method of Analysis	Units	Results	Description
N-Total	Kjedhal	%	0,65	h
P_2O_5-avl (P-Bray I)	Spectrofotometry	ppm P	11,00	h
K_2O Potential Ex. HCl 25%	AAS	me.100 g^{-1}	2,45	h
CEC	Volumetry	me.100 g^{-1}	22,60	l
pH H_2O	Elektrometry	-----	5,70	Slightly Sour

Description: Criteria for Planting Media, h = High, l = Low, m = Medium, sl = Slightly Low, vl = Very Low, vh = Very High, nm = Not Measurable

In the final soil results shown in Table 7, that the nutrient levels of N-Total, Phosphor (P_2O_5) and Potassium (K_2O) have high criteria after the application of liquid green manure *Eichhornia crassipes* Zucc. and potassium fertilizer (KCl) level 60% to the

Inceptisol soil planting media. This indicates that the soil has sufficient nutrients in the planting media after the application of liquid green manure *Eichhornia crassipes* Zucc. and potassium nutrient fertilizer (KCl) level 60%. According to Gani (2009); Kurniawan (2019); Yosephine *et al*. (2022), that when organic fertilizer is mixed with inorganic fertilizer, green organic fertilizer will be able to increase crop production and plant retention will become available nutrients for plants.

CONCLUSION

The results of this research study show that the application of liquid green manure from *Eichhornia crassipes* Zucc. and potassium fertilizer (KCl) at a treatment level of 15 g.polybag^{-1} and 600 ml.polybag^{-1} was one of the treatment levels that had a significant effect on all treatments. The final soil analysis test on Inceptisol soil media showed that the soil analysis criteria had a significant effect, or could be said to be high, with a cation exchange capacity of 22.60 me.100 g^{-1} and a soil acidity level of slightly acidic at 5.7. This is suitable for plant growth because the soil has sufficient nutrient content. Observations of the growth and development of green eggplant plants showed significant effects on vegetative and generative parameters. This indicates that the application is more suitable than using fewer or more nutrients.

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