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Smart Farming Innovation Towards Growth And Yield Of Melon Plants In Agrotourism Village Sumbergedang

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Abstract
Sumbergedang has natural village potential, namely: 30 springs spread across 13 hamlets and 6 ha of unused land. This land has been prepared for village agrotourism, namely banana and melon plants. The purpose of this activity is to analyze the combination of circulation interval treatments on smart farming of melon plants for the growth and yield of melon plants in Sumbergedang. The activity method includes DFT hydroponic installations by making hydroponic installations and providing trellises. The planting medium uses foam. The foam media is cut into squares measuring 2x2 cm in a greenhouse measuring 11 x 25 meters. Seedlings use tissue incubation techniques. Transplanting is done when the seedlings are 14 days old. Melon seeds are placed in hydroponic net pots measuring 7cm high with a diameter of 5.8 cm then placed on the DFT plant media. Maintenance provides AB mix nutrients, checking nutrients is done every morning using an EC meter. The results of the activity show that there is a real interaction between electronic conductivity and real circulation intervals on plant growth, plant height, number of leaves and fruit weight. The combination of electrical conductivity treatment of 2000 uS /cm + circulation interval of 120 produced the best fruit weight of 1250.29 grams and a fruit sweetness level of 10.88%, thus providing the greatest benefit.
Keywords: *Melon plant agrotourism, Sumbergedang, circulation interval, circulation interval, melon plant appearance.*

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I. Introduction

Sumbergedang Village is one of the villages located in Pandaan District, Pasuruan Regency, East Java Province, with a total area of 3,037,720 ha/m2 consisting of 13 (Thirteen) Hamlets. Sumbergedang Village has green natural conditions around the mountains, strategic and cool because it is located at the foot of Mount Penanggungan and to the West you can see the view of Mount Arjuno with a height of 300 meters and an average temperature of 27°C, providing positive potential, especially clear and abundant springs originating from mountain water. Natural Resource Potentials include 1. 6 ha of unused village land 2. Rice, horticultural and vegetable farming 3. Livestock farming includes cattle, sheep, goats and fish 4. There are around 30 springs spread across 13 Hamlets 5. Tourism Potential There is the Talang Abang Water Bridge. Agrotourism is a potential source of income for the village, integrating all the supporting potential of the village's extraordinary, exotic natural resources into a self-sufficient and prosperous village. One potential horticultural commodity is melons and bananas, which the village government has prepared several facilities for supporting agrotourism (Sujono et al., 2024).

Melon (Cucumis melo L.) is a type of fruit horticultural plant belonging to the gourd family or Cucurbitaceae. This plant is cultivated in lowlands and highlands with an altitude of 200 to 2000 meters above sea level. The temperature required for growth ranges from 12°C to 35°C with 10 to 12 hours of sunlight exposure per day, and requires rainfall of 166.6 mm to 200 mm per month (Wahyudi et al., 2020). According to Daryono et al. (2015), the types of melon that can adapt well to agro-climatic conditions in Indonesia are the net type (netted skin), no net (skin without net) and rock melon (netted skin with colored flesh). High public demand makes melon one of the superior horticultural commodities (Istiningdiyah et al., 2013). Conventional farming is farming that uses cultivated soil media with its drawbacks requiring a fairly large area of land in certain locations, many failures (Kramchote & Glahan, 2020, requiring land that has been given manure, urea, and so on to be suitable for planting (Indrawati et al., 2012). For this reason, a hydroponic melon plant model was developed using the Smart Greenhouse system (Jonet et al., 2024). Hydroponic melon cultivation with a drip irrigation system has advantages in efficient water use and plant maintenance (Apriyani et al., 2025). According to Silvia et al. (2020) one of the irrigation techniques that can save water use is the drip irrigation technique, we can also provide irrigation water by dripping water into pipes along the plant rows called the Drip Irrigation system (Sujadi & Nurhidayat, 2019). In this Drip Irrigation system, the provision of irrigation water is combined with the addition of nutrients to melon plants. So with the Drip Irrigation system, providing optimal production and more efficient and effective irrigation water use in melon cultivation (Lestari et al., 2024). According to Firmansyah (2018), controlling the electrical conductivity (EC) in water is the main key to providing nutrient solutions in hydroponic systems. Setting the EC value can not only increase plant growth but also save the use of hydroponic nutrients. The nutrient circulation interval is important in hydroponic systems because it affects plant growth and production. Research such as observing the effects of nutrient circulation intervals on plant growth and production, comparing different nutrient circulation intervals, and trials with various combinations of nutrient electrical conductivity levels can help in optimal melon plant growth for deep flow technique hydroponic systems. This Smart Greenhouse has been proven to reduce maintenance costs and increase production, offering an effective solution in modern agriculture (Apriani et al., 2025).

II. Implementation And Methods

Activity study This carried out in the Village greenhouse area Sumbergedang during do mentoring with group farming in the field . The method used start stage socialization cultivation melon plants with Community Group farmer Sumbergedang, preparation planting until with mentoring maintenance until with harvest. The materials used includes, Amanda variety melon seeds, AB mix nutrients, pesticides, fungicides, acid nitrate. The tools used consists of a greenhouse measuring 11 x 25 meters from material galvalume , a set irrigation in a way hydroponics complete a set arrangement in a way digital automation (smart farming) with the Apriyani model et al (2025), includes tray, cutter, water pump , scissors , PE hose , tub plastic , PVC pipe 4 " PVC pipe size 1/2", foam density 16 thickness 3 cm, ec meter, ph meter, tools documentation , tools write , sprayer, term slide , scales , glass measuring spoon measuring instruments , meters , scales , refractometers and chlorophyll meters. Incubation techniques use tissue as many as 5 sheets for seed base and moistened use a little water and give 7 sheets tissue as closing seeds and moistened use a little water. Then seeds are placed in a place dark for 2 days , after radicle on seed grow seed planted to the foam media that has been prepared , then seed seeded for 14 days . Transplanting was carried out when seeds Already 14 days after planting . Melon seeds using foam media placed to net pot hydroponics sized 7cm high with a diameter of 5.8cm then placed on the plant media dft with distance designated planting namely 30 cm. The treatment given is internal circulation flow consists of of 4 times , in treatment S1 it lights up for 10 minutes very in 60 minutes . In treatment S2 is on for 10 minutes very in 120 minutes . In treatment S3 lights up for 10 minutes very in 180 minutes . In the S4 treatment it lights up for 10 minutes very in 240 minutes . Next do maintenance carried out with give AB mix nutrition , checking nutrition done every Morning with use ec meter. Application fungicides and insecticides done in a way periodic . Observation sample done every 7 days very with high parameters plants , number leaves , stem diameter . Next do observation , observation parameters covering long plants , stem diameter , number leaves , chlorophyll leaves , wide leaves , weight Fruit , Sweetness level . Result data research obtained tested using the Anova test . If show influential results real so will to be continued Duncan's test (DMRT) at 5% level using Microsoft Excel software.

III. Results And Discussion

1. Plant Height

Analysis results variety show that electrical conductivity treatment and circulation interval very real impact to long Plants observed at 14 and 21 HST. Electrical conductivity treatment and circulation interval influential real to tall plants observed 35 days after planting. Electrical conductivity treatment had a very significant effect to long Plants observed at 7 HST, 14 HST, 21 HST, 28 HST, 35 HST. Electric conductivity treatment and circulation interval No influential real to long plants at 7 HST and 28 HST observations . Circulation interval treatment very real impact to long plants at 14 HST, 28 HST observations . Circulation interval treatment influential real to long plants at 35 HST observation . Circulation interval treatment No influential real to long plants at 7 HST, 28 HST observations . Comparison between treatment with control based on the Duncan test (DMRT) at 5% level is presented in Table 1.

Further test results of the Duncan Multiple Range Test (DMRT) with 5% level (Table 1), shows K3S2 treatment (electrical conductivity 2000 uS / cm + circulation interval 120 minutes) no different real with K4S2 treatment (electrical conductivity 2500 uS /cm + circulation interval 120 minutes) but , different real with treatment others in the 14 HST observation . At 21 HST the average best namely K3S2 (electrical conductivity 2000 uS / cm + circulation interval 120 minutes) has average 96.00 different real with treatment other . K3S2 treatment (electrical conductivity 2000 uS / cm + circulation interval 120 minutes) is different No real with treatment of K3S1 (electrical conductivity 2000 uS /cm + circulation interval 60 minutes) and K3S3 (electrical conductivity 2000 uS /cm + circulation interval 180 minutes) against long plants at 35 HST observation . Based on Table 1. K3 Treatment (EC 2000 uS /cm) no different real with K2 treatment (EC 1500 uS /cm) but , different real with K1 (EC 1000 uS /cm) and K4 (EC 2500 uS /cm) against long plants at 7 HST observation . K4 treatment (EC 2500 uS /cm) did not different real with K3 treatment (EC 2000 uS /cm) however , is different real with K2 (EC 1500 uS /cm) and K1 (EC 1000 uS /cm) treatment against long plants at 28 HST observations . The circulation interval treatment at 7 HST observations had the same average and not different real . Treatment of circulation interval S2 (Circulation interval 120 minutes) is not different real with S1 treatment (60 minutes circulation interval) is different real with circulation intervals S3 (circulation interval 180 minutes) and S4 (circulation interval 240 minutes) in observations of 28 HST.

The existence of difference tall plant at each treatment Because existence difference combination treatment Good density nutrition and circulation intervals of course influence growth and development melon plants . According to (Sulistyono and Riyanti, 2015) that Melon growth and production are influenced by moderate water volume No lower production but increase efficiency water use. If the volume of irrigation water is too high small , then melon production will decreased 25% due to decline weight fruit . Concentration nutrition become factor important in cultivation melon plants , according to (Nikolaou et al ., 2019) are increasingly concentrated solution so Power deliver electricity anode and cathode the more high . So that EC value in nutrition is description many dissolved nutrients in water with indicator delivery electricity . The more tall EC value then the more concentrated solution nutrition .

2. Amount Leaf (strand)

Variety of results show electrical conductivity treatment and circulation interval very real impact to amount leaves at 14 HST and 21 HST observations . Electrical conductivity treatment and circulation interval very real impact to amount leaves on observation 7 HST. electrical conductivity treatment and circulation interval No influential real to amount leaves at 28 HST and 35 HST observations . Electrical conductivity treatment had a very significant effect to amount leaves at observations of 7 HST, 14 HST, 21 HST, 28 HST, 35 HST. Treatment of circulation intervals very real impact to amount leaves at 14 HST, 21 HST observations . Circulation interval treatment influential real to amount leaves at 7 HST, 35 HST observations . Circulation interval treatment No influential real to amount leaves at 28 HST observation . The average number of results leaf read more presented in Table 2.

Further test results of the Duncan Multiple Range Test (DMRT) with 5% level, indicating K3S1 treatment (EC 2000 uS /cm + 60 minutes circulation interval) no different real with K3S2 treatment (EC 2000 uS /cm + circulation interval 120 minutes), and K3S4 (EC 2000 uS /cm + circulation interval 240 minutes) but different real with treatment other to amount leaves on observation 7 HST. K4S2 treatment (EC 2500 uS /cm + 120 minutes circulation interval) did not different real with K3S2 treatment (EC 2000 uS /cm + circulation interval 120 minutes) but different real with treatment other to amount leaves at 21 HST observation. At 35 HST observation , treatment best namely K3S2 (EC 2000 uS /cm + circulation interval 120 minutes) has average 22.50 strands different real with treatment other to amount leaf plant

Further test results of the Duncan Multiple Range Test (DMRT) with 5% level in the 28 HST observation shows electrical conductivity treatment K3 (EC 2000 uS /cm) no different real with K4 treatment (EC 2500 uS /cm) but , different real with electrical conductivity treatment K1 (EC 1000uS/cm), K2 (EC 1500uS/cm) on amount leaves . In the observation of 35 HST, the K3 treatment (EC 2000 uS /cm) had average highest namely 38.00 strands and different real with treatment K1 (EC 1000 uS /cm), K2 (EC 1500 uS /cm), K4 (EC 2500 us/cm). Circulation interval treatment own the same average and not different real at each treatment at 28 HST and 35 HST observations . At the observation amount leaf there is differences amount leaf at each treatment, things This caused by concentration different nutrients. According to (Indrawati, et al., 2013), it states that level nutrients desired by plants different plants fruit need concentration nutrition taller compared to with plant vegetables. There are differences amount leaves on each treatment allegedly caused by existence difference tall plants at the age of 35 HST. This is in line with (Ginting, et al. 2017), which states that the taller melon plants then the more Lots amount leaf.

3. Diameter Stem

Analysis results variety show that electrical conductivity treatment and circulation interval No influential real on stem diameter at 7 HST, 14 HST, 21 HST, 28 HST, 35 HST observations . Electrical conductivity treatment had a very significant effect on stem diameter at 21 HST, 28 HST, 35 HST observations . Electrical conductivity treatment did not influential real on stem diameter at 7 HST and 14 HST observations . Treatment of circulation interval very real impact on stem diameter at 35 hst observation . Treatment of circulation interval No influential real on stem diameter at observations of 7 HST, 14 HST, 21 HST, 28 HST, average area data leaf presented in Table 3.

The results of the Duncan Multiple Range Test (DMRT) with a level of 5%, showed that the electrical conductivity treatment had the same average and was not significantly different for each treatment at 7 HST and 14 HST. In the observation of 21 HST, the K4 treatment (EC 2500 us/cm) was not significantly different from the K3 treatment (EC 2000 us/cm), but was significantly different from the K1 treatment (EC 1000 us/cm), and K2 (EC 1500 us/cm) on the diameter of melon plants. The K3 treatment (EC 2000 us/cm) was not significantly different from the K4 treatment (EC 2500 us/cm) but was significantly different from the K1 treatment (EC 1000 uS/cm) and K2 (EC 1500 uS/cm) on the diameter of melon plant stems at 28 HST. Electrical conductivity treatment had the highest average in treatment K3 (EC 2000 us/cm) 7.54 and was significantly different from treatment K1 (EC 1000 us/cm), K2 (EC 1500 us/cm) and K4 (EC 2500 us/cm) on melon plant diameter in observation 35 HST. The circulation interval treatment had the same average and was not significantly different in each observation 7 HST, 14 HST, 21 HST, 28 HST. The circulation interval treatment S2 (120 minutes) was significantly different from treatment S3 (180 minutes), but was not significantly different from S1 (60 minutes) and S4 (240 minutes) in observation 35 HST. There was a difference in stem diameter in each treatment, this happened because the nutrient needs of melon plants were met so that the plant metabolism process took place optimally, and the results of photosynthesis, which is one of the plant metabolisms that correlated with stem diameter growth. In hydroponic cultivation, to achieve optimal nutrient efficiency, nutrients must be provided in sufficient quantities to meet plant needs. Oversupply of nutrients can reduce vegetative development and lead to plant toxicity. Conversely, undersupply of nutrients can inhibit root development, thus impairing nutrient uptake, even if the plant does not show any visual symptoms of deficiency (Bariyyah et al., 2015).

4. Leaf Area (cm)

The results of the analysis of variance showed that the electrical conductivity and circulation interval treatments had no significant effect on the leaf area of melon plants. The electrical conductivity treatment had no significant effect on leaf area. The circulation interval treatment had no significant effect on the leaf area of melon plants. The average leaf area data are presented in Table 4.

Based on the average results obtained, it shows that the treatments K1 (EC 1000 uS/cm), K2 (EC 1500 Us/cm), K3 (EC 2000 uS/cm), K4 (EC 2500 uS/cm) showed no significant difference in leaf area. Treatments S1 (circulation interval 60 minutes), S2 (circulation interval 120 minutes), S3 (circulation interval 180 minutes), S4 (circulation interval 240 minutes) showed no significant difference in leaf area.

The results of the analysis of the average data of the combination of electrical conductivity treatments did not significantly affect the leaf area of melon plants, the electrical conductivity treatment did not significantly affect the leaf area, and the circulation interval treatment did not significantly affect the leaf area of melon plants. This is thought to be because the nutrient needs of melon plants cannot be met by the nutrient concentration treatment, especially when combined with the circulation interval which results in the plants being unable to retain the nutrient solution properly so that one of the consequences is that the plant's need for nitrogen cannot be met, so that the growth of leaf width is less than optimal.

This is as stated by (Huda et al., 2019) who stated that the nutrient that plays a major role in leaf area is N. N elements are closely related to chlorophyll synthesis and protein and enzyme synthesis. N elements also act as leaf catalysts and CO2 fixation required by plants for photosynthesis. If the macronutrient is deficient, what happens is that photosynthesis runs slowly so that leaf formation is not optimal. If leaf formation is not optimal, the plant's leaf area is also not optimal.

5. Chlorophyll of Melon Plant Leaves (g/m2)

The results of the analysis of variance showed that there was no interaction between electrical conductivity and circulation interval treatments on melon leaf chlorophyll. Electrical conductivity treatment had a very significant effect on leaf chlorophyll. Circulation interval treatment had no significant effect on melon leaf chlorophyll. The average results of leaf chlorophyll data are presented in Table 5.

Further Duncan Multiple Range Test (DMRT) results at 5% showed that the K3 treatment (EC 2000 uS/cm) was not significantly different from the K2 treatment (EC 1500 uS/cm) and K4 (EC 2500 uS/cm) but was significantly different from the K1 treatment (EC 1000 uS/cm) on leaf chlorophyll. Treatments S1 (circulation interval 60 minutes), S2 (circulation interval 120 minutes), S3 (circulation interval 180 minutes), S4 (circulation interval 240 minutes) showed no significant difference in leaf chlorophyll. The analysis results showed that the electrical conductivity treatment affected leaf chlorophyll content. This is suspected because the N nutrient contained in the nutrient is able to meet the plant's needs to form chlorophyll pigments. According to (Yuwono and Basri, 2021), nitrogen is an essential nutrient that functions as a building block for chlorophyll and increases leaf size. Chlorophyll pigments function to absorb sunlight energy which plays a role in the process of photosynthesis. The sunlight energy absorbed by chlorophyll pigments will be used to break down water molecules into H2 and O2 which is called photolysis. According to (Lusia, 2011), factors that influence chlorophyll formation include genes, light and the elements N, Mg and Fe as formers and catalysts in chlorophyll synthesis then other factors are disturbances in plants such as plants attacked by viruses and diseases that attack plants in the leaves so that the pigment that makes the leaves green is reduced.

6. Weight fruit (g)

The results of the analysis of variance showed that the electrical conductivity and circulation interval treatments had no significant effect on fruit weight. The electrical conductivity treatment had a very significant effect on fruit weight. The circulation interval treatment had a significant effect on melon fruit weight. The average fruit weight data are presented in Table 6.

The results of the Duncan Multiple Range Test (DMRT) with a level of 5% showed the highest average electrical conductivity treatment on fruit weight, namely 1250.29 grams in the K3 treatment (EC 2000) level of melon sweetness. The treatment us/cm) was significantly different from the treatments K1 (EC 1000 us/cm), K2 (EC 1500 us/cm), K4 (EC 2500 us/cm). The circulation interval treatment showed no significant difference on fruit weight. electrical conductivity had a very significant effect on the level of fruit sweetness. The circulation interval treatment did not have a significant effect on the brix of melon fruit. The results of the analysis of the average combination of electrical conductivity treatments did not have a significant effect on melon fruit weight, as well as the electrical conductivity treatment had a very significant effect on melon fruit weight, and the circulation interval treatment did not have a significant effect on melon fruit weight. This indicates that at the EC value the nutrient needs required by plants have been met including the availability of Ca, K, and P elements which play a major role in fruit growth. This is in line with what was stated by (Iqbal, et al., 2014) who stated that the weight of the fruit of a plant depends on the nutrients obtained by the plant itself.

7. Sweetness level

The results of the analysis of variance showed that the electrical conductivity and circulation interval treatments had no significant effect on the level of fruit sweetness, as presented in Table 7 .

The results of the Duncan Multiple Range Test (DMRT) with a level of 5% showed that the K3 treatment (EC 2000 uS/cm) was not significantly different from the K2 treatment (EC 1500 uS/cm) and K4 (EC 2500 uS/cm) but was significantly different from the K1 treatment (EC 1000 uS/cm) on the level of sweetness of melon fruit. Treatments S1 (circulation interval 60 minutes), S2 (circulation interval 120 minutes), S3 (circulation interval 180 minutes), S4 (circulation interval 240 minutes) showed no significant difference in the level of sweetness of melon fruit. The results of the analysis carried out on the level of sweetness of the fruit had a very significant effect but the circulation interval showed no significant effect on the sweetness of the fruit. This is because the sweetness of the fruit is formed from the nutritional content. According to (Delfiendra, 2016) the level of sweetness in melon fruit is grouped into 3, namely fruit with a brix of 8% is poor quality, 10% is average, 12% is good quality, 14% is very good quality. The level of sweetness of the fruit is influenced by the nutrients contained in the nutrients such as K and M. According to (Parmila, 2019) an increase in potassium nutrients has a significant effect on increasing sugar levels in the fruit. Potassium nutrients can help the breakdown of carbohydrates into sugars so that they can increase the sweetness of the fruit (Ramadani, et al., 2022). According to (Christy, 2018), which states that N content plays an important role in increasing assimilates such as sugar storage and fruit production.

Figures And Tables

Table 1. Average Value of Interaction of Electrical Conductivity Treatment and Circulation Interval on Plant Height

Perlakuan	Panjang Tanaman (cm)	
	7 HST	28 HST
K1 (Electrical Conductivity 1000)	5,64a	92,25a
K2 (Electrical Conductivity 1500)	6,56ab	106,25b
K3 (Electrical Conductivity 2000)	8,91b	119,31c
K4 (Electrical Conductivity 2500)	6,13a	120,63c
S1 (interval sirkulasi 60 menit)	6,77	108,94ab
S2 (interval sirkulasi 120 menit)	7,22	116,38b
S3 (interval sirkulasi 180 menit)	6,45	107,50a
S4 (interval sirkulasi 240 menit)	6,80	105,63a

Table 2. Mark Average Amount Leaf Plant Each Treatment Electrical Conductivity and Interval

Perlakuan	Jumlah Daun (helai)	
	28 HST	35 HST
K1 (electrical conductivity 1000 uS/cm)	17,69a	17,69a
K2 (electrical conductivity 1500 uS/cm)	19,81ab	29,06c
K3 (electrical conductivity 2000 uS/cm)	26,38c	38,00d
K4 (electrical conductivity 2500 uS/cm)	22,94bc	22,94b
S1 (Interval Sirkulasi 60 Menit)	21,81	27,50
S2 (Interval Sirkulasi 120 Menit)	22,38	28,69
S3 (Interval Sirkulasi 180 Menit)	21,63	26,56
S4 (Interval Sirkulasi 240 Menit)	21,00	24,94

Table 3. Mark Average Diameter Stem Each Treatment Electrical Conductivity And Interval Circulation

Perlakuan	Diameter Batang(mm)				
	7 HST	14 HST	21 HST	28 HST	35 HST
K1 (electrical conductivity 1000 uS/cm)	4,34	4,34	5,05a	5,63a	5,63a
K2 (electrical conductivity 1500 uS/cm)	4,31	4,31	5,23ab	5,89a	6,62b
K3 (electrical conductivity 2000 uS/cm)	4,37	4,37	5,54bc	6,56b	7,54c
K4 (electrical conductivity 2500 uS/cm)	4,45	4,45	5,57c	6,59b	6,59b
S1 (Interval Sirkulasi 60 Menit)	4,39	4,39	5,33	6,21	6,53ab
S2 (Interval Sirkulasi 120 Menit)	4,38	4,38	5,38	6,29	6,81b
S3 (Interval Sirkulasi 180 Menit)	4,38	4,38	5,31	6,09	6,51a
S4 (Interval Sirkulasi 240 Menit)	4,31	4,31	5,37	6,08	6,53ab

Table 4. Average Leaf Area Results Melon Plants Each Treatment Electrical Conductivity and Circulation Interval

Perlakuan	Luas Daun (cm2)
K1 (electrical conductivity 1000 uS/cm)	3489,75
K2 (electrical conductivity 1500 uS/cm)	3581,21
K3 (electrical conductivity 2000 uS/cm)	3410,38
K4 (electrical conductivity 2500 uS/cm)	3282,53
S1 (Interval Sirkulasi 60 Menit)	3601,07
S2 (Interval Sirkulasi 120 Menit)	3421,18
S3 (Interval Sirkulasi 180 Menit)	3330,28
S4 (Interval Sirkulasi 240 Menit)	3411,34

Table 5 . Mark Average Chlorophyll Leaf Each Treatment Electrical Conductivity And Interval Circulation

Perlakuan	Klorofil Daun
K1 (electrical conductivity 1000 uS/cm)	0,20a
K2 (electrical conductivity 1500 uS/cm)	0,27b
K3 (electrical conductivity 2000 uS/cm)	0,31b
K4 (electrical conductivity 2500 uS/cm)	0,27b
S1 (Interval Sirkulasi 60 Menit)	0,27
S2 (Interval Sirkulasi 120 Menit)	0,26
S3 (Interval Sirkulasi 180 Menit)	0,26
S4 (Interval Sirkulasi 240 Menit)	0,26

Table 6 . Mark Average Weight Fruit Melon Each Treatment Electrical Conductivity And Interval Circulation

Perlakuan	Berat Buah (g)
K1 (electrical conductivity 1000 uS/cm)	715.43a
K2 (electrical conductivity 1500 uS/cm)	963.90b
K3 (electrical conductivity 2000 uS/cm)	1250.29c
K4 (electrical conductivity 2500 uS/cm)	893.55ab
S1 (Interval Sirkulasi 60 Menit)	949.83
S2 (Interval Sirkulasi 120 Menit)	1057.80
S3 (Interval Sirkulasi 180 Menit)	945.46
S4 (Interval Sirkulasi 240 Menit)	870.08

Table 7. Mark Average Level sweetness Fruit Melon Each Treatment Electrical Conductivity And Circulation Interval

Perlakuan	Brix (%)
K1 (electrical conductivity 1000 uS/cm)	9,14a
K2 (electrical conductivity 1500 uS/cm)	10,72b
K3 (electrical conductivity 2000 uS/cm)	10,88b
K4 (electrical conductivity 2500 uS/cm)	9,91ab
S1 (Interval Sirkulasi 60 Menit)	10,04
S2 (Interval Sirkulasi 120 Menit)	10,75
S3 (Interval Sirkulasi 180 Menit)	10,32
S4 (Interval Sirkulasi 240 Menit)	9,54

IV. Conclusion

Electrical conductivity and circulation interval treatment show real interaction at high parameters plants, number leaves, weight fruit. Combination treatment produce growth the highest at the age of 35 HST , namely electrical conductivity treatment 2000 uS /cm + circulation interval 60 minutes with height 166.25 cm, electrical conductivity treatment 2000 uS / cm + circulation interval 120 minutes with average height 179.00 cm, electronic conductivity treatment 2000 uS / cm + circulation interval 180 minutes with average height 161.25 cm. Combination electrical conductivity treatment 2000 uS /cm + circulation interval 120 get results amount leaf best namely 38.00 (strands). Combination electrical conductivity treatment 2000 uS / cm + circulation interval 120 minutes get results heavy fruit best of 1250.29g and the level sweetness fruit 10.88% so obtained level profit the biggest.

Suggestion

For get good quality melon with weight big and sweet taste so that obtained profit maximum, cultivation melon plants in general hydroponics should with Combination electrical conductivity treatment 2000 uS / cm + circulation interval 120 minutes.

Saying Thank You

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