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Application of Compost and Dolomite Dosage on Chrysanthemum Plant Growth and Yield

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Abstract
This study aims to determine the effect of applying compost and dolomite doses on the growth of chrysanthemum plants (Dendranthema grandiflora, Tzelev). This research was conducted in Pancasari Village, precisely in the Pudak Lestari Agro Ornamental Plant Farmers Group. This study employs a Group Randomized Design (GRC) consisting of two factors in a factorial arrangement. The first factor is compost (K), composed of 3 dosage levels, namely: K_1= 2 tons ha^{-1}, K_2= 4 tons ha^{-1}, K_3= 6 tons ha^{-1}, while the second factor is Dolomite (D), which consists of 3 dosage levels, namely: D_1= 2 tons ha^{-1}, D_2= 4 tons ha^{-1}, D_3= 6 tons ha^{-1}. The results showed that the interaction between compost and dolomite (KxD) had an intangible effect on all observed variables. The highest economic fresh weight of flowers was obtained in the treatment of compost fertilizer at a dose of 6 tons ha^{-1} (K_3), which was 45.56 g, or an increase of 18.86% from the lowest economic fresh weight of flowers obtained at a dose of 2 tons ha^{-1} (K_1), which was 38.33 g. Dolomite treatment provided the highest financial, fresh flower weight at a dose of 6 tons ha^{-1} (D_3), which was 44.11 g, or an increase of 9.67% from the lowest economic, fresh weight obtained at a dose of 2 tons ha^{-1} (D_1), which was 40.22 g.

Keywords: *Compost Fertilizer; Dolomite; Dose; Chrysanthemum Plants*

1. Introduction

The chrysanthemum plant comes from the crosses of Chrysanthenum indicum, Chrysanthenum morifolium, and Chrysanthenum daisy. Chrysanthemum plants (Dendranthema grandiflora, Tzelev) are also known as Seruni or Golden Flower. Chrysanthemums play a significant role in the lives and cultures of the people, particularly in China and Japan. Chrysanthemum plants, which originated in China and Japan, were introduced to Europe and France in 1795. Chrysanthemum plants are a mainstay commodity in the floriculture industry due to their excellent agribusiness prospects and high market demand. In addition to being used for chrysanthemum garden decoration, it also serves to make decorations and chrysanthemum flower tea. Suitable climatic and agroecosystem factors, available resources, and ever-increasing population growth create opportunities for the floriculture business in both domestic and export markets [1]. The fragrance and color of flowers are essential decorative characteristics of chrysanthemums, especially for consumable chrysanthemum tea, and excellent fragrance determines its commercial value. Today, chrysanthemums are widely used for their fragrances and medicinal properties [2]. Previously, some plant breeders in the UK and the Netherlands tried to glorify several types of local chrysanthemums. More than 500 varieties were produced, some of which have survived to this day [3]. Taxonomically, the following are the classifications of chrysanthemums: Kingdom: Plantae, Division: Spermatophyta, Class: Dicotyledonae, Order: Asterales, Family: Asteraceae, Genus: Chrysanthemum, Species: Dendrathema grandiflora, Tzelev [4]. Chrysanthemums have superficial roots that range from 20-25 cm in depth and extend sideways. The origins of chrysanthemums are white and fibrous, making them highly sensitive to environmental influences. The stems of chrysanthemums are filled with delicate and juicy/non-dense hairs, sparse branching, softly structured, about 0.5 cm in diameter, and green in color. Still,

if left to grow for a long time, the stems of chrysanthemums will become hard (woody) and brownish-green. The leaves of chrysanthemums are characterized by their thick texture. The shape of the leaves varies according to the variety. The leaf tips are tapered, the base is rounded, and the edges are jagged. They are stacked intermittently on the stems or branches. Chrysanthemums grow upright at the ends of the plant, are arranged in long to short stalks, and include complete flowers. Chrysanthemums are compound flowers consisting of ribbon flowers and tube flowers. Ribbon flowers have colored crowns that determine the color dominance in chrysanthemums. In contrast, tube flowers are located in the center of the flower and have a different color than ribbon flowers.

Chrysanthemums grow well in medium to high altitudes, specifically in the range of 600-1200 meters above sea level. They require air humidity of around 70%-80% to reduce the potential for fungal growth and other diseases [5]. Therefore, chrysanthemum cultivation in areas with high rainfall can be carried out in a sheltered house, such as a plastic house or greenhouse. Building greenhouses in Indonesia, with its wet tropical climate, must differ from those in subtropical climates [6]. Increasing production through intensification often has problems, including the provision of planting materials (cuttings), the regulation of planting distance, the regulation of soil moisture with mulch, the determination of the appropriate sources of organic fertilizer as well as the optimal dosage, pre-and post-harvest (sorting, grading, and packaging) and the management of the production system [7].

Chrysanthemum plants require a growing medium that is typically a mixture of soil and organic matter, such as compost. The addition of organic matter, such as compost, to the soil can increase the community and activity of soil microorganisms, which contribute to improving soil health and plant productivity [8]. In addition, compost can also be used to increase environmental carrying capacity, increase plant production, increase farmers' income, and reduce pollution to the environment [9]. The results of the study on the application of various sources of organic matter in the cultivation of chrysanthemums as cut flowers have a significant influence on the compost of chrysanthemum harvest with a dose of 6 tons ha^{-1} [10].

Dolomite is a type of limestone that provides benefits to the soil and plants, such as supplying essential nutrients for plants and helping to adjust the soil pH according to plant needs. Dolomite also acts as a soil improver because, too often, the application of fertilizers in the form of Ammonium and calcium can result in a magnesium deficiency; the application of dolomite can neutralize acidic reactions due to excessive fertilizer application [11]. The elements contained from dolomite used in this study are MgO content (%) : ≥20, Soluble MgO Citric Acid (%) : ≥16, and CaO content (%): ±30. In addition, one way to overcome the lack of macro and micronutrients in the soil is by liming [12]. The results of the study on the use of water hyacinth and dolomite fertilizer in chrysanthemum cultivation showed that the dose of dolomite fertilizer of 450 kg ha^{-1} resulted in the highest flower stalk length and fresh weight of 150.03 cm and 67.23 g, an increase in yield of 4.21% and 7.47% respectively when compared to the lowest treatment [13].

2. Materials and Methods

The research is located in Pancasari Village, Sukasada District, Buleleng Regency, within the Pudak Lestari Agro Ornamental Plant Farmers Group, at an altitude of 1,247 meters above sea level and with an average temperature of 17°C to 20°C. The research time starts from October 2024 to February 2025. Research materials and tools include hoes, cultivators, special scissors, special paper, rubber, chrysanthemum cuttings, calipers, electric scales, labels, compost fertilizer, dolomite, signs, timers, artificial lights, pegs, enforcement nets, NPK 16-16-16, Prevathon, Cozeb, Avidor, and Demolish. This study employs a Group Randomized Design (GRC) consisting of two factors in a factorial arrangement. The first factor is compost (K), composed of 3 dose levels, namely: K_1= 2 tons ha^{-1}, K_2= 4 tons ha^{-1}, K_3= 6 tons ha^{-1}, while the second factor is Dolomite (D), which consists of 3 dosage levels, namely: D_1= 2 tons ha^{-1}, D_2= 4 tons ha^{-1}, D_3= 6 tons ha^{-1}. The variables observed in this study include plant height, number of leaves, stem diameter, age of the first flowers, number of flowers, flower diameter, length of flower stalks, weight of flower stalks, and fresh weight of economic flowers.

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The research results were analyzed using statistical methods by the research design. If the single treatment and interaction had a real to very real effect, then it was followed by the LSD test at the level of 5% and the Duncan test at the level of 5%. Furthermore, to determine the close relationship between variables, correlation analysis is used.

3. Results and Discussion

3.1 Results

Based on the results of the statistical analysis of all observed variables, the significance of the dose of compost (K) and dolomite (D) and their interaction (KxD) with the observed variables is presented in Table 1.

Table 1. Significance of the dosage of compost (K) and dolomite (D) and their interaction (KxD) on the variables observed in chrysanthemums.

No.	Variable	Treatment		
		(K)	(D)	(K x D)
1	Maximum plant height (cm)	*	*	ns
2	Maximum number of leaves (strands)	*	**	ns
3	a. Diameter batang (mm) 30 dap	**	*	ns
	b. Diameter batang (mm) 60 dap	ns	*	ns
	c. Diameter batang (mm) 90 dap	ns	ns	ns
4	First emerging flower age (dap)	ns	ns	ns
5	Number of flowers (florets)	*	*	ns
6	Diameter bunga (cm)	*	*	ns
7	Flower stalk length (cm)	*	ns	ns
8	Weight of flower stalks (g)	**	*	ns
9	Economic fresh weight (g)	**	*	ns

Description: *= has a real effect (P<0.05), **= has a very real impact (P<0.01), ns = intangible effect (P≥0.05).

The interaction between compost and dolomite (KxD) had an insignificant effect (P≥0.05) on all observed variables. Compost (K) treatment had a real impact (P<0.05) to very real (P<0.01) on all variables, except for an intangible effect (P≥0.05) on the stem diameter of 60 dap, the diameter of the stem 90 dap, and the age of the flower appeared first. Meanwhile, in the treatment of dolomite (D), there was a real effect (P<0.05) to very real (P<0.01) on all variables, except for an unreal effect (P≥0.05) on the stem diameter of 90 dap, the age of the flower appearing first, and the length of the flower stalk (Table 1).

3.1.1 Plant Height (cm)

The maximum plant height for the highest compost dose is found at a dose of 6 tons ha^{-1} (K_3), which is 86.06 cm, and the lowest with a dose of 2 tons ha^{-1} (K_1), which is 80.40 cm (Table 2). The maximum plant height of the highest dolomite dose was found at a dose of 6 tons ha^{-1} (D_3), which was 86.10 cm, and the lowest with a dose of 2 tons ha^{-1} (D_1), which was 80.51 cm (Table 2).

Table 2. Average maximum plant height and maximum leaf count on application of compost and dolomite fertilizer dosages.

Treatment	Maximum Plant Height (cm)	Maximum Number of Leaves (strands)
Compost Fertilizer (K)		
K_1 (2 ton ha^{-1})	80.40 b	32.22 b
K_2 (4 ton ha^{-1})	82.96 ab	32.47 b
K_3 (6 ton ha^{-1})	86.06 a	34.49 a
LSD 5%	4.34	1.76
Dolomite (D)		

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D_1 (2 ton ha^{-1})	80.51 b	31.12 c
D_2 (4 ton ha^{-1})	82.80 ab	33.14 b
D_3 (6 ton ha^{-1})	86.10 a	34.91 a
LSD 5%	4.34	1.76

Information: The average value followed by the same letter in the same column shows an intangible difference in the 5% LSD test.

3.1.2 Number of Leaves (Strands)

The maximum number of leaves for the highest compost dose was found at a dose of 6 tons ha^{-1} (K_3), which yielded 34.49 pieces, and the lowest with a dose of 2 tons ha^{-1} (K_1), which yielded 32.22 pieces (Table 2). The maximum number of leaves for the highest dolomite dose was found at a dose of 6 tons ha^{-1} (D_3), which was 34.91 pieces, and the lowest with a dose of 2 tons ha^{-1} (D_1), which was 31.12 pieces (Table 2).

3.1.3 Stem Diameter (mm)

a. Stem Diameter 30 days after planting

The maximum dose of compost 30 days after planting was found at a dose of 6 tons ha^{-1} (K_3), corresponding to a height of 4.11 mm, and the lowest at a dose of 2 tons ha^{-1} (K_1), corresponding to a height of 3.60 mm (Table 3). The stem diameter 30 days after planting the highest dose of dolomite was found at a dose of 6 tons ha^{-1} (D_3), which was 4.09 mm, and the lowest with a dose of 2 tons ha^{-1} (D_1), which was 3.65 mm (Table 3).

b. Stem Diameter 60 days after planting

The diameter of the stem 60 days after planting the highest compost dose at a dose of 6 tons ha^{-1} (K_3), which is 4.82 mm, and the lowest at a dose of 2 tons ha^{-1} (K_1), which is 4.59 mm (Table 3). The diameter of the stem 60 days after planting the highest dose of dolomite was found at a dose of 6 tons ha^{-1} (D_3), which was 4.93 mm, and the lowest with a dose of 2 tons ha^{-1} (D_1), which was 4.48 mm (Table 3).

c. Stem Diameter 90 days after planting

The diameter of the stem 90 days after planting the highest dose of compost at a dose of 6 tons ha^{-1} (K_3), which is 5.58 mm, and the lowest at a dose of 2 tons ha^{-1} (K_1), which is 5.14 mm (Table 3). The stem diameter 90 days after planting the highest dose of dolomite at a dose of 6 tons ha^{-1} (D_3), which is 5.51 mm, and the lowest at a dose of 2 tons ha^{-1} (D_1), which is 5.16 mm (Table 3).

Table 3. The average stem diameter is measured at 30, 60, and 90 days after planting following a dosing application of compost and dolomite.

Treatment	Stem Diameter 30 dap (mm)	Stem Diameter 60 dap (mm)	Stem Diameter 90 dap (mm)
Compost Fertilizer (K)			
K_1 (2 ton ha^{-1})	3.60 b	4.59 a	5.14 a
K_2 (4 ton ha^{-1})	3.96 a	4.73 a	5.23 a
K_3 (6 ton ha^{-1})	4.11 a	4.82 a	5.58 a
LSD 5%	0.31	-	-
Dolomite (D)			
D_1 (2 ton ha^{-1})	3.65 b	4.48 b	5.16 a
D_2 (4 ton ha^{-1})	3.94 ab	4.72 ab	5.28 a
D_3 (6 ton ha^{-1})	4.09 a	4.93 a	5.51 a
LSD 5%	0.31	0.35	-

Information: The average value followed by the same letter in the same column shows an intangible difference in the 5% LSD test.

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3.1.4 Age of First Emerging Flowers (dap)

The age of flowers appeared first, with the highest compost dose at 4 tons ha^{-1} (K_2), which was 79.22 days after planting, and the lowest with a dose of 6 tons ha^{-1} (K_1), which was 77.89 days after planting (Table 4). The first flowering age appeared at the highest dose of dolomite at a dose of 6 tons ha^{-1} (D_3), which was 79.56 days after planting, and the lowest at a dose of 4 tons ha^{-1} (D_1), which was 77.33 days after planting (Table 4).

3.1.5 Number of Flowers (florets)

The highest number of compost dose flowers was found at a dose of 6 tons ha^{-1} (K_3), which was 12.31 florets, and the lowest with a dose of 2 tons ha^{-1} (K_1), which was 10.63 florets (Table 4). The highest amount of dolomite dose flowers was found at a dose of 6 tons ha^{-1} (D_3), which was 12.48 florets, and the lowest with a dose of 2 tons ha^{-1} (D_1), which was 10.67 florets (Table 4).

Table 4. The average lifespan of flowers appears first, followed by the number of flowers after the application of compost and dolomite fertilizer dosages.

Treatment	Age of First Emerging Flowers (dap)	Number of Flowers (floret)
Compost Fertilizer (K)		
K_1 (2 ton ha^{-1})	78.00 a	10.63 b
K_2 (4 ton ha^{-1})	79.22 a	11.51 ab
K_3 (6 ton ha^{-1})	77.89 a	12.31 a
LSD 5%	-	1.24
Dolomite (D)		
D_1 (2 ton ha^{-1})	78.22 a	10.67 b
D_2 (4 ton ha^{-1})	77.33 a	11.31 a
D_3 (6 ton ha^{-1})	79.56 a	12.48 a
LSD 5%	-	1.24

Information: The average value followed by the same letter in the same column shows an intangible difference in the 5% LSD test.

3.1.6 Flower Diameter (cm)

The highest flower diameter at the highest compost dose was found at a dose of 6 tons ha^{-1} (K_3), which was 9.41 cm, and the lowest at a dose of 2 tons ha^{-1} (K_1), which was 8.56 cm (Table 5). The highest dolomite dose flower diameter was found at a dose of 6 tons ha^{-1} (D_3), which was 9.43 cm, and the lowest at a dose of 2 tons ha^{-1} (D_1), which was 8.58 cm (Table 5).

3.1.7 Flower Stalk Length (cm)

The length of the flower stalk for the highest compost dose was found at a dose of 6 tons ha^{-1} (K_3), which was 114.03 cm, and the lowest at a dose of 2 tons ha^{-1} (K_1), which was 107.99 cm (Table 5). The length of the dolomite flower stalk was highest at the dose of 6 tons ha^{-1} (D_3), which was 112.74 cm, and the lowest at a dose of 2 tons ha^{-1} (D_1), which was 108.28 cm (Table 5).

Table 5. Average flower diameter and stalk length at the application of compost and dolomite fertilizer dosage.

Treatment	Flower Diameter (cm)	Length of the flower stalk (cm)
Compost Fertilizer (K)		
K1 (2 ton ha^{-1})	8.56 b	107.99 b
K2 (4 ton ha^{-1})	9.11 ab	109.61 ab
K3 (6 ton ha^{-1})	9.41 a	114.03 a
LSD 5%	0.63	4.69
Dolomite (D)		

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D1 (2 ton ha^{-1})	8.58 b	108.28 a
D2 (4 ton ha^{-1})	9.07 ab	110.61 a
D3 (6 ton ha^{-1})	9.43 a	112.74 a
LSD 5%	0.63	-

Information: The average value followed by the same letter in the same column shows an intangible difference in the 5% LSD test.

3.1.8 Weight of Flower Stalk (g)

The highest dose of compost stalk was found at a dose of 6 tons ha^{-1} (K_3), corresponding to 55.22 g, and the lowest at a dose of 2 tons ha^{-1} (K_1), corresponding to 48.00 g (Table 6). The highest dose of dolomite stalk weight was found at a dose of 6 tons ha^{-1} (D_3), which was 53.78 g, and the lowest at a dose of 2 tons ha^{-1} (D_1), which was 50.22 g (Table 6).

3.1.9 Economic Fresh Flower Weight (g)

The highest dose of compost is found at a dose of 6 tons ha^{-1} (K_3), which is 45.56 g, and the lowest at a dose of 2 tons ha^{-1} (K_1), which is 38.33 g (Table 6). The highest dose of dolomite, in terms of fresh flower weight, was found at a dose of 6 tons ha^{-1} (D_3), which yielded 44.11 g, and the lowest at a dose of 2 tons ha^{-1} (D_1), which yielded 40.22 g (Table 6).

Table 6. Average weight of flower stalks and economic fresh weight of flowers on dosing applications of compost fertilizer and dolomite.

Treatment	Weight of the Flower Stalk (g)	Economical Fresh Weight Flower (g)
Compost Fertilizer (K)		
K1 (2 ton ha^{-1})	48.00 b	38.33 c
K2 (4 ton ha^{-1})	53.00 a	42.44 b
K3 (6 ton ha^{-1})	55.22 a	45.56 a
LSD 5%	2.61	2.91
Dolomite (D)		
D1 (2 ton ha^{-1})	50.22 b	40.22 b
D2 (4 ton ha^{-1})	52.22 ab	42.00 ab
D3 (6 tons ha^{-1})	53.78 a	44.11 a
LSD 5%	2.61	2.91

Information: The average value followed by the same letter in the same column shows an intangible difference in the 5% LSD test.

3.2 Discussion

The highest economic fresh weight of flowers was obtained at the dose of 6 tons ha^{-1} (K_3) compost fertilizer, which was 45.56 g, or an increase of 18.86% from the lowest economic fresh weight of the flower obtained at the dose of 2 tons ha^{-1} (K_1) compost fertilizer, which was 38.33 g. The increase in the fresh weight of the flowers was economically supported by the height of the plant (r = 0.991**), the number of leaves (r = 0.877**), the number of flowers (r = 0.999**), the diameter of the flower (r = 0.996**), the length of the flower stalk (r = 0.943**). The highest plant height, number of leaves, number of flowers, flower diameter, and length of flower stalks were obtained in the treatment of compost with a dose of 6 tons ha^{-1} (K_3), and the lowest was obtained in the treatment of compost with a dose of 2 tons ha^{-1} (K_1). The height of the plant economically supports the high weight of fresh flowers, the number of leaves, the number of flowers, the diameter of the flowers, and the length of the flower stalk, which is due to the nutrients contained in the compost fertilizer made from the leftover chrysanthemum harvest. Compost fertilizer made from chrysanthemums functions to improve soil structure and serve as a medium for the development of beneficial microorganisms, promoting healthy root growth in the soil. Compost can provide macro (N, P, K, Ca, Mg) and micro (Mn, Fe, Cu, Zn) nutrients needed

by plants, and it contains humic acid that can increase the soil cation exchange capacity and enhance the activity of soil microorganisms [14]. The results of the analysis of compost fertilizer made from chrysanthemum harvest raw materials show the content of elements N (high), P (very high), K (very high), and C-organic (very high). Judging from its role, element N plays a vital role in vegetative growth, especially in leaf growth [15]; element P plays a role in the formation of ATP (Adenosine Triphosphate), which is the primary source of energy in the plant metabolic process, element K plays a role in the regulation of stomata, namely the pores on leaves that control the absorption of carbon dioxide, and element C- Organic is essential for soil fertility and helps plants absorb other nutrients. The results of the research on the application of various sources of organic matter in the cultivation of chrysanthemums as cut flowers, especially in the treatment of the type of organic matter of chrysanthemum plant waste, exerted a real ($P<0.05$) to very real ($P<0.01$) effect on the variables observed in chrysanthemum plants and gave the highest results at the treatment dose of 6 tons ha^{-1} [10]. The composting process of organic matter is also quite time-consuming because it is a natural process [16].

Dolomite treatment provided the highest economic fresh flower weight at a dose of 6 tons ha^{-1} (D_3), which was 44.11 g, or an increase of 9.67% from the lowest economic fresh flower weight obtained at the dolomite treatment at a dose of 2 tons ha^{-1} (D_1), which was 40.22 g. The increase in the fresh weight of flowers is economically supported by plant height (r = 0.998**), number of leaves (r = 0.996**), number of flowers (r = 0.993**), diameter of flowers (r = 0.991**), length of flower stalks (r = 0.997**). The highest plant height, number of leaves, number of flowers, flower diameter, and length of flower stalks were obtained in dolomite treatment with a dose of 6 tons ha^{-1} (K_3), and the lowest was obtained in dolomite therapy with a dose of 2 tons ha^{-1} (K_1). The high weight of economical fresh flowers supported by the height of the plant, the number of leaves, the number of flowers, the diameter of the flower, and the length of the flower stalk is due to the effect of applying dolomite which can provide nutrients for plants, help change the pH of the soil according to the needs of the plant, and can neutralize the excessive saturation of substances that can be toxic to the soil and plants. The high and low levels of lime in the soil significantly impact soil fertility. The benefits of dolomite are as a Mg nutrient that functions in the formation of chlorophyll, which is helpful for the process of photosynthesis, as a source of Ca nutrients, and as an ameliorant/soil improver. Dolomite can provide essential nutrients to the soil and contains other micronutrients, thereby supporting plant growth and development [11].

The results of the study [17] showed that the application of dolomite had a significant effect on improving soil pH; calcium can be exchanged (Ca-dd), and magnesium can be exchanged (Mg-dd), resulting in increased Ca levels and absorption, as well as increased Mg levels in plants. The results of the study on the use of water hyacinth and dolomite fertilizer in chrysanthemum cultivation showed that the dose of dolomite fertilizer of 450 kg ha^{-1} resulted in the highest flower stalk length and fresh weight of 150.03 cm and 67.23 g, an increase in yield of 4.21% and 7.47% respectively when compared to the lowest treatment [13]. Improper lime dosage can affect the availability of phosphorus nutrients in the soil; in acidic soils, element P is not available because it is bound by the AL to form AL-P, while soils with high lime content do not necessarily also have a high level of fertility, it can be toxic if applied excessively because lime will bind nutrients P from the soil to form Ca-P, Where these nutrients are needed by plants for their growth process. The study's results showed that applying 1 kg of dolomite spread over one oil palm tree increased phosphate levels by 47%, potassium levels by 16%, and magnesium levels by 32% in the soil, thereby enhancing plant root growth [18].

In this case, the results of the photosynthesis process also have an essential role. The use of a dose of compost fertilizer made from chrysanthemums and dolomite plants has a real effect on plant height, number of leaves, number of flowers, flower diameter, weight of flower stalks, and fresh weight of economic flowers. This happens because the more leaves a plant has, the more

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optimal its photosynthesis process becomes. The use of compost fertilizers can reduce the use of inorganic fertilizers by up to 60% [19]. The use of organic nutrients should be combined with inorganic nutrients to complement each other, as they can have an excellent influence on plant growth and yield [20].

4. Conclusion

The interaction between the dose of compost and dolomite had no significant effect ($P \geq 0.05$) on any of the observed variables. The compost treatment provided the highest economic yield of fresh flowers at a dose of 6 tons ha^{-1} (K_3), which was 45.56 g, representing an increase of 18.86% from the lowest economic yield obtained at a dose of 2 tons ha^{-1} (K_1), which was 38.33 g. Dolomite treatment provided the highest economic fresh flower weight at a dose of 6 tons ha^{-1} (D_3), which was 44.11 g, or an increase of 9.67% from the lowest economic fresh flower weight obtained at the dolomite treatment at a dose of 2 tons ha^{-1} (D_1), which was 40.22 g.

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