

**Liquid Fertilizer from Mexican Sunflower plant (*Tithonia diversifolia*)
and Effectiveness in Amaranthus cultivation**



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ABSTRACT

The research study was aimed to evaluate the effectiveness of liquid fertilizer prepared using Mexican sunflower plant. It is a weed plant. The experiment was carried out during January 2023 to March 2023 at the Department of Botany, Faculty of Science, Eastern University Sri Lanka. The experiment was arranged in a Completely Randomized Design (CRD) with five treatments and five replicates. Treatments are T1 - recommended amount of inorganic fertilizers by the Department of Agriculture (DOA), T2 - Half amount of recommended inorganic fertilizers and 3 times application of compost extract, T3 - Half amount of recommended inorganic fertilizers and 3 times application of cowdung extract, T4 - Half amount of recommended inorganic fertilizers and 3 times application of Mexican sunflower – guinea pig manure liquid fertilizer and T5 – 3 times application of Mexican sunflower – guinea pig manure liquid fertilizer. Liquid fertilizer application was done 3 times (2 WAP, 3 WAP and 4 WAP) until the harvesting. All other agronomic practices were followed based on DOA recommendation. Plant height, number of leaves per plant, leaf area, and stem length were measured in weekly interval. Yield was measured at the time of harvesting. Analysis of Variance was performed to determine significant difference among treatments ($p < 0.05$). The statistical results show that the highest mean plant height was observed in control treatment (T1) while the yield was high in the treatments T4 and T5 compared to other treatments. It could be concluded that application of Mexican sunflower plant- guinea pig manure liquid fertilizer combined with inorganic fertilizer or alone would enhance yield of leafy vegetable.

Table of Contents

| | |
|---|-----|
| ABSTRACT..... | i |
| ACKNOWLEDGEMENT..... | ii |
| List of tables..... | iv |
| List of figures..... | vi |
| Abbreviations..... | vii |
| CHAPTER 1 | 1 |
| Introduction..... | 1 |
| CHAPTER 2 | 4 |
| 2.0 Literature Reviews..... | 4 |
| 2.1. Amaranthus plant..... | 4 |
| 2.1.2 Uses..... | 4 |
| 2.1.3 Nutritional Value..... | 6 |
| 2.1.4 Fertilizer Application..... | 8 |
| 2.1.5 Harvesting..... | 10 |
| 2.2 Mexican sunflower plant..... | 11 |
| 2.3 Guinea pig manure..... | 15 |
| 2.4. Compost tea method..... | 16 |
| CHAPTER 3 | 16 |
| MATERIALS AND METHODOLOGY | 18 |
| 3.1 Location..... | 18 |
| 3.3 Treatment..... | 18 |
| 3.3 Experimental Design..... | 18 |
| 3.4 Preparation of liquid fertilizer..... | 20 |
| 3.5 Cultural Practices..... | 21 |
| 3.5.1 Planting Materials..... | 21 |
| 3.5.2 Preparation of polythene bag..... | 21 |
| 3.5.3. Transplanting..... | 21 |
| 3.5.4. Fertilizer Application..... | 21 |
| 3.5.5. Watering..... | 21 |
| 3.5.6. Weeding..... | 21 |

| | |
|--|-----------|
| 3.5.7. Pest and disease control..... | 21 |
| 3.5.8. Harvesting..... | 21 |
| 3.5.9 Measurements..... | 22 |
| 3.5.10. Statistical analysis..... | 21 |
| CHAPTER 4 | 23 |
| Result and Discussion..... | 23 |
| 4.1 Properties of the Soil..... | 23 |
| 4.2. Determination of Nutrient content of the Liquid Extract Fertilizer..... | 23 |
| 4.3 Agronomic Parameters..... | 24 |
| 4.3.1. Height of the Plant in Different weeks..... | 25 |
| 4.3.2. Number of leaves of the amaranthus plant in different weeks..... | 26 |
| 4.3.3 Number of branches of the amaranthus plant in different weeks..... | 27 |
| 4.3.4 Leaf area of the amaranthus plant..... | 28 |
| 4.3.7 Fresh weight and Dry weight of the amaranthus plant..... | 28 |
| CHAPTER 5 | 30 |
| Conclusion..... | 30 |
| CHAPTER 6 | 31 |
| References..... | 31 |
| Appendix | 35 |

List of Tables

| | |
|---|----|
| Table 1: Scientific Classification of the mexican sunflower plant..... | 10 |
| Table 2: Treatment..... | 17 |
| Table 3: Liquid fertilizer preparation method | 19 |
| Table 4: Physio-chemical properties of Potting medium..... | 22 |
| Table 5: Nutrient content of the fertilizer: Mexican sunflower liquid extract fertilizer | 23 |
| Table 6: Plant height at 2 nd , 3 rd and 4 th week after planting..... | 24 |
| Table 7: The number of leaves..... | 25 |
| Table 8: Number of branches..... | 26 |
| Table 9: The leaf area of the plant..... | 27 |
| Table10: Fresh weight and Dry weight of the amaranthus plant | 29 |

List of Figures

| | |
|---|----|
| Figure 1: Experimental Design Arrangement | 18 |
| Figure A1: Compost Tea method..... | 35 |
| Figure A2: Pollythene Bag Preparation..... | 35 |
| Figure A3: Height of the Plant Measuring..... | 36 |
| Figure A4:T4 plant..... | 36 |