GHADEER INC (M) SDN. BHD
Manufacturer & Exporter
(842594-M)
Green Spot Fertilizer

Effects of

Green Spot Liquid Fertilizer

On Ornamental Plants In Putrajaya-Malaysia

BY:

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Green Spot Fertilizer

GREEN SPOT LIQUID FERTILIZER

EXECUTIVE SUMMARY

VENUE

PERBADANAN PUTRA JAYA, MALAYSIA

AIM & OBJECTIVE

To check and evaluate Green Spot Highly Concentrated Liquid Fertilizer, on Flora of Putrajaya, Malaysia

EVALUATION PERIOD

5 Applications between 7th July 2011 and 17th August 2011

Harvested on 9th September 2011

EXECUTIVE SUMMARY

- Green Spot Fertilizer treated landscaping plants had more flowers and richer in leaf color.

- Ghadeer Inc (M) Sdn. Bhd.'s growth stimulating liquid fertilizer namely "Green Spot Fertilizer" enhances the growth of the plants and is an effective supplement of solid fertilizer.

- **G**rowth response in Putrajaya plants proves that there was quick absorption of GSF and also leaching losses are nil which will help improvement of Eutrophication of lakes in Putrajaya.

- Use of Green Spot Fertilizer for landscaping plants will definitely enhance the appearance of Putrajaya.

- GSF is cost effective method to enhance appearance of Putrajaya.

- GSF can be incorporated with normal pest and disease control spraying hence additional cost of application is not incurred.

- Green Spot Fertilizer is manufactured in Malaysia.

Necessity of Green Spot Fertilizer application

Green Spot Fertilizer is a growth stimulating liquid fertilizer which is effective for correcting soil deficiencies and overcoming the soil's inability to transfer nutrients to the plant. It contains highly concentrated plants elements and has a well balanced chemical composition of all macro and micro nutritional elements suitable to the plant. Appendix -1

Plants at Putra Jaya are not doing well, because most of top soil has been removed for preparation of land for construction, hence the plants are not responding well to fertilizers applied.

A trial of highly concentrated Green Spot Liquid Fertilizer was conducted at Perbadanan Putrajaya central nursery.

THE COMPANY

GHADEER INC (M) SDN. BHD., is an Agronomical Concern and manufactures innovative products for agriculture by assimilating new and old technologies for the benefit of society. The company since its inception is manufacturing its flagship product "**Green Spot Fertilizer**". Government of Malaysia (Matrade) has selected only Ghadeer Inc (M) Sdn. Bhd., in Fertilizer sector to represent Malaysia in **13th OIC Exhibition 2011 at Sharjah, United Arab Emirates. Ghadeer Inc (M) Sdn. Bhd.,** is also member of United Nation Global Market (UNGM) as vendor in fertilizer sector with registration No. 187330. Appendix -2

Material & Method

Location:



Perbadanan Putrajaya, Malaysia (Central Nursery)

Variety Of Plants for Trial:



Plants

S.No.	Name of Plants
1.	Helianthus (Sunflower)
2.	Marigold
3.	Anthurium
4.	Mint
5	Bougainvillea
6.	Hibiscus

Soil:-

The plants were planted in poly bags filled with soil from the area.

Type and composition rates applied

GSF 1 (10:8:20+T.E) is for mature stage/fruiting or flowering stage and GSF-2 (20:8:10+T.E) is for immature stage/young/for greens/leafy vegetables/plants.

Application	GSF-Type	GSF(ml)/ltr	Total GSF Used For 10 ltr of water	Date of Application
First	GSF-2	5	**50**	7th July 2011
Second	GSF-2	7	**70**	15th July 2011
Third	GSF-1	10	**100**	21st July 2011
Fourth	GSF-1	7	**70**	27th July 2011
Fifth	GSF-1	10	**100**	17 August 2011
	Total	39ml	390ml	

- Note: For mint plants we have applied GSF 2 only

Per Plant Application

Total Number of Plants Treated	=	37 Nos.
Average GSF applied/application/ltr	=	7.8 ml
7.8ml/ltr x 10ltr	=	78 ml GSF
78ml GSF for 37 plants	=	2.1ml GSF per plant/application
Total GSF applied for 1 Plant	=	2.1 ml/application/plant

Method of Analysis

Marigold and Helianthus was selected for comparison and harvested on 9th September 2011 at time: 11am.




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GSF TREATED
MARY GOLD

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CONTROL
HELIANTUS


GSF TREATED
HELIANTUS

The plants were separated in to roots, stem, leave and flowers and was weighed.

Helianthus				**Marigold**		
Fresh/Plant (g)				Fresh/Plant (g)		
	Control	**GSF**	**%**	**Control**	**GSF**	**%**
Stem (g)	2.8	6.7		3.7	18.6	
Leaves (g)	2.7	4.5		7.0	16.5	
No. of flowers				16	48	300
Flower (g)	12.9	26.0		9.0	21.3	
Total (g)	18.4	37.2	202	19.8	56.4	285

Helianthus				**Marigold**		
Dry/Plant (g)				Dry/Plant (g)		
	Control	GSF	%	Control	GSF	%
Stem (g)		1.1		0.6	3.2	
Leaves (g)		1.0		0.9	2.9	
Flower (g)		3.3		1.3	3.5	
Total (g)	2.4	5.4	225	2.8	9.7	346

The plants separated in to roots, stem, leaf, and flowers and was weighed.
The sample was dried at 105 ° centigrade overnight and weighed for dry matter. Samples were then ground for the analysis by MS 677.Pt-1-VII: 1980 then sample were ashed and ashed solution was prepared by MS 677.Pt-1-VII: 1980

Total N analyzed by KJELDAHL Method

Total Phosphorous, Calcium, Magnesium and all trace elements was analyzed by ICP (Inductively Coupled Plasma Spectrophotometer).

Sulfur: Elemental method used to evaluate presence of sulfur in plants
Appendix-3

Results:

Marigold and Helianthus Plants both Control and GSF treated were harvested and submitted to ESPEK Research & Advisory Service Laboratories for analysis purpose. The results show that the GSF treated Plants are high in all macro and micro nutrients and the Control Plants have less nutrients. A short summary of report is as under:

Marigold

	CONTROL/Plant				GSF/Plant				Control = 100% GSF = %?
	Stem	**Leaves**	**Flower**	**Total**	**Stem**	**Leaves**	**Flower**	**Total**	
Dry Weight (g)	0.6	0.9	1.3	2.8	3.2	2.9	3.5	9.7	245.0
Major Element (mg)									
Total N	1.7	4.5	4.4	10.5	9.4	17.5	16.9	43.9	316.0
P_2O_5	0.6	0.8	1.0	2.4	2.4	2.3	2.8	7.5	215.0
K_2O	5.7	9.3	6.2	21.3	27.3	27.7	16.5	71.6	235.8
CaO	0.5	3.1	1.0	4.6	4.1	11.3	2.4	17.8	285.3
MgO	0.1	0.3	0.5	0.9	0.7	0.9	1.1	2.8	220.7
S	0.6	1.0	0.5	2.1	1.9	2.1	1.3	5.4	152.2
Minor Element (mcg)									
B	1.4	4.9	4.0	10.3	7.4	15.1	9.8	32.3	213.9
Mn	nd	3.3	nd	3.3	5.9	32.2	4.1	42.2	1197.9
Cu	1.3	3.1	5.3	9.7	5.1	9.1	8.8	23.0	137.6
Fe	9.4	77.3	63.6	150.3	52.7	227.0	117.3	396.9	164.1
Zn	1.9	8.3	6.0	16.2	9.8	27.8	20.7	58.4	260.8

Helianthus

	CONTROL/Plant	GSF/Plant				Control = 100% GSF = %?
	Total (Stem, Leaves, Flower)	Stem	Leaves	Flower	Total	
Dry Weight (g)	2.4	2.0	1.7	5.9	9.5	296.9
Major Element (mg)						
Total N	14.9	6.3	10.4	40.7	57.4	286.0
P_2O_5	3.5	2.4	1.3	8.6	12.3	250.7
K_2O	26.2	24.2	22.9	47.2	94.3	259.6
CaO	9.6	3.9	13.9	19.7	37.5	290.9
MgO	2.6	1.0	1.7	5.4	8.1	214.4
S	2.1	0.6	1.5	4.2	6.4	204.0
Minor Element (mcg)						
B	19.6	5.9	23.2	41.4	70.5	260.6
Mn	6.5	2.0	19.2	26.9	48.1	642.2
Cu	14.0	3.5	8.7	24.1	36.3	158.6
Fe	86.0	30.8	90.1	168.6	289.5	236.7
Zn	33.1	11.6	29.2	44.8	85.5	158.0

Solar Lux Analysis

The GSF treated plants was noticeably greener, thicker and larger then control plants, so in order to measure the light interference and photosynthesis activity light meter was used to measure the light passing through the leaves. The results are as follow for Hibiscus, Bougainvillea and Anthurium:-

S.No.	Name of Plant	Control	GSF	GSF = 100% Control = ? %
1	Hibiscus	8800	3100	183.87
2	Bougainville	10500	5000	110.00
3	Anthurium	12000	5000	140.00

Please note that the much lower level of light passing through GSF leaves.

Solar Lux Comparison Pictures:



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CONTROL
7504
03/10/2011 12:18PM


03/10/2011 10:57AM

CONCLUSION:

The growth response from GSF applied plants was 225% for helianthus and 346% for marigold as compare to control.

The major elements N, P, K, Ca, mg, & S accumulated by above ground parts of marigold was 152% 316% better then control.

The minor elements B, Mn, Cu, Fe, & Zn accumulated by above ground parts of marigold was 138% to 1200% better then control.

The major elements N, P, K, Ca, Mg, Ca & S accumulated by above ground parts of Helianthus was 204% to 291% better then controls.

The minor elements B, Mn, Cu, Fe, & Zn accumulated by above ground parts of the Helianthus was 158% to 642% better then control.

SUMMARY:

The trial proves that GSF growth stimulating liquid fertilizer was effective in correcting soil deficiencies as seen by the results.

GSF growth stimulating liquid fertilizer was effective to overcome soil's inability to transfer nutrients to the plants as evidence by the level of calcium and magnesium absorbed by the plants from 214-290%, Calcium and Magnesium was not supplied by GSF.

The above facts and figures depict that the application of Green Spot Fertilizer can stimulate growth of the plants located at Putrajaya by correcting soil deficiencies and overcoming the soil's inability to transfer nutrients to the plant.

ACKNOWLEDGEMENT

We hereby wholeheartedly acknowledge the patronage and support of following persons without whom this report would have not been completed. It is to them that we owe our deepest gratitude.

- Honorable Mr. ZOLKAPLIE BIN MUSTAFA, Deputy Director (Horticulture and Landscape Resource), Department of Landscape and Parks, PERBADANAN PUTRAJAYA-MALAYSIA for providing us the opportunity to conduct trial of the Green Spot Fertilizer. We also thank him for approvals, easing our official matters at the trial sites and the encouragement and we believe that without his support we would have not accomplished our task comfortably.

- Respected Mr. HARIS BIN EMBONG, Principle Assistant Director, (Horticultural and Landscape Resource) Department of Landscape and Parks, PERBADANAN PUTRAJAYA, MALAYSIA for supporting us during the trial, applications and harvesting phases. We greatly appreciate the help you have provided to us by deputing the workers and allocating tools to facilitate our job.

- Mr. NANTHA KUMARAN, Managing Director, Advance Fertilizer Manufacturer Sdn. Bhd., who provided technical assistance at his factory despite his many other professional commitments. His wisdom, knowledge and commitment to the highest standards helped us to resolve many technicalities.

- We also thank Mr. ASSAITHAMBY for providing field related services, MS. LEE PEIGGY and Mr. SANAULLAH for compiling the report.

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APPENDIX-1

GREEN SPOT FERTILIZER

The product "Green Spot Fertilizer" is a multi-nutrient liquid fertilizer ideal for nutritional requirements of all types of flora. It contains high concentrated activated NPK and has well balanced chemical composition of all macro and micro nutritional elements suitable to the plant, soil and environment. Its application results in high yield and well nurtured plants having fruits and bearings full of nutrients beneficial for end consumers. Green Spot Fertilizer is a panacea for weak and dying plants and it revitalizes and rejuvenates them by providing the required nutritional strength.

Some other qualities are:

- It increases the yield by 25%.
- It enhances plant vigor, improve quality of crop products
- It enhances the ability of water absorption, maintenance, resistance to drought and cold.
- It enhancing the resistance to pests and diseases and stresses.
- Effective soil amendment improving the development of roots.
- It recovers severely nutrient deficient plants or plants debilitated by pests and disease.
- It cures plants subjected to adverse soil conditions which impair nutrients uptake including prolonged periods of dry weather/water logging.

BENEFITS OF LIQUID FERTILIZER OVER GRANULAR FERTILIZER

Saves time and money.

Liquid Fertilizers are easy to apply and does not require any experienced hand for its application whether it is foliar application or fertigation method it is similar to the method of watering the crops thus it not only saves time but also trim labour costs.

Even Application

Liquid Fertilizers are easier to apply evenly thus avoiding burns due to high accumulation of fertilizer at one point. Even application of the Granular Fertilizer is difficult and the high concentration of granules at one point may lead to burns and damages.

Quick Absorption

One of the greatest advantages of liquid fertilizers is that they are quickly absorbed by the leave and some into the ground which makes a very good form of fertilizer. Diluting liquid is much easier than dissolving granules, and liquids are a final product that can be much more evenly distributed over an area. When spreading granules, it is easy to get concentrations of fertilizer in certain areas that might lead to scorching or burning. Liquids have the benefit of being easier to regulate and mix.

Foliar Feeding

In addition to pouring/fertigation Liquid Fertilizers can be applied through foliar sprays, which is the most efficient way to increase yield and plant health. Tests have shown that foliar feeding can increases yields from 12% to 25% when compared to conventional fertilization. Foliar feeding is an effective method for correcting soil deficiencies and overcoming plants inability to absorb nutrient for poor soil.

Safe Application

Because it has a very safe concentration, one does not need to worry much about the possibility of burning the grass. Even when you make the mistake of applying excessive amounts on the lawns, the consequences are usually not as grave as those arise when the same is done with granular fertilizer.

Eutrophication Of Lakes

Leaching losses are high in solid/Granular fertilizer due to heavy application of nutrients specially Nitrogen and Phosphorous which cause Eutrophication of lakes.

APPENDIX-2

BRIEF INTRODUCTION

THE COMPANY

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THE TEAM

We are team of dedicated knowledge based professionals endeavouring all the time to provide best and wide spectrum of solutions for the benefit of society. Our diversified and dedicated team makes all out efforts to strengthen our social commitments by imparting their expertise through innovative technologies tailored to the needs of modern world.

COMMITMENT TO THE SOCIETY

We being an environmental cognizant entity accept and advocate the universal truth that if we do not permit the earth to produce beauty and joy, it will in the end not produce food either and we in love of our mother nature commit ourselves to make such products which let our earth to produce beauty and joy. We understand that we do not inherit the earth from our ancestors; we borrow it from our children and we are obligated to return it to our children in a manner it produces beauty and bliss to them.

CERTIFICATIONS: Till Todate:-

Well known Research Laboratories "ESPEK, SGS MALAYSIA, CCM FERTILIZER MALAYSIA, SIME DARBY, PCSIR PAKISTAN" And Department of Soil, Water and Environment Bangladesh qualitatively certified our flagship product **"Green Spot Fertilizer**".

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Recommended Dosage

The following recommendation is made on the basis of calculations conducted at:

Plants in 120 Poly Bags have height 8-10 Inch and width 8-10 Inch spread in a total area of 8 Sq. Meter having 16 Plants in 1 Sq. Meter approx. 60 ml GSF mixed in 6 litre water sprayed using Knapsack Sprayer on the plants till the solution runoff the plants and the results were successfully achieved therefore the following dosage is recommended.

10ml GSF in 1 Litre Water for 1 Sq. Meter Area (approx 16plants in one meter square).

Expected losses 30% approx.

Pictures of Trial using Knapsack Spray:





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Comparison between GSF treated plants with controlled plants

4th Application on 4.8.2011

Helianthus



Marigold



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Comparison between GSF treated plants with controlled plants

4th Application on 4.8.2011

Anthurium



Mint



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Comparison between GSF treated plants with controlled plants

4th Application on 4.8.2011

Bougainvillea





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Comparison between GSF treated plants with controlled plants

4th Application on 4.8.2011

Hibiscus

