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BIOSTIMULANT USING SEA WEED

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Introduction

Goals

•Production of biostimulant using seaweed

Long term goals 2024 - 2026

•Production of bio fertilizers that have full macronutrient (NPK)

•Selling of package of biostimulants and biofetilizers using sea weed to farmers

•Help farmers to increase their yields and decrease the use of chemicals

•After finish their examination enable to employee them selves

. Biostimulant is “a substance or microorganism that, when applied to seeds, plants or on the rhizosphere, stimulates natural processes to enhance or benefit nutrient uptake, nutrient use efficiency, tolerance to abiotic stress, or crop quality and yield”. Defined in the 2018 Farm Bill. Biostimulants are not actual natural nutrients but the do stimulate the natural nutrition processes of plants. Biostimulants are rich in multi-nutrients but cannot replace fertilizers, although it has a potential to improve soil quality and plant productivity even under stress conditions.

Seaweed biostimulant have been shown to help reduce seed dormancy and enhance root systems, flowering, fruits quality, taste and even the quality of produce , they act as tonic for healthy plants growth .Seaweed fertilizer is highly effective and efficient fertilizers that offers severals benefits compared to conventional fertilizers .It is undoubtedly one of the best fertilizers because it is organic and effortless fertilizer , safe and non –toxic (since it made from marine plants it is completely safe and no chemicals are used in making it that does not harm the environment) ,can be given to all the house plants , very easily absorbed by plants ,so it is also a very effective to provide more power to plants in less time , no expertise is required (in use the solution anyone can use it without any complexity) also it easy to store and cheaper (1kg is about 10,000/= tsh and can be used more than three months depend on plants you have)

Method

In use of seaweed biostimulant because it come on concentrated form , measure 6 grams of seaweed powder to be diluted in 1 liter of water mix it properly before giving it to plants , feed the plant with solution thrice in a week , it can be store for 8- 10 days at normal temperature .Overdose will burn the plants .

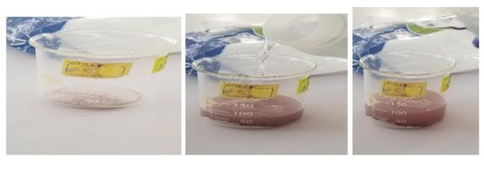
We used CADMIUM REDUCTION METHOD .CODE 3649

Powdered cadmium is used to reduce nitrate to nitrite .The nitrite that is originally present plus reduces nitrate is determined by diazotization of sulfanilamide and nitrite followed by coupling with N-[1 naphthyl]-ethylenediamine dihydrochloride to form a highly coloured azo dye which is measured colorimetrically.

QUANTITY	CONTENT	CODE
2 x 60 ml	*Mixed Acid Reagent	*V-6278-H
55 g	*Nitrate Reducing Reagent	*V-6279-C
1	Spoon, 0.1 g , plastic	0699
1	Dispenser Cap	0692

Results

Therefore do to our experiment of seaweed biostimulant using brown species our result range in Medium – High concentration which is 48ml/



Pounds Per Acre	Range
0.0-9.0 lb/acre	Low
11-29 lb/acre	Medium
33-51 lb/acre	Medium – high
53-100 lb/ acre	High
Over 100 lb / acre	Very High

Conclusion

The project went well because students enjoy learning in practices more than in theory , they have been apply the practice in topics such as photosynthesis they noticed the formation of chlorophyll to Nitrogen obtained in the seaweed biostimulant , nutrition in plants they look how macronutrients in plants work such as Nitrogen due to the application of seaweed extract the garden plants increase in root and shoot length than others garden plants above picture shown , scientific methods when apply step by step the scientific methods until the result obtain such as formulation of hypothesis ,experimentation ,conclusion and report writing also in the topic of classification they look the classification of seaweed in Zanzibar which are Rhoophyta(red) , Phaeophyta (brown), and Chlorophyta (green)

References

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https://www.voiceofplants.com

Acknowledgments

First thank for God for giving us healthy until we finish this project also special thanks goes to Head master of Chasasa Secondary School Mr. Rashid Sinani Massoud for his big support in financial as well as in wonderful ideas on this project from staring until finish , also special thanks to my student for their contribution until we finish the projects happy to work with them charming ,hardworking and ready to increase their ideas , uniqueness I like to thanks the President of the Revolutionary Government of Zanzibar Doctor Hussen Mwinyi for his big investment in seaweed and in blue economy in general, we benefited alot .