

EFFECT OF URINE ON MAIZE YIELD- PROSPECTS FOR FOOD SECURITY

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INTRODUCTION AND BACKGROUND

- Urine constitutes only 1% of the total wastewater generated.
- However, it contains the largest proportion of plant nutrients found in wastewater.
- Reuse of the nutrients contained in urine will reduce environmental pollution.
- The advantages of urine as fertilizer will be immense as it will serve as a substitute to commercial fertilizer.
- It can be of great use in meeting the fertilizer demands of rural farming communities in developing countries.
- In Nigeria, maize remains a major cultivated cereal

METHODOLOGY

- ❑ The experiment was designed to determine the effectiveness of human urine as a viable and beneficial source of plant nutrients in comparison to other sources of nutrients.
- ❑ The experiment was a 5x3 factorial laid out in a randomized complete block design (RCBD).
- ❑ It had factor A as five sources of fertilizer (human urine, poultry manure, urea, NPK 15:15:15, and control). Factor B was three local maize varieties.
- ❑ This gave a total of 15 treatment combinations replicated three times, giving a total of 45 plots.
- ❑ Urine treatment was applied on all three varieties of maize and compared with other nitrogen sources.
- ❑ It was shown that all three maize varieties responded positively to the treatments (human urine, poultry manure, urea, NPK 15:15:15) except the control that had no form of fertilizer applied to it.
- ❑ Human urine significantly influenced the growth rates and yields of all three maize varieties, followed closely by NPK 15:15:15, urea, and lastly poultry manure.

RESULTS AND CONCLUSION

- ❑ Maize varieties fertilized with human urine produced similar results as those fertilized with other sources of nitrogenous fertilizer.
- ❑ In the taste assessment test, tasters could not differentiate between maize treated with human urine and those grown with other sources of fertilizer.
- ❑ Thus, tasters did not prefer any particular maize sample as all the maize were evaluated as being good-tasting.
- ❑ This showed that human urine does not affect or alter the taste of any crop it is fertilized with.
- ❑ This means that human urine can be used at the convenience of a home to grow crops