



# Analysis of Compositions of Common Manures

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### Introduction:

Manure is a valuable resource that can supply essential crop nutrients to displace the need for commercial fertilizers and organic matter to improve soil structure. Efficient utilization of manure can substantially reduce production costs and protect our environment. Traditionary farmers have been using animal manure mostly than the other types of manure based on their availability as majority of Tanzanian keeps livestock animals which mostly are Cattles and chickens. Due do different types of feeding to these animals nutrient content of manure vary widely. Content of manure is influenced by the animal species, the growth stage of the animal, the feed composition, the amount and type of bedding used

### Problem:

Thus this project intend to analyze nutrients content from two samples of manure which are cow manure and chicken (broiler) manure in the laboratory focusing on PH and macro nutrients composition which are Nitrogen, phosphorus and potassium as these are nutrients required mostly for plants growth using Rapitest pH NPK soil test kit. The results of this project will help farmers to choose the best manure for sustainable agriculture.

### Method:

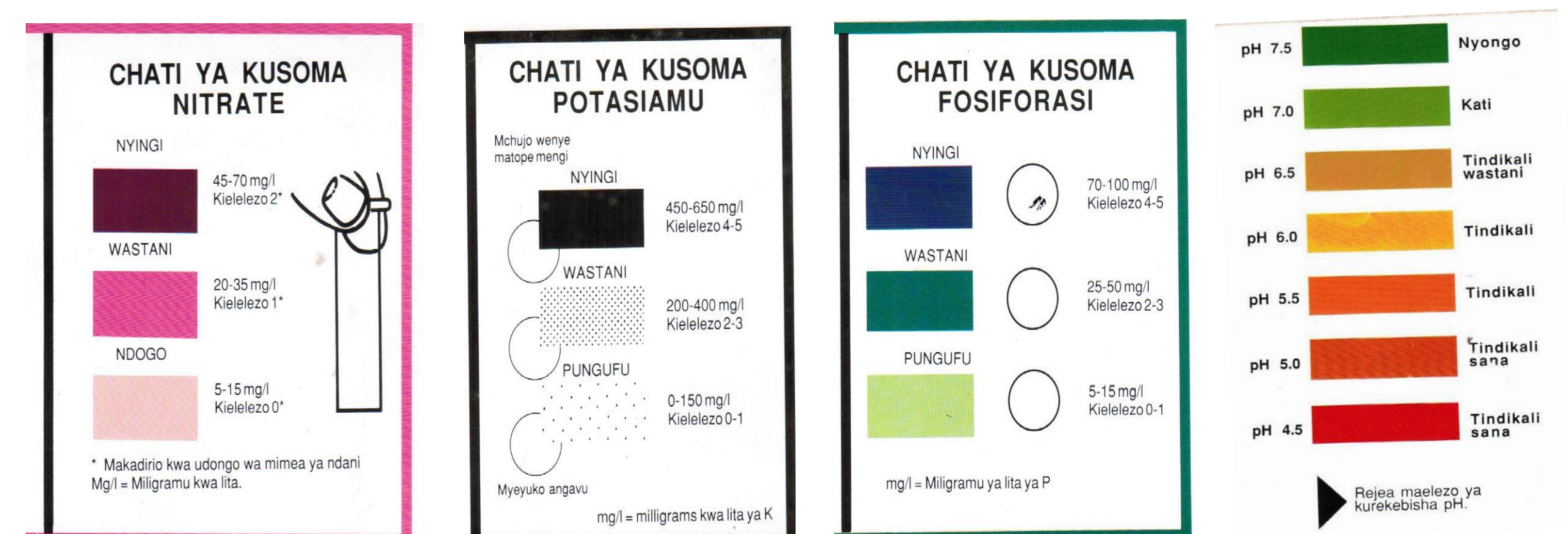
Samples collected were dry cow and chicken manure. Rapitest pH NPK soil test kit was used experimentally to analyze the pH value, and macro elements such as Nitrogen, Phosphorus and Potassium present in dry cow and chicken manure.



students experiment to test nutrients contents and pH in chicken and cow manure

### Results:

Chicken manure has more nutrients composition compared to cow manure due to difference in bedding, types of feeding and excretion of nitrogeneous waste because chicken excrete only uric acid, than ammonia so large amount of Nitrogen remains in its waste products. Data recorded above show that there is more Nitrate, Phosphorus and Potassium composition in chicken (broiler) than in cow manure.



Sample	pH value	Phosphorus	Potassium	Nitrate
Chicken Manure	7.5	70-100mg/l	450-650mg/l	20-35 mg/l
Cow manure	8	70-100mg/l	0-150mg/l	5-15mg/l

### Conclusions:

From our project we can conclude that, chicken manure is the best manure because it contain large amount of Nitrate, Phosphorus and potassium composition. We advice Tanzanian farmers to use more chicken manure than cow manure for the best yield.

### References:

<http://novascotia.ca/agri/programs-and-services/lab-services/analytical-lab/>  
<http://ucfoodsafety.ucdavis.edu/files/26444.pdf>

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