

Garden trials using urine as a plant food

Some practical methods



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The value of urine!

Urine is rich in nitrogen (increases plant growth) and also contains useful quantities of phosphorus (helps root growth) and potassium (helps fruiting). Urine is ideal for speeding up the growth of many useful plants which include: Maize, rape, spinach, covo, cabbage, tomato, and onion. And also trees like mulberry, gum and banana.



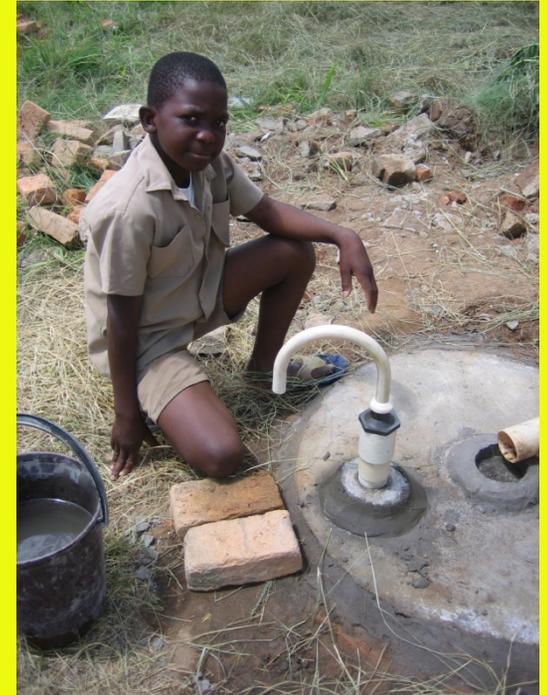
But people must be convinced of the value of urine.

A good start in convincing people is to perform simple trials in the homestead or in the school garden to show the effects. People want to see practical results

What methods can be used to achieved these goals?



Collecting the urine



Urine can be collected in bottles, eco - lilies (container and funnel) for boys and men, potties for girls and women and in urine diverting pedestals or squat plates. Also from the boys school urinal!

Simple plants trials can be performed in:

1. 10 litre basins or buckets



2. Small round gardens (ring beam gardens)



3. Sections of existing or new vegetable gardens



How to make simple trials in basins or buckets

You will need:

- 1. Two 10 litres buckets or basins*
- 2. Plant seedlings*
- 3. Urine and water*
- 4. measuring devices*
- 5. Urine dispenser : small watering can or bucket*



Stage one

Fill each bucket or basin with the selected soil.

Plant the selected type of seedlings in two buckets or basins. Water and let the seedlings establish for a week before applying the urine.



In this case Tsunga have been planted

Stage two – Start urine application

In the case 100mls urine has been added to 300mls water using the measuring devices. This diluted urine can be added once, twice or three times a week. More urine, more growth. The effect takes a week or two to show. Mainly in the greening of leaves at first.



400mls of 3:1 water and urine added to each treated bucket or basin.

Stage three – cropping

After a month or two of treatment a large difference will be noted between the plants treated with diluted urine and those treated with water only as the following photos show.



Cabbage and Spinach after two months treatment.

SPINACH and RAPE

In this photo the combined production of 8 basins of urine treated spinach and 8 basins water treated spinach led to a 3.4 increase in weight. 3 basins of urine treated rape produced 5X the weight of water treated rape.



Spinach and rape respond very well to urine treatment .

MAIZE

Maize is never grown in buckets, but the effect of urine can be demonstrated in buckets as these photos show.



The amount of growth is proportional to the amount of urine fed to the plant.

Applying diluted urine to valuable trees mulberry and gum

*125mls of diluted urine (1:1) followed by 400mls water
once a week can have a significant effect.*



Experiments in Ring beam gardens

The ring beam garden is a miniature garden surrounded by bricks. The diameter is about one metre.



The ring beam garden can be planted with a single type of vegetable or a combination of vegetables, as in the right photo where cabbage, tomato and garlic have been planted.

Urine treatment of ring beam garden

A successful urine application can be made up by diluting 800mls of urine (2 X 400mls) with 2400mls (6 X 400mls) water in a small watering can or small bucket. This is applied to the soil surrounding the plants after the first week after planting the seedlings. This dose can be applied between once and three times a week with additional watering.



Spinach planted on poor soil and treated with water (left) and diluted urine (right) over the course of a month. The increase in weight was 7 times.

Production in ring beam garden



This single ring beam produced 26 kg of spinach in a year when fed with diluted urine.

Using ring beam gardens at the school

After a month the influence of urine treatment was clearly visible.. Rape yield increased 7X, and spinach 4 X. Increase in maize size was very obvious.

Upper photos untreated, lower photos urine treated.



Plant, water, apply urine, crop and measure and eat!



Experiments in vegetable beds - RAPE

Most trials will take place in sections of established vegetable garden in practice.



3 litres of diluted urine (3:1) was added with a small watering can to the treated area, three times a week. This led to considerable growth of rape in the established section of vegetable garden. After 4.5 weeks the average weight of plants had increased by over four times.

Experiments in vegetable beds - TSUNGA



***Growth of tsunga in established section of vegetable garden.
After 4.5 weeks the average weight of plants had increased
by 3.6 times.***

Experiments in school vegetable beds - Spinach



Huge effect of urine application on spinach in beds in the school garden . Plants on right treated with commercial fertiliser!

NO NEED TO MEASURE!!!

What is important is:

- 1. That there is confidence that the recycling method will work in practice.***
- 2. That the increase in production can be seen to be effective***
- 3. That the increase in production is worth the effort.***
- 4. That food grown with the help of urine tastes good and is safe.***

PEOPLE MUST TASTE!