Experiments at Recycling urine in the school garden

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Teaching the younger generation! (Schools Sanitation Programme)

Teaching school children about ecological sanitation – how build simple and effective toilets and how to increase crop production by using compost and urine adds an exciting new dimension to sanitation promotion

Garden experiments

The usefulness of urine and compost can be taught in school gardens. The knowledge gained can then be passed on to the teachers and communities.

Start up trials can be taught in small gardens called "ring beam gardens!"

Plants like maize, spinach and rape respond well to urine treatment. They are useful in start up trials.

About 20 rape and spinach were planted in each ring beam and about 9 maize seedlings. Plants in some ring beams were fed diluted urine, others water only to make comparisons.

Urine collection

Urine was at first collected in bottles in the boys toilet.

Later a special urine collecting trough and tank were fitted to the boys urinal and pumped out with a plastic pump into bottles and buckets

Garden experiments with urine

Urine was applied to the soil around the plants diluted with water (1:3).

800mls urine being diluted with 2400mls water and applied to the treated ring beams two or three times per week.

All ring beams were watered regularly

Quick results!

Garden experiments with urine on poor soil

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.






These simple early trials had an influence on later uptake of the method.

School children and their parents, teachers and other members of the community were able the view the result.

They marvelled and were impressed!

Maize trials

Later a series of maize trials was conducted using urine.

Some rows of maize were fed diluted urine and others water only

Huge differences were recorded!

Maize trials

Each maize cob was measured in 3 experiments carried out in the garden

Huge differences were recorded!

Large numbers of people saw the effects of urine during open day!

Hundreds of people witnessed the effect of urine on maize and other plants!

Other plants – Spinach

The application of diluted urine on spinach (2litre in 10 litres of water - twice a week) enhanced the growth far more than commercial fertilisers in this experiment

Other plants – Rape

The application of diluted urine on rape was also significant

Success leads to success!

Now sweet cane and other plants like tomato, onion, soya bean and banana are being tested with urine treatment!

This project has taught us that the school is an ideal place for teaching new methods and promoting new ideas!

The physical evidence must be provided and the method given support by influential members of the community.