Reuse of faecal sludge as organic fertiliser in context of Bangladesh : BRAC WASH Initiative

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BRAC WASH Programme, Bangladesh

BRAC WASH INITIATIVE

- BRAC WASH programme has provided more than 1 million double pit latrine as grant to ultra poor people
- They need to be emptied to keep them usable.
- What to do with the faecal sludge after emptying?

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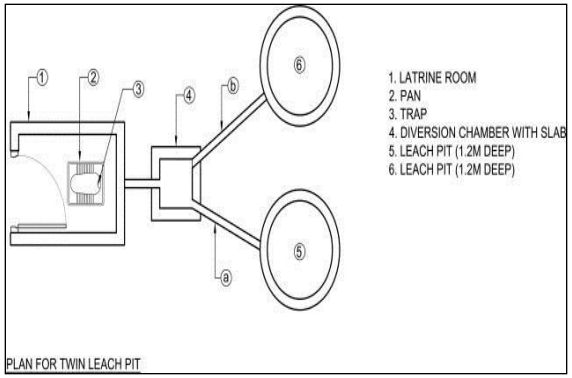
THE RESEARCH AIMS TO

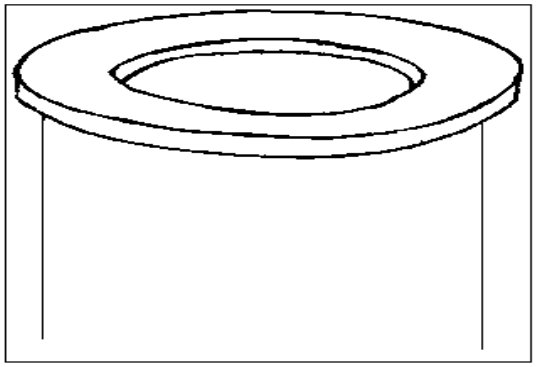
- Meet the nutrient content at national organic fertilizer standard
- Contribute to the agricultural system of Bangladesh through FS based organic fertilizer

ANAEROBIC DIGESTION

Two Pit Latrine



Digestion inside the pit



- Sludge remains in the pit for more than one year in closed environment
- Anaerobic condition exists during that period and sludge become digested

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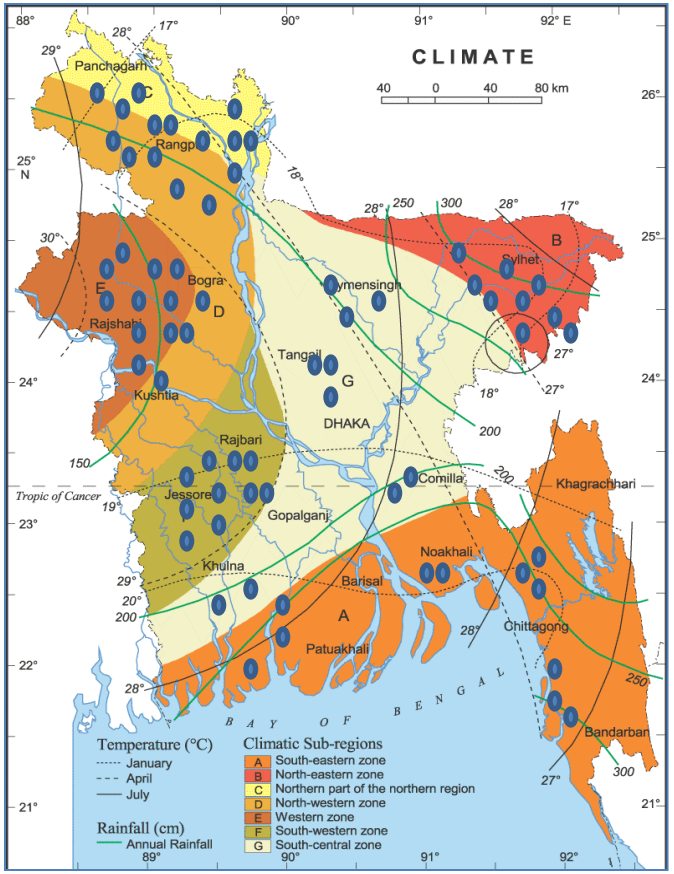
SAMPLE ANALYSIS

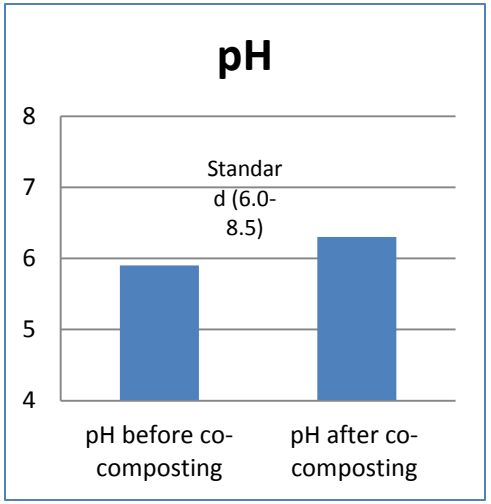
- Digested pit excreta collected from 7 climatic zones of Bangladesh
- 10 samples collected from each zone
- Physical and chemical parameters of these 70 samples were analysed.

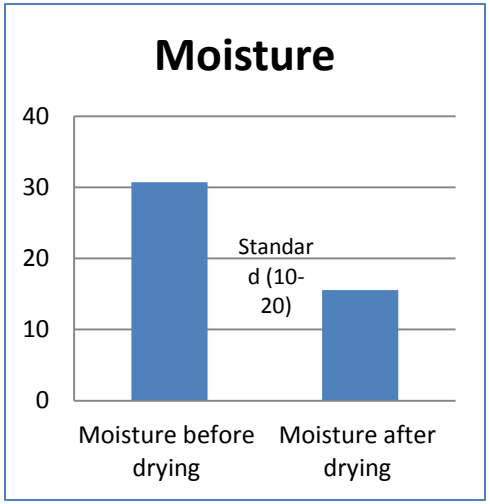


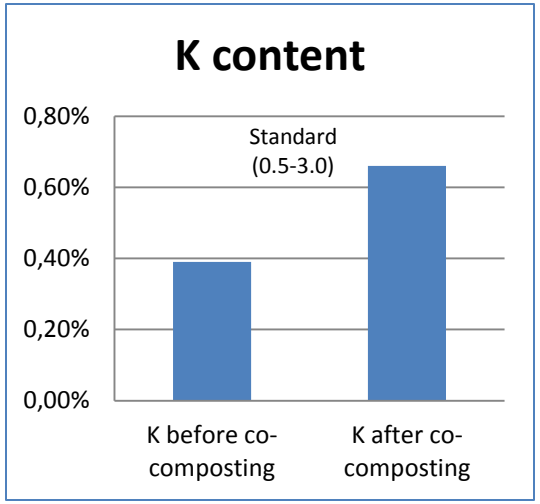
DEFICIENCIES IN NUTRIENT

- High moisture
- Low pH
- Low Potassium

- Co-composting with saw dust and sun drying







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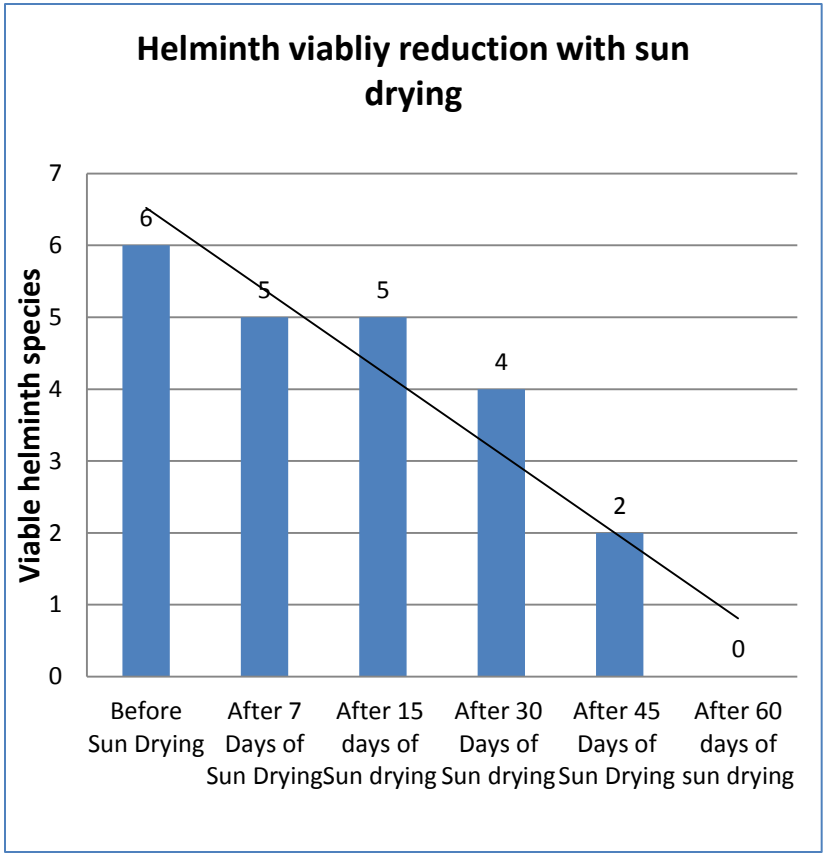
PATHOGEN REDUCTION

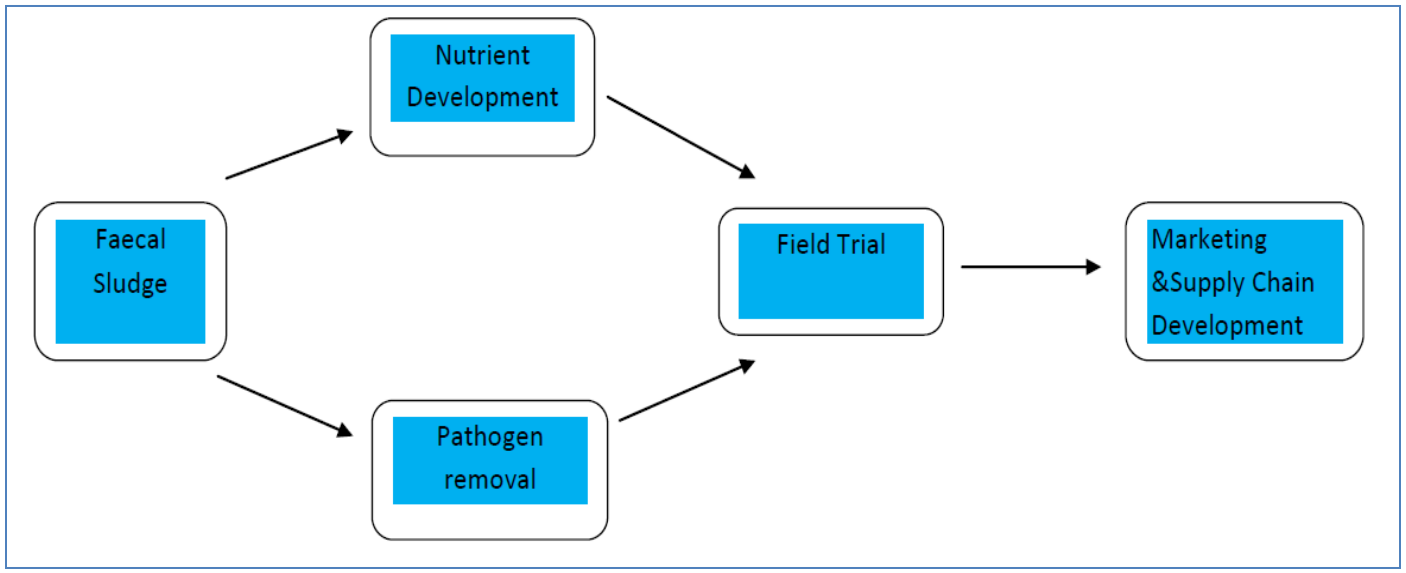
Pathogen Reduction

- Removal of E. coli after 7 days of drying
- Removal of C. perfringens after 15 days of drying
- Complete inactivation of helminths ova after 60 days of drying

Helminths Reduction



CURRENT PHASE



On Rice

On Vegetable

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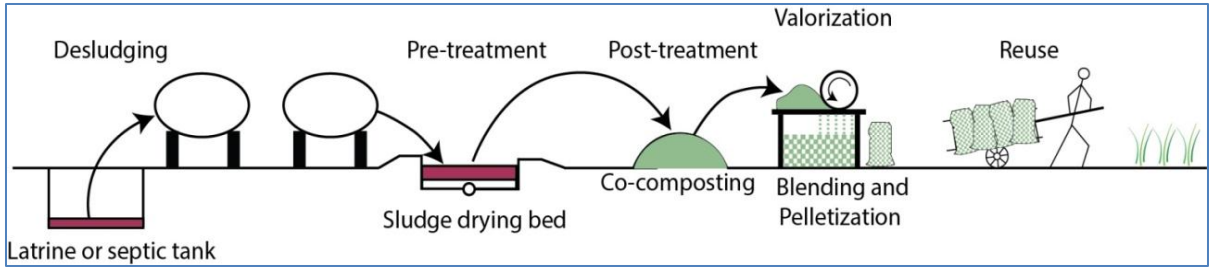
ONGOING RESEARCH

- Co-composting of faecal sludge with kitchen and market waste
- Biogas generation from the mix of faecal sludge, corn stovers and chicken manure
- Introduction of mechanical pit emptying through vacutug



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