



## The Resource Recovery and Reuse



# Large scale production and commercialization of Fortifer - a fertilizer manufactured from fecal sludge - in Ghana

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# History of Fortifer development

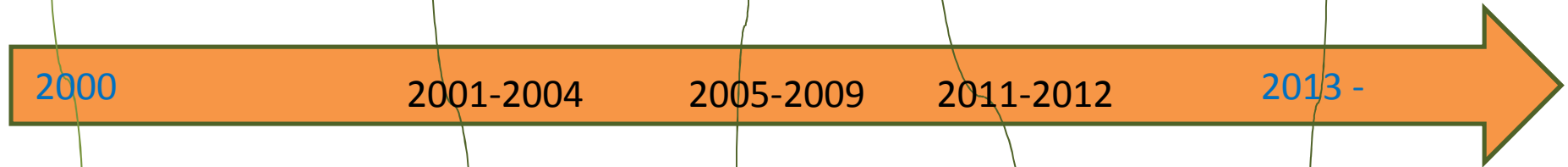
Analysis of nutrient recycling loop model, demand, supply, technical and institutional issues

Testing recycling options

Enrichment and Field Applications

Pelletization

Commercialization and process optimization



Farming systems identified  
Market demand and institutional arrangement

Recommendations on several options

Comlizer developed

Excreta based fertilizer product developed: **Fortifer**

Four expected Outcomes

Donors: IDRC

French, SDC, KEZO

Swiss NCCR, IDRC, BMGF

BMGF

BMGF, DFID and GCC



Water for a food-secure world

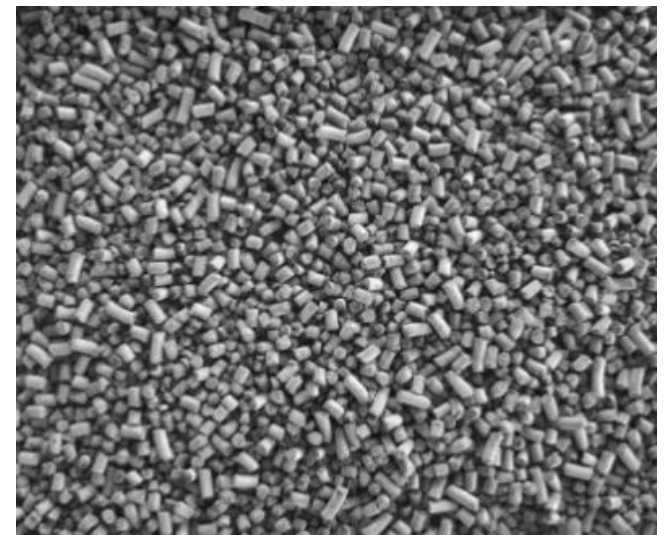
www.iwmi.org



# What is Fortifer ?

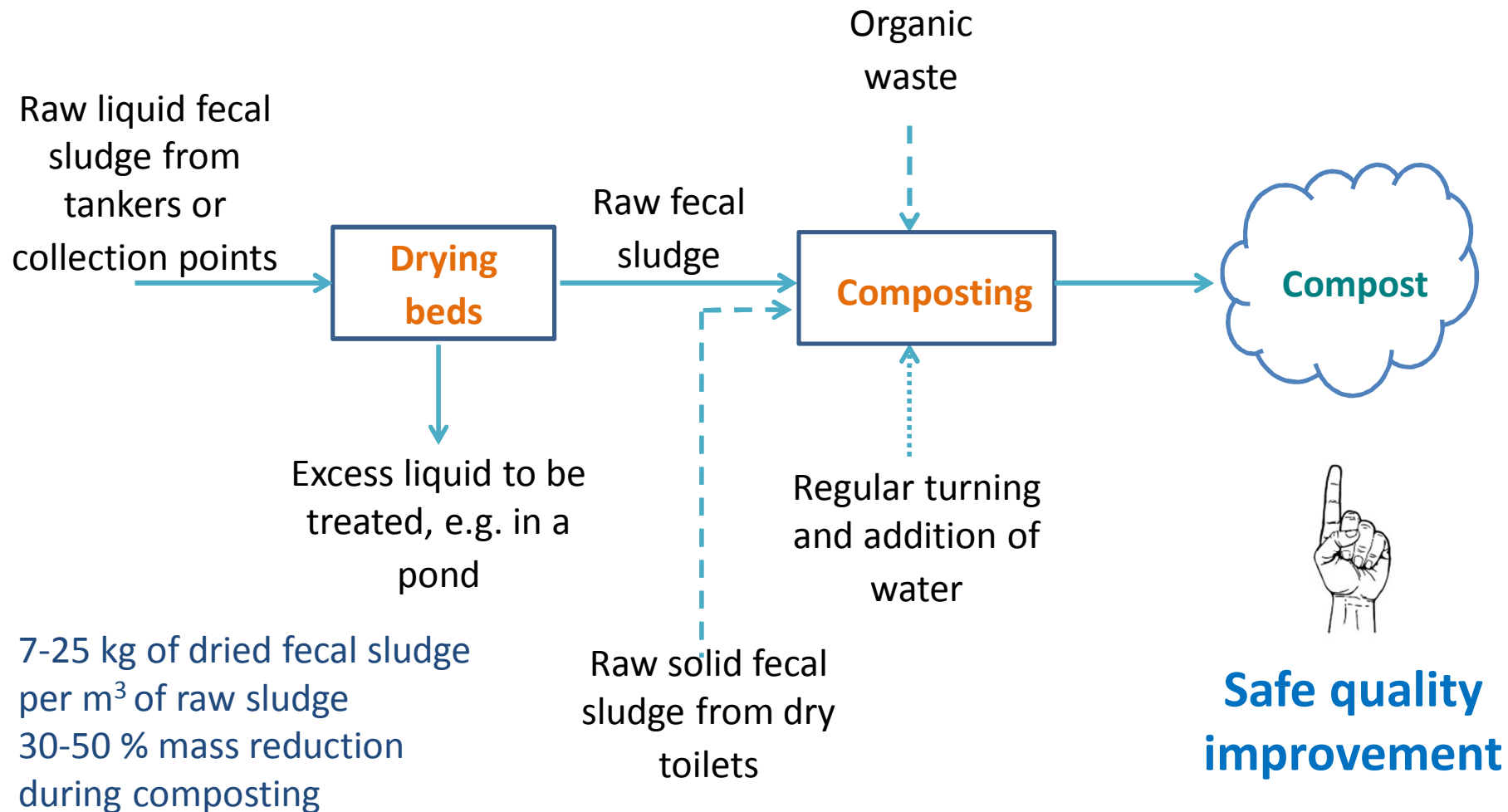
Includes several excreta-based fertilizer formulations

- Compost or co-compost of fecal sludge
- Blended composts in powder
- Blended composts in pellet



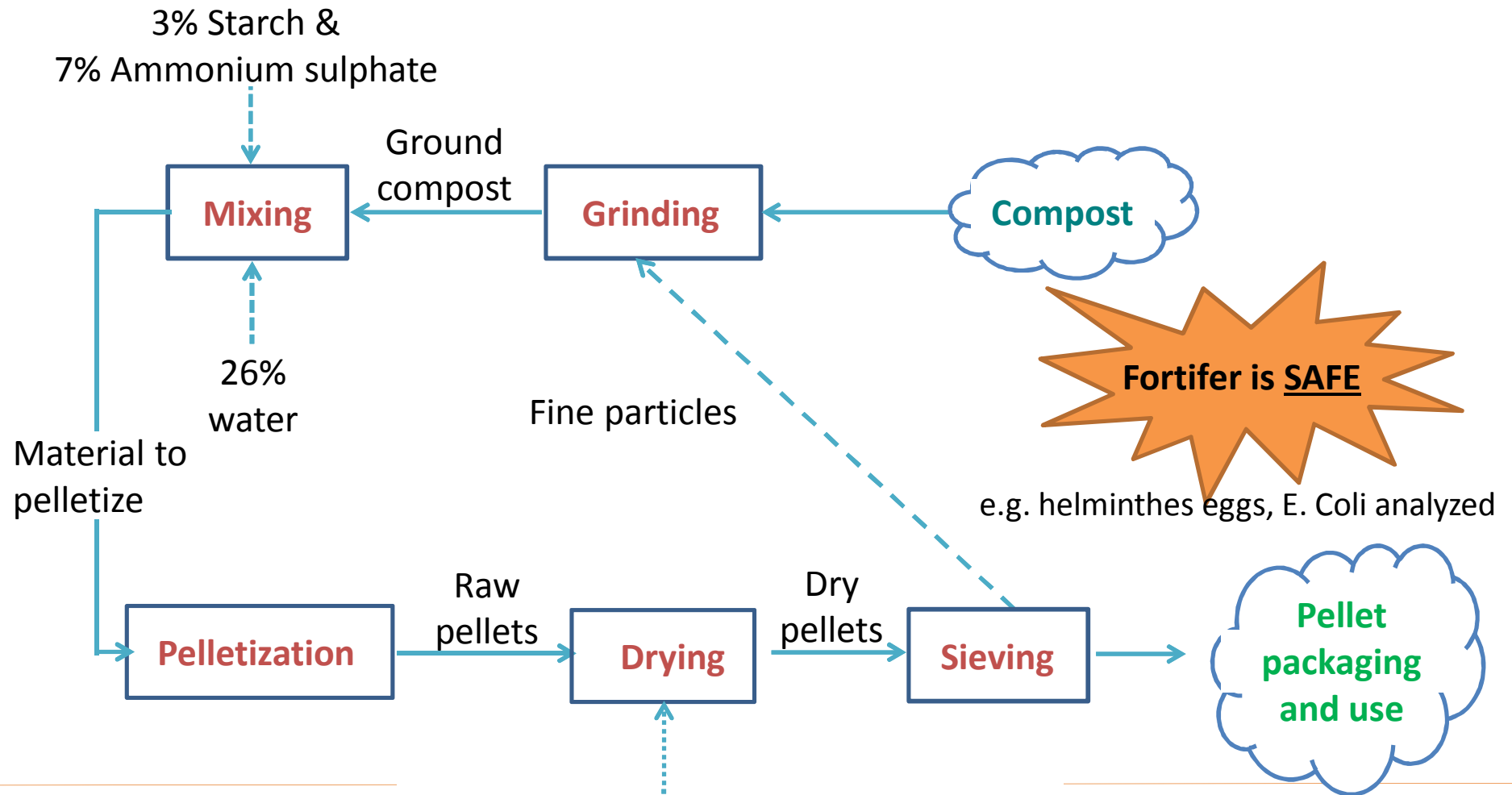
# The Fortifer technology

## Part A. Production of composts



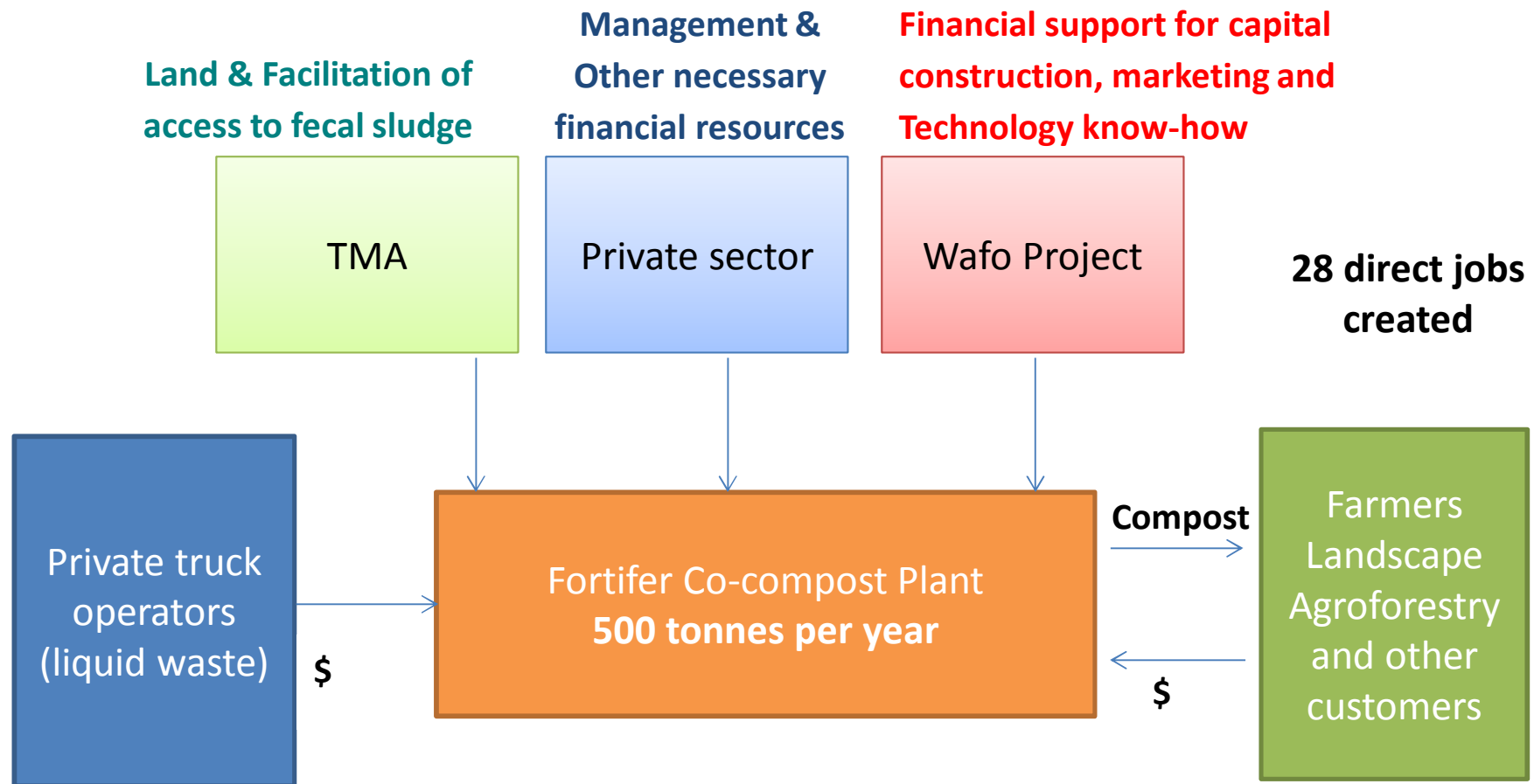
# The Fortifer technology

## Part B. Enrichment and pelletization of composts



# Possible business Model

Breakeven: 3-4 years





BILL & MELINDA  
GATES foundation



Partners of IWMI in Ghana are :

- **TREND Group:** Training Research and Networking for Development
- **VVU:** Valley View University;
- **BNARI:** Biotechnology and Nuclear Agriculture Research Institute, Ghana
- **We are also supported by an Advisory Team** (Environment Protection Agency, Ministry of Food and Agriculture, Kwame N’Krumah University of Science and Technology, private sector, Ministry of Local Government and Rural Development).
- **Etc.**





Thanks!

