



# Universität Hohenheim

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## Acceptability of urine-based fertilizer for crop production:

A study of Amrahia, Malejor, Oyibi, Danfa, Adoteiman and Otinibi farming  
villages in the Greater Accra Region of Ghana

**Presented by**

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## 7 Summary

The agricultural productivity of sub-Saharan Africa has been poor due to poor soil fertility. Reduced fallow periods coupled with short growing seasons without external nutrient input has led to over use of the agricultural lands, characterized by negative nutrient balance.

In Ghana low soil fertility as a consequence of nutrient depletion has been identified as a major cause for stagnating and even declining crop yield per unit area. Mineral fertiliser use has been found not to be an alternative due to budgetary constraints.

The use of ecological sanitary products has been suggested as promising alternative to the use of mineral fertiliser. Ecological sanitation protects the environment and human health by recycling human waste which is returned to the soil as nutrients which is desperately lacking in the agricultural lands of most developing countries.

Against this background, the study attempts to find the acceptance level of ESAP in general and human urine in particular as soil fertiliser among farmers near VVU where already functioning ecological sanitation facilities are in place.

Religious or socio-cultural factors which may be apt to influence farmers' acceptance or rejection of the product were also investigated.

57 farmers from the nearby villages were interviewed using semi-structured questionnaire. Data collected ranged from personal, farm operations through to acceptability of urine-based fertiliser for crop production.

The study results show that generally almost all interviewed farmers do not apply any kind of manure onto their fields. They assume their soils are fertile enough and that low yields per hectare is due to poor precipitation. They mainly raise annuals, especially cassava and maize, which tend to exhaust the soil of its nutrients quicker. Among those who used some level of manure, 30% use mineral fertiliser and 50% use animal excreta basically to nurse vegetables. Some reasons cited by farmers for not using mineral fertiliser are the high cost and also fear of it destroying the soil in the long run among others.

Less than 10% of the farmers practise composting as an alternative method of improving the fertility of the soil.

Investigation into the use of human excreta for crop production revealed that none of the interviewed farmers currently use it. However, 3.5 % of them have used human faeces before with the rest neither having used human faeces nor urine for crop production before.

Almost all farmers interviewed have neither religious nor socio-cultural objections to the use of human excreta for agriculture. About 60% agreed that it is good to use but at the same time expressed health concerns. With regard to the use of human urine, farmers agreed that it has good potential and are willing to try it. However when made to rank human excreta among animal excreta and mineral fertiliser, human excreta was ranked last behind mineral fertiliser.

Generally the acceptability of urine-based fertiliser is positive as farmers have no serious religious or socio-cultural objections to the product and are willing to give it a try. However as farmers have not had any experience with the product, it is difficult to ascertain the acceptance level among them. The responses given by the interviewees were therefore not well informed.

Experience from the study reveals that farmers should be involved in identifying the real constraints to farm productivity and the planning of potential solutions to these problems. The farmers should be adequately informed about the use of ESAP.

In order to increase farmer and other stake holder confidence in the project, the opinions and suggestions of these stake holders should be sought and integrated to modify the whole process of handling the material. This will dispel any fears and concerns and will positively impact the level of acceptance among the stake holders.