

# Soil Health: AEI Burkina, 2012-2017



Woman farmers during a training in agro-ecological intensification techniques near Fada NGourma (Burkina Faso)

Equity; focus on marginalized farmers; integrate M&E

## Generate farm typologies to better understand various agro-ecological and socio-economic contexts

A socio-economic evaluation of the project's impact (including gender disaggregated discussion groups and 127 household surveys) compared trained with non trained farmers in the 4 project areas and confirmed **significant benefits for trained farmers including:** recuperation of uncultivable land; yield increases over 100%; reduced striga infestation; improved diets; increased number of meals in the lean season; improved social cohesion. The survey indicates the program achieves a **high degree of equity; poorest households also adopt most AEI innovations, except micro-dosing**, although not at the same scale or speed.

## Farmers adapt options to their contexts

The **adoption rates** of improved seeds, contour bunds, FMNR, rotation and micro-dose chemical fertilizer all range between 83 and 60%. Adoption of zai, compost, intercropping, and grass strips are between 46 and 38%. Intercropping is at 21%. Most AEI fields are between 0.25 and 0.50 ha. The size of treated fields grows over time.

Reflective practice; Gender

## Address socioeconomic and agroecological trade-offs that limit use of known soil management options

The combination of testing with socio-economic data led to **option by context recommendations such as:**

- If farmers do not have easy access to **water**, composting large biomass quantities is impossible;
- if farmers do not have access to **labor**, the labor-intensive AEI options (e.g. zai, stone bonds) are more difficult to implement, especially on large fields
- **Women** farmers opt to adopt technologies requiring lower labor input (zai, improved seeds, compost).
- Lack of **land tenure** security, and limited access to capital also inhibited women from adopting longer term AE innovations such as FMNR, micro-dosing.

Frame outcomes through the lens of options by context analysis

## West Africa Community of Practice



## Project Partners

Association Minim Song Panga

Groundswell International INERA

## Farmer and technician training on basics of soil fertility principles, diagnostics and related crop management

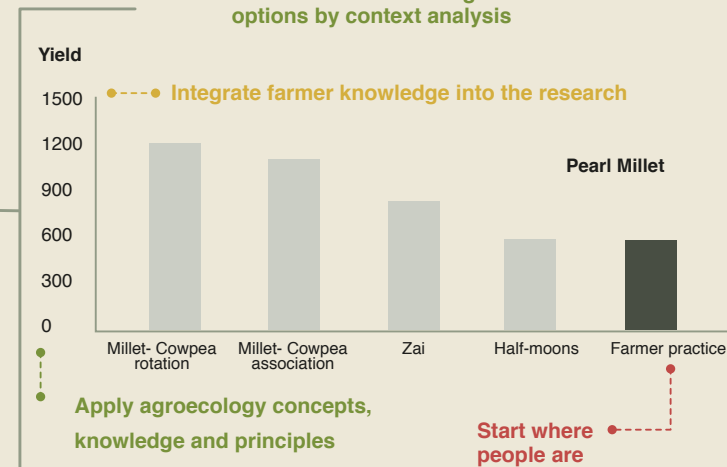
(2016) 6,832 farmers (40% women) from 80 villages received training sessions on AEI experimentation protocols. Demonstration plots & farmer field schools (FFS) were established in 40 villages to support the rapid dissemination of preferred technologies.

Enhance research quality through capacity building; phased and emergent design & implementation; support farmer involvement in selecting, testing and assessing options

## Contextualize and refine crop and landscape management options

**Agroecological soil fertility management** strategies were tested by 120 farmers, including Sorghum or millet in improved zai holes (manually dug) or , with application of organic matter and micro-dosing of fertilizer and in half-moons water catchments, with application of organic matter and microdosing of fertilizer. **Associations and rotations with cowpea produced the highest yields**, but farmer organizations appreciated the ability of zai and half-moons to maintain sorghum in good health in drought conditions.

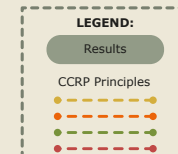
Integrate social & technical inquiry



## The need

The agro-climatic buffer zone of Burkina Faso is considered to be a high-risk environment where **food insecurity and the degradation of natural resources mutually affect one another.**

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