

sification strategies

Farms in the densely populated and intensively cropped volcano mountain slopes of the Mt Elgon in Uganda struggle to intensify production. Many do not intensify; others choose the organic system for their coffee at least, many others conventional practices using both chemical inputs (fertilizers), mulch and manure.

- One (1) farm producing organic coffee and other crops
- Method: MEFA (Material and Energy Flow Analysis), an accounting method which quantifies movements of matter and energy (incl. labor) within and through the farming system.
- Data collection: Interviews, observation, activity diaries, survey

Yet, we hypothesized **that biomass would be a main constraint** to the

organic intensification strategy. Thus, an organic intensification may be dependent on inputs from outside the system, as conventional intensification is. The poster presents the biomass metabolism of one

farm producing organic coffee near Kapchorwa.

> How dependent is the organic production on inputs from outside the farm?

> How regenerative is the farm to its environment?



Figure 1: Scheme of the farm's stocks, boundary, and flows

Results: Key Biomass Flows - towards a representation of the farm metabolism

purchased in manure are the savannah where local cattle is





Figure 3: Inflows, stocks and outflows on the farm in tons Dry Matter from September 2019 to September 2020

> The biomass imports used for fertility enhancement (feed and manure) reveal a coupling of the mountain organic coffee production to the savannah grassland system down the mountain.

> The savannah and distant fields (rented) are depleted from organic matter while own fields are enhanced. This relocation pattern is conditional to the wealth of the farming household.

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