

Equal benefits or not? Farmer perceptions of the cowpea living mulch technology in northern Ghana



INITIATIVE ON
Mixed Farming
Systems

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Introduction

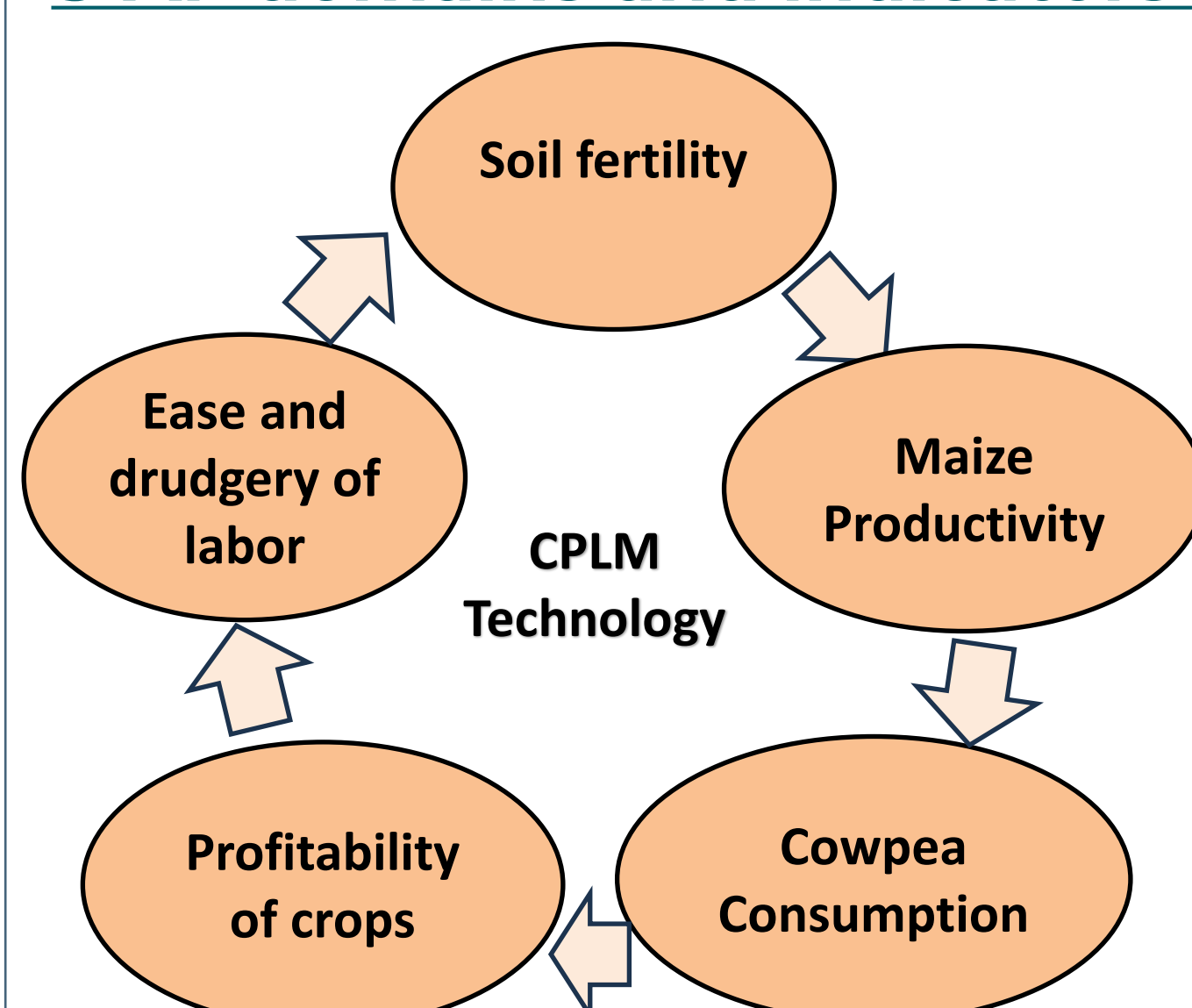
Several benefits (weed control, improved soil fertility and productivity, etc.) are associated with the use of live mulch cover cropping systems.

However, it increases labour demand for field activities such as planting and harvest in smallholder farms.

There is limited literature on who benefits the most from live mulch cropping systems especially in smallholder farms where a gendered division of labor exists.

This study sought to assess farmers' experience in relation to the benefits of the cowpea living mulch (CPLM) technology using the 5 Sustainable Intensification Assessment Framework (SIAF) domains

SIAF domains and indicators measured in the study



1. **Environment** - soil fertility
2. **Productivity** - maize productivity
3. **Human** – Cowpea consumption
4. **Economic** – Profitability of crops
5. **Social**- Ease and drudgery of labor

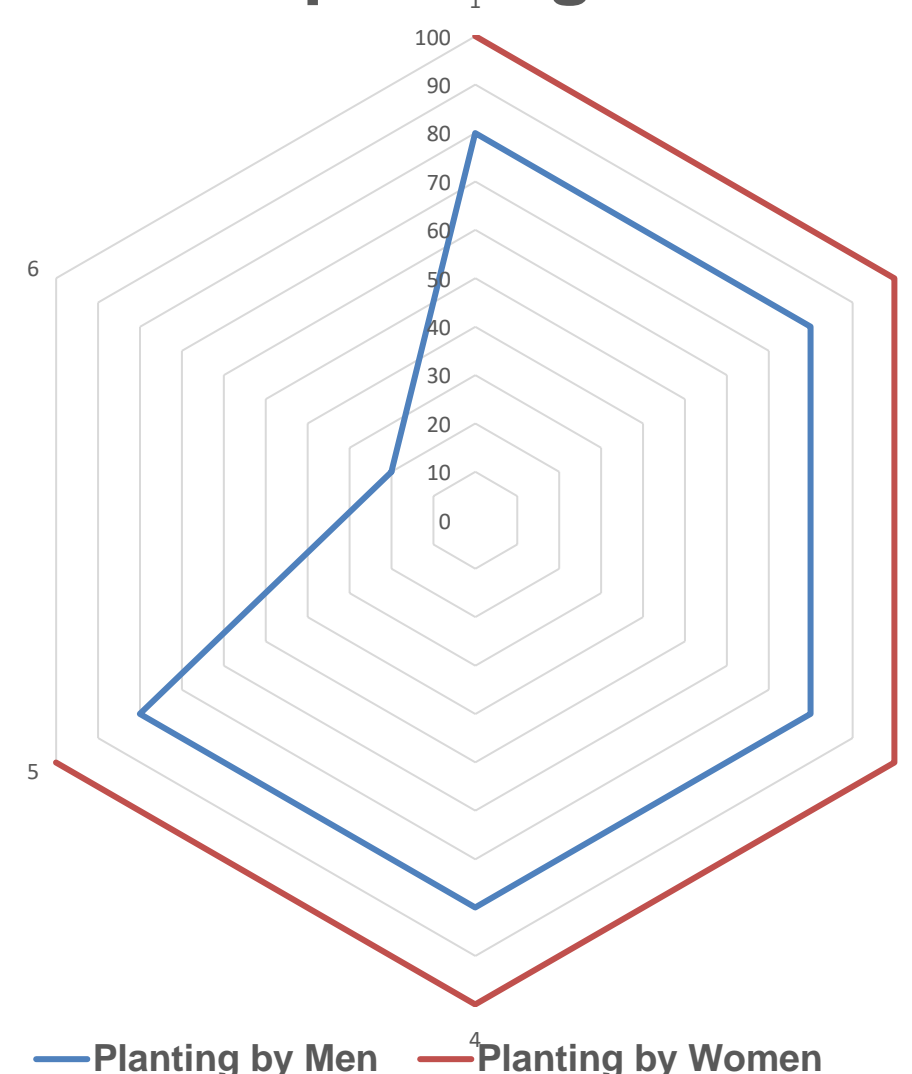
Figure 1: The indicators measured in the study related to the 5 SIAF domains

Methodology

- A gender evaluation was conducted in 2019 to assess farmers' experience in relation to the benefits of the cowpea living mulch (CPLM) technology.
- Twelve gender-separate (6 with women and 6 with men) focus group discussions were held with 84 sampled African RISING farmers who validated the CPLM technology for two years.
- Participatory scoring activities were used to assess drudgery scores and household members labor involvement at different cropping stages.

Key findings

20% increase in women's labor for planting in CPLM



30% increase in women's labor for harvesting in CPLM

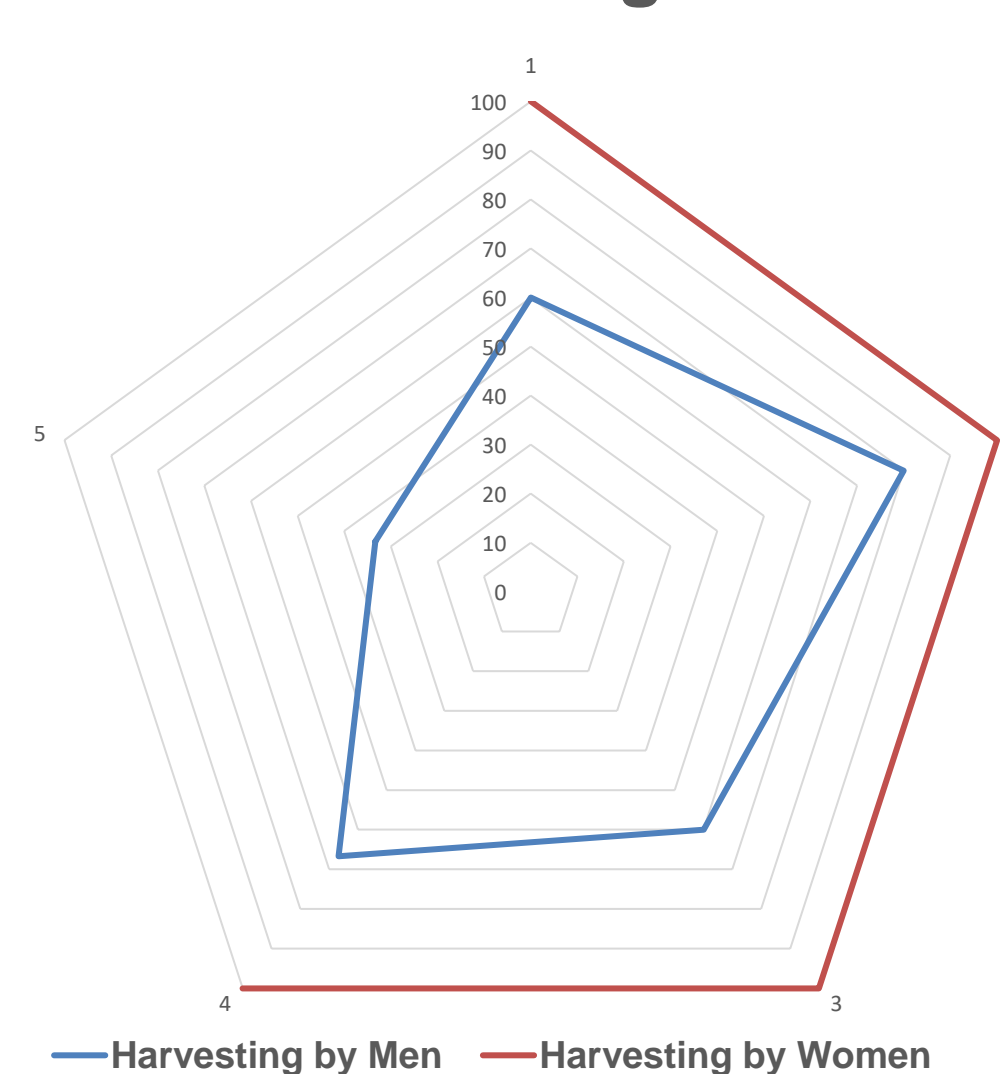


Figure 2 and 3. Matrix scores showing gender differences in labor burdens during planting and harvesting in CPLM respectively

- Farmers perceived an **increase in soil fertility (environment), cowpea consumption (human), income (economic)** from CPLM than the maize monocrop.
- **Weeding is done once** in the CPLM relative to the twice weeding in the maize monocrop.
- Whereas some farmers perceived **maize yield to increase** under CPLM compared to maize monocrop in the first season, others perceived maize yield increase after the second season of practicing the technology (productivity).
- Farmers perceived the CPLM to be **time-consuming and labour demanding** during activities such as **planting and harvesting**, tasks that are often done by **women and children**.

Conclusions

- Despite the perceived benefits of the CPLM as highlighted above, it increases the labour burdens of especially women during planting (20%) and harvesting (13-33%) activities compared to that of men.
- Sustainable agriculture research and projects should promote farmers adoption of simple mechanized planters and harvesters to lessen the labour burdens of women farmers to enjoy the full benefits of the CPLM technology.



Figure 4: Cowpea used as a living mulch for maize

References

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- Mrunalini, A., Snehalatha, Ch., 2010. Drudgery Experiences of Gender in Crop Production Activities. *J Agri Sci*, 1(1): 49-51 (2010) <https://doi.org/10.1080/09766898.2010.11884654>