

POLICY BRIEF

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POTENTIAL FOR MARKET GARDENING PRACTICES TO TRANSITION TO LIVING SOIL MARKET GARDENING: SOUTHERN BENIN

Market gardening (15% of agricultural GDP) in Benin faces challenges of soil degradation caused by unsustainable farming practices and climate change. Nature-based Solutions (NbS), including agroecological practices such as Maraîchage sur Sol Vivant (MSV; living soil market gardening), are promoted to restore soil life and reduce dependence on chemical inputs. However, their adoption remains limited. This study looked at the potential of agroecological farming practice for soil regeneration in southern Benin.



Some practices in Mono: mulching and tillage

OVERVIEW

MSV emphasizes three principles: no-tillage, permanent soil cover, and regular organic matter input. To access the potential of this transition, the study defined the following objectives: **i)** identify the soil management practices; **ii)** analyze the interactions between practices, farmers' knowledge and economic benefits; and **iii)** determine the main barriers and enabling factors to MSV adoption in the study area.



Survey on a market gardening site in Houeyogbé, fieldwork 2025.

POLICY RECOMMENDATIONS

1. Strengthen training and field schools
 2. Facilitate financial/institutional support
 3. Develop markets for agroecological produce
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1. NGOs and Research institutions (PADMAR, DELTA Mono): Develop context-specific training programs and organize farmer field schools to foster co-production of innovative knowledge directly in farmers' fields.
 2. Policy makers (Ministry of agriculture, ATDA): Design and implement incentive schemes to facilitate access to inputs and promote agroecological practices.
 3. NGOs and Ministry of economy: Support producer cooperatives to improve input access and agroecological market opportunities.

KEY FINDINGS

I. Practices

Practices in the study area fall into two categories: Soil management (SM) practices including organic matter input (OMI); agroforestry; mulching; amendment; cover cropping and tillage; and cultivation practices related to SM including crop rotation (CR) and chemical fertilizer use. The use of these practices depends on the conventional, agroecological and organic cropping systems in the study area.

II. Relationship between practices, knowledge, and economic indicators

- The adoption of certain practices, gross margin, & return on investment, are significantly influenced by access to training and better soil health knowledge.
- OMI & CR lead to better economic performance.
- Cover cropping and chemical fertilizers have adverse effects on economic indicators.

III- Barriers and enabling factors to MSV adoption

- Key barriers :

High labor demand for implementation; high costs (mulching compost); market constraints; land tenure insecurity.

- Key enabling factors:

Training availability; environmental awareness; institutional support in the area.

RESEARCH APPROACH

The study was conducted in southern Benin, specifically in five communes of the Mono department: Bopa, Comè, Grand Popo, Houeyogbé, and Lokossa. The methodology combined **quantitative** and **qualitative** approaches including questionnaires (n=297), Likert scale assessment (n=16), and key informant interviews (n=8). The findings suggest that **longitudinal studies** are needed to capture the long-term impacts of MSV-related practices and to monitor the relationship between these practices and economic benefits. Limitations of the study include the **low representativeness of the sample of organic farmers and the use of self-reported economic data**.

CONCLUSION

The research objectives were achieved by showing that, while MSV practices offer both economic and ecological potential, their adoption remains constrained by socio-economic and institutional barriers. The study highlights the need for targeted support in training, input accessibility, and market valorization to foster a broader transition towards sustainable agroecological (nature-based) farming systems.



Key informant interview in Comè, fieldwork 2025.

REFERENCES

Dossa, T. E. N. (2025). Evaluation of market gardening practices in Mono, Southern Benin : Potential for transition to market gardening on living soil (MSV). [Master's thesis at Université Félix Houphouët-Boigny (UFHB).]

