



Tropentag, September 20-22, 2023, hybrid conference  
“Competing pathways for equitable food systems transformation:  
Trade-offs and synergies”

## Drivers, enablers and barriers for wider adoption of agroecological farming practices in Ethiopia: A case of vegetable production

YIDNEKACHEW ZEWDE, RALPH ROOTHAERT, WUBETU LEGESSE, AMHA BESUFKAD

*World Vegetable Center, Ethiopia*

### Abstract

The conventional vegetable production systems promote wider applications of chemical fertilizer and synthetic pesticides to maximise crop yield. Studies also show that applications of such chemical inputs have reached an alarming rate and it has created eminent threat on the health of soil, plants, animals and humans. Therefore, a sustainable production system that promotes the adoption of agro-ecological practices has paramount importance to ensure improved health for the planet and people. This paper examines the main drivers, barriers and rates of adoption of agro-ecological practices in central highlands of Ethiopia. The findings from the study showed that there was limited awareness and scant application of agro-ecological practices. The adoption process is mainly determined by agronomic, socio-economic, institutional, financial, socio-cultural and market related factors. During the two and half years of intervention in three districts of Ethiopia, the number of farmers who adopted more than five RAs has increased by almost 62%. The most widely adopted practices include the use of vermicompost, bio-slurry, crop rotation, conventional compost, neem extract for pest control, intercropping and improved crop varieties. On the other hand, the least adopted RAs constitute the application of drip irrigation, mulching, protected cultivation, green manuring, and biopesticide. The main supply-side determinants for adopting a particular practice include the cost of adoption, accessibility to farmers, scale of adoption, type of crop, relative availability of inorganic inputs (chemical and fertiliser), skills required for adoption, and institutional support system. A multiple regression analysis on those determinants implies that age of farmer, level of education and frequency of attending training were found to be enablers of adoption. However, the number of practices adopted by a farmer and his/her land holding size exhibit an inverse relationship: this means smallholders have got higher propensity to intensify. The barriers to adoption include limited access to organic inputs and absence of a market system that differentiates vegetables produced in an agroecological way. Therefore, to enhance the rate of adoption and make impact at scale, further research and development interventions should focus on factors that empower, enable and drive the adoption of agroecological practices.

**Keywords:** Agroecological practices, barriers, enablers, people & planet health, vegetable production