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## Understanding Influencing Factors to the Spread of Conservation Agriculture (CA) in Sub-Saharan Africa Following the Qatoca Approach: Results from Seven Case Studies

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### Abstract

In order to achieve main objectives of development in Africa (i.e. poverty reduction, food security and sustainable natural resource management), measures to stabilise and increase soil productivity need to be taken without delay. Many studies have argued that the above objectives cannot be achieved under conventional tillage-based agriculture - held accountable for soil degradation and continuous decline in crop yields. Conservation agriculture (CA) based on minimal or no-tillage is increasingly seen as a promising alternative for highly productive and sustainable farming.

In spite its reported benefits, CA adoption rate in sub-Saharan Africa (SSA) compared with other continents have remained extremely low. While literature on adoption constraints is abundant, comprehensive, holistic frameworks and tools for explaining and targetly supporting adoption are still lacking.

This contribution demonstrates how a recently developed Qualitative participatory expert-based Assessment Tool (QAToCA) complemented by selected key informant interviews and structured field observations was applied in seven case studies across Malawi, Burkina Faso, Zimbabwe, Tanzania and Kenya, to 1) determine relative adoption potential of CA, 2) assess institutional, socio-economic and cultural influences on its adoption potential and, 3) identify site-specific hindering and supporting factors to its adoption potential in SSA.

Results show: 1) cases with high adoption potentials explained mostly by positive institutional factors, and lack of alternative options - especially in dry and water limiting areas e.g. the case of northern Burkina Faso where farmers have no option than to adopt the locally adapted CA practice - Zai farming.

2) cases with low adoption potentials attributed mostly to unstable and less secured market conditions and strong competition of CA with livestock over residue.

Critical concerns for long lasting adoption in SSA calls for more innovation systems orientation towards supporting CA adoption amongst smallholder farmers within which attention should be focus especially on 1) addressing emerging needs for new input and output market outlets, 2) adapting CA to the existing management structures of adopting farms and, 3) taking into consideration, the hidden sensitive gender issues between men and women in small scale family structures, 3) further developing a supportive political and institutional frame condition at village and regional levels.

**Keywords:** Adoption, conservation agriculture, influencing factors, QAToCA, sub-Saharan Africa