



The use of improved seed varieties by farmers in Sub-Saharan Africa: taking stock, moving ahead



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4th International Conference on Global Food Security 2020 (Online, 07-09 December 2020)

WHAT IS THE ISSUE?

- ♦ Agriculture is a fundamental for sustainable development and poverty discount in many growing countries (Ouma & de Groote, 2011).
- ♦ Sub-Saharan Africa (SSA) food production has simply kept up with the fast population growth experienced over the past two decades (Fuglie *et al.*, 2013).
- ♦ Agricultural productivity growth in SSA averaged only 2.4% over the previous four decades, whilst the productivity of the rest of developing world accelerated by 4 % (Dzanku *et al.*, 2015).
- ♦ The issue of the use of low-quality seeds by farmers among other factors (Louwaars & de Boef, 2012).
- ♦ **Objective of this paper:** Review factors constraining the adoption of improved seed varieties and strategies to enhance their adoption in SSA to draw lessons for decision makers.

METHODS

- ♦ **Data:** Secondary data from Google scholar, Agora, Hinari.
- ♦ **Various points guiding the literature search:** seed systems, impediments to the adoption of improved seeds, and past experiences to increase the uptake of improved seeds.
- ♦ **Criteria used for inclusion were:** (i) articles relevant to the various points discussed, (ii) articles in peer reviewed journals, and (iii) articles with focal point on Sub-Sahara Africa countries.
- ♦ **First screening:** More than 90 articles, but only a total of 44 articles met the criteria

RESULTS

- ♦ Agricultural productivity growth in SSA is low (Figure 1)

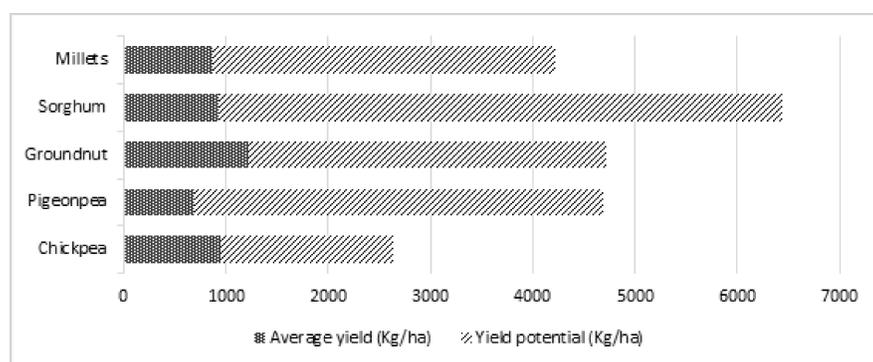


Fig 1: Yield gap of crops in Sub-Saharan Africa

- ♦ Low level of adoption of improved varieties in SSA (Figure 2)

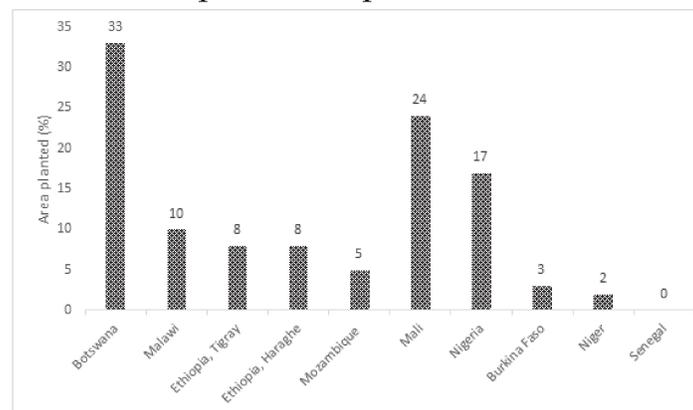


Fig 2: Adoption levels of improved varieties of sorghum in SSA

The impediments to the adoption of improved seed varieties in SSA:

IMPEDIMENTS	HOW?
Poor availability of improved seed varieties	unavailability of preferred variety, unavailability at farmers' preference time, and unavailability at the location where farmers live
Limited access to relevant information	Farmers are not aware of a technology (including improved seed varieties)
Prohibitive cost of improved seed varieties	The high price of improved seed varieties given the economic status of resource-poor farmers
Limited access to credit opportunities	Incapacity of poor smallholder farmers to pay for improved seeds owing to shortage of cash and limited access to credit
Culture limitations	Negative perception associated with improved seeds due to cultural and traditional considerations

RECOMMENDATIONS

- ♦ Encouraging the development of contractual farming
- ♦ Development of efficient seed marketing/value chain
- ♦ Alternative subsidy mechanism on seed and other inputs
- ♦ The development of warrantage system (also known as warehouse inventory credit, or inventory credit, or the warehouse receipt system)
- ♦ The demand-led method for all initiatives: functional value chain based on the preferences of end consumers

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- ♦ Ouma, J.O., & de Groote, H. (2011). Determinants of improved maize seed and fertilizer adoption in Kenya. *Journal of Development and Agricultural Economics*, 3 (11):529-536.