



The Impact of Agricultural Extension Policies on Nutritional Outcomes: The Case of NAADS in Uganda

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Key findings

- The National Agriculture Advisory Services (NAADS) has improved the long-term outcome of nutrition by improving children under 5 height-for-age score.
- Farmer organizations and extension-related organizations such as NAADS are important outreach agents that need to be empowered to enhance agricultural extension services access and hence nutrition security.

The context

Agriculture is a very important pillar in most African countries' development strategies. East African countries have been upbeat on agricultural issues because all of them are members of the Comprehensive Africa Agriculture Development Programme (CAADP). This initiative has set the goal of a minimum of 6% of agricultural annual growth and 10% of every government spending in agriculture, which should then translate to nutrition security, a key item in the Sustainable Development Goals (SDGs). Reducing and ultimately eradicating malnutrition and hunger is mandatory in achieving any meaningful economic growth as most economic activities are fully dependent on healthy populations that provide the required workforce.

Despite the efforts being made to address nutrition security, recent data show that 29% of Uganda children below age 5 were stunted, with relatively higher stunting rates in rural areas (Uganda Bureau of Statistics and ICF, 2017). Much of Uganda's population (44%) is considered food insecure, and many people (35%) cannot meet minimum energy requirements. Consequently, many young children (<5 years) are underweight (14%) (IFPRI, 2017).

Transforming agriculture and fitting in the nutritional requirements could be the surest way of improving the population nutritional outcomes. Agriculture is indeed central to improving food and nutrition security (Whitney et al., 2017). In the recent past, several studies have focused on leveraging or modifying agriculture to enhance nutrition (Pandey, Dev and Jayachandran, 2016).

Most African countries have recently taken a very bold step in agricultural modernization and Uganda is not an exception. Farmers advocate that the development of agriculture depends largely on access to agricultural extension; agricultural extension strengthens a farmer's capacity to innovate by providing access to knowledge, new technologies and information (Emmanuel et al., 2016).

However, it is evident that farmers' access to agricultural extension in Uganda is low (Benin et al., 2018) and as nutrition becomes an important contributor to poverty-reduction strategies and countries start scaling up nutrition programmes, new ways of delivering interventions, knowledge, and tools will be essential. The introduction of the National Agriculture Advisory Services (NAADS) is one such policy intervention that was adopted in Uganda in 2001.

The Problem

The research on which this policy brief is based aimed to contribute to the policy debate and to provide policy makers with evidence-based policy and intervention recommendations on the linkages between agriculture and nutrition in Uganda. Specifically, the research investigated whether the adoption of National Agriculture Advisory Services (NAADS) in Uganda had an impact on nutritional outcomes of children under 5 years in the participating households by looking at the children's nutrition outcomes of weight-for-age, height-for-age and weight-for-height scores.

Research results

Intermediate results indicate that household participation in NAADS policy is influenced by several household and farm level characteristics, which have important policy implications:

- Educated households are more likely to participate in NAADS, indicating the importance of formal education and minimum literacy of the rural population to effectively understand and apply the lessons and messages from extension services.
- Off-farm income is positively related to household participation, underlying the importance of access to non-farm income opportunities as a reasonable strategy to raise rural incomes and improve nutritional status.
- Household size exerts a positive and statistically significant effect on household participation in NAADS.
- Ownership of livestock has a positive relationship on NAADS participation. Livestock ownership is used as a measure of wealth status of households; therefore, access to assets such as ownership of livestock provides households with leverage to invest in agricultural extension participation.

Efforts to improve human capital in the form of education and providing them with better infrastructure, and advanced extension services, would go a long way to help facilitate the participation in agricultural extension.

Estimation for ultimate outcomes showed that households who participated in NAADS had children who had better height-for-age score, which was aligned to the recommendations of the World Health Organization for children under 5 years of age, implying that participation in NAADS reduces stunting but not underweight or wasting of children.

Implications for policy makers

The results of our research, on which this policy brief is based, suggests that designing effective programmes for improving agricultural productivity in Uganda could have a potentially positive impact on child nutritional status. In particular, there are promising measures that can help reduce malnutrition, especially stunting, from relooking at policies geared towards agricultural extension, as extension can be used indirectly to improve child nutrition.

Policy makers, programme designers and implementers should improve education and agricultural extension infrastructure to ensure that the messages on both agriculture and nutrition are taken up with equal seriousness by the providers and users. It will also save on resources especially if the same resources are trained and used in such a way that they can deliver both messages simultaneously.

Further, NAADS was a public programme linked with private sector delivery mechanisms. There is therefore need for design of better public-private programmes and interventions aimed at providing both short term and long term nutrition outcomes, like those of weight-for-age and weight-for-height that were not positive for this particular intervention.

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