

## Theory of Change (ToC) for Tackling Access to Agricultural Inputs through Agro-dealers in Nigeria

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Globally, farmers get agricultural inputs from previous harvests, agro-dealers, friends, state/federal ministries, non-governmental organizations and other sources. These agro-inputs are seeds, feed, plant-protection products- pesticides, herbicides, equipment and technology. Agro-dealers stock these agro-inputs in their shops for farmers to access them (Staudacher, *et al.*, 2021). There are related policies that are an obstacle to prevailing effective and efficient agro-dealership. These include the fragile regulatory structure for the control of product quality and for averting the anti-competitive behavior of importers and major distributors. The existence of adulterated/fewer quality products in the market disturbs the agro-dealers business which results in the propensity to lose customers and face a decrease in profit. Related effects have also been seen on sale of expired agrochemicals (TheGuardian, 2020).

An all-around market-oriented approach to agro-dealer development enables improved efficacy in the input distribution, economic performances and allocation of resources. The benefits of agro-dealer development increase at various levels in the agricultural sector and reach different stakeholders in the sector. When agro-dealers technical capacity is developed, it will permit them to accelerate the uptake of improved practices, deliver advisory services of high-quality to small-scale farmers and improves the income and general wellbeing of farmers who adopt the use of improved practices (Allgood, 2011).

To improve these agro-dealers cost-effectiveness, operation and possible long-term economic achievement in serving farmers, there is a need to develop their very vital business expertise. Developing business networks is important in facilitating agro-dealers to take advantage of chances to improve the cost and operational efficiency of the agricultural value chain and credit management and for expansion of the scope of their operations. It is important to engage each agro-dealer development initiative to the particular conditions and market features of a given country.

Theory of Change as used in this study reinforced that agro-dealers' organized capacity by improving their accountability and structure of ownership leading to a well-organized and planned agro-dealers. This will in turn expand input supply, and also support in transferring knowledge on the use of these agricultural inputs to small-scale farmers. The theory of Change is difficult to trace specifically where the term was first used, but a tip-off at its origins can be found in the considerable body of applied and theoretical development in the field of evaluation, specifically among the work of scholars such as Peter Rossi, Huey Chen, Carol Weiss and Michael Quinn Patton (Patrizi and Quinn (2010); Weiss (1995); Chen and Rossi (1980). These evaluation practitioners and theorists have concentrated on how to apply program theories to evaluation for many years.

In the late 1950s with Kirkpatrick's 'Four Levels of Learning Evaluation Model' used the theories of change in evaluation. Further progress and evolution have included Daniel Stufflebeam's Context, Input, Processes and Products, CIPP, and the widely used Logframes or logical models which set out causal chains usually consisting of inputs, activities, outputs and outcomes coupled to long-term goals (James, 2011). The US-based Aspen Institute and its Roundtable on Community Change was one of the organizations which began to focus on these issues. The effort of the Roundtable steered the publication of *New Approaches to Evaluating Comprehensive Community Initiatives* in 1995. Carol Weiss, a member of the Roundtable's Steering Committee on Evaluation assumed that an important reason for implementing complex programs so challenging to evaluate is that, the assumptions that inspire them are poorly pronounced. She claimed that participants of complex community initiatives classically are uncertain about how the change process will be disclosed and therefore give little responsiveness to the early and mid-term changes that need to happen for a longer-term goal to be achieved (Weiss, 2011). Weiss propagated the term "Theory of Change" as a way to describe the set of assumptions that explain both the mini-steps that lead to the long-term goal and the connections between program activities and outcomes that occur at each step of the way.

In this framework, ActKnowledge (2003) encompassed the development of Theory of Change Online, TOCO, and a tailor-made software tool. Anderson (2005) pointed out that ToC works as an Expectation Management Tool, which reveals the interventions and expected outcomes an employee is supposed to work. An example made by Post (2015) is the Education for All (EFA) organizations' assessment of education monitoring on progress towards United Nation's education goals, where the ToC was employed to estimate how work is done. ToC engrossed not

just on engendering knowledge about whether a program is operative, but also on explaining what approaches it uses to be operative (Coryn, *et al.*, 2011).

### **ToC Application to Farmers' Access to Agricultural Inputs through Agro-dealers**

The implicit ToC adopted by Osei, *et al.*, (2017); Connell and Kubisch (1998) were established on the fact that reinforcing the organized capacity of the agro-dealer organizations, by improving their accountability and structure of ownership, will lead to well-organized and planned agro-dealers. This will in turn expand input supply, and also support in transferring knowledge on the use of these agricultural inputs to small-scale farmers.

The theory has the following assumptions as used by Osei, *et al.*, (2017)

- 1) Agro-dealers will intensify investments in their enterprise
- 2) Agro-dealers will deliver inputs to small-scale farmers
- 3) Agro-dealers have training needs
- 4) Variation in productivity does not lead to significant price variations

When agro-dealers are trained on the best way to supply farmers with agricultural inputs and their management, this can lead to a greater impact on farmers' productivity. Aside from training, the initiative/program was to assist the agro-dealers form demonstration plots close to their shops to show-case to farmers the adoption of improved technologies. Three main outputs of the program were anticipated for the agro-dealers: -

- 1) To acquire training on how to order and market agricultural inputs
- 2) To acquire training on how to offer advisory services on the input they sell
- 3) To be trained on how to establish demonstration plots.

Outputs of the program were-

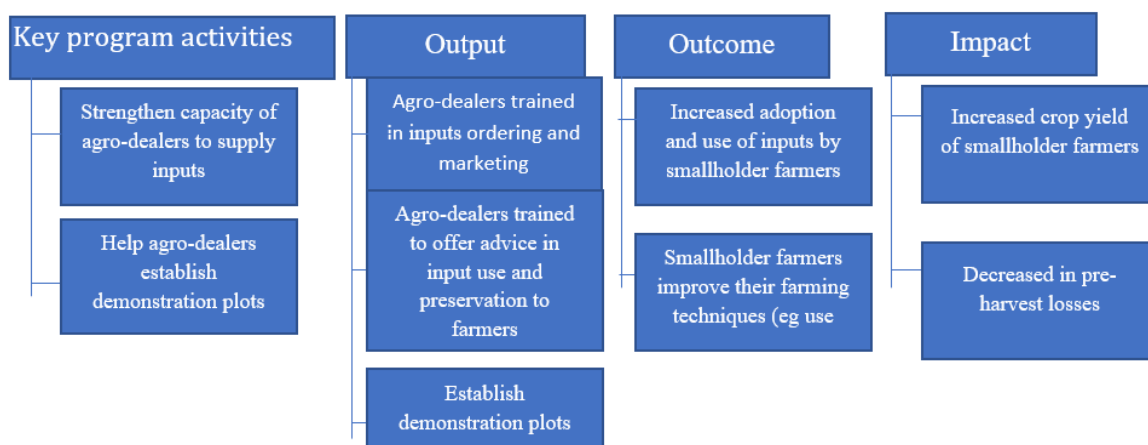
1. Adoption and use of improved inputs have to increase by the small-scale farmers; and
2. The advancement in farming practices of the small-scale farmer.

Two main impacts expected after this program were-

- 1) improved crop yields of small-scale farmers and
- 2) decreased pre/post-harvest losses

ToC as applicable to this study illustrated that there has been some paradigm shift by smallholder farmers from consulting extension agents to agro-dealers. The reduction in the number of extension agents to farm families' ratio led the smallholder farmers to source agricultural information from agro-dealers who sold inputs to them. The target ratio of Extension Agents to Farm families according to the Food and Agriculture Organization is 1:800 while the number in place were 1:5,128 in Ekiti State, 1:1,7118 in Osun State and 1:7,411 in Oyo State respectively (REFILS, 2017). In the study of Ajala *et al.*, (2013); Olorunfemi *et al.*, (2019) extension agents had low involvement in the dissemination of information to small scale farmers. However, Olaniyi and Farinde (2017) indicated that there was a general decline in extension service performance. Therefore, farmers now contact agro-dealers directly to supply them with agro-inputs and give advisory services to farmers on which agricultural input to purchase to give them high yield. Thereby, agro-dealers disseminate information and knowledge about agricultural inputs sold by them to the farmers.

In the figure below, to implement a project for Agro-dealers, there are some key program activities, for example, "To help Agro-dealers establish demonstration plots". The expected output of this program which is a result of a development intervention is to establish demonstration plots. These are designed to produce an outcome (the short-to-medium-term effects of an intervention). That is, when farmers see inputs displayed on the demonstration plots, it increases the adoption and use of such input. And eventually, impact on improved crop yield of smallholder farmers. The concept of Output, Outcome and Impacts are Results, it depends on the duration it takes effect whether short, mid/medium, or long-term effect.



Source: Osei, *et al.*, 2017

Figure 1: Theory of change

Theory of change exposed a possible knowledge about agro-dealers distribution of agricultural inputs to smallholder farmers. Agro-dealers organized capacity by improving their accountability and structure of ownership leading to well-organized and planned agro-dealers. This will in turn expand input supply, and also support in transferring knowledge on the use of these agricultural inputs to small-scale farmers.

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My academic journey started when I was opportune to withdraw from a public primary school to a private primary school because my junior brother wouldn't stay in the private school, he was enrolled in. This built my academic foundation to be a sound student right from my childhood. In my primary, I was elected as the senior girl due to my academic performance. This made my parents seek funds, by all means, to enrol me to a private secondary school which further builds on my academic performance.

My teachers knew me for always writing my classwork, doing assignments and giving my own opinions in class. I was academically sound and elected as the senior girl of Fountain International High School, Ekiti State, Nigeria. I passed my West African Examination Council in flying colours. I registered for Jamb to study Medicine in University of Ilorin, Kwara State, Nigeria. But unfortunately, I was given admission to study Agriculture. When I saw the admission letter, I was determined to reach the peak of my career and have a doctorate degree to be called a 'Dr' even if not in medical line. Under the supervision of Prof Adekunle, A.A., I was taught how to use Statistical Package for Social Sciences, SPSS; I graduated with second class upper in 2011.

Two months before the end of my service year, I bought my master's degree form from my National Youth Service Corps, NYSC savings. I was given admission to study masters in Agricultural Extension. I obtained my MSc in Agricultural Extension from University of Ilorin in 2014 when I was 24years old. In the year 2015 I published my first article under my maiden name "Adojutelegan".

The article titled " Factors affecting activities of water melon farmers in Ekiti State", was supervised by Prof Adereti, F.O., who came for sabbatical leave during my MSc program. After

my MSc degree in 2014, I got married and raised my family. This tied me down to move forward with my academic pursuit. My supportive husband encouraged me to apply for my Doctorate Degree in 2018 which was newly created at Federal University Oye Ekiti.

I applied, started lectures, wrote exams and did my project under the supervision of Prof Adeniji, O.B., Prof Fakayode, S.B. and Dr Ogunjimi, S.I. I had to travel almost 100kilometers thrice in a week for lectures. My husband gave me a car to ease my accessibility to school.

Together with four of my colleagues, we do have a good ride to school. With a determined mind coupled with mental stability, supportive family, encouraging Supervisors and most importantly a working Vice Chancellor, Prof Fasina, A.S., I was able to finish my Doctorate degree within three years. I graduated with my joy knowing no bounds in December 2021.

I became the first female PhD holder in Federal University Oye Ekiti Nigeria at the age of 32 with 3kids. As a motivated young lecturer with over 10 published articles in reputable journals of which 2 are indicated in Scopus.