ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 12, Issue, 09, pp.13368-13371, September, 2020

DOI: https://doi.org/10.24941/ijcr.39555.09.2020

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

RESEARCH ARTICLE

MODEL-FARMER BASED AGRICULTURAL EXTENSION SERVICE DELIVERY APPROACH: ITS FAILURE TO REACH SMALLHOLDER FARMERS IN ETHIOPIA

***Asrat Worku Jarsa**

Department of Rural Development and Agricultural Extension, Wolaita Sodo University

ARTICLE INFO

Article History:
Received 05th June, 2020
Received in revised form
07th July, 2020
Accepted 24th August, 2020
Published online 30th September, 2020

Key Words:
Extension approach, Ethiopia, Fellow farmer, Model farmer, Smallholder Farmers.

ABSTRACT

For decades, range of extension approaches has been employed in Ethiopia to support farmers with advice, technologies and new ways of doing things. Currently, agricultural extension service delivery approach his being implemented in link with 'farmers group arranged in rural set up to facilitate extension delivery. It has been in place to more exercise participation of smallholder farmers in extension service delivery and to improve its coverage. The main objective of this systematic review was to examine the challenges of this model-farmer based extension approach in reaching smallholder farmers. The mode-farmer approach in the country has been given focus to compile it as best practices with the aim of being scaled up and out so that average productivity of the majority of follower smallholder farmers is to be transformed to the level of that of model farmers. However, because of very low mentoring capacity, this approach has poorly address the advisory needs of the follower farmers. Not compensating model farmers for their time and energy in supporting follower farmers, absence of clear guideline to identify and promote the use of model farmers in testing new innovations and sharing their knowledge and skills to other farmer, poor participatory planning that it is still dominated by village leaders or wealthier farmers and poor facilitation from extension system made still the voice of the poor farmers is neglected. Therefore, it needs further modifications in to address extension service demand of these needy smallholder farmers.

Citation: ***Asrat Worku Jarsa.*** **2020.** "Model-Farmer based Agricultural Extension Service Delivery Approach: Its Failure to Reach Smallholder Farmers in Ethiopia", *International Journal of Current Research*, 12, (09), 13368-13371.

INTRODUCTION

The government of Ethiopia has made great effort to transform agricultural sector which is main national economy base for the country. The government of Ethiopia has been investing consistently and heavily in the agricultural sector than other African countries (Berhane *et al*. 2018; Berhanu and Poulton, 2014). Its commitment is to sustainably increasing agricultural production to meet the growing demand for food, industrial raw materials, and foreign currency earnings (ATA, 2017; Elias, 2013; FDRE, 2016). The country's government effort to transform the agricultural sector was, with all other intervention, mainly by strengthening its extension services as part of the general agriculture policy reform (Ministry of Agriculture and Natural Resources (MoANR), 2017). Agricultural extension services are organized and delivered in a variety of ways in Ethiopia with the ultimate aim of increasing farmers' productivity and income (Benincasa, 2019).

Corresponding author:* **Asrat Worku,
Department of Rural Development and Agricultural Extension, Wolaita Sodo University.

It has been oriented to allow farmers gain access to knowledge, information on improving practices along the value chain to adopt, increase yield and income. However, success of agricultural extension service delivery in achieving these depends on the extension approach that is being used to reach or communicate to farmers (Berhane *et al*, 2018; Dercon *et al*., 2007). Hence, different approaches of agricultural service delivery has been adopted and implemented in different periods of time to address production and productivity problems among smallholder farmers. Still, the use of innovative approaches and strategies to increase coverage and access of the service is the main concern of the government and all concerned stakeholders involved in agriculture extension services delivery (Davis, K., 2008). Agricultural Extension has been implemented and subject to radical policy changes in Ethiopia for decades, almost for the last 50 years (Anandajayasekeram *et al*, 2008).By Ethiopia government, agricultural extension has been believed as crucial means for transforming the country subsistence agriculture through deployment of extension workers up to kebele level. Agricultural extension is currently being provided primarily by the public sector, operating in a decentralized manner through which extension is implemented at the woreda/district level (IFPRI, 2010).

As core service delivery approach, model farmer approach is being widely used across the country in which successful farmers which have demonstrated selected as principal agent to disseminate technologies and information to follower to disseminate technologies and information to follower farmers (Selam and Ruth, 2020). As a main Farmer-to-Farmer extension core orientation, agricultural extension services choose individual farmers to work with them in implementing their outreach programs (Simpson *et al*. 2015).The common service delivery approach in Ethiopia, model-farmer based extension delivery, is being implemented as a means of reaching more farmers with involvement of smallholder farmers. Reasons for this include the ability to reach more farmers at less cost, the higher level of trust that farmers have in fellow farmers and the perceived enhanced sustainability of the approach. Those farmers selected to become lead farmers in farmer-to-farmer extension efforts are often called model, master or lead farmers, and are chosen based on their agricultural expertise (Khaila *et al*, 2015).

METHODOLOGY

To come up with this review article, systematic review has been conducted. Varieties of documents were reviewed. The data were collected from records, articles, journals and original research papers. The collected data were organized and compiled for interpretation.

Basics of model-farmer based Agricultural extension service delivery in Ethiopia: It has been believed that agricultural extension system in Ethiopia has great potential to help farmers to enhance their agriculture productivity. Considering its necessity, Ethiopia invested a lot in this sector and ranked one of the densest agricultural extension systems in the world with approximately 21 development agents (DAs) per 10,000 farmers, and even more in the high-potential areas(Ministry of Agriculture (MoA), 2010; IFPRI, 2010). The Ethiopian extension system uses Farmer-Training Centers(FTCs) based agricultural extension approach coupled with farmer groups such as one-in-five and development units, which are considered an entry point for the grass-roots extension services and for the bottom up extension approach. Ethiopia has also been implementing a participatory extension system (PES) since 2010 following the commencement of the first Growth and Transformation Plan (GTP-I) (MoANR and ATA, 2017).

Operation of Model Farmer Extension Approach in Ethiopia: The Ethiopian agricultural extension system have adopted and widely used model farmer approach across the country in which successful farmers which have demonstrated selected and used as principal agent to disseminate technologies and information to follower to disseminate technologies and information to follower farmers (Kaleb, 2017). The entire extension service delivery system of the country is organized in such as way agricultural information and technologies originating from different research institutions are first communicated to the model farmers then model farmers in turn communicate the information to the follower farmers. However, productivity and adoption of the technologies and practices by smallholder farmers remains low (MoANR and ATA, 2017). The current Ethiopian agricultural extension system predominantly uses a group extension method in which farmers are organized in to a political structure what is termed as 'development team' consisting of 30-40 individual farmers and within each development team, members are further divided into a smaller group comprising five individuals called 1 to 5 social network (Etenesh, 2016; Selam and Ruth, 2020). Farmers in the network have strong social tie to one another which is founded on either by their neighborhood or any form of social relation. Each of the 1-5 social networks as well as the bigger development team is led by a farmer who is regarded as 'model', while the remaining member farmers are regarded as 'followers'(Selam and Ruth, 2020). The entire extension service delivery system of the country is organized in such as way agricultural information and technologies originating from different research institutions are first communicated to the model farmers then model farmers in turn communicate the information to the follower farmers. However, such structure is not feasibly working for technology scaling up and other extension services. It is simply to transfer political information (Kaleb, 2016).

Model farmer has responsibilities of sharing knowledge, best practices and improved technologies obtained from any source to their fellow farmers. In farmer development group approach, each individual farm household prepares annual farm plan, then individual demand is aggregated at the sub group level in a 1:5 arrangement then sub- group plans are then consolidated into the farmer development group level plan that is submitted to the DA and finally Development agents/extension workers aggregate all the FDG demands in the village and reports to the kebele Farmer Training Center Kebele level demands are then compiled by the Development Agents coordinator and sent to the woreda/district (Etenesh, 2016). The big problem in this case is that kebele administrations as well as model farmers are not really interested to reach and contact all stallholder farmers with their actual and fact needs. This calls a great challenge in entire extension system to reach all marginalized and poor farmers who in fact to be empowered with extension system (Leta, 2017).

Missing of Selection Criteria of Model farmers: The selection of model farmer is based on some criteria which were developed by Zonal/woreda agricultural offices. The criteria like implementing full package activities which include maintaining an orderly home, owning a private latrine, sending children to school, implementing good agronomic practices, and using agricultural technologies (Selam and Ruth, 2020). Also other criteria related to the personal characteristics are being considered during the selection. These criteria include being a hard worker, capable of thinking innovatively, complying with instructions, and displaying good behavior (Benincasa, P. 2019; Selam and Ruth, 2020). Using these DAs together with community leaders, such as kebele managers, identify farmers that fit the criteria in order to serve as MFs. Each kebele keeps registers of all households living there. In these registers, households are ranked according to wealth as rich, medium, and poor – based mostly on their ownership of land, livestock, and other household assets. As a final stage in the selection of model farmers, checking of done on prospective model farmers on their allegiance to the ruling party and to ensure that they are not supporters of opposition groups (Taylor and Bhasme, 2018). However, practically, the selection of farmers as models and followers is implemented by agricultural

professionals in a top-down manner, with minimal involvement of community members. Though many criteria of selecting model farmer listed and mentioned, the main criteria being considered are wealth and political allegiance which are more straightforward to identify and easier to monitor. This finally making the follower farmers not interested to work with these nominally selected model farmers and extension personnel engaged in such fake screening (Etenesh, 2016).

Confusions of Model-Farmers based and Farmer to Farmer Extension Approaches: Model farmer is being implemented in Ethiopia with no link to philosophy and principles of farmer to farmer extension delivery philosophy. Farmer –to- Farmer extension delivery approach is predominantly based on the intent of selecting model farmers or farmer trainer/lead farmer based on expertise (Franzel *et al*. 2015; Simpson *et al*. 2015).However, this is not common in model-farmer extension delivery system. In farmer-to farmer extension approach, the core principles are voluntarism; model/lead/farmer trainers are being selected in consultation with community members; being accountable to the farmers they serve; and demonstrating an interest in sharing skills and information(Stella, 2015).In experience of model farmer extension delivery in Ethiopia, the model farmers are not in such position to work with follower farmers who are many in number.

Challenges for Model Farmers extension approach Implementation: Agricultural extension service in general, globally, is facing problems related to its coverage; complexities involved in the service; wider agricultural development policy environment; the role of concerned institutions in service delivery, political support and commitment and insufficient appropriate and relevant technologies (Berhanu *et al*, 2006; Stella, 2015).

Specific to model-farmer based extension deliver, the challenges are many and complex in their nature (Leta *et al*. 2017; Swanson, 2008; Akinnagbe and Ajayi, 2010). The basic assumption of model farmer extension approach is that model farmers/lead framers can improve the extension coverage by assisting other farmers who are resource poor and resistant to using new innovations (Abate *et al.,* 2017). However, model farmers complain that they are not compensated for their time and energy in supporting other farmers. Additionally, absence of clear guideline of identification and promotion of the use of model farmers in testing new innovative technologies and sharing to other follower farmers is the main challenge. Hence, inconsistent and irregular rewarding mechanism is being common practice (MOANR, 2017). Follower farmers are frequently complaining on the way how model farmers are utilizing their position in community for unwanted purpose. Follower farmers believe that the model farmer approach has become a mechanism for exclusion (Kaleb, 2016). They are experiencing discrimination from extension personnel for not being ideal farmers. Additionally, they fear erosion of the culture of cooperation in the desire to nurture competitive values among farmers. Follower farmers also complaining that model farmers are selectively communicating different information to them, and not always in a timely manner. Moreover, follower farmers feel that model farmers hardly listen to them and feeling that it is those with money that are listened to. Follower farmers also fear that model farmers are insisting and following other farmers to be in line with political ideology that they believe belongs to(Etenesh, 2016). Another prominent challenge to farmer-led extension is about fake participatory planning that is still dominated by village leaders or a number of wealthier farmers. In such process poor farmers' voice is neglected. By Selam and Ruth (2020) also revealed that lack of common interest in the group, lack of trust among the group members, lack of resource among the small holder farmers and poor facilitation from extension system are the main challenges in implementation of model farmer based extension system in Ethiopia. Because of these all challenges, model-farmer extension approach being practiced with less effect on local poor farmers (Faure *et al*, 2012).

Conclusion

Philosophically, it has been considered that farmer led extension delivery approach is a worthwhile method to scale up the dissemination of different extension services and to reach marginalized and poor rural farmers. However, there is still the gap in reaching smallholder farmers. Many factors are contributing for this. The critically identified reasons are poor participatory planning that it is still dominated by village leaders or a number of wealthier farmers so that the voice of the poor farmers is neglected. In general model farmer based extension service delivery system is being implemented with many complains. Accordingly, it is less effective in increasing the coverage of extension delivery with the participation of follower farmers. In such process, model farmers are being selected with minimal participation of the community members and the selection is not based on the ability. It is being complained that model farmers are being considered that as privileged to access information, new technologies and new skills more than other farmers.

It is being counted by many follower farmers as it is becoming a means to implement top-down agricultural extension system delivery. Its identification of and favoring of better-off farmers those supporting the government making this extension delivery approach less attractive by local follower farmers. These selected model farmers are not becoming accountable to local farmers and not equitably and fairly sharing information and technologies.

Recommendations

Base on review of different policy documents and published articles, certain policy implications have been suggested to make model-farmer based agricultural extension services delivery approach effective in Ethiopia.

- Model farmers selection criteria has to be technical and focus on sounding parameters excluding subjective wealth and political commitment criteria
- All farmers have to be aware off the philosophy and importance of model farmer extension delivery to all farmers.
- The selections of model farmers have to be participatory engaging representatives of the community groups.
- Clear guideline of selecting and using model farmers for extension delivery has to be devised and communicated by the government.

- Better to capacitate model farmers with skill and knowledge to train follower farmers.
- Model farmers have to be compensated and encouraged for their work burden and time they waste while working with follower farmers based on clear monitoring and evaluation.
- Clear formal structure of linking model farmers with extension personal have to be designed for formal integration in agricultural extension service delivery system.
- Strengthening the link between model farmers and follow farmers by creating more transparency so that follower farmers have access to see for the innovative practices among model farmers.

REFERENCES

Anandajayasekeram, P., R. Puskur, S. Workneh, and D. Hoekstra. 2008. *Concepts and Practices in Agricultural Extension in Developing Countries: A Source Book*. International Livestock Research Institute.

ATA, 2017. Ethiopia's Agricultural Extension Strategy on Vision, Systemic Bottlenecks and Priority Interventions, Addis Ababa

Benincasa, P. 2019. *Differences between Model Farmers and Cooperatives in Ethiopian Agricultural Development: Evidence From the Create Project*. Enschede, University of Twente

Berhane, G., C. Ragasa, G. T. Abate, and T. W. Assefa. 2018. *The State of Agricultural Extension Services in Ethiopia and their Contribution to Agricultural Productivity*. Addis Ababa: International Food Policy Research Institute

Berhanu, K., and C. Poulton. 2014. "The Political Economy of Agricultural Extension Policy in Ethiopia: Economic Growth and Political Control." Development Policy Review 32 (s2)

Davis, K., 2008. Extension in Sub-Saharan Africa: Overview and Assessment of Past and Current Models and Future Prospects. *Journal of International Agricultural and Extension Education, 15(3):*

Dercon, S., D. Gilligan, J. Hoddinott, and T. Woldehanna. (2007). The Impact of Agricultural Extension and Roads on Poverty and Consumption Growth in Fifteen Ethiopian Villages. CSAE WPS/2007- 01. Centre for the Study of African Economies, University of Oxford.

Elias, A., M. Nohmi, K. Yasunobu, and A. Ishida. 2013. Effect of Agricultural Extension Program on Smallholders' Farm Productivity: Evidence from Three Peasant Associations in the Highlands of Ethiopia. *Journal of Agricultural Science*5 (8).

Etenesh Bekele, 2016. Farmers 'Group and Agriculture Extension in Ethiopia

Faure, G., Y. Desjeux, and P. Gasselin. 2012. "New Challenges in Agricultural Advisory Services from a Research Perspective: A Literature Review, Synthesis and Research Agenda." *The Journalof Agricultural Education and Extension* 18(5): doi:10.1080/1389224X.2012. 707063.

FDRE (Federal Democratic Republic of Ethiopia). 2016. Growth and Transformation Plan II (GTP II) (2015/16–2019/20)

IFPRI(2010). In-Depth Assessment of the Public Agricultural Extension System of Ethiopia and Recommendations for Improvement. IFPRI Discussion Paper 01041

Kaleb Kelemu. 2016. Analysis of the Characteristics of Model Farmers in the Ethiopian Agricultural Extension System. *International Journal of Agricultural Extension*

Khaila S, Tchuwa F, Franzel S, Simpson S. 2015.The Farmer-to-Farmer Extension Approach inMalawi: A Survey of Lead Farmers. ICRAF Working Paper No. 189. Nairobi, World Agroforestry Centre. DOI: http://dx.doi.org/10.5716/WP14200.PDF

Leta, G., G. Kelboro, T. Stellmacher, and A. K. Hornidge. 2017. *The Agricultural Extension System in Ethiopia: Operational Setup, Challenges and Opportunities*.

MoANR (Ministry of Agriculture and Natural Resources), and ATA (Agricultural Transformation Agency). 2017. *Ethiopia's Agricultural Extension System. Vision, Systemic Bottlenecks and Priority Interventions*. Addis Ababa: Federal Democratic Republic of Ethiopia Ministry of Agriculture

Ministry of Agriculture (MoA).2010.Participatory Extension System. Addis Ababa.

O.M. Akinnagbe and A.R. Ajayi, 2010.Challenges of Farmer-Led Extension Approaches in Nigeria. *World Journal of Agricultural Sciences* 6 (4): 353-359, 2010 ISSN 1817-3047

Selam Hailemichael & Ruth Haug . 2020. The use and abuse of the 'model farmer' approach in agricultural extension in Ethiopia, The Journal of Agricultural Education and Extension, DOI: 10.1080/1389224X.2020.1757475

Simpson, B., S. Franzel, A. Degrande, G. Kundhlande, and T. Sygnola. 2015. *Farmer to Farmer Extension: Issues in Planning and Implementation*. MEAS Technical Note. https://www. agrilinks.org/library/farmer-farmer-extension-issues-planning-and-implementation

Stella K,2015. Lead Farmer Approach Guidelines.Director, *Agricultural Extension Services. P. O. Box 30145 Lilongwe*

Swanson, B.E., 2008. Global Review of Good Agricultural Extension and Advisory Service Practices, Food and Agriculture Organization of the United Nations, Rome.

Taylor, M., and S. Bhasme. 2018. "Model Farmers, Extension Networks and the Politics of Agricultural Knowledge Transfer." Journal of Rural Studies 64: 1–10.

****