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Nigeria Stored Products Research Institute Multipronged Approach to Dissemination of Improved Postharvest Technologies in Nigeria

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SUMMARY

Effective dissemination has been on the front burner of efforts to promote adoption of improved technologies. In disseminating her range of postharvest technologies, NSPRI has deployed a mix of orthodox (individual, group, and mass contact method) and unorthodox (Agricultural Research Outreach Centre in villages and schools) methods. While the orthodox methods have proved successful in some spheres its inadequacies birthed the AROC whose strength is participatory technology transfer. NSPRI has established a number of AROCs across Nigeria that have increased the rate of utilization of technologies by host communities and also by farmers in adjoining communities.

INTRODUCTION

There is no doubt that improved technologies are profitable (Moser, 2006; Duflo, Kremer, and Robinson, 2008; Suri, 2011). They enhance the productivity, production and profitability of farmers (Sendhil *et al*., 2018). Nevertheless, improved agricultural technologies, especially postharvest technologies are known to diffuse slowly and incompletely in most developing countries (Adegbola *et al*., 2019). In order to strengthen the innovation capacity of agriculture, there is need to effectively facilitate and catalyze improved technologies adoption through dissemination. Dissemination is a sine qua non component of the process of moving innovation from one party to another either through transfer or diffusion (Kenneth, 2018). It is through effective dissemination that technologies are accepted and utilized; no matter how well developed a technology is, if it is not adopted, it will be alleged as unimportant or inadequate (Gathecha, Bowen & Kochomey, 2012). Nigerian Stored Product Research Institute (NSPRI) has been in the forefront of generation and transfer of improved postharvest technologies and techniques in Nigeria; it has come up with a number of postharvest technologies that address postharvest losses and improve shelf life of commodities. NSPRI through its extension arm has propagated array of postharvest technologies through a combination of orthodox methods and pathways; it has used a combination of individual, group, and mass contact method.

Fig: 1. Dissemination of Improved Postharvest Technologies in Nigeria by NSPRI

Orthodox Methods

Individual methods are undoubtedly the most common extension methods used by NSPRI, here its extension agents meet clients privately to provide them with beneficial information and advice. This method has posed a challenge in terms of number of individuals to be serviced. Nonetheless it has used the following forms of individual method to propagate its proven technologies: Farm and Home Visit; Office Call; Counselling; Letter; Telephone Call; Electronic mail (Email); and recently Video call (Zoom & Skype). For the reason that individual extension methods are cost ineffective and have limited coverage, NSPRI has also generously used the group method due to its ability to reach more clients. Specifically, it has used the group method to reach more clients especially those with little awareness about it, its activities, and technologies. NSPRI has employed the following forms of group method to disseminate its proven technologies: Group Meetings; Group Discussion; Demonstrations; Field Days; Trainings; Workshops and Seminars; Symposium. More than any other tools, NSPRI has deployed the mass contact method to create awareness for its improved technologies. It has used the following forms of mass contact method to propagate its proven technologies: Radio jingles/advertisement; Posters; Advertisement on National Television; Newspapers; Leaflets; Rallies; Advisory booklets.

Fig: 2. Dissemination of Improved Postharvest Technologies in Nigeria by NSPRI

AROCs as Unorthodox Method

Outside orthodox approaches, NSPRI has correspondingly used Agricultural Research Outreach Centre (AROC) as a dissemination pathway for propagation of its proven technologies to make up for the weaknesses and shortcomings of conventional methods of technology transfer (Sanni, Ayanda, Alhassan, Adebayo, & Bako, 2011). The scheme was intended to facilitate the trial and adoption of agricultural innovations by stakeholders in the agricultural sector under their environmental conditions (Adeogun *et al.*, 2020). Precisely, participatory

technology transfer through dissemination, and grass root extension is the forte of the scheme. Essentially, improved technologies generated by NSPRI are taken to AROCs for dissemination to its clients. A unique feature of this system is inclusiveness; the system involves farmers as observers and sometimes as executors in trials of improved agricultural technologies and practices/protocols. Experiences have shown that AROCs have sped up the rate of adoption of technologies by host communities and also by farmers in neighboring villages and communities where AROCs are located (Akinola, Ene, & Baiyegunhi, 2013). Demonstrations of utilization of improved technologies in AROCs have also serve as demonstration of effectiveness of technologies in the established centres. Adeogun *et al*. (2020) opined that relevant information on agriculture and concomitant sectors are also to be displayed at the AROCs. To be precise, AROCs are to serve as laboratories for showcasing agricultural technologies developed by National Agricultural Research Institutes (NARIs) for transfer and adoption (Othman, 2018). While AROCs in villages are aimed at encouraging large scale adoption of improved technologies in the rural areas, AROCs in schools conversely are planned to increase adoption of improved technologies in schools and among farm families of the students (Saleh, 2021). Apart from the fact that this scheme aids technology transfer, it has also amongst others contributed significantly to the income generating capacity of host communities (Akinola, Ene, & Baiyegunhi, 2013).

Unambiguously, NSPRI has used its AROCs in schools as places to showcase/disseminate its improved technologies in diverse locations. It has also used its AROCs in villages for testing and showcasing the potential impact that its developed technologies could have on rural livelihood. NSPRI has its AROCs in schools and villages in these locations across Nigeria: AROC, Araromi-Ipo, Kwara State; AROC, Jege along Ipao-Irele road, Kogi State; AROC, Tatabu, Niger State; AROC, Tsafa, Niger State; AROC, Malale, Niger State; AROC, Alapa community, Kwara State; AROC, Erin-Oke, Osun State; AROC, Moniya, Oyo State; AROC, Alayere community, Ondo State; AROC, Tankpafu, Kwara State; AROC, Mandzwakwa, Kwara state; AROC, Aliara Community, Kwara State; AROC, Ikorodu, Lagos State; AROC, Ohorhe 2 community, Delta State; AROC, Isale Awe, Kwara State; AROC, Laduba, Kwara State; AROC, Yandev, Benue State; AROC, Wannune, Benue State; AROC, Lasoju, Kwara State; AROC, Enterprise Grooming Institute, Ilorin Kwara State; AROC, Eucharistic Heart of Jesus Model College Ilorin, Kwara State; AROC, Ilorin Comprehensive Secondary School, Ilorin, Kwara State and AROC, Abolarin College, Oke-Ila, Osun State

CONCLUSION

NSPRI's use of diverse approach (these methods compensate for one another) in disseminating postharvest technologies has upped the adoption rate of most of its technologies in Nigeria.

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