

8 Networking for agricultural innovation. The MVIWATA national network of farmers' groups in Tanzania

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8.1 Introduction

The previous section has highlighted the recent policy changes in the agricultural sector in Tanzania and, in particular, the role of FOs in relation to research and extension. To a large extent public financing for research and extension is being made conditional on a strong collaboration with farmers and FOs. Many FOs have emerged that are attempting to help address the multiple challenges faced by farmers – in agricultural and livestock production in general, and the need for innovation in particular. Nevertheless, there continues to be inadequate farmer participation in decision-making throughout the entire AR&D process, whether these innovations are technical, organizational or institutional. However, FOs have significant additional potential to make the research and extension agenda more relevant to farmers' needs and their environment, and indeed in bringing about the desired changes in agricultural productivity, incomes and sustainability. Because MVIWATA is one of the oldest Tanzanian FOs and has been involved in the agricultural innovation process since its establishment, lessons can be learned from its experience.

8.2 MVIWATA

MVIWATA⁴⁵ is a national network of farmers' groups in Tanzania, and was established in 1993 by small-scale farmers from the Morogoro, Iringa, Tanga, Mbeya and Dodoma regions (in the centre, southwest and northeast of Tanzania) who wanted to establish a farmer-to-farmer exchange forum. Sokoine University of Agriculture (SUA) at Morogoro guided and facilitated its establishment, which finally led to formal registration of the organization in 1995. MVIWATA's mission is to link farmers' groups and local networks of such groups together into a sound and strong national FO capable of ensuring representation and advocacy of their interests in decision-making processes at all levels. MVIWATA's overall objective is to develop a strong and effective representation of farmers' interests in jointly confronting their needs and challenges, mainly concerning participatory communication, lobbying and

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⁴⁵ MVIWATA is the acronym for *Mtandao wa Vikundi vya Wakulima Tanzania*.

advocacy, plus organizational strengthening to provide agronomic and marketing services. MVIWATA advocates strong organizations for smallholder farmers, establishing reliable markets for their farm produce, sustainable financial and technical advisory services, as well as empowered representation of farmers at all levels.

In many areas MVIWATA is strongly represented at the village level; small-scale farmers (irrespective of age, gender, farm type, religion, geographical origin, or political opinions) can become members and hold responsible positions in the organization. MVIWATA has five organizational levels: individual members; local farmers' groups; local networks; intermediate level networks; and the national level (with headquarters in Morogoro). MVIWATA operates under the motto '*Mtetezi wa Mkulima ni Mkulima Mwenyewe*', which literally means 'defender of farmers' interests by farmers themselves'. The organization has members in more than 100 local networks with some 1 000 affiliations. Network size varies from 5-70 affiliated farmer groups, each with an average of 5-200 members. Farmers are all small-scale farmers and can be members through their groups (presently 60 000) or as individual members (10 000 cardholders).

8.3 Links with key actors

All actors in the NARS, from policy makers to AR&D institutions (both public and private) and FOs (such as MVIWATA) play a role in agricultural innovation, which involves efforts to improve the current practices in agricultural production, processing, organization and marketing. FOs also play a role in collecting and disseminating practical and technical information through formal and informal networks within their structure. In order to be relevant to the clients' formal or generic needs, agricultural research organizations need to become more client-oriented and demand-driven; this can be greatly facilitated if clients are organized and their demands are properly articulated.

Innovation involves new products, processes or changes to existing products or processes. The speed with which firms and clients adopt new technology and information, and which largely determines its final impact, depends on its relevance and the constraints of the marketplace (e.g. availability of inputs, access to credit, markets, etc.). Participatory group approaches have become common in most rural development initiatives. These groups can be self-initiated ('self-help' groups), or initiated with support from government services, AR&D projects, NGOs, commodity-based farmers' groups or producers' associations. Considerable on-farm research and adaptation involving farmers and farmers' groups is often required before an innovation becomes fully relevant and can be easily adopted.

MVIWATA plays an important role in innovation and links up (both nationally and internationally) with actors relevant to rural development and agricultural innovation. MVIWATA is recognized by farmers and other stakeholders as a credible, independent, and democratic membership organization with elected

representatives. MVIWATA works closely with agricultural AR&D organizations⁴⁶ and is a member of several national steering committees and boards.⁴⁷ Internationally, MVIWATA also networks with other FOs⁴⁸ and has links with many NGOs and funding partners. One of MVIWATA's strong points is its credibility with both farmers and other agricultural innovation stakeholders who recognize the organization as independent from the government and publicly financed services. The organizational structure is democratic with effective control of the organization by members and their elected representatives at local and national level being recognized in the MVIWATA statutes.

8.4 MVIWATA's overall strategy

MVIWATA carries out the following operational activities:

- Strengthening local groups and networks through motivating self-reliance attitudes and encouraging farmers to defend their own interests. MVIWATA trains farmers on collective action for poverty reduction in rural areas, without becoming government or donor dependent. Training aims at capacity building of the members involved in the network.
- Provision of participatory training skills to network members through extension services and study tours. Training is targeted at leaders appointed by their respective groups to attend the courses. After completion of the course, these leaders are required to provide feedback to their respective groups and networks so that the knowledge they have gained can be disseminated to all members.⁴⁹
- Support to sustainable income-generating projects organized by members, by encouraging and assisting farmers to form their own savings and credit groups.⁵⁰
- Construction and rehabilitation of rural infrastructures, including rural training centres, market structures, feeder roads and bridges to improve access to markets.⁵¹
- Membership affiliations with national and international network organizations as part of lobbying and advocacy activities. MVIWATA has created partnerships with many social and civil society organizations, both

⁴⁶ Such as INADES-Tanzania, PELUM-Tanzania, Southern Highlands Development Project, Cooperative College Moshi, SUA, Tanzanian Association of Non-Governmental Organizations, and the Agency for Cooperation and Technical Development.

⁴⁷ The PADEP; the Agricultural Marketing Systems Improvement Programme (AMSDP); the ASDP Task Force; the Eastern Zone Client-Oriented Research and Extension (EZCORE) programme; and the Morogoro Livestock Training Institute (LTI).

⁴⁸ East African Farmers Federation (EAFF); International Federation of Agricultural Producers (IFAP); and several national unions in Sub-Saharan Africa and Europe.

⁴⁹ Up to now more than 600 farmers have been involved in national farmer visit exchange programmes and 70 Tanzanian farmers participated in farmer exchange visits to several foreign countries.

⁵⁰ To date, 25 Savings and Credit Cooperatives (SACCOs) have been formed.

⁵¹ Especially in the Nyandira, Kinole and Tawa villages of Morogoro, and in Kibaigwa village, Kongwa district in Dodoma region.

inside and outside Tanzania (see above). Together with MVIWATA, these partners help farmers improve their local knowledge and develop strategies for poverty alleviation.

- Information management, dissemination and exchange by documenting farmers' experiences, and activities using other media, e.g. radio, television, booklets and newsletters. This work focuses on informing producers of agricultural innovations and organizations from which they may benefit.
- Providing a platform for lobbying and fundraising for agricultural and income-generating undertakings by members. After farmers have initiated their own development initiatives, MVIWATA tries to contact funding organizations in order to support and strengthen these initiatives.

8.5 MVIWATA's approach to agricultural innovation

RELYING ON LOCAL FARMERS' GROUPS AND NETWORKS

One of MVIWATA's key institutional innovations involves forming a network of farmers and groups in order to create fora for communication, information exchange and sharing experiences.⁵²

MVIWATA uses a bottom-up participatory approach in which farmers fully participate in designing and implementing innovative technologies and approaches for enhanced agricultural productivity. The methods used include community meetings and open group discussions to reflect on the situation of farmers, reveal their challenges, inventory farmers' own capabilities, identify constraints and decide on actions that can be taken. MVIWATA therefore builds up farmers' capacities to recognize their own capabilities and identify solutions within their own means. In this way MVIWATA strengthens local farmers' groups and networks by motivating self-reliance attitudes. MVIWATA trains farmers on how to join together in order to be in a better position to decide which development programmes they themselves can initiate in the fight against rural poverty. The organization establishes farmers' groups and networks to help farmers solve socioeconomic problems without waiting for conditioned grants or gifts from donors.

With regard to agricultural AR&D, two sides are always emphasized simultaneously: in marketing terms it is important to have at least a potential market for a new product or process; and in productive terms, relevant technologies are required (this may mean generating new scientific and technological information, or just using adaptive research and dissemination). Through the initiatives of MVIWATA and its partners, farmers' groups carry out income-generating activities such as: SACCOs, inputs supply, vegetable and fruit production/processing, raising dairy livestock, producing tree seedlings etc.

⁵² MVIWATA has documented and disseminated this experience, in collaboration with INADES (African institute for economic and social development).

VALUING INDIGENOUS KNOWLEDGE AND ADOPTION OF IMPROVED PRACTICES

MVIWATA also emphasizes attitude and perception changes that aim to improve the value of farmers' indigenous technical knowledge and take advantage of such know-how in adapting new technologies. MVIWATA encourages formal research to improve indigenous knowledge already practiced by farmers in order to make agriculture more rewarding. In this context, developing new products and processes through innovation focuses on the needs of the clients, placing particular emphasis on user participation in decision-making and evaluation of innovative technologies.

Some agricultural innovations that have recently been adopted by MVIWATA farmers' groups include the replacement of conventional cultivation systems involving frequent ploughing and tillage to 'conservation agriculture'. For example on the slopes of the Uluguru Mountain in the Morogoro Region, farmers have adopted improved soil conservation measures (such as terracing and contour bund farming, row cropping across the slope and agro-forestry practices), as well as zero and rotational grazing. They have also introduced new crops such as tomatoes, Irish potatoes, and sunflowers, and have dug water distribution canals for better management of irrigated agriculture. In the drought-prone Dodoma Region, farmers have adopted techniques such as rainwater harvesting and agro-forestry, and are addressing soil fertility issues by leaving crop residues in the field and incorporating them into the soil to encourage nutrient recycling. In many areas farmers are successfully applying these improved technologies and have significantly improved their income levels.

DISSEMINATION OF FARMERS' KNOWLEDGE AND EXPERIENCES

MVIWATA plays an important role in facilitating the exchange of farmers' practical and successful experiences, including the dissemination of farmers' best practices through written materials, radio programmes and newsletters; this includes work on technologies as well as on the management of dynamic groups.⁵³

MVIWATA has several mechanisms for disseminating innovations, including:

- its own radio programme called '*Ijue Mviwata*' and various television programmes;
- booklets that document best practices;
- a quarterly newsletter on technology dissemination '*Pambazuko sauti ya wakulima*';
- training workshops that are held regularly to train farmers' leaders and trainers;

⁵³ Indigenous medicinal plants used to treat crop pests and diseases in the Dodoma, Singida, Morogoro and Mbeya regions have been documented by INADES in '*Kulima mimea shambani kwa kutumia njia za asili No 2, 1999*'. INADES, in collaboration with MVIWATA, also produced stories such as '*Mabise wa Magubike*'.

- local network meetings to discuss new information useful to farmers; and
- exchange visits during which farmers share their knowledge and experiences. These study tours expose farmers to different environments and sources of knowledge, while also allowing them to learn new technologies through interaction with other farmers who already practice these methods.

8.6 Results of MVIWATA's role in agricultural innovation

RECOGNITION OF FARMER INSTITUTIONS

The results achieved by MVIWATA are evident in at least three areas. Firstly, farmers' knowledge is recognized as valuable and important information that is readily available; the effective use and incorporation of this information into improved technologies requires close interaction between researchers, extension staff, and farmers themselves. Secondly, it is becoming increasingly clear that institutional change is required for FOs to be positioned in such a way that they become meaningful representatives. Thirdly, farmers' groups have become deeply involved in facilitating the improvement of smallholder's livelihoods through income-generating activities for which innovation and hence knowledge is required (MVIWATA functions as the knowledge broker).

THE FARMER'S VOICE

Farmers in MVIWATA farmers' groups are beginning to realize the need to raise their collective voice, as well as the importance of group work and collective action to improve their socioeconomic conditions. In MVIWATA's operating areas, farmers have become confident in addressing their problems and are involved in village and ward development committees. MVIWATA has representatives on steering committees and boards, and farmers have been involved in marketing board committees. The strengthening of local farmers' groups and networks has also enabled farmers to strongly interact with extension staff. Farmers in these areas have generally improved their ability to initiate their own development projects and take responsibility for implementation, monitoring and evaluation.

INCOME GENERATION

Some of the farmers who have joined MVIWATA have improved their livelihoods, including their income-generating activities. On the other hand it is also realized that farmers often identify more urgent obstacles than technology development and dissemination (e.g. input access). The fact that MVIWATA's involvement in some situations does not appear to have an immediate impact on farmers' economic performance sometimes forms an obstacle to mobilizing support for agricultural innovation development programmes.

8.7 Main constraints and challenges for MVIWATA

Farmers united in MVIWATA have tried to ensure an effective representation of their interests. However, both MVIWATA and the majority of its members

are facing a wide range of challenges and bottlenecks that hinder agricultural technological innovation.

At the national level the gap between resources and ambitions results in an ongoing discussion by the MVIWATA steering committee on what should be the main priorities in assisting member farmers and groups. On the one hand, poor communication infrastructure for the farmer-to-farmer dissemination of information is hindering innovation development and trained network promoters often fail to reach the target farmers in a timely manner. On the other hand, the lack of sufficient market capacity to absorb increased supply is also a major challenge. The lack of adequate communication facilities and appropriate markets has contributed to failures in adapting and implementing otherwise relevant agricultural innovations. In areas with intensive agriculture, farmers often point to the poor quality and the lack of timeliness (of chemical input supplies) as important reasons for slow adoption.

Some farmers have misconceptions about the role of MVIWATA, confusing the services supplied by the network and the economic activities of the farmers' groups. Some farmers join local networks with a perception of obtaining loans or grants from the government or NGOs, rather than gaining knowledge, information and experience from extension service providers and/or other farmers⁵⁴. However, MVIWATA does not provide funds to farmers, it only facilitates farmers' capacities to influence research and extension services providers, and provides access to training opportunities.

Group dynamics and leadership are sometimes also considerable barriers to innovation development and adoption. Some leaders of farmers' groups and networks are insufficiently competent to coordinate the agreed activities. Many farmers' groups and networks fail to achieve their goals due to the lack of coordination and, out of frustration, farmers then frequently decide to elect new leaders. Under such circumstances, it becomes difficult to make any real progress in technology transfer and adaptation.

Another challenge for small-scale farmers is the introduction of market liberalization, which leads to competition between producers in terms of the quality of farm products. The lack of financial resources to run a small business is a frequent constraint, particularly in combination with the lack of adequate skills and knowledge. SACCOs often do not save sufficient funds to meet the demand for seasonal loans and agricultural credit.

⁵⁴ For example, farmers from Sukuta village failed to implement and sustain their small farmer-owned projects due to lack of knowledge and, as a result of poor management, carried out no evaluation and monitoring of their development projects.

