

National Agricultural Research Systems experiences in the use of participatory approaches to animal health research in Kenya

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Introduction

Participatory approaches (PAs) as used in animal health research in Kenya today were introduced in the early 1990s. Initially, most of the research in NARS was laboratory based. Many technologies were developed but did not reach the end users (farmers). Several mechanisms to transfer technologies to farmers were explored and during this period emphasis was placed on on-farm adaptive research and technology transfer using a “bottom-up” approach. This change was partly influenced by shifts in policies of some development partners who were interested in the impact of farmer demand led research in the alleviation of poverty (^{1,2,3}).

From the 1980's to date, Kenya has faced budgetary deficits that have led to the removal of subsidies on services provided by the Government. Privatisation and cost-sharing policies in the provision of animal health services were initiated with the expectation that the private sector would progressively fill the gap left by the Government (^{4,5}). However, the removal of subsidies and increasing costs resulted in a decline in the utilisation of these services by farmers. New methods were sought to deliver services to the end users and over the past ten years, participatory approaches (PAs) have emerged as appropriate alternatives to effective delivery of technologies by empowering communities (^{6,7,8}). These were institutionalised in the NARS during this period. Participatory research in animal health has been carried out in various parts of the country: in Western Kenya (Kakamega, Vihiga, Butere-Mumias, Busia, Teso and Bungoma districts); Rift Valley province (Kajiado, Nakuru, West Pokot, Turkana, Trans-Mara, Narok and Uasin Gishu districts); Eastern province (Embu, Makueni and Machakos districts); Coast province (Kilifi, Tana River and Kwale districts); Central province (Kiambu, Maragua and Nyeri districts) and Nyanza province (Rachuonyo and Suba districts).

Initial reactions to participatory approaches

Biophysical scientists had negative attitudes towards these approaches. The scientists were initially apprehensive and reluctant to adopt PAs as they considered them to be overburdening and an interference with scientific etiquette. This was attributed to the lack of skills among the biophysical scientists to conduct studies using the PA methods. They were also concerned that the results of qualitative studies carried out using PAs would not be accepted for publication in scientific journals. They also feared losing control of the research projects to other collaborators with comparative advantage in the use of PAs.

Implications of participatory approaches for the research institutes

The institutionalisation of PAs required capacity building and training in effective use of PA methods. Retraining of scientists, particularly the veterinarians and other staff working in the NARS was undertaken. Short training courses were arranged with resource personnel sourced from non-governmental organizations (NGOs) who were expected to impart both the theory and relevant practical experiences of using PAs in technology dissemination. Other resource personnel were sourced from local universities to complement international consultants who were funded by various donor agencies under technical assistance programmes.

Despite the freeze on employment in Government, it was possible to justify the recruitment of social scientists in both KETRI and KARI to strengthen institutional participation in socio-economics research. In addition, both institutions established socio-economics units under the leadership of senior and experienced officers to enhance the incorporation of PAs in the bio-physical research programmes. Both institutes established competitive research funds that proactively encouraged applicants to demonstrate farmer-led demand for the proposed research activities. The agricultural research fund (ARF) in KARI and the technology transfer partnerships fund (TTPF) in KETRI thus enhanced the incorporation of PAs in animal health research. In addition, appraisal procedures for scientists in the institutes were reviewed to recognise and award reports and publications written from PA studies. PAs are now integrated in institutional missions and visions including project monitoring and evaluation processes⁽⁹⁾.

Lessons learnt

Participatory approaches are now widely accepted tools for conducting applied research in the NARS^(10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,30). The attitudes previously held by scientists that communities had little to offer in technology development and dissemination have changed and they have learnt that communities have a wealth of knowledge which can be used to enhance research outputs. As a result of PAs, scientists have been able to develop rapport with the clientele making it easier for farmers to adopt the technologies resulting from research⁽¹¹⁾. There is an increasing interest among stakeholders including policy makers and implementers, researchers, NGOs, CBOs and individual farmers to use PAs to enhance poverty reduction in farming communities^(4,5,31). There is increased targeting especially in applied research projects, of the resource poor as partners rather than subjects. There has also been development of strong linkages among stakeholders using PAs^(15,19,20). Some communities have been empowered through capacity building activities to ensure that they participate effectively in proper record keeping, follow-up and scheduling of research activities⁽¹⁵⁾.

The expectations of farmers are sometimes quite high and this could impede achievement of the set objectives of some research projects^(15,20,22,28).

Institutional experiences of the change through a SWOT analysis

Strengths

Within the Research Institutes, there was support from senior management coupled with a strong recognition of the need for the research institutes to change strategy from undertaking basic to applied and demand driven research that could increase adoption of research products. There was also a conducive government policy environment and commitment of interest that favoured the adoption of PAs and both KETRI and KARI continue to draw on this for enhancing PAs. In addition, donor support for some projects was dependent on the incorporation and use of PAs in research activities⁽⁸⁾.

The flexible institutional structures easily allowed for the incorporation of PAs into research projects. Also, both institutes had a number of technologies that had already been developed and were on the shelves awaiting transfer^(8,11,14,15). Most target communities were receptive to these approaches and this provided a good entry point for the institutes embracing PAs. With the employment of social scientists, it was easy for the institutes to assemble multi-disciplinary research teams, as the biophysical scientists were already available.

Weaknesses

The institutional mandates were limited and did not facilitate research by a single institution on all aspects demanded by client farmers. The mandate of KETRI limits it only to tsetse and trypanosomiasis research and control while the NVRC mandate limits it to specialisation in selected animal health constraints.

The initial negative attitude to PAs by the biophysical scientists was a major constraint to their institutionalisation in the NARS. This coupled with lack of appropriate personnel to undertake the bulk of participatory assignments presented obstacles to the incorporation of PAs in existing research projects. Both KARI-NVRC and KETRI as government research institutions found it difficult to retain highly trained and experienced scientists especially those trained in PAs. This led to a high staff turn over to the private sector and international organizations thereby making it difficult to implement effective follow-up of planned activities as some of the projects were linked to individual scientists with whom the respective communities identified.

Participatory approaches were also complicated by lack of appropriate quality control standards (standard operating procedures) to guide the conduct of participatory studies and thus allow for comparison of data across study sites by different institutions. Initially, the linkages between and within the institutions to enhance the learning process in the use of PAs were not well established. Both KARI-NVRC and KETRI used their respective regional research centres and stations in collaboration with the Department of Veterinary Services to link laboratory-based projects with target communities in the field. In situations where NVRC and KETRI worked in similar areas, no modalities had been worked out to allow for comparison and sharing of data. This was observed in a community based tsetse control project in Trans Mara district, implemented by KETRI within a KARI field station but the two institutions did not share the information generated.

A major weakness of the NARS involvement in PAs was the inability of many of the animal health technologies developed in the laboratories to drive their own demand. This was due to a number of reasons including lack of awareness about the technologies, failure of the technologies to meet the farmers immediate needs, the high cost and unavailability of the technologies on the market. This was observed in Lambwe Valley where communities could not adopt the concept of using deltamethrin impregnated targets despite their efficacy in controlling tsetse flies^(14,28). A similar situation pertained in Busia district where farmers were unable to contribute KShs. 47 towards a tsetse trapping control scheme in the community.

Where appropriate entry points were identified, some contact persons politicised the technology dissemination process in order to gain political mileage. Some community members also collaborated with the research projects with expectations of offers of formal employment by either KARI or KETRI but were frustrated on realising that this was not possible.

Another area of weakness was the limited capacity of NARS to conduct both ex ante and ex post impact assessment studies.

In some multi-disciplinary and multi-institutional projects, although stakeholders' roles may have been well defined, lack of sufficient financial inputs by some stakeholders affected project implementation. This was observed by KETRI in a partnership project in Lambwe Valley. In addition, both the communities and researchers had unrealistic expectations of the outputs of PAs with the communities expecting instant solutions to their various animal health constraints whereas some researchers expected communities to endorse their research agenda. Some NARS' projects had no in built feed-back mechanisms to ensure the smooth flow of information between researchers, target communities and intermediary stakeholders. For projects where feed-back was incorporated, tight budget lines limited flexibility on how this was implemented.

The repeated use of PAs by different research groups working independently in one community has led to fatigue as observed in Nguruman where KARI, KETRI, ICIPE and other NGOs have repeatedly carried out different research projects for many years. This fatigue has been precipitated by lack of feedback to the communities by some of the partners.

There was also lack of linkages between institutions involved in PAs across international borders. This could have facilitated the sharing of information and skills for enhanced efficiency in the adoption of PAs by NARS working in similar livestock production systems.

Opportunities

There is need to enhance multi-institutional networking and information sharing among stakeholders. To achieve this, KARI and KETRI are currently working in partnership with NGOs, CBOs, individual farmers and development partners using PAs under the Agricultural Technology and Information Response Initiative (ATIRI) and TTPF. There is also a need to enhance capacity building in the use of PAs within communities and the government extension system. The sharing of information between all the partners involved will contribute to this objective.

The targeting of community-based organizations should be widened to include the poorest of the poor. Both KARI-NVRC and KETRI have noted in some community participatory projects that even the minimal subscription fees for membership to some CBOs are unaffordable to the poorest farmers. The development and transfer of technology using PAs through CBOs thus excludes these most vulnerable groups of farmers.

For the successful implementation of PAs in the various production systems, both KARI and KETRI will need to review their institutional mandates and strengthen linkages to ensure broad coverage and follow up of problems identified in PAs. Future projects should include in their budgetary costings modalities for undertaking both ex-ante and ex-post impact evaluations. These will help to justify continuous use of resources on projects being implemented using PAs (³²). There is also need for stakeholders to enact standard operating procedures for appraising PAs. This is important if data generated is to be compared, extrapolated, shared and best-practice documented. All stakeholders using PAs need to attend regular refresher courses and the trainers should moderate the curricula in line with the changing needs for livestock technology transfer.

Threats

Despite the successes, a number of challenges threatened the institutionalisation of PAs in NARS. Unfulfilled expectations from both researchers and end-users led to fatigue and frustration in areas where their agenda were divergent. This was exemplified in a needs assessment project in Teso district where farmers wanted fertiliser to use for farming activities in order to generate income for tsetse control. This need could not be addressed as it was not within KETRI's mandate and had not been budgeted for.

Some projects are executed on strict budget lines and clearly defined activity schedules, hence there is no room for re-evaluation without accompanying budgetary implications. The lack of commitment from target communities and other stakeholders limits most projects to mobilisation exercises without any tangible benefits. This has been experienced by NARS through implementation of some projects that have a high public good component such as tsetse control using traps and targets. The lack of sustained community interest in such projects threatens the development of capacities for participation and sustainability (¹⁵).

In multi-institutional studies, the signing of a memorandum of understanding (MOU) does not guarantee participation in project activities. Commitment of resources by various stakeholders even when agreed in MOUs often presents challenges to the implementation process. This has been experienced in Lambwe Valley where a number of stakeholders failed to contribute their institutional allocations in the budget for the planned activities and often relied on the other partners to accomplish such activities (¹⁵).

Conflicts between research and community activity calendars often constrain projects that have elaborate outputs but very strict time lines. In such cases, community interests tend to take precedence over research interests leading to unforeseen delays and cost over-runs. This has been experienced in projects in some arid and semi-arid areas where problems such as insecurity, drought and water shortages necessitate frequent movements by communities and research teams have to customise their studies to these conditions to meet their objectives.

The inability of research institutes to retain highly trained and experienced staff is a major impediment to the implementation of participatory projects. Both KETRI and KARI have witnessed a high staff movement mainly to the private sector, NGOs and international institutions.

The dependency on donor funding for research projects by both institutions is another issue that needs to be addressed. Over the years, both KETRI and KARI have depended on external funding for operational costs of research. Since these were not revolving funds, they wound up at the end of each donor-funded project. It is crucial for the institutions to seek alternative sources of funding in order to ensure sustainability of research programmes. In addition, some communities have now developed a high donor dependency syndrome and will seek alternative donor funds at the end of projects that were initially designed for sustainable take-over by the communities.

Current status and the way forward for NARS

Current status

As highlighted in the SWOT analysis, research institutes have made significant changes in their style of project cycle management and PAs are now used to inform and involve all partners in technology development and dissemination processes. KARI has initiated the agricultural technology and information response initiative (ATIRI) to improve the transfer of appropriate agricultural technologies to end-users. ATIRI aims to improve the ability of farmers to make demands on agricultural service

providers and to enhance the effectiveness of intermediary organizations and farmers' groups in meeting the knowledge needs of their clients and members. Through ATIRI, KARI will strengthen its capacity to respond more efficiently to these demands through provision of information on improved technologies and by increasingly focussing its research on problems and opportunities identified by farmers. ATIRI will also test new participatory approaches to the rapid scaling-up of dissemination of promising technologies and strengthening partnerships for better provision of services to farmers.

To sustainably fund animal health research, KARI proposes to engage in providing laboratory testing and consultancy services on a commercial basis as well as utilizing available farmland for profitable farm enterprises. A business development unit in KARI is developing these proposals. KETRI has on the other hand, embarked on the Research Fund (RF) that avails funds from the GOK to researchers interested in undertaking multi-disciplinary studies. In addition, a rapid response team whose operations heavily rely on the use of PAs is in place to meet farmers requests for technical advice.

Conclusions

This paper has highlighted experiences arising from the use of PAs in animal health research by some NARS in Kenya. Particular attention has been paid to the SWOT analysis and various options for improvement suggested.

Despite the initial apprehension about PAs, they have been found to be useful and hence incorporated in institutional mandates and missions. There is strong institutional commitment to incorporate PAs in planning, implementation, monitoring and evaluation of technology development and dissemination initiatives.

The major weaknesses identified need to be addressed. These include lack of information sharing, networking and feedback between institutions in Kenya and others carrying out related work in neighbouring countries. There is also a need for standardisation of PA operating procedures for institutions working on similar issues.

The use of PAs has enhanced, strengthened and enriched data collection and analysis by involving all stakeholders in the information chain. Thus the data can be meaningfully used to inform policy formulation and implementation for greater impact at the community level.

Increased use of PAs will serve as a means of learning from field experiences through feedback and thus enhance research programme management and performance as a means of improving food security and livelihoods among the poor.

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