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PARTICIPATORY PLANNING AND IMPLEMENTATION OF CROSSBREEDING ACTIVITIES IN AFRICA

Policy Brief: 12

KEY MESSAGES

- *Strengthening the participation of stakeholders in planning and implementing crossbreeding programs will reduce the loss of indigenous breeding stock*
- *Stakeholder involvement in planning and management is expected to lead to more realistic and effective policies and plans, as well as improve their implementation.*

INTRODUCTION

The call for participatory approaches, including planning and implementation of crossbreeding activities in Africa, emanates from the many failed experiences in the crossbreeding sector, some of these have been directly linked with the absence or weak participation of stakeholders in the crossbreeding and associated efforts. Where results from crossbreeding-based systems are found to be encouraging, stakeholder participation has surfaced as a major factor contributing to the effectiveness of the programs. Even in those situations where some stakeholders were involved to a certain extent, a major critical shortfall has been the weak planning. It has been further noted that where stakeholder involvement led to positive outcomes for sustainable crossbreeding programs, the timing was critical. The possibilities of influencing crossbreeding success were seen to be best during the early project stages, because decisions made early reduced unnecessary changes during later development stages and even the total life of the programme.

Several reasons have been adduced for the weak or non-participation of stakeholders in the planning and implementation of crossbreeding programs. Among them is the absence of friendly policy environments that foster collaboration and partnerships. In many African countries there is no specific policy area or legislation which fully cover crossbreeding, animal genetic resources (AnGR) conservation and use of genetic resources for food and agriculture and fishery. AnGR policies are by and large effected through legislation on agricultural, environment and trade policies. Although there are public sector coordinating bodies, their effectiveness have been low. It can be stated without much controversy that breeding research and development works have been going on in some countries in the absence of any properly defined breeding policies. There are several challenges to participatory planning and implementation in crossbreeding in Africa.

POLICY RELATED ISSUES

Among issues raised concerning the weak participatory planning and implementation process in crossbreeding involving exotic breeds and local AnGR are:

- The establishment of functional crossbreeding programs under smallholder conditions, disseminating improved breeds to village flocks/herds, and designing, organizing and

implementing crossbreeding activities has been a challenge. Past genetic improvement efforts mostly failed, among other things, due to incompatibility of introduced genotypes with producers' breeding objectives, management practices and environmental conditions; the lack of comprehensive approach to design simple but effective breeding strategies instead of adopting complex breeding programs that require advance breeding knowledge, many logistics and technologies. Many countries lack the capacity to monitor impacts.

- The major problem for implementing a strategic crossbreeding is the availability of exotic genes. The success is affected by how well planned the mating system is. Most producers/farmers when implementing their schemes choose their male/semen with herd requirements in mind, but the matings happen to individual female. Strengthening availability must be the top priority to enable farmers to follow a breeding strategy and reach a suitable and sustainable herd performance
- In many countries, awareness of the diverse and significant contributions of local AnGR is relatively low among policy-makers, which has resulted in the failure to adequately invest in essential institutional development and capacity building to enable countries to fully utilize and develop their AnGR. Generally, such communication and awareness campaigns often do not exist, thereby creating room for adventures in crossbreeding at the cost of local AnGR.
- Most stakeholders involved in crossbreeding have to act on a narrow scientific basis. This is mainly due to the fact that much of the necessary knowledge is not available to them or missing due to a lack of dedicated research or that the available information in the hands of extension agents does not reach the stakeholders who need them. Where the information do reach stakeholders, sometimes they are difficult to adapt them and therefore insufficiently adopted. The knowledge generally resides among the academia, in the public sector and in private companies. Farmers and producers are often reluctant to take advice from the research sector, as the relationship between the two stakeholder groups is not sufficiently developed.
- Many of the challenges that have been associated with crossbreeding systems in the past are the result of undisciplined implementation of the system and disregard of expert advice. As many crossbreeding initiatives show, most of the activities are "re-inventing wheels", not building on prior experience or available research. Thus, there is a greater need to better utilize the expertise available to appropriately implement crossbreeding systems and programs.
- Enhancing networking among key stakeholders in view of properly exploring crossbreeding is fundamental. Some countries in Africa recognize the important role of national networks for the management of AnGR in supporting institutional development and capacity building. Some stakeholder bodies are present in African countries but other stakeholder institutions important for breeding, such as breeder's organizations are sometimes non-existent. Even in countries where networking on

AnGR is occurring, the roles and responsibilities of the various stakeholders are often not clear.

LESSONS LEARNT ON DISCONTINUATION OR FAILURES IN CROSSBREEDING PROGRAMS IN AFRICA

In 2014/2015, AU-IBAR undertook a study among 42 countries on the status and development of their AnGR. The Study was part of a broader programme whose goal was to get African countries to be effectively involved in the sustainable utilization of AnGR, and to carry out their functions in ways that ensure food security and improved livelihoods. As part of the Study, information was sought from COUNTRIES on:

The status of genetic improvement programs initiated by governments

The Study reported that there were 215 cattle genetic improvement programs on-going in Africa, of which 65 (30.2%) were crossbreeding. For sheep the numbers were 124 for which 29 (23.4%) were crossbreeding. The corresponding figures for goats were 119 of which 30 (25.2%). Many of the breeding programs that were still on-going had been running for a decade or more but there were also records of discontinued breeding programs. In the Study, a total of 22 countries reported of breeding programs that have had to be discontinued in the past for several reasons. Of these countries 11 (50%) reported of only one programme discontinued, 5 (25%) of the countries had discontinued two programs, whiles another 25% discontinued three programs. Whereas in few cases the discontinuation were related to lack of fitness of the animals produced to the environment, as for example Ghana's case of Cockerel Improvement programme in the early 1980s that led to the loss of broodiness in female birds, most programs were discontinued for lack of or misapplication of funds, a larger percentage of these related to insufficient funds to continue the projects when initial funding ended. However, cases related to misunderstanding among stakeholders also led to discontinuation. Botswana's discontinuation of a well-planned Bull Subsidy Scheme for small holder farmers in communal areas got discontinued because the purpose for the scheme was being defeated because farmers were now selling these subsidized genetically improved bulls to slaughter facilities at higher prices than improving their animals. It was gathered from information from Tanzania that most of crossbreeding programs in the country ceased due to climate change that could not favor exotics and crossbred, also partly due to low adoption of crossbred-based technologies by local farmers.

The reasons for the discontinuations

It was deduced from the results that for the programs or projects that got discontinued because of sufficient funds, lack of holistic planning was partly to be blamed. Where donor funds were used for the initial phases of the programs, the agreed termination dates should have spur on governments to make arrangements in good time for the programs

to continue. The fact that they were discontinued suggests inadequate planning and/or inadequate consultations among partners. The case of the discontinuing a Bull Subsidy scheme in Botswana because farmers used the genetically improved bulls for other purpose not agreed on, is an example of where lack of participatory planning may have occurred.

SETTING THE POLICY AGENDA

The agenda setting for policy discussions, formulation and the communication of the policies should include:

Limited technical knowhow

One important principle in the implementation of crossbreeding programs is that they should be launched in very strategic and realistic areas where impact can be demonstrated to build confidence. Crossbreeding remains a mating system and really needs to be thought of as a system of producing replacements. The choice of local breeds is important but these local breeds are threatened by indiscriminate crossbreeding. This mainly happens due to insufficient development of clear breeding objectives, control of breeding progress and continued supply of desired crossbred levels which were not sufficiently addressed in most countries and programs.

Weak monitoring and control

Local breeds are being replaced or developed using exotic germplasm without inventory and monitoring systems in place to determine the long-term impacts on indigenous breeds, or comparative studies to guide this development. The consequences are the lack of comprehensive knowledge of local resources and information, and their qualities, characteristics, accurate data on breed populations (difficult to estimate endangered breeds). The success of the programs is dependent on careful monitoring, i.e. measuring the performance of the progeny of distributed males.

Strong partnerships

Strong partnerships between public and private sector and market incentives were described as essential components for successful crossbreeding programs are often not sufficiently developed. Marketing activities should include the dissemination of information, publications and research results, as well as awareness raising efforts to inform the public on genetic resources. User guides and methodologies on how to approach these dedicated marketing developments are currently missing. This limits the exchange of good practices and therefore networking. Success stories on the valorization of local AnGR and value chain developments should be compiled and distributed via the existing networks.

Exchange of genetic material among countries and regions

While there are many positive examples of the introduction of genotypes, they are not always well adapted to the environment or the production system. Consequently, there are examples of the damaging effects of taking exotic material in order to improve local breeds. The development of (genetic) impact assessment methods or instruments may be worth considering as a basis for putting in place strategies to support the mitigation of the potential negative side effects of particular exchange practices. Application of impact assessments could start with the development of (soft) guidelines or a code of good practice. A more binding approach might involve the approval of an impact assessment by a relevant authority as a prerequisite for exchange.

Strengthening cooperation

Stakeholder fora could function as information and advocacy platforms for Stakeholders' needs. They could influence to a certain degree the direction of crossbreeding programs as they are responsible for deciding AnGR activities. Stakeholders could agree to practice controlled breeding; their capacity should be raised through trainings, enabling them in recording and allowing them to make informed decisions. Stakeholder bodies in the form of cooperatives and farmers associations could trigger private actor interactions with farmers and public actors at multiple levels. Stakeholder organizations could try to use their possibilities and demand what policies entitle crossbreeders to for the benefit of the AnGR sector development.

Weak institutional capacity of stakeholder organizations

Institutional development and capacity building are essential for many countries to enable them to achieve successfully the sustainable use of their AnGR. Improvement of the institutional environment could provide farmers with the required technical support or provide with improved breeding material. Short courses and on-farm demonstration sites could be suggested as ways to promote exchanges between farmers and scientists, and to enable "hands on" training, recognizing the advantages of farmers learning from experience and from fellow farmers.

Clarifying stakeholders' roles and responsibilities

Significant variation exists in the participation of stakeholders in breeding initiatives. Efforts must be well planned to achieve the desired outcomes and efficiently use scarce human and financial resources. Establishing transparent planning processes will enable all stakeholders to identify the main barriers and challenges that must be addressed; the most appropriate breeding options; and the resources that are needed for implementation. Clarifying roles and responsibilities among all stakeholders contributing to breed AnGR genetic improvement efforts and increased participation of the commercial sector would be highly beneficial. It will also provide an essential framework to coordinate actions

among diverse participants by indicating the roles and responsibilities of organizations, agencies and institutions.

Link negative impacts of crossbreeding schemes and the need for conservation efforts

The present conservation efforts vary significantly between countries, as does the capacity to implement conservation measures. Many countries do not have a comprehensive national conservation programme or policies for AnGR. The lack of capacity is preventing implementation of conservation measures, and thus, capacity building for AnGR. Several countries indicate that currently, in-situ conservation – sustainable on-farm operations, is the only practical conservation measure. Several countries express interest in developing niche markets noting that products from indigenous breeds are favored over products from exotic breeds. However, the negative impacts of indiscriminate crossbreeding practices, such as dilution of genes that confer adaptation in the indigenous populations, are rarely linked to the need for conservation efforts.

POLICY OPTIONS AND RECOMMENDATIONS

Policy options to resolve some of the outstanding issues and enabling environments for partnerships and collaboration in crossbreeding programs to thrive include:

- Governments of which almost all are signatories to the Convention on Biological Diversity (CBD), should as a matter of urgency, promote policies and legislations that promote the development and use local AnGR, as a way of stemming the tide in the practice of indiscriminate crossbreeding. Supporting in situ conservation and valorization of local AnGR and identifying priority activities is one of the key approaches to achieving this goal. The policy and legislation development should extend to national and regional crossbreeding regulations guidelines and model laws which should guide and support countries in establishing their own crossbreeding policies and legislations. Provisions in the national policies and legislations, relative to AnGR management, should insist on all genetic improvements demonstrate clearly defined breeding goals and objectives, indicate roles and responsibilities among all stakeholders, identify human, financial and infrastructure needs and priorities.
- Governments should create suitable environments and financial resources for outreach and awareness campaigns to promote greater awareness of the potential of local AnGR breeds. Awareness campaigns should be explicit on the challenges that have been associated with the implementation of crossbreeding systems in Africa, and links between the practice of crossbreeding and the loss of genes responsible for adaptability and productive and reproductive performance of indigenous AnGR.
- Governments should provide suitable environments and mechanisms that disseminate information on past crossbreeding projects, as well as those on-going, which failed or stand

a chance of failing, partly due to weak participation of breeders and other stakeholders in the formulation and management of crossbreeding programs. Governments should create environments and actions that empower relevant branches of governments to establish mechanisms within countries that promote and enhance interactions among all the main stakeholders in the livestock sector, including public agencies and private sector interests, farmers, farmer organizations, research and education institutions.

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