Research

Improving Communication in Agbiotech Projects: Moving Toward a Trust-centered Paradigm

Obidimma Ezezika and Justin Mabeya

Abstract

Communication with end users about agricultural biotechnology does not necessarily lead to commensurate adoption of biotech crops. Agbiotech communication implies challenges like disagreement between proponents and opponents of genetically modified (GM) technology and media influence on public opinion, both of which can negatively impact public trust in, and thus adoption of, biotech crops. We argue that communication strategies for introducing biotech crops should focus on building and fostering trust between project partners developing biotech crops and the community they intend to serve to facilitate effective adoption of the crops. Strategies should include a combination of knowledge dissemination; early and continuous communication; provision of training; emphasis on end-user benefits; and transparency about agbiotech projects – all with the aim of building and fostering trust between partners of agbiotech projects and the community.

Keywords

agricultural biotechnology, biotech crops, communication, trust

Introduction/Literature Review

In 2008, an application by the Agricultural Research Council (ARC) of South Africa for general release and farmer participatory trials of a new Bt potato variety (genetically modified SpuntaG2) was denied by the Directorate of Biosafety, Department of Agriculture, Forestry and Fisheries (Institute of International Agriculture, 2008). The Directorate cited a number of socio-economic and technical reasons (Agricultural Research Council, 2009) for its decision. On its part, Potatoes South Africa (PSA), a farmers' organization and a collaborator in the project, publicly opposed the application by ARC, saying the industry believed the potential damage of commercializing this technology would far outweigh the expected benefits (Pieterse, 2008). This example demonstrates the need for effective communication that goes beyond dissemination of accurate information through formal and legal channels (like agreements between project collaborators) on biotech crops to one that is focused on building and fostering trust in the process and the product.

This paper outlines strategies for applying a trust-centered communication model for biotech crops. These strategies emerged from an analysis of case studies data collected by the authors from 81 key informant interviews, one focus group discussion, and one farm visit with agricultural sector stakeholders involved in eight agbiotech projects in Burkina Faso, Egypt, Kenya, Nigeria, South Africa, Tanzania and Uganda. The purpose of the study was to understand the role of trust in public-private partnerships (PPPs) operating agbiotech projects in Africa. For each case study, interviews

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were conducted during the period between 2009 and 2012 in the aforementioned countries, including Zanzibar and the USA at the convenience of the interviewees. The interviews explored the interviewees' perceptions of trust among the partners and with the public, apparent challenges to trust building, and observed trust-building practices. Finally, interviewees were asked for their suggestions on how trust in agbiotech PPPs can be improved. Data for each case study was analyzed independently. Using the objectives as theoretical propositions, the data were analyzed by reading through the interview transcripts and generating recurring and emergent themes. The analysis was completed by reviewing relevant project documents and research articles. All the data were triangulated to create a comprehensive narrative on how trust is understood and built among the partners and with the community.

Individual case study findings presenting lessons on trust building have since been published. One cross-cutting emerging theme (which is the subject of this article) from the data analyzed was the need for a model of agbiotech communication that encompasses strategies that seek to build and foster trust between the project and the public rather than merely delivering information. Table 1 presents a preliminary summary of the key emerging themes discussed by interviewees with respect to a trust-centered communication model.

Table 1
Key emerging themes from interviewee responses

Theme		**Interviewee responses per theme (%)**
Clear and correct information	Have active communication between all stakeholders	41
	Provide sufficient information to the public	
	Information delivery should focus on building trust	
	Use communication experts for clarity	
Transparency about the project	Transparency builds trust among stakeholders	14
	Openness about the capacity of organizations to deliver	
Provision of training	Reduces complaints and mistakes by stakeholders	18
	Improves biotech communication and information delivery	
Benefits to the user	Knowledge of benefits improves trust in the technology and its adoption	13
	Benefit must be of significant magnitude to the farmers	
Early and continuous engagement	Constant and open communication builds trust	14
	Incorporate stakeholders views	

A trust-centered communication paradigm

In this paper, we posit that trust-centered communication — that is, communication focused on building and fostering trust — is more effective than plain delivery of information on agricultural biotechnology, which is the typical strategy of agbiotech communications. Trust-centered communication goes beyond awareness creation and dissemination of information about biotechnology to

the end users. While these involve spreading knowledge about the intentions and promises of the technology, they are not sufficient in and of themselves (Ezezika & Oh, 2012). Trust-centered communication focuses on building and fostering trust between the technology developer and end user. In this paper, we discuss five strategies of trusted-centered communication (see Figure 1): provision of clear and correct information; training of stakeholders on how to communicate; awareness creation by ensuring early engagement with the end-users; emphasis on how the end users can benefit from the technologies; and transparency within the project. Together, these strategies seek to address the challenges observed in agbiotech communication in Africa.

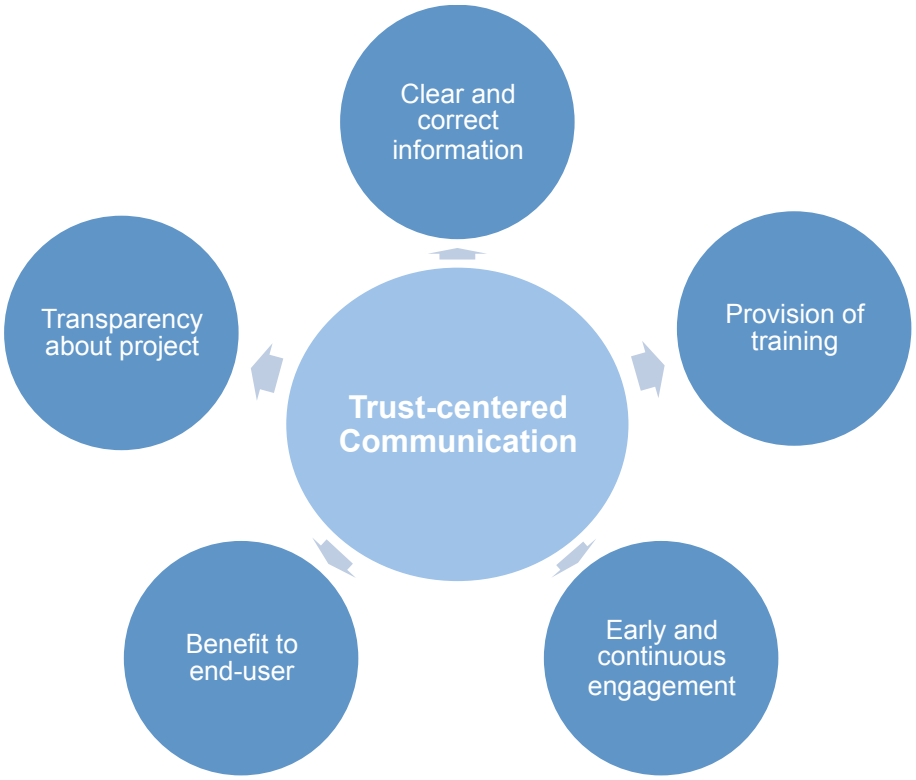

Figure 1: Strategies for implementing a trust-centered communication model

Effective communication on agricultural biotechnology is challenging

Communication in the field of agricultural biotechnology implies several challenges to the building and fostering of trust among agbiotech project partners and with the public. Such challenges include: polarization between the proponents and opponents of agricultural biotechnology; limited understanding among some scientists about what GM technologies consist of and their value to society; limited funding and low prioritization of the communication component of agbiotech projects; and negative public perceptions that arise from sensationalized media reporting.

Disagreements are prevalent between proponents and opponents of GM technology (Cooke J. G. & Downie, R., 2010; Mabeya & Ezezika, 2012). These disagreements may be caused in part by limited understanding or information on the part of scientists about genetic modification and its potential products. A lack of understanding by scientists — the would-be communicators — leads to skepticism about the technology and, in turn, the public's withdrawal of support for agbiotech development.

Limited understanding or information about the potential product can be a result of insufficient funding for agbiotech projects to hire, retain, and equip communication experts with the knowledge and tools to enable them to share information effectively about agricultural biotechnology (Mabeya

& Ezezika, 2012; Lundy, Ruth, Telg, & Irani, 2005). Limited funding may be attributed to low prioritization of the communication component during the planning stages of the projects, as was found in the Virus Resistant Cassava for Africa (VIRCA) project in Uganda and Kenya (Ezezika, Mabeya, & Daar, 2012a). In this study, it was found that agbiotech projects typically involve a variety of components — such as product development, communication, and regulatory — each of which are managed by teams of individuals from diverse backgrounds. One of the inherent challenges to managing projects with diverse membership is the inability to project a cohesive voice across the project teams. Occasionally, one component of the project is emphasized less than the others — such as communication and outreach, which are sometimes relegated to the periphery — which, as a result, can skew knowledge about the project.

The media also has been found to have a negative influence on how the public perceives partners in agbiotech projects (Sengooba et al., 2009). The public tends to have less trust in the private sector partners involved in agbiotech projects because of the way they are portrayed in the media. In some instances, the media's sensationalized reporting on biotech crops has been coupled with inaccurate information disseminated to the public. For example, there are cases of selective reporting on confrontations, rather than agreements, between proponents and opponents of biotech crops, and on public concerns about environmental safety (Sengooba et al., 2009).

Communication on agricultural biotechnology rarely focuses on trust

In recent years, there has been a surge in the number of agbiotech development initiatives because of the recognition that growing biotech crops is a potentially viable method to alleviating rising food scarcity and poverty in developing countries (Spielman, Cohen, & Zambrano, 2006). These initiatives often rely on the collaboration between private multinational corporations and public research institutions within the framework of a PPP (Denning et al., 2009; Pinstrup-Andersen & Cohen, 2000; Zheng, Roehrich, & Lewis, 2008).

However, one of the challenges to the successful implementation of agbiotech PPPs is distrust between the public and the private sector partners (Spielman & Grebmer, 2006; Ezezika et al., 2012). This distrust has been attributed partly to failure on the part of the latter (who are the technology developers and promoters) to target their communication efforts at building and fostering trust with the public; rather, they simply pass to the public facts about the technology. We observed that this failure may contribute to the public becoming susceptible to views that are in opposition to agbiotech crops, thereby heightening their distrust in the technology.

Building on the Cartagena Protocol's recommendation for awareness creation, public consultation, and information delivery (Center on Biological Diversity, 2000), many communicators have built their agbiotech communication strategies on a "knowledge deficit model" (Brossard & Shanahan, 2007). The knowledge deficit model works on the assumption that the more knowledge about biotech crops is shared with the public, the higher the likelihood for acceptance and adoption of the technologies. However, effective communication must include not only information delivery through public awareness and engagement measures but also building and fostering trust with the public, alongside risk communication (about the potential risk and science-based management) and mediated discourse (interaction in the media about agricultural biotechnology) (Brossard & Shanahan, 2007).

Since public trust is critical for adoption of biotech crops, there is a need for partners in agbiotech PPP projects to put in place practices for communicating with stakeholders, not only to ensure clarity of information about the technology, but also to enhance public trust in the technology.

Strategies of a trust-centered communication model for agbiotech projects

We propose five strategies that comprise a trust-centered communication model. The first strategy is the provision of clear and correct information about GM technology to the public. Disagreement between proponents and opponents of GM technology implies, to some extent, failure to agree about certain aspects of biotech crops. As found in the Insect Resistant Maize for Africa (IRMA) project (Mabeya & Ezezika, 2012), provision of sufficient, clear, and correct information about GM technology to the public is likely to enable individuals to make independent, informed decisions without having to engage them in the divisive debate on GM technology. The use of multiple channels of communication — such as using professional communications organizations, holding stakeholder workshops, and distributing brochures and leaflets to the various stakeholders — may enable information about biotech crops to reach more people.

This strategy presumes that once the members of the public have received the information it will empower them with the knowledge needed to make their own judgment and thereby address misconceptions that may exist about the technologies. However, it was found in the Bt cotton project in Burkina Faso (Ezezika, Barber, & Daar, 2012) that this strategy needs to be supplemented with other strategies, which we elaborate on below.

The second strategy of trust-centered communication is the training of specific stakeholders on enhancing the delivery of knowledge and information on agricultural biotechnology to other project stakeholders and the public. For example, the training of journalists and scientists on effective communication about the science of agricultural biotechnology was carried out in the Bt cotton project in Burkina Faso (Ezezika et al., 2012). These trainings often have led to a reduction in inaccurate and sensationalized reporting, thus contributing to improved delivery of information (Sengooba et al., 2009).

The information delivered must also be harmonized, in terms of accuracy and consistency, to ensure the end users (farmers) are not led to confusion by information coming from multiple sources. For example, an initiative referred to as the National Biotechnology Awareness Creation Strategy (BioAware Kenya) (ISAAA Crop Biotech Update, 2011) was set up to coordinate and improve access to balanced (harmonised) findings and to demystify biotechnology. BioAware Kenya provides training to experts on how to provide accurate and consistent biotech information to stakeholders in a coordinated manner.

A third strategy for trust-centered communication is provision of early, proactive, and continuous communication. This strategy was used by the partners in the Bt cotton project in Burkina Faso (Ezezika et al., 2012). Currently, a number of agbiotech projects in Africa are in the research and development (R&D) phase. During this phase, there is a tendency for the projects to proceed with R&D while neglecting the need to pursue active communication with the public. Project management components, including R&D, communication, and others, need to be carried out in tandem to prevent perceptions among project partners that one project component is being favored over another and instead encourage project partners to build team spirit. This will contribute to building trust among the partners and with the community.

A fourth strategy is to communicate how the end users specifically will benefit from the technologies and to listen to their concerns. The importance of this was found in the case of Bt maize in South Africa (Ezezika, Lennox, & Daar, 2012), in which it was reported that when the promoters of the technology showed how the technology could improve farmers' socio-economic status, there was a higher likelihood for farmers to form trust in the products and its promoters. However, when the focus was only on the gains made by the promoters of the technology — which is often represented

by their recouping of the costs of technology development — then trust was compromised (Ezezika, Lennox et al., 2012). Further, the community wants to be listened to, not preached to. The project partners should listen to the community's fears and feelings pertaining to the technology. Listening to the end user can be enhanced by using the local language, which will result in better understanding and retention of information by the community, as was observed in the Bt cotton project in East Africa (Ezezika, Mabeya, & Daar, 2012b).

The fifth strategy is ensuring transparency within agbiotech projects. Trust-centered communication espouses transparency about all of the project's activities, engagements, and experiences. This involves informing the public of challenges and risks in the project and those implied by agricultural biotechnology in general as well as of the possible risk-mitigation strategies in place. Stakeholders also want to know the status of intellectual property ownership of the technology. Differences in opinions should be carefully and openly discussed so the stakeholders are able to build confidence and respect for each opinion. A study on the role of trust building in agbiotech PPPs in Africa found that transparency in communication must entail reporting about bad results, even if they may be damaging to the reputation of the project (Ezezika & Oh, 2012). That way, honesty is proven and trust among the communicating parties enhanced.

Conclusion

Agbiotech projects continue to engender scepticism and distrust among stakeholders for reasons ranging from its involvement of the private sector to questionable merits of agricultural biotechnology. This has, as a result, had a negative impact on the development and adoption of biotech crops. To address this challenge, the communicators of agricultural biotechnology have devised communication strategies such as the 'knowledge deficit model,' which assumes the end users will adopt biotech crops if they have knowledge about them (Brossard & Shanahan, 2007). While these strategies emphasize knowledge dissemination and awareness creation among the stakeholders, we believe they can be further enhanced by also focusing on building and fostering trust. Trust-centered communication strategies build on awareness creation with targeted stakeholder training; early, proactive and continuous communication; emphasis on how the end user benefits from the technologies; and transparency about the processes and products of the agbiotech projects.

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