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Case studies on smallholder farmer voice: an introduction to a special symposium

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Abstract In the spring of 2013, project leaders who received funding from the John Templeton Foundation's program "Can GM Crops Help to Feed the World?" met in England to discuss progress on funded projects and to identify common objectives and research interests. The collection of essays in this special symposium is one outcome of that meeting. This introduction provides background on the symposium's theme of understanding the challenges to smallholder farmers having a voice. Farmer voice is important not only in debates about genetically modified crops but also for policies, technologies and other efforts designed by interests seeking ostensibly to improve the livelihoods of smallholder farmers.

Keywords Farmer voice · Smallholder farmer livelihood · New technology · Genetically modified organisms

Introduction

This collection of essays deals with the topic of farmer voice. Farmers have a voice when their preferences, perspectives, knowledge and needs are considered when policies, standards and technologies are developed with the intention of improving farmer livelihoods. Farmer voice is more than merely asking farmers what they think about a particular policy or new technology. For farmers to have a voice, they must be empowered and active participants, not passive recipients. They must be equal to other stakeholders participating in decisions about objectives, methods, scope and dissemination plans. By farmers we mean primarily smallholder farmers, particularly those in developing countries, although lessons here could apply to other marginalized groups.

In this introduction we provide background on the issue of farmer voice, identify challenges keeping farmers from having a voice and efforts to overcome those challenges, and describe the collection of essays in this symposium.

Background and barriers

There is a growing awareness among researchers that the voice of smallholder farmers, especially those in developing countries, are not being heard (Aldaba 2002; Hall et al. 2004; Dolan and Opondo 2005; Cheyns 2014; Silva-Castañeda 2012). As Cheyns (2014, p. 443) recently stated: "Family farmers and local communities feel that their voices are not heard and that their concerns are not taken into account." Indeed, smallholder farmers often have a weak or non-existent voice in influencing "changes to political power and policy" (Stringer et al. 2008, p. 239). This is because of their low socio-economic status (Friedmann 1992; Béné 2003) and because "[t]here are many power barriers that prevent the voice of smallholders and workers being heard" (Nelson and Tallontire 2014, p. 495).

One problem perpetuating a weakness of farmer voice is that researchers often assume that they know farmers, their challenges, and solutions to these challenges, as well as farmers' preferences (Cheyns 2014; Pimbert 2010). As an illustration, Cheyns (2014) recounts a case where a member of the Indonesian Oil Palm Farmers Union stated that a researcher with a PhD in Chemistry was disruptive of his (the member's) efforts in the Union. The reason? The

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researcher thought he was "better placed than you (the farmer) to speak on farmers' behalf." Thus, emblematic of the problem of farmer voice is the fact that research findings are often handed to small-scale farmers without first seeking their input in the research process (Pimbert 2010). When this happens, farmers might be blamed when research output, such as a new crop varieties, fails to yield the expected results. According to Pimbert, researchers never ask the question, "Is there something wrong with the research itself?" (p. 1). There might be something wrong with the research if it fails to incorporate farmer voice.

Consequently, scholars and scientists are beginning to acknowledge the need to involve farmers in agricultural research and development (e.g., Ashby and Sperling 1995). An example here is participatory research. "The key difference between participatory and conventional methodologies lies in the location of power in the research process" (Cornwall and Jewkes 1995, p. 1667). Power is located more closely with smallholder farmers when researchers utilize participatory methods, because the primary objective of participatory methods is the empowerment of marginalized groups rather than the achievement of specific scientific or policy objectives (Bruges and Smith 2008). As explained by Valdivia et al. (2010, p. 819):

> Participatory research allows farmers and scientists to develop a common set of expectations and vocabulary to discuss alternative strategies. By participating in research, farmers can make their own observations and can derive lessons from research beyond those conclusions presented by the researcher.

Consistent with this view, Stringer et al. (2008) proposed that through dialogue and sharing of experiences, and by enhancing unity among themselves, farmers could have a stronger voice that would culminate in better representation for them.

Other scholars suggest the need for a "decentralized client-driven technology development" that provides interaction between researchers and farmers that takes into account smallholder farmers' knowledge, needs, and preferences (e.g., Ashby and Sperling 1995). Examples here are multi-stakeholder initiatives (MSIs) and multi-stakeholder processes (MSPs), which consist of venues designed to bring together individuals, groups or organizations that have diverse interests and values but have a desire to achieve a common objective. Although many MSIs and MSPs are designed to coordinate the interests of business, NGO and government stakeholders only (Cheyns and Riisgaard 2014), some are developed with the intention of giving smallholder farmers and workers a voice, although with varying degree of success (Cheyns 2014).

Voices of smallholder farmers could also be heard through the formation of producer organizations such as cooperatives (Hall et al. 2004). These initiatives might be beneficial because, aside making the voices of farmers heard, they can facilitate consensus building and help to resolve conflicts among traditionally competing stakeholders (Dolan and Opondo 2005). Stringer et al. (2008) note that small-scale farmer voices could be heard if, during workshops and exchange visits, they are allowed to interact with stakeholders.

Smallholder farmers encounter challenges in their bid to make their voices heard due to what Cheyns (2014) describes as: (1) vertical hierarchical relationship between smallholder farmers and company managers or directors and (2) priority being given to interest groups over and above the concerns of smallholder farmers. For instance, Dolan and Opondo (2005, p. 89) note that MSPs "can also incorporate a narrow range of actors, who may not reflect the interests of intended beneficiaries (e.g., workers)." The reason is that MSIs are generally shaped or controlled by business interests (Cheyns and Riisgaard 2014). Participatory processes can also fail when the social distance between researchers and smallholder farmers is too large, making mutual communication and understanding difficult (Bentley 1994).

Non-governmental organizations (NGOs) can be helpful in making smallholder voices heard by helping transform smallholder voices so that they are compatible with the liberal grammar of the MSIs (e.g., Roundtable on Sustainable Palm Oil) (Aldaba 2002; Cheyns 2014; Silva-Castañeda 2012), and by providing solitude and care to affected people and helping them prepare for public speaking (Cheyns 2014). However, these can be ineffective if "they tend to reinforce existing power inequalities" (Nelson and Tallontire 2014, p. 495). Moreover, international NGOs cannot adequately represent smallholders or vulnerable groups unless they are on the ground with these people (Fransen and Kolk 2007). Therefore, if NGOs are to help with making smallholder voices heard, then they ought to be close to smallholder farmers (Cheyns 2014). Another problem is when policies and recommendations (e.g., ethical codes) do not conform to the desires and contexts of smallholder farmers in developed countries (Dolan and Opondo 2005; Pimbert 2010). Farmers concerns or attempts to make their voices heard may also simply be snubbed (Cheyns 2014).

This collection of case studies

Although there is a growing body of research that recognizes the importance of incorporating the voice of farmers in policy debates, scientific research activities and other endeavors, more work is needed in understanding specific barriers to farmer voice in specific contexts, and in assessing the potential of overcoming these barriers. In other words, what is needed is a dedicated effort to develop

case studies that focus directly on the topic of farmer voice. This collection of essays fills this void.

These essays emerged from a workshop held in Cambridge, England, in the Spring of 2013, organized by the NGO Biosciences for Farming in Africa (B4FA) in cooperation with the John Templeton Foundation (JTF). Participants in the workshop were project leaders who received funding from the JTF as part of their program entitled "Can GM Crops Help to Feed the World?"[1] The purpose of the workshop was for project leaders to provide a status report on their projects and for project leaders to get to know each other. Many projects examined the role of GM crops in improving the livelihoods of smallholder farmers.

During the workshop project leaders discussed common elements of their projects, including the importance of working closely with smallholder farmers in order to understand their perspectives and the context within which GMOs would affect them. It is from this discussion that this collection of essays arose. Specifically, a sub-group of attendees at the Workshop felt a need for a more concerted effort to identify successes and continued challenges of increasing the voice of smallholder farmers, especially since many of the funded projects had objectives of identifying and overcoming barriers to farmer voices.

This collection of essays contains five case studies of JTF-funded projects and activities designed to increase the voice of smallholder farmers. All essays were peer reviewed. The essays describe these efforts and provide a critique of their success. In particular, after providing a brief introduction to the context, the authors describe specific challenges and barriers to farmer voice. The authors then consider ways in which their projects have intended to overcome barriers to farmer voice and the extent to which these efforts have been successful.

Description of cases

The following briefly summarizes the case studies in this symposium.

Schnurr and Mujabi-Mujuzi examine the case of matooke farmers in Uganda. Matooke is a starchy banana that is typically consumed cooked rather than eaten raw, and it is one of the primary sources of carbohydrates for poor Ugandan farmers. Researchers are developing GM varieties of matooke that are resistant to plant diseases and that are biofortified. Schnurr's JTF grant examines the "attitudes and intentions" of smallholder farmers in Uganda to adopt GM crops (Schnurr 2014). According to Schnurr and Mujabi-Mujuzi, matooke farmers are "virtually shut out of [the] contentious debate" regarding biotechnology (this issue). Typically, researchers, policy officials and biotechnology proponents and opponents talk to but not with smallholder farmers. In identifying specific problems or barriers, the authors focus on the research process and research dissemination efforts. In particular, the barriers they identify are (1) researchers taking surveys and then modeling the data using econometric techniques that presume farmers are rational profit maximizers; and (2) researchers communicating strategies typically targeting elites, such as policy makers and urban consumers. Schnurr and Mujabi-Mujuzi also consider participatory approaches to overcome these barriers, but with mixed results.

The case study by Stone and Flachs considers smallholder farmers of cotton in India and rice in the Philippines. Stone's JTF grant "examines effects of technological change on farmer knowledge and decision-making in both cotton and rice farming in India, and in rice farming in India and the Philippines," with a particular focus on farm management practices and seed choice resulting from the introduction of Bt cotton and Golden Rice (2014). Stone and Flachs identify three important biases affecting the voice of smallholder farmers: information, individual and short-term. Information bias means that farmer voice is affected by the information given to them—information which is typically controlled by outside interests, such as scientists and policymakers. Individual bias is the idea that assessments of farmer opinions are often made independent of the social and cultural contexts within which farmers live. Short-term bias reflects the effort of researchers and others to focus on "short-term yield advantages in the first year or two after adoption" (this issue) rather than on long-term effects on farmer well-being. They argue that because of these biases, efforts to improve farmer voice will not improve substantially.

Carro-Ripalda and Calderón's essay examines the effect of the GM maize controversy in Mexico on smallholder farmer voice. Carro-Ripalda's JTF grant looks at the nature of the GM debate in India, Brazil and Mexico. She is particularly interested in how "social, cultural and religious factors … shape the acceptance, use and resistance to GM crops" in these three countries (Macnaughton and Carro-Ripalda 2014). In their essay, Carro-Ripalda and Calderón find that in Mexico the "pro-GM camp … continue(s) to make very little attempt to collect or comprehend small farmers' opinions regarding this agricultural biotechnology, [while] the anti-GM coalition … includes smallholder farmers' representatives" (this issue). Nevertheless, important barriers exist limiting the voice of smallholder farmers in Mexico. These barriers arise because of concerns about the expertise of farmers to offer opinions about

[1] For a description, see https://www.templeton.org/what-we-fund/funding-priorities/can-gm-crops-help-to-feed-the-world. See also http://b4fa.org/can-gm-crops-help-to-feed-the-world/.

GMOs, the misrepresentation of farmer attitudes and opinions by other stakeholders, the way in which others perceive smallholder agriculture compared to conventional farming practices, the lack of a political and institutional mechanism for including smallholders in policy debates about GMOs, and the fact that smallholders frame issues differently than other stakeholders. They conclude with a relatively normative assessment that smallholder farmers have a right to be included in debates about GMOs.

Hendrickson and her colleagues are interested in the extent to which GM maize is adopted in South Africa. Their JTF grant involves the creation of a "community of practice," whereby smallholder farmers who have not grown GM maize are given an opportunity to do so and to share in the development of new knowledge obtained from their experiences (Meyers et al. 2014). In their case study, Hendrickson et al. note the general inability of smallholder farmers in South Africa to access GM maize. They also identify a number of barriers to farmer voice in South Africa resulting from their being marginalized and lacking access to basic extension services, in part because during Apartheid the government operated dual extension services—one servicing white commercial farmers and the other servicing black farmers. They also identify a widespread lack of knowledge about GM crops, even though South Africa was the first African country to approve GM crops for commercialization. Post-apartheid politics further complicate efforts for small-scale farmers to having a voice. That said, Hendrickson et al. are optimistic in ability of the community of practice and similar mechanisms to improve farmer voice.

Valdivia and her colleagues focus on the well-being of smallholder farmers in Kenya, for whom cassava is an important food security crop. Like the case of matooke bananas described above, cassava is being genetically modified for disease resistance and biofortification. Their JTF grant examines the potential risks and benefits of introducing GM cassava in Kenya, with a particular emphasis on developing effective ways of communicating these risks and benefits to smallholder farmers and other stakeholders (James et al. 2014). The essay by Valdivia et al. identifies several barriers that prevent smallholder farmers in Kenya from having an effective voice. These include (1) fragmentation of farmers and difficulties of farmers working collectively, (2) not understanding the specific contexts of farmers, such as the uncertainty arising from climate change, when informing farmers about new technologies, and (3) farmers and scientists (and other stakeholders) utilizing different knowledge systems. Their case study suggests that there is a potential for translational research processes to help overcome these barriers.

Summary

The aim of this collection of essays is to bring attention to the issue of farmer voice. These essays highlight specific barriers and challenges to farmer voice and provide insights into efforts intended to make the voice of smallholder farmers heard, especially regarding the development of new agricultural technologies, such as GMOs. If there is a message these essays provide, it is that we have a long way to go.

Stone and Flachs, as well as Schnurr and Mujabi-Mujuzi, are skeptical of current efforts to improve farmer voice. Both essays state that there are persistent barriers preventing meaningful improvement in farmer voice, especially when researchers assume to know what smallholder farmers know and want. To this end, researchers can help give farmers a voice if they involve these farmers in the research process and not sidestep them when communicating their findings and recommendations, a message supported by Hendrickson et al. and Valdivia et al. in their essays. For example, participatory research could help reduce the magnitude of information and individual biases described by Stone and Flachs, as well as encourage a long-term perspective on agricultural research in order to overcome the short-term bias. Furthermore, framing and knowledge barriers common to the cases described by Carro-Ripalda and Calderón and by Valdivia et al. suggest that differences in knowledge systems, cultural and social contexts of farmers as well as researchers' misperceptions about farmers' knowledge and expertise all pose challenges to farmers making their voices heard. Thus, efforts to give farmers a voice need to take all these considerations into account through participatory research processes. In countries where GMO debates are still unsettled (e.g., Mexico and Kenya), it would be both appropriate and necessary to involve smallholder farmers in discussions about GMOs so that pro-GMO and anti-GMO campaigns adequately reflect the interests of smallholder farmers and other marginalized stakeholder groups. Doing so would not only provide an avenue for small-scale farmer voices to be heard, but also furnish researchers with more knowledge about farmer expertise, preferences, social and cultural contexts necessary for understanding and communicating the short- and long-term implications of biotechnology application in agriculture.

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