

EDITORIAL

Agricultural extension in Latin America: current dynamics of pluralistic advisory systems in heterogeneous contexts

Similar to other parts of the world, in Latin America agricultural extension systems¹ have gained renewed attention in policy discourse and practice in recent years (Alemany and Sevilla-Guzmán 2007; Aguirre 2012), in order to help achieve multiple goals, such as equitable rural development, transfer of technologies aimed at increasing agricultural productivity, food security and adaptation to climate change. Latin America provides an interesting context for studying the dynamics in extension systems, because (1) in many countries there are pluralistic extension systems with different types of providers and the state often has outsourced extension, (2) many countries have agricultural sectors consisting of both commercialized export-oriented agriculture by large farms and smallholder agriculture and (3) several innovative extension initiatives and proposals have been developed in the region drawing on local academic traditions, which can enrich the global debate on rural extension.

In the past decades, work on extension system dynamics in Latin America has appeared in English language scientific journals. This work has focused on the organization of extension systems, extension methods and its role within the broader agricultural innovation system (see e.g. Bebbington and Sotomayor 1998; Berdegúe and Marchant 2002; Carrasco, Acker, and Grieshop 2003; Gonzalez and Salgado 2004; Quintana 2004; van Leeuwen, Beekmans, and van Haeringen 2007; Muñoz-Rodríguez and Altamirano-Cárdenas 2008; Dutrénit, De Fuentes, and Torres 2010; Namdar-Irani and Sotomayor 2011; Hellin 2012; Landini and Bianqui 2013; Landini 2015; Landini and Bianqui 2014; Aguilar-Gallegos et al. 2015; Klerkx, Álvarez, and Campusano 2015). However, recent studies from Latin America remain under-represented in English language scientific journals, such as the JAEE. We are aware that there is a wealth of insights available through studies in Portuguese and Spanish language publications and policy reports (Alemany and Sevilla-Guzmán 2007; Muñoz Rodríguez and Santoyo Cortes 2010; Aguilar Ávila et al. 2011; Aguirre 2012), but these may not reach part of the scholarly community.

This special issue aims to fill this gap, by bringing together a collection of papers which document recent dynamics in agricultural extension systems in Latin America. In this introductory paper, we will set the scene for the special issue by providing a historical overview of the evolution of extension systems in Latin America, we will introduce the papers in the special issue and we will draw some overarching discussions from these, and will give some reflections on the process of organizing this special issue and scholarship on extension in Latin America.

Historical overview: evolution of extension systems in Latin America

The origin and evolution of extension systems differ across countries and regions of the world (Da Ros 2012). For Latin American extension systems, there is a strong agreement on the key role played by the United States in the creation of most of them (Lelis, Coelho, and Dias 2012). During the late 1940s and 1950s, in the context of the post-World War II and the beginning of

the Cold War, the United States provided funding and technical assistance for the creation of extension institutions all over Latin America (Otero and Selis 2016). From 1943 to 1956, extension services were created with the support of the United States in several countries (in chronological order): Peru, Venezuela, Brazil, Bolivia, Nicaragua, Honduras, Paraguay, Ecuador, Colombia, Guatemala and Argentina. The extension approach was aimed at the modernization of agriculture, the transfer of green revolution technologies and the incorporation of small farmers into the market (Da Ros 2012). From the 1950s to the 1980s, Latin America adopted the same extension system more or less uniformly, in which the service was provided by government employees, who worked under a mostly linear and diffusionist approach (Landini and Riet 2015).

During this 'diffusionist' period, an alternative approach emerged in the context of what was named as dependency theory (Tort 2008), a perspective that discussed the unequal relationships between central (wealthy) countries and the periphery (developing countries). In this context, the dialogical extension approach proposed by the Brazilian author Paulo Freire (1973) consolidated. His extension model focuses on the need of developing farmers' critical awareness on the social relations of production that generate and reproduce social inequity and highlights the importance of drawing upon farmers' knowledge and experience and establishing a horizontal, interactive, co-constructive relationship between extensionists and farmers. Importantly, this extension approach had a strong political emphasis, which is still relevant nowadays for inspiring extensionists all over Latin America.

In the 1980s, rural extension institutions faced a deep crisis. In Latin America, the fiscal and economic crisis, the criticism against the diffusionist extension approach aimed at supporting agricultural modernization and the progressive consolidation of the neoliberal agenda led to a period characterized by pressures toward the privatization of public extension services (Thornton 2006; Diesel et al. 2008; Da Ros 2012). Beyond the differences between countries, the crisis of the traditional extension systems was characterized by an abrupt reduction in the public funding for extension, dismantlement of extension institutions and outsourcing of extension work to the private sector (Thornton 2006; Ardila 2010).

In the 1990s, the countries of Latin America responded slowly and differentially to gaps that had emerged in extension systems, building and applying a range of approaches and models to renovate their extension system. These models led to increase the diversity of actors that provide extension services (Diesel et al. 2008), to focus on rural poverty and family farming (Tort 2008) and with an increasing appreciation of farmers' participation in extension processes, in line with the recommendations of international aid organizations (Da Ros 2012).

Since the mid-2000s, with important differences between countries, extension has regained interest by public policies (Alemany and Sevilla-Guzmán 2007; Aguirre 2012), which lead to the strengthening (in some cases the recovery) of national extension institutions. During this period, the focus on family farming remains, as well as the valorization of participatory processes and pluralism of extension providers. Interestingly, the territorial approach to rural extension and development processes has generated increasing interest. This approach highlights the importance of the multi-actor and inter-institutional nature of development processes, thus aiming at supporting the articulation of institutions and actors at a local level in the context of development platforms (Tort 2008; Ringuet 2010; Da Ros 2012). Alongside, there is also a role for agri-business firms supplying extension services in the context of contract farming schemes (Namdar-Irani and Sotomayor 2011; Babu, Sette, and Davis 2016; Zhou 2016).

Hence, Latin America currently provides an interesting context of pluralistic extension systems, with several innovative initiatives and proposals, which have been developed in the region drawing on local academic traditions and which can enrich the global debate on rural extension.

The papers in this special issue: a focus on new arrangements, heterogeneous demands and politics in pluralistic extension systems

This special issue comprises studies from four countries in Latin America: Argentina, Brazil, Costa Rica and Mexico. Obviously, based on this limited number of studies no general conclusion can be drawn on the state of extension systems in the whole of Latin America, but nonetheless tentatively some cross-cutting issues can be identified which seem to play out beyond the context of single countries. Before we discuss these cross-cutting issues, we will briefly introduce the four papers featured in the special issue.

The first paper by Fernando Landini engages with the ongoing debate on demand-driven extension (Rivera and Alex 2004; Klerkx, De Grip, and Leeuwis 2006; Klerkx and Leeuwis 2008; Kibwika, Wals, and Nassuna-Musoke 2009; Parkinson 2009; Kilelu, Klerkx, and Leeuwis 2014) and analyzes the dynamics of interaction between extensionists and farmers in Argentina, seen from the perspective of the extensionist. He finds that different types of relationships co-exist: a more traditional diffusionist approach goes side-to-side with a co-construction approach. The type of approach is articulated in a negotiation between demand and supply, in which also power dynamics play out as regards which topics are given attention and which type of recommendations are given. Diffusionist extensionists have a tendency to generalize the validity and usefulness of their own technical knowledge and to reject the value of farmers' local one, establishing a hierarchy between both. Constructivist extensionists acknowledge the limitation of their own knowledge and capacities, and value the farmers, thus considering that best fit practices and innovations are the result of a co-constructive process. However, this does not mean that more diffusionist extensionists should be branded as non-adequate, as they put a lot of emphasis on building trust relationships with their clients. They also highlighted the importance of giving recommendations that fit farmers' practices, preferences and rationales. Diffusionist extensionists also emphasized the importance of trust and of building a good relationship between extensionists and farmers more often than constructionists, which challenges stereotypical perceptions of diffusionist extensionists. The paper shows that both extension approaches (diffusionist and constructivist) are not only different practices but are also rooted in different worldviews and conceptions of what knowledge is and how it is constructed, and reveals the existence of extensionists that support both diffusionist and constructivist beliefs. In line with this conclusion on the co-existence of diffusionist and constructivist beliefs and actions, Landini also make an interesting distinction between request-driven and demand-driven extension services, and questions the assumption that the demand is prior to or independent from the interaction between farmers and extensionist: how would farmers know what to demand without knowing all the available alternatives and, what is more, without discussing, analyzing and reframing their problems with the extensionists? Landini therefore argues that most importantly, attention should be paid to support extensionists (many of which still have a diffusionist approach) in organizing an adequate demand articulation process in which there is a good power balance between farmer and extensionist which leads to a meaningful dialogue.

The second paper by Vivien Diesel and Marcelo Miná Dias provides an interesting insight in the political economy of extension system reform in Brazil, related to its focus on inclusiveness toward smallholders and a focus on agro-ecological ways of farming. This paper connects to an observation by Birner et al. (2009) that in the analysis of extension system reform and the discussion on 'best-fit' extension systems political economy aspects should not be underestimated, an issue which has been addressed by a number of papers in recent years (Parkinson 2009; Mahon, Farrell, and McDonagh 2010; Berhanu and Poulton 2014). In their paper, Diesel and Miná Dias analyze the implementation of

a nationwide extension program focused on an agro-ecological transition and endogenous development, delivered decentrally through state–civil society partnerships. They show that the hard reality of program implementation and the political negotiations at different macro and micro levels, led to a reframing of the program, which affected the target groups, the mode of delivery (toward contracting-out), and the normative orientation of the program (from agro-ecology to a fuzzier definition of sustainable development). It shows the influence of policy programs of changing governments on extension program implementation and focus, how the diversity of farmers (smallholders, indigenous groups and agro-industrial large farmers) is hard to accommodate in a single extension approach, and how lobby groups connected to different groups of farmers try to influence the program in their favor. Interestingly, many influences on the execution of the program were due to long-established path-dependencies and lock-ins, which shows that new extension programs do not land in a vacuum. Diesel and Miná Dias therefore provide a reality check on taking the political economy of extension system reform seriously, especially in countries of Latin America where similar to Brazil a great diversity exists in types of farmers, and where political changes are highly influential on policies and their enactment on the ground.

The third paper by Anna Snider, Eva Kraus, Nicole Sibelet, Aske Skovmand Bosselmann and Guy Faure, provides insight in the diversity of players in pluralistic extension systems, and focuses on producer organizations which are increasingly recognized as an important player in service delivery to farmers, either through direct provision or by coordinating access to services (Devaux et al. 2009; Gouët and Van Paassen 2012; Yang, Klerkx, and Leeuwis 2014; Kilelu, Klerkx, and Leeuwis 2016). The paper is set in the context of agri-food standards, which increasingly have become a reality for Latin American farmers given their insertion in global supply chains (Farina et al. 2005; Bain 2010; Ruben and Zuniga 2011; Klerkx, Villalobos, and Engler 2012), and which require an ‘upskilling’ of the farmers which are members of the coffee cooperatives studied. The main findings of the paper are that the cooperatives act as intermediaries linking their members to relevant services, thereby also interpreting and filtering the advisory services so that the services help farmer’s comply with standards, but also address other needs of farmers, as well as broader public goals. The effort of cooperatives to ‘upskill farmers’ was aided by a broader institutional environment of government and NGOs creating awareness on the importance of certifications and more generally sustainable agricultural practices. While the certifications contributed to a more holistic approach to coffee production by addressing new topics regarding sustainable agricultural practices, and innovative new roles in service coordination by cooperatives, extension methods remained rather traditional and not fully suited to supporting co-learning approaches suited to the complexity of sustainable farming practices, indicate a need for advisor capacity building. However, here also a trade-off played out between having intensive learning with some farmers or supporting a large number of farmers. Despite all the efforts, the authors found that reduction of pesticides was modest, indicating that extension has an influence but is part of a broader institutional environment. This requires broader interactions in the overall innovation system, in which cooperatives could facilitate the formation of broader innovation platforms.

Lastly, the fourth paper by Tania Carolina Camacho-Villa, Conny Almekinders, Jon Hellin, Tania Eulalia Martinez-Cruz, Roberto Rendon-Medel, Francisco Guevara-Hernández, Tina D. Beuchelt and Bram Govaerts brings us to Mexico and the debate on how to deal with heterogeneous demands and styles of farming and show sufficient flexibility in larger programs to accommodate these (Namdar-Irani and Sotomayor 2011; Labarthe and Laurent 2013; Kilelu,

Klerkx, and Leeuwis 2014; Aguilar-Gallegos et al. 2015; Totin et al. 2015). The authors report on the implementation journey of MasAgro, a large program in Mexico promoting conservation agriculture, through the concept of 'hubs'. These hubs are nodes around which networks of advisors and other support agents are brought together with farmers and other relevant actors, in which a so-called hub manager acts as a broker. The authors document how the program has evolved from a technology transfer focus to a broader participatory innovation focus, and worked out quite differently in the different regions it was implemented. Each hub is unique in terms of its different agro-ecological, socio-economic, cultural and political characteristics, which called for hub managers having to negotiate, identify and create opportunities for collaboration in their region. Hence, the authors follow Klerkx, Aarts, and Leeuwis (2010) here and argue that 'adaptive management' of innovation is needed, and a key message of the article is that large programs such as MasAgro cannot take a 'one-size-fits-all' approach. The MasAgro experiences offer lessons for national public efforts to transform agricultural advisory services and accommodate a pluralistic agricultural extension system in Latin America, which according to Camacho et al. will need long-term coherent macro-level visions, frameworks and support, while the serendipity and opportunistic elements of the process in the dynamic and heterogeneous context ask for space and capacity of implementers to respond and adapt.

If we take these four papers together, despite that these obviously have different analytical foci and empirical realities, a number of cross-cutting observations can be made:

- 1) The need to deal with heterogeneity. Most Latin American countries are large, and host different types of production and different types of producers; with large variations in institutional and budgetary capacities between countries. This heterogeneity calls for accommodating and fostering diversity, as above all the papers by Diesel and Miná Dias and Camacho et al. show. This implies that extension approaches should be able to accommodate a certain degree of flexibility, and should be able to respond to different demands, which leads us the next cross-cutting issue.
- 2) The persistence of traditional, diffusionist extension approaches and the need to foster more flexible and demand-driven ones. The notion of demand can be explained here in different ways. Firstly, farmers are faced by new demands on them such as standards, as Snider et al. show. This leads to new demands in terms for support of extension services, and the papers by Snider et al. and Camacho et al. show that this requires support to build capacity among extensionists to provide the right support to assist in farmer learning. As the paper by Landini shows, this may require a considerable change in mindset. As Landini also argues, demand-driven does not mean that the supply side (extensionists) do not have a say in the services delivered, but it is rather about a meaningful dialogue between demand and supply. Here, as the papers by Snider et al. and Camacho et al. indicate, brokers between demand and supply seem to be essential to navigate pluralistic extension systems, and more broadly agricultural innovation systems.
- 3) Lastly, an important point to be made as regards reform of pluralistic extension system which appears as cross-cutting, is the political nature of these reforms. Given the multiple goals to be met in Latin American countries with heterogeneity in farmer types, large programs such as PNATER in the case of Brazil and MasAgro in the case of Mexico, their implementation implies political struggle. While on the one hand this is natural and may lead to adaptation to actual circumstances as the paper by Camacho et al. shows, it may also contradict original goals of extension reforms due to capture by incumbent actors and interests, linked to path-dependency in extension systems.

Concluding reflections and way forward

We initiated this special issue with the intention to bring more Latin American experiences into the international debate on extension system dynamics. The initial call for abstracts yielded 20 abstracts, from which 10 were selected to be developed into full papers. After peer review of the 10 full papers, eventually 4 papers were accepted for publication, after several rounds of revisions. Some papers were revised after review, but in the end were not accepted as they did not meet all the criteria required to become acceptable for publication. This process has prompted us to provide some reflections here on publishing work from Latin America in journals like the JAEE. We noted that while there are several rich experiences of high interest which are also well documented, a problem was that they are not well connected to scientific debates in the English language scholarly literature. Overall, we noted that several authors had problems in articulating the broader theoretical implications of their work, achieving a clear theoretical positioning of the paper, providing sufficient rigor of the chosen methodology, or dealing effectively with reviewer comments. Given that these are key requirements for publication in a journal like the JAEE, we had to disappoint some authors whose work did have potential. Possibly, the relatively high rejection rate may be linked to authors normally publishing in regional journals or writing more for a policy-maker or practitioner audience, and not being familiar with the requirements of the JAEE. However, it is also important to note that the assessment criteria of the JAEE may be different from those of Latin American scientific journals, and that in different parts of the world there may be different standards of what constitutes scientific quality (in terms of theoretical embedding, epistemology and methodological approach) and style and flow of scientific papers.

Given the potential, we would like to urge the Latin American community of scholars in agricultural extension, and more broadly learning, competence building and innovation in agriculture and rural development, to seek closer engagement with scholarly debates in communities attached to English language scientific journals (such as the JAEE, but also journals such as the *Journal of Rural Studies*, *Agricultural Systems* and *Agriculture and Human Values*). We would like to invite Latin American scholars to attend and present papers at biannual conferences such as the International Farming Systems Association Symposium, the European Seminar on Extension Education and the conference of the Association for International Agricultural and Extension Education. Possibly, this can be supported and promoted by the Academic Group within the Latin American Network for Rural Extension Services (Red Latinoamericana de Servicios de Extensión Rural – RELASER). Conversely, English language scientific journals like the JAEE could also engage in a reflection on how to deal with different scientific cultures, and possibly providing a space for more practitioner or policy-maker-oriented papers (e.g. by having a ‘policy and practice perspectives’ section).

To conclude, we hope that this special issue on dynamics of agricultural extension systems in Latin America can also catalyze dynamics in the study of extension in Latin America and ultimately increase the visibility worldwide of Latin American scholars in this field.


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Note

1. Also increasingly named as agricultural or rural advisory systems (Faure, Desjeux, and Gasselin 2012), but not frequently in Latin America, where agricultural or rural extension services/systems is the most common reference.

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