More Private Extension is Needed to Close the Yield Gap

I began my aquaculture career as an aquaculture extension agent, working with smallholder rice farmers in Sierra Leone as a US Peace Corps Volunteer in the early 1980s. Later, through work in universities, I came to know the extension approach of the US Land Grant College system. The basic process of the system involves farmers telling extension agents their problems, agents carrying that information back to the university to share with experiment station workers. Those research scientists would then develop solutions for the farmers' problems and the extension agent would carry the results and recommendations back to the farmers. Simply put, extension is the delivery of information to farmers.

This publicly funded extension system, along with a training and visit model, has served as the approach applied in development projects since the 1970s. Unfortunately, especially in developing countries, it has not served farmers or other stakeholders very well. In that context, where governance and functioning state institutions are chronically weak, publicly funded agricultural extension functions poorly. Extension agents are underpaid, have low morale and are given few resources to do their work. There is often an expectation by farmers that they will have to pay agents a fee for services that are in the extension agent's job description to provide. Agents are often poorly accountable to their farmer-clients. Some extension workers are not very well qualified and are just happy to have a government job. The land grant model can work well, but only when the extension system has a sustainable source of fiscal support and agents are well trained and motivated.

But it doesn't have to be this way. There are alternatives to addressing the critical need of providing information to farmers on best practices and modern technologies that can improve the profitability of aquaculture. Despite my Land Grant System upbringing, I have come to appreciate the role of private delivery of extension information. For private sector extension, input commodity enterprises like aquafeed mills and hatcheries, and national producer federations or farmers associations can function as extension service providers.

In Bangladesh, a recently concluded, USAID-funded development project (AIN) worked with fish seed producers, seed traders, small-scale feed mill owners and feed dealers to develop their capacity to carry and extend technical information to farmers, applying a training of trainers (TOT) approach. The project developed a series of posters (festoons) on various technical topics that could be carried from village to village and easily displayed to small gatherings of farmers.

After seeing novice fish farmers ask a grass carp hatchery owner in Afghanistan questions about stocking density and feeding, I helped him develop a basic package of information that could be given to those farmers. This served to enhance the reputation of the hatchery owner and stimulate further fish sales.

I work often with technical service teams from feedmills that assist shrimp and tilapia farmer-clients in Latin America. Providing lectures and farm visits from a visiting "expert" is intended to boost feed sales. The idea is that, if the farmers receiving the technical information can be productive and efficient, they will buy more feed.

In all the examples I've provided above, the scenarios are win-win. The hatchery owner, fingerling supplier, or feed mill representative provides useful information and recommendations to farmers as a service that adds value to the input purchase and in turn farmers will be inclined to purchase more seed or feed. Input suppliers undertake extension activities as a form of marketing.

Obviously there are potential conflicts of interest and proper functioning of the system requires ethical integrity. Some information provided by private extension agents can give mistaken impressions, emphasize the wrong things, or steer producers in directions that serve primarily the interest of the service provider.

I am not trying to make a neoliberal argument for a smaller government role in extension or for unleashing the power of the free market. The main reason for advocating more private extension is simply that existing publicly funded extension services in developing countries are woefully ineffective and inefficient. In any case, farmers obtain information from a variety of public, private and NGO sources, as well as from successful "master" farmer-leaders.

I am also not advocating the replacement of one form of extension with another; both forms are complementary. Public extension is appropriate for small-scale, resource-poor farmers, where general "public good" information can help farmers become more productive. Private extension tends to provide more specialized knowledge to larger-scale commercial farms, often to the exclusion of small-scale producers. However, past development experience in Africa and Asia indicates that commercial farms of small to medium scale can be a better mechanism to achieve rural economic development and food security than development of subsistence level, small-scale farms. Private extension is better suited to addressing the specialized information needs of these commercial farmers.

So, what can we do to have more private extension and to make it better? First, we need to identify the critical upstream service providers in aquaculture value chains and provide them with training and technology packages appropriate for the farmers they serve. There is a pressing need to increase accountability of extension agents to farmers. At the national levels, public extension systems need to be more fiscally sustainable. To the extent possible, extension functions should be devolved to producer groups or farmer associations.

It is clear that huge increases in aquaculture production are possible by closing the yield gap between current and potential production levels, or at least reaching the level of the best performing farmers. To that end, private extension can play a key role in providing technical information and practical advice to farmers. This information is needed to overcome factors that reduce yields (e.g. diseases), those that limit yields (e.g. feeds and other inputs) and ultimately allow realization of the genetic potential of improved strains.

— John A. Hargreaves, Editor-in-Chief