

## Libraries as activators of farmer's learning

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### Abstract:

*This paper shares the experience of the EIFL (Electronic Information for Libraries) Public Library Innovation Programme (EIFL-PLIP), which supported public and community library pilot projects focused on meeting farmers' needs for information and access to resources provided by governments. Since 2010, EIFL-PLIP has supported 13 library projects focused on supporting farmers in developing and transition economy countries. As a result, farmers have access to ICTs for the first time, have acquired ICT skills, increased opportunities to exchange knowledge with peers (face to face or online), and gained adapted agricultural content, for example, content translated into local languages. The paper reflects on EIFL-PLIP's learning over three years, and concludes with some of the ways in which public and community libraries are contributing to farmers' learning and consequently to improved livelihoods.*

**Keywords:** agriculture, public libraries, technologies.

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### Introduction

In the developing world, small farms are one of the most important sources of food and income. It is generally accepted that access to agricultural and other information plays an important part in boosting farmers' productivity and their willingness and ability to adopt more efficient farming practices. Today, access to information increasingly depends on access to Information and Communication Technologies (ICTs), online resources and services. The internet has become not only the major channel for accessing the most up to date knowledge and practices, but also facilitates financial transactions, widens access to markets and fosters communication and networking with peers and relatives.

However, deployment of ICTs among farmers may be hindered by a range of barriers: economic constraints mean farmers cannot afford ICT; geographical remoteness of some farming communities means they are not reached by telecommunications infrastructure; many farmers lack awareness about the potential value of ICTs, and the skills and confidence needed to use ICTs. Much of the information on the internet is in languages that are foreign to farmers, and often, information has little local relevance. Public libraries in developing countries are increasingly becoming agents of digital inclusion and, by employing a combination of approaches, can help rural communities to overcome these barriers. As recognized and trusted institutions that are close to where people live, libraries can play a major part in contributing to individual learning and community advancement.

This paper shares the experience of the EIFL (Electronic Information for Libraries)<sup>1</sup> Public Library Innovation Programme (EIFL-PLIP)<sup>2</sup>, which, since 2010, has supported 13 public and community library pilot projects aiming to meet farmers' information needs in developing and transitional economy countries. As a result, farmers served by these libraries now have access to ICTs for the first time, have acquired ICT skills, increased opportunities to exchange knowledge with their peers (face to face or online), and have gained adapted agricultural content, for example, translated into local languages. The paper reflects on EIFL-PLIP's learning over three years, and concludes with some of ways in which public and community libraries are contributing to farmers' learning and consequently to improved livelihoods.

### **Farmers' information needs, ICTs and libraries**

In developing countries, agriculture continues to be the main source of employment, livelihood and income for between 50% – 90% of the population. Of this percentage, small farmers make the majority, up to 70 – 95% of the farming population. Empowering smallholder farmers to produce more food for local consumption and local markets is a globally recognized development strategy. Increased farmers' productivity leads to higher level impacts, such as life quality, employment, better nutrition, improved health, better education and, finally, to a better economic situation in local communities and nationally.

In a blueprint for action, Actionaid (2011) defines the list of basic conditions for successful farming: land; water; farming inputs (seeds, breeds, farm tools and equipment, sustainable fertilizers and pesticides); extension<sup>3</sup> services and training; credit and financial services; marketing and research and technology. An extensive literature review on training for rural development by Kathleen Collett and Chris Gale (2009) concludes that in general a variety of knowledge development methods used in different contexts leads to raising productivity levels. Thus, providing farmers with an opportunity to obtain new knowledge or upgrade their knowledge and skills is a basic condition for farm growth as well as for improvement of livelihoods.

The World Bank, in its 2008 Agriculture for Development report, discusses reasons for considerable productivity and profitability gaps among small hold farmers, and highlights lack of information and skills as contributing factors. The report suggests that provision of

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<sup>1</sup> URL: <http://www.eifl.net/home> (EIFL Home Page)

<sup>2</sup> URL: [www.eifl.net/plip](http://www.eifl.net/plip) (EIFL Public Library Innovation Programme Landing Page)

<sup>3</sup> Authors note: Extension refers to the transfer of new knowledge and skills to agricultural practices through farmer education.

information might be improved through exploring new approaches to demand-led extension and to the application of new information and communications technologies.

However, it is not easy to get farmers, whose immediate interest is working in the fields, to pay attention to learning. A survey of farmers in Bangladesh (Eamin Ali Akanda, A.K.M., Roknuzzaman, Md., 2012) concluded that farmers need information to support a wide range of agricultural activities, and that they use different sources and media to access the information they need. However, many of the farmers surveyed were not well aware of modern agricultural techniques, and only occasionally used such techniques. Many initiatives intended to bring agricultural information to farmers, fail because of distance, unsuitable timing, irrelevant content and other factors. In developing countries, illiteracy can also prevent farmers from accessing to critical information. Some researchers suggest that one effective solution is web based learning. Yet to be able to explore technology supported learning, farmers have to overcome primary barriers, such as lack of access to ICT, lack of skills to use the technologies, lack of awareness about what content is available online, etc.

In communities where there is poor communication infrastructure, and where many people are illiterate, there is a need for trusted intermediaries. Locally based libraries are well suited to play this role. Dr. L. O. Aina – LIS professor – in his various publications (1991, 2006) argues that local public libraries can be information gatekeepers who handle agricultural information and constantly update farmers' knowledge. He also recognizes a need for information repackaging to meet the information needs of rural inhabitants in a language and format that they would understand.

### **Innovative library services to support farmers learning**

It may seem obvious that rural public libraries have a role to play in supporting small and medium scale farmers; however, in practice, public library agricultural services are difficult to find, especially in the developing world. From 2009 to 2013 EIFL-PLIP provided grant support to 13 public and community library pilot projects that addressed the needs of farmers.

The EIFL-PLIP methodology supports implementation of new and innovative services through a combination of grants and capacity building. The latter includes training and mentoring in impact research methods, using a very practical approach, so that librarians can assess the impact of their services on users and in communities. The libraries describe the experience of implementing their projects, in narrative format, using data collected with the use of adapted template tools, such as questionnaires, results maps with indicators common to all supported libraries, and surveys. EIFL-PLIP is able to pool information from many libraries and to draw conclusions about the value of public library services to development, based on impact evidence produced by the libraries.

The grant programme enabled EIFL-PLIP to identify different examples and models of public and community library services for farmers. For this paper we have selected six case studies representing different geographical, social and economic contexts: two from the Balkan region – both European Union (EU) candidate countries; two from Baltic States – new EU member countries going through a transition economy period, and two from East Africa – fast developing economies. All libraries use a combination of approaches to encourage farmers to learn new skills and develop new competences.<sup>4</sup>

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<sup>4</sup> Two-page impact summaries of these six projects (and all 13) can be found at [www.eifl.net/plip-impact](http://www.eifl.net/plip-impact).

### ***Agrolib-Ja, Serbia***

Public Library Radislav Nikčević in Jagodina's AgroLib-Ja project was one of the first agricultural library services to be supported by EIFL-PLIP. The library coordinates the project, which operates through a network of five libraries (Public Library Radislav Nikčević and four rural branch libraries in the villages of Glavinci, Glogovac, Bagrdan and Bunar). The project inspired the local government to renovate Public Library Radislav Nikčević and its four partner libraries to accommodate the service. With the EIFL-PLIP grant, Public Library Radislav Nikčević installed computers at the four libraries and purchased stocks of books and journals on agriculture, increasing their own stock and for distribution to the four libraries. The grant also enabled the library to strengthen librarians technology, training and agricultural research skills, enabling them to train and support farmers, and to launch an ICT training programme for farmers. The libraries also organized a series of agricultural events during which farmers could meet officials of government agricultural and business development agencies.

During the 12-month period covered by the EIFL-PLIP grant, the five libraries trained 59 farmers. The project continued after the grant period, training 185 more farmers to use ICT. During the project's first year, the libraries hosted eight professional lectures on agricultural topics to increase farmers' knowledge of new farming methods. The libraries partnered with the Agency for Small and Medium Enterprises and Registered Households for training and assistance in registering farms, and with the Network of Rural Development of the Ministry of Agriculture, which provided information on subsidies and grants and helped farmers apply.

In addition to these new learning opportunities, the public library built an online farm produce market ([www.agrolib.rs/pijaca](http://www.agrolib.rs/pijaca)) that allowed farmers to sell products over the internet and so to increase their income. The website – [www.agrolib.rs](http://www.agrolib.rs) – has become a popular and important source of agricultural information and news, including weather updates, descriptions of farming methods, links to support agencies and digitized magazines and books.

At the end of the EIFL-PLIP project period, the library assessed the impact of AgroLib-Ja. Librarians reported that the most successful aspects of the project were the agricultural lectures and ICT training. In 2011, one more library, in the village of Glavinci, was renovated with local government support, and launched a service for farmers.

The success of the initiative has led to a new programme, currently in development, titled Agricultural Libraries. The new initiative involves national and international stakeholders: the Ministry of Culture of Serbia, local governments, Beyond Access (an international initiative comprising 10 organisations that support the idea of libraries contributing to development and wellbeing). It aims to revitalize libraries across Serbia to support local farmers and rural development.

### ***A library on wheels – at the will of the farmers in Macedonia***

In Macedonia – a neighbouring country of Serbia – Regional public and university library "Goce Delcev" in Stip decided to extend their mobile library service to reach farmers in four villages that do not have libraries: Karbinci, Tarinci, Karaorman and Chardaklija.

With grant support from EIFL-PLIP, the library equipped their mobile library INFOBUS with wi-fi internet and laptop computers, stocked it with books and journals on agriculture, and initiated an ICT access and training programme and lecture series for farmers.

Working with the university's Rural Development Office, librarians organized 30 seminars for farmers in their villages, informing farmers about the government's rural development goals and available subsidies, introducing farmers to new methods of keeping livestock, growing crops and organic farming. Librarians trained 42 farmers to use computers and the internet, and supported 145 farmers with online applications for grants and subsidies.

Regional public and university library Goce Delcev also developed a web portal for farmers, Agrokorner (modelled on the Serbian AgroLib website described above), to provide information about modern farming methods, and to direct farmers to agriculture support agencies and sources of subsidies.

At the end of their EIFL-PLIP project period in November 2012, the library reported that there had been a 20% increase in the number of farmers applying for agricultural production grants in 2012 in the municipalities of Stip and Karbinici.

### ***Hand in Hand: Enhancing E-inclusion of Farmers at Rural Public Libraries, Latvia***

Klaintaine Public Library – a small rural library in Aizkraukle region in the North of Latvia, organized a series of webinars for farmers, offered through a network of rural libraries, all connected to high speed – broadband – internet. Farmers could either go to their library to view the webinars together, and discuss content with each other, or log in from their homes. Webinars were also posted online so that farmers could revisit them, or view them later. The library's main partner was the adult education specialist agency, the Latvian Rural Advisory and Training Centre's (LLKC). Experts from LLKC presented eight interactive webinar sessions, encouraging debate and answering questions during online streaming or afterwards, via email.

During the EIFL-PLIP project period (2011/12), webcasts through 20 rural libraries attracted 1,878 viewers, and 65 farmers went to their local library to watch the webinars together. The project's popularity with farmers, and effectiveness in reaching them, convinced the Ministry of Agriculture to use webinars for live webcasting of regional agricultural conferences. The LLKC now also uses webinars to train farm extension staff in its rural offices. After the end of the EIFL-PLIP project period (2012), Klaintaine library continued organizing events for farmers. The library also cooperates with the State Agency "Agricultural Data Centre", which organizes seminars on agricultural topics in the library.

Librarians observed that a combination of webinars and face-to-face meetings with experts worked best in achieving the goal of informing farmers. Farmers, who are pressed for time and whose time is structured according to the seasons, also appreciated the opportunity of returning to view recorded webinars online.

### ***Libr-A: To help farmers in Pasvalys, Lithuania***

Pasvalys Marius Katiliskis Public Library modelled their service for farmers on the Serbian example, presented above. The library's Libr-A service includes free internet access; individual or group ICT training for farmers: a desktop publishing (DTP) centre for farming business needs, for example, designing posters, labels or business cards, and the online agricultural web-portal [www.pasvaliodirva.lt](http://www.pasvaliodirva.lt) that carries news and information. Web-portal content is generated by the library, by researchers of a local agricultural institute and the local newspaper.

The library has trained over 120 people (farmers, entrepreneurs and rural branch librarians) to use ICT. Training enabled the rural librarians to train farmers and their families, and to offer consultation services for farmers. Observing that many farmers had smart phones, but were not using them to full capacity, the library included skills for using smart

phones to access the internet, to send emails and to create and read QR codes (digital bar coding) in their training.

Through this innovative service, the library became recognized as a valuable partner in local development. Librarians also acknowledged that their success was built on cooperation with local players, among them the Pasvalys Farmers Association.

Since completion of the EIFL-PLIP grant period (2012), the library has continued to offer non-traditional services, including lending equipment; offering support for media development; travelling to agricultural fairs with a tent for information events. In collaboration with the Local Action Group of the district of Pasvalys – a group of local public and private partners from the rural area formed to take part in the European Commission supported Leader+ Community initiative – the library took part in development of a new online economic activities database [www.sukikaima.lt](http://www.sukikaima.lt) that includes an index of local rural businesses, posting and news about agricultural produce. The library has also begun cross-border cooperation with neighbouring districts of Latvia to develop the role of public libraries as local business information centres supporting rural development.

### ***ICT for Sustainable Agro-Biodiversity and Natural Resource Management, Uganda***

Kachumbala Area Cooperative Enterprise (KACE) Community Library took into account the limitations of a low resource environment and farmers' crucial information needs in designing their 'farmer-to-farmer' information service. With support from EIFL-PLIP (2012/13), the library project developed digital documentation skills of 30 farmers who are now able to use digital voice recorders and cameras to document farming practices of other farmers and to share information with their peers – literate and non-literate farmers.

Within the EIFL-PLIP grant period, the library worked with farmers to produce four PowerPoint presentations on diseases and pests affecting fruit and vegetable plants, and arranged 15 documentary screenings, attracting about 500 farmers. In addition, the library organized ICT training, enabling 121 farmers to learn how to use computers. At the time of writing this paper, the total number of farmers trained to use ICT was close to 300.

This successful pilot project, and strong ownership and support by farmers, has helped KACE to receive a three-year grant from the international non-governmental organization Build Africa. The grant enables KACE to disseminate material produced by the farmers more widely in the district, to install additional computers and to build farmers' internet research skills so that they can look for new marketing opportunities and market their produce online.

### ***Connect Uganda Project, Uganda***

The Connect Uganda Pilot Project, led by Maendeleo Foundation (a technology training non-governmental organization based in Mukono) brought together five community libraries from four regions of Uganda to develop an agricultural information service in local languages spoken by farmers. Each of the five libraries was equipped with three laptops and connected to the internet through existing 3G and GSM cellular networks. Maendeleo Foundation also installed solar power to charge netbooks for three of the libraries that are not connected to the national electricity grid. The project team worked with the Uganda Community Libraries Association (UgCLA), Makerere University Centres for Lifelong Learning, government farm support agencies and farmers' groups, to launch a community library programme that includes ICT skills training for farmers and creation and packaging of information in local languages.

During the EIFL-PLIP grant period (2012/13) the five libraries enabled 700 farmers and other rural community members to use ICT. Librarians also were able to support and

guide individual information searches of farmers related to locally cultivated crops, and livestock. Working with farmers' groups, project partners repackaged locally relevant agricultural information and translated it to local languages for dissemination to farming communities through their farm associations and groups. Dissemination of repackaged materials was successful, especially when print formats were supported by the use of videos and pictures. Maendeleo Foundation emphasizes the importance of networking for farmers' learning – through variety of activities libraries are able to encourage forming groups of farmers, so that they can interact and, when needed, support each other.

### **Conclusions: Public library powers farmer learning and development**

The World Bank (2008) proposes that information provision might be improved by exploring new approaches to demand-led extension and to the application of new information and communications technologies. The cases described in this paper suggest that public libraries in rural areas present opportunities for this exploration - opportunities that should not be overlooked by governments and development agencies interested in farming development and food security.

All of the library services described in this paper successfully partnered with universities, research institutes, government departments, agriculture-focused NGOs and others who could provide both experts to speak at events, and high-quality information. In interviews, librarians, partner organizations and farmers all gave positive feedback about these partnerships, sometimes expressing surprise that a public library had approached them for partnership. Known and trusted in their communities, and staffed by skilled information professionals, public libraries have natural advantages when it comes to provision information and training to farmers working on small to medium sized farms, and can supplement efforts of other intermediaries in the following ways, as the examples presented above indicate:

- Bridging the digital divide for farmers / rural communities| and raising awareness about relevant / new technologies and applications;
- Bringing information and knowledge related to new or better agriculture practices;
- Fostering localization and contextualisation of agricultural information;
- Supporting farmers' networking and peer learning;
- Helping farmers to promote and sell their produce online; and
- Connecting farmers to relevant government agencies and extension services.

While the partnerships enabled the libraries to provide useful information services, librarians also acknowledged that researching and meeting farmers' information needs, including developing and translating locally appropriate content was a challenge, and hard work, especially where libraries operate with very meagre human and financial resources (for example, the tiny community/ public libraries in the Connect Uganda project, or the Latvian webinars project have only one or two staff). In addition to sometimes struggling to provide specialist information in forms and formats accessible to farmers, librarians found they had a lot to learn about working with farmers, for example, taking into account seasonal work and harvest periods; farmers were sometimes too tired after a long day in the fields for intensive training or to attend events. For the projects to succeed, the librarians needed to listen to the farmers and adapt their schedules to suit them, and even more important, to create opportunities for farmers to articulate their needs, preferences and concerns in relation to service providers, and to encourage them to do so.

From the EIFL-PLIP agriculture projects experience and results, we can conclude that public libraries can effectively reach farmers, and improve farmers' access to extension services delivered by government and non-governmental organizations. By providing free

access to ICT and ICT training, public libraries improve digital technology skills, stimulate interest in agricultural innovation and open farmers' eyes to a vast store of potentially useful online information. All of the library agricultural services described in this paper have attracted new interest and / or funding from government and non-governmental agencies, to continue and expand their services, or to extent them to include other libraries. Slowly, both in the countries where we work and in other countries, we are seeing growing numbers of public libraries offering information services targeting farmers and rural communities.

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