

Implementing Community Based Extension

Practical Action Practice Briefing

INTRODUCTION

Over the past decade, Practical Action has implemented a wide-ranging programme of work to deliver agricultural services to farmers in some of the most marginal areas of rural Latin America, Africa and Asia. This has involved developing local *community based extension* (CBE) systems to bring information, skills and services to farmers who have otherwise been left out of government and commercial extension. The process has been cost-effective; and the results have brought impressive improvements in agricultural and livestock production, and food security amongst rural populations.

Drawing on ex-post evaluation studies of CBE in four countries - Bangladesh, Kenya, Peru, and Sudan - this document outlines the steps that Practical Action's country offices took to implement community based extension in practice. It is a cross-country synthesis of qualitative information on how selecting, training and deploying community based extension workers worked in practice. There are many similarities, as well as differences, between these four country projects, and between the different types of agriculture, livestock, and fisheries extensionists. The paper aims to document the approaches taken, and draw out lessons and best practice so that others may learn from our experience.

The report is intended for Practical Action personnel, particularly new staff, to inform them of our approach, as well as for staff of other NGOs and government Ministries that are themselves considering implementing community based extension.

What is community based extension?

Community based approaches to providing extension services are characterised by the use of 'para-professionals'. Rather than external 'expert' extension professionals, these individuals originate from and reside in the communities where they operate. They are practicing farmers, fishermen, and livestock keepers who work independently, on a voluntary or self-employed basis, to provide much demanded advice, training, techniques, veterinary treatments and agricultural services for local farmers. Community based extension agents are trained by external facilitating agencies – from the NGO, government, or private sector – in both technical aspects, and participatory approaches to encourage farmer experimentation and knowledge exchange.

Why community based extension?

Over a number of decades, particularly since the structural adjustment policies of the 1980s-90s, governmental provision of agricultural and veterinary extension services has contracted, as extension budgets have become the target for cuts. Less accessible, more risk-prone and poorer areas have been the first to experience the loss; policies have favoured agricultural growth mainly in reliably rain-fed and irrigated areas. Moreover the extension advice that such resource-poor farmers in marginal areas do receive has tended to be of low quality, with top-down and unaccountable delivery mechanisms, providing advice that is ill-suited to complex agro-ecological conditions.

In these circumstances – where 'traditional' state extension has failed farmers in marginal areas, and private commercial service providers do not reach them – community based extension shows huge potential:

“CBE can provide more affordable, accessible, responsive, easy-to-understand and accountable services compared to those that farmers might receive from external agents.”

Practical Action's CBE Work

Practical Action has worked with community based extension systems for over two decades (one of the

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first such projects started in Kenya, in 1986). The approach was integrated into our work originally from the basis of technology promotion. Providing more in depth extension training to one or two individuals in a community was a pragmatic strategy to ensure long term follow up to group based farmer training, reducing the need for NGO field staff to provide ongoing support. These extensionists maintain links with NGO staff for the duration of the project and with government and private sector service providers over the longer term in order to continually update their knowledge and skills.

Practical Action has employed a variety of approaches to community extension as part of a number of rural projects. Principally, it has been a tool to promote farmers' linkages to markets, and to respond to the multiple challenges faced by vulnerable farming communities in marginal areas (including low levels of organisation, insecure access to natural resources, poor access to productive technologies and inputs, and challenging physical environments).

Broadly, community extensionists have been supported to:

- o work voluntarily or on a self-employed basis, serving all households in the community and demand from other households;
- o build capacity of local farmers to investigate and solve their own problems and adapt new technologies with experimentation;
- o provide a strong link between farmers and local government officials, including for pest and disease monitoring;
- o for crop farmers: help local farmers to improve yields with low input techniques and technologies; give guidance on public health issues, marketing, natural resource use, and livelihoods options;
- o for para-vets: help improve animal health, by recognising the most common diseases, diagnosing and treating sick animals, preventing disease occurrence

through vaccination, promoting good livestock practices and breed improvement, and referring difficult clinical cases to a supervising vet.

The particulars of the CBE approach have varied in different countries and projects – often reflecting the institutional context, and the needs and livelihoods base of the local communities served. For example, in the four studies from Bangladesh, Kenya, Peru and Sudan referred to in this document, extensionists have variously specialised in mixed production agriculture, potato production, animal health, poultry production, alpaca husbandry, ethno-veterinary herbal treatments, and fisheries (Table 1). The CBE approach and training has shared many basic characteristics in common across the different regions and continents. These similarities, as well as appreciable differences, are explored in this document.

Table 1: Type of community extensionists deployed in each country

Bangladesh	Kenya	Peru	Sudan
<ul style="list-style-type: none"> o Horticulture o Poultry farming (female) o Animal health (male) o Fisheries 	<ul style="list-style-type: none"> o Animal health o Ethno-veterinarian 	<ul style="list-style-type: none"> o Agriculture – mixed production o Alpaca husbandry o Animal health o Potatoes 	<ul style="list-style-type: none"> o Agriculture o Animal health

The deployment of CBE has not been without some challenges. Nevertheless, the outcomes of this approach have been notable. Farmers and livestock keepers have been able to increase animal health and production of crops, as a result of the advice and services that CBE has provided. The evaluation studies have shown that community based extensionists have:

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- been able to reach challenging and remote contexts – including in conflict areas of Sudan and river-island communities in Bangladesh;
- have provided services over the long term, some still practicing more than ten years after they were first trained.
- been affordable for even the poorest – in cases where there is a charge (e.g. for administering animal vaccines) rates have been small, and flexible for households least able to pay;
- been physically accessible and culturally appropriate;
- been accountable to communities – often Village Development Committees have had a say in selecting extensionists and monitoring their progress;

Structure

How were CBE approaches carried out? The main body of this document details the procedure and some of the key factors in the implementing CBE, drawing on the evaluation of Practical Action's past project experiences in four countries. It examines:

- the procedures, practices and criteria for selecting extensionists across the projects
- the training given to extensionists – including training structure, logistics, language and style
- the training curricula
- extension in practice – focusing on recognition and certification, institutional roles, and ongoing refresher training

In the conclusion, we reflect on some of the key identified factors for success in the projects.

ANALYSIS

Selection of Extensionists

Selecting the most appropriate candidates – and ensuring a participative procedure with community buy-in – is a critical factor in the success of community based extension schemes. This first section looks at the processes and criteria for selecting extensionists across the four country projects, and problems that have arisen in practice.

Selection process

Getting the procedure right for selecting candidates for extensionist training is important – to ensure both that the most suitable candidates are put forward, and that there is strong community support. Community-wide support for an extensionist helps to ensure broad use of their service, and better accountability. Only fellow community members are well placed to judge the necessary social qualities of a candidate – including their honesty, community standing, or commitment to service.

In all of Practical Action's CBE work, the principle of grassroots participation has been robustly upheld. Communities, usually via a Village Development Committee, were responsible for selecting their own extensionist candidates. Each community was requested to propose candidates, based on a list of agreed criteria (see criteria below) suggested in conjunction with Practical Action and sometimes local agricultural or veterinary officials. These individuals would then be discussed openly with Practical Action to reach consensus on the best candidate(s) to go forward.

The job of briefing communities on what to expect from community based extension was a crucial part of ensuring that the most appropriate candidates were selected. Where unsuitable candidates were occasionally put forward, the cause can often be attributed to confusion amongst community members who did not fully understand the role, expectations and significance of a community extensionist. Thus, with appropriate explanation and information of

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the role of the CBE agent, consensus was more easily reached.

The precise methods of decision-making varied according to local custom. For example, in Andean Peru, the collective culture of decision making in village assemblies differed from that of Adakar (village) leaders in Kenyan pastoralist communities taking selection decisions. There were varying degrees of collaboration with Practical Action in the selection process. In Peru, following Practical Action's initial approach to a village assembly, explaining and inviting their participation in the Kamayoq (CBE) system, the village assemblies were largely left to their own devices to make their selection decisions. Conversely, in some Bangladesh projects that employed CBE, candidates were nominated by the community, but vetted and accepted for the training by project staff. In Sudan, where there was disagreement over the suitability of a candidate (e.g. they did not meet the criteria for being literate), the Village Development Committee's decision was final.

In only two cases was there an exception to community decision over selection. First, in an early project deploying CBE in Bangladesh, candidates tended to be identified by Practical Action on the basis of an individual's interest and entrepreneurial spirit demonstrated during previous community-wide agricultural trainings. Second, in 2002 in north-central Kenya, Practical Action selected 25 previously-trained ethno-veterinary extension agents to undertake full para-vet training.

Criteria for selection

The criteria used to select candidates tended to fit a general theme. There are variations in the extent to which the selection criteria were observed in practice, and the significance that was given to them. For example, some communities tended to follow the listed criteria more strictly, whilst others clearly saw them as pointers or suggestions for guidance only, and did not necessarily observe them all in practice (e.g. Peru). One of the determining factors here tends to be the extent of government involvement. In both Kenya and Sudan, there was a lot of local government involvement in selecting and training

candidates; in these circumstances, the given criteria tended to be stricter.

The frequently listed qualities for a good community extension agent were:

- resident: candidates were to be permanent residents, 'rooted' in their village, and likely to remain there, they would speak the local language;
- trustworthy: candidates should have 'good moral standing', with a sense of responsibility and community service;
- accessible by the poor: community extensionists should ideally not come from an elite family, rather they should come from the socio-economic group being targeted by the project;
- knowledgeable: candidates should have good practical experience of farming, and interest in the adoption of new productive technologies;
- good communication: candidates should have qualities to motivate people, and to share their technical skills.

Some aspects of selection, however, are less clear cut:

- *Age*. In Bangladesh, age criteria were kept flexible for community groups to decide on themselves. Similarly in Peru, the prescribed age range was wide (25-60 years). In Sudan, however, the agreed criteria gave preference to younger candidates (age 25-35), who would be able to work as extensionists for a long time. For Kenyan pastoralists, middle aged individuals (30s-40s) were preferred by communities, on the assumption that they were less likely to migrate away.
- *Literacy* and education levels is an aspect of selection that raises some challenges. Government officials involved in delivering training typically preferred candidates who are literate, whereas communities often preferred candidates who showed

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'trustworthiness', 'commitment' and 'responsibility'. Although in Sudan and Kenya, for para-vet training, government veterinary departments demanded that candidates were literate, the survey of CBEs in Samburu, Kenya, found only 72% of pastoralist para-vets were able to read or write. In Bangladesh, levels of educational attainment were left to community discretion. In Peru, almost all Kamayoq were able to read and write – reflecting higher levels of education in that country, and the expectation that selected extensionists should have completed at least primary education.

- *Marital status* is a selection criteria in Sudan, where CBE candidates are expected to be married. Though some funding agencies have objected to this clause, communities tend to uphold it, on the basis that married candidates are more likely to be settled in the village. In other countries there was flexibility over marital status.
- *Gender* is an important issue for community extension. Traditionally, agricultural and veterinary advice has been a male domain. Overcoming this barrier is an important objective for CBE projects – in order to improve gender parity, provide a further livelihood option for women, boost women's status and empowerment, and importantly, to improve the reach of extension and advice services to women farmers. Projects have aimed to encourage the selection of women as well as men, though there have sometimes been cultural constraints. In Bangladesh it is not considered culturally appropriate for women to be trained as livestock extensionists (treating goats, cows and sheep). However, women have been exclusively trained in specific aspects of animal health including poultry vaccination and the rearing and supply of breeding bucks. Similarly, in Peru has responded to gender inequality in the numbers of CBE agents by training some women-only groups. In Kenya, pastoral communities have a strong preference for

selecting male extensionists, due to the protective attitude of the community elders concerning women venturing out into conflict affected areas. On the other hand, in Darfur, Sudan, a high proportion of women have been trained as extensionists (40% of agricultural extension agents, and 25% para-vets), though they do not tend to operate beyond their immediate community.

Selection challenges

With good due process and explanation of the role, CBE selection procedures tended to run smoothly, with good candidates identified by their communities and accountable to them. Only rarely have there been circumstances where a candidate proposed by the community is considered inappropriate by Practical Action staff or trainers and it has been suggested that someone else be selected. In Peru, Practical Action interviews the candidates before beginning the training to assess their capacity. If at this stage, there is some reason why they may not in fact be a suitable candidate (e.g. they are too young or they are not resident in the village), there is an opportunity to feed back to the community that they are not suitable and to select another candidate: this is an informal process of negotiation. In general however, good prior community mobilisation has ensured that communities take responsibility for selecting the best candidates who fulfil their obligations to the community.

Capacity Building Process

Timing and logistics

To provide a useful service to communities, and with skills that they might be able to charge for, extensionists had to be well trained with specialist knowledge. This capacity building process has needed to be constantly and flexibly adapted to local social and cultural conditions, and the institutional and natural resource context. Some of these particularities are picked out below. Nevertheless, the trainings did all share a number of common approaches:

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- Formal training tends to last between 15 and 30 days consisting of classroom-based theory and practical exercises.
- Either after formal training, or interspersed between formal training sessions, trainees are expected to practice and refine their skills “on the job”. Practical Action staff visit regularly to provide additional guidance and support for up to a year.
- Once qualified, refresher trainings are sometimes available from Practical Action or other agencies to help extensionists’ skills stay current (see more on this in the section below on Practice).

There is some variation between countries in the intensity of the formal training. In Sudan, community para-vets tend to be given 21 consecutive days of basic training on animal health and epidemic disease. In Kenya, however, the 21 day training consists of continuous intense teaching for two weeks, then a two month break for field experimentation, followed by seven days of training to share experiences learned in the field and refresh knowledge. This is based on the African Union International Bureau for Animal Research (AU-IBAR) curriculum guidelines. In Peru however, extensionists receive 28 days of intensive training distributed over 7-10 months. Each burst of training is carried out in a different rural location, to promote practice in real situations – the frequency of the training sessions determined according to the availability of participants.

Because participants tend to come from dispersed areas, trainings are usually residential. The costs, including reimbursement for trainers, are all covered by Practical Action project funding – free for participants (estimated to be about GB£120 per head for livestock training in Bangladesh).

Teaching

Training is designed to reflect the educational level of the candidates, many of whom have only a few years of primary education. Teaching emphasises practical aspects, drawing from

experience, and includes hands-on activities to improve understanding of the theory. By promoting experimentation and reflection on practice, trainers encourage the self-analysis and trialling that would be required of extensionists in their work. This was particularly the case in Kenyan ethno-veterinary training, in which herbalists were facilitated to share traditional knowledge amongst themselves, as well as participating in field clinical trials, to build up best practice.

Beyond the practical knowledge that extensionist trainees learn, a critical element of teaching is support in making business plans and preparing to use their skills in providing services in their communities. Kenyan trainees are encouraged to draw up their own action plans, and later report back on how they were fulfilling them. Similarly, in Peru, trainees learn book keeping, marketing and other aspects of small business management.

A wide range of cultural and linguistic barriers always had to be taken into account, especially given that some of the marginal areas where CBE approaches are adopted have distinct indigenous cultures and dialects. For para-vets in Kenya, training is carried out in the local tribal language – or, if the trainers are not highly fluent, then a community based animal health worker ‘elder’ may act as a resource person to translate. It is particularly important to get the technical terminology across in the local language. In Sudan, training is carried out in Arabic, but trainers should know the local dialect. Meanwhile in Peru, particular emphasis has been given to valuing indigenous culture, which has often been marginalised from the mainstream. Here, Practical Action used community based extension to strengthen local cultural organisations, and to recognise and promote indigenous knowledge. It was therefore significant that all training was conducted in the Quechua language, and practiced traditional norms of collective learning – where an innovator must maintain a humble and patient position on an innovation before validation by a wider group of peers on the basis of trial.

Who were the trainers?

An important component of the success of CBE

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services has been ensuring that the training given to community based extensionists is respected, and indeed legitimate – both for local officials, and trainees. Those who run the training should be experts in their field, familiar with local language and customs, and, when needed, given government sanction. The selection of trainers differs between crop based and animal health extension training.

In the case of crop based agricultural extension, trainings are usually run by Practical Action expert agriculturalists in close collaboration with local government agricultural staff, research organisations or educational institutions, who may be called upon to input into either curriculum development and/or training. For example, a horticulture training in Bangladesh was designed with input from horticulturalists in the Bangladesh Government Department of Agricultural Extension, and conducted by two Practical Action staff members, drawing on contributions from Agricultural Extension Officers, scientists from the Bangladesh Agricultural Research Institute, and the Department of Agricultural Extension.

Sometimes existing community based extensionists participate in delivering training, transmitting their acquired knowledge and experience of working as an extensionist. In Peru, as expert extensionists emerged after some years of practice, the team drew on these 'Kuraq Kamayoq' (Great Kamayoq), all from Quechua speaking farming communities in the Sicuani area, to assist in the training. Similarly in Sudan, several agricultural extension workers became involved in training and mentoring new community extension agents. This was found to make workshops more relevant for trainees, aiding the learning process.

In the case of animal health extension training, government veterinary officials tend to request much stronger involvement, both in forming the curriculum and schedule, and in leading the instruction. This helps them to guarantee that these trainings were conducted by well qualified vets, and to control standards in the process. This is particularly the case in Kenya, Sudan and Bangladesh where local animal health extension services still exist. Delivery of training by government staff also helps in establishing a

strong relationship between the trainees and government vets which will serve them over the longer term: the trainee is able to access ongoing advice and update knowledge; and the government extension staff are able to work through the CBEs to reach communities more effectively.

Curricula

Of necessity, the content of training curricula varied country by country, and area by area, according to local preferences, local conditions, and the forms of community based extension carried out. Each country has, to some extent, developed its own tradition of extension training; there has been relatively little learning between different countries' experiences.

Who devised curricula – on what basis?

Animal health training curricula are generally much more controlled by government veterinary officials. This was the case to the greatest extent in Kenya, where in 2002, following Government suspicion of unregulated community based animal health work, a standardised training curriculum was developed and approved by the Kenya Veterinary Board: the African Union – Inter-African Bureau for Animal Resources (AU-IBAR) Guidelines. Whilst this curriculum was developed in consultation with NGOs (including Practical Action), drawing on similar courses that Practical Action had developed previously, it nevertheless placed power with government agencies. In Sudan, similarly, NGOs and communities have little discretion over the curriculum of animal health training, as the Department of Animal Resources is charged with control of NGO training – though there is some space for Practical Action to input into non-veterinary matters. It remains an open question as to how responsive this structure can be to local conditions and communities' priorities. Nevertheless, in practice, the training content has been well focused on preventing public animal health outbreaks, and participants have generally found the training to be useful.

For other types of community extension, training curricula are usually developed more

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collaboratively, with greater balance of input from Practical Action, communities and participants. For example, in agriculture based trainings in Sudan, though training and curriculum design for agricultural CBE workers was conducted by the Ministry of Agriculture, the Ministry has been open to modifications suggested by Practical Action, more so than with veterinary matters. For some trainings in Kenya that used herbal medicine practices for animal health, a much more participative approach was used. Training of these 'ethno-vets' was highly collaborative, and used cross-cultural exchange visits to facilitate sharing and testing of knowledge. In these cases, Practical Action carried out needs assessments with communities before any training: the information gathered would help to establish the level of understanding of local communities' animal health disease problems and remedies before designing training packages. Similarly in Bangladesh, CBE trainings in fisheries, agriculture and animal health were tailored to local communities' needs, developed between Practical Action and local government experts, on the basis of long term work with those communities.

Perhaps the best example of training curricula developed with input from communities and participants comes from Peru, where before each round of training, it has been the practice to conduct a planning workshop where the participants can adjust the curriculum proposal that has been designed by the Advisory Committee (of local agricultural experts) and Practical Action, to best fit their needs. In addition, to design follow-up and refresher trainings, the training team in Peru collect opinions and recommendations from communities during visits, to find the most needed areas to boost capacities.

What was the content of training?

This section draws out themes and points of comparison on the content of what CBE trainees actually learned in their training courses. Whilst these are not easily comparable – due to sometimes inconsistent information and the difficulty of comparing one form of extension with another – it is clear that there are some areas of consistency between training curricula, but that

there were differences in character between each country.

Animal health trainings tend to be more standardised across the four country case studies, and are the easiest to compare. Most community based animal health care extension trainings typically include the following topics:

- introduction to the nature and role of a community based extensionist / para-vet;
- stakeholders in animal health care systems and government roles;
- use of veterinary equipment;
- immobilisation of animals;
- anatomy and physiology;
- signs of a sick animal and vital signs;
- classification and diagnosis of illness;
- treatment of ordinary cases (basic surgical procedures, common pests and problems, worming, common diseases);
- infectious diseases (bacteria, parasites and viruses) and their treatment;
- drug handling and usage – including vaccines;
- epidemics and disease monitoring and control;
- taking samples and keeping records;
- animal feed and nutrition;
- breeding, livestock development;
- communication skills in extension;
- business, management and marketing skills;
- final exam and certificate.

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Beyond these topics, there are a number of areas of differentiation between different para-vet trainings:

- In Kenya, this training is not specific to any particular animal – the information is given generally and applied to all kinds of livestock herds (in the Samburu training, this is principally cattle, sheep, goats and, in drier areas, camels). By comparison, in Sudan, the para-vet training differentiates between cattle, poultry, and other animals in each different topic; and in Peru, some trainings focus only on once species, alpaca;
- General animal health workers in Peru, working with cattle, sheep and Andean camelids (alpacas), are trained to focus on more specific diseases (presumably the most common problems), including mastitis, respiratory illnesses in young animals, and foot hygiene;
- In Kenya, even in mainstream para-vet training, under the AU-IBAR guidelines, extra focus is given to herbal (ethno-veterinary) knowledge;
- Climate change, disaster vulnerabilities, and natural resource management were a key feature of Bangladesh para-vet training;
- In Sudan, para-vets were trained to conduct inspections of abattoirs and meat production;
- Being part of a ‘markets and livelihoods’ programme, the Peruvian CBE training gave great emphasis to helping farmers to access markets and commercial opportunities, and training extensionists in promoting and managing their own business. There was also particular emphasis on values, team building and support – including self esteem and identity, ethical values, and the Kamayoq Association;
- Considerations of gender differentials were a feature of both Peruvian and

Bangladeshi training;

- Only Sudan include breeding and artificial insemination as a core component of para-vet training; in other countries, this skill was often provided in later follow-up training, and has been highly demanded by extensionists as a good business opportunity;
- Peru’s alpaca husbandry courses have particularly focused on herd development and reproduction calendar, pasture management, and meat and fibre commercialisation.

CBE systems for crop based agriculture varied much more between countries, more tailored to local growing conditions. The training curricula reflect this. Bangladesh food security programmes, for example, seek to promote more horticulture – diversified fruit and vegetables growing – to produce higher value and more nutritious products. Sapling nurseries, vegetable seeds, grafting and fruiting were therefore the focus of the content of training for community extension agents. By contrast, in Sudan’s arid conditions, more importance is given to land management – including soil erosion, terrace construction, ploughing, soil types, soil fertility, water harvesting and conservation, land preparation, drought resistance, on farm research, and monitoring rainfall and testing for moisture in the soil and atmosphere. For Peru’s native potato cultivation training, particular prominence is given to farmer experimentation, testing and evaluation of new techniques, and a focus on potato pests and diseases.

Agriculture training curricula do, however, share some similar characteristics, detailed below:

- To promote food security, food and seed storage is often a prominent factor. So too is diversification of production and livelihood – including agro-forestry techniques;
- Farmer experimentation is usually promoted (if to varying degrees);
- Like para-vet training, there is some

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emphasis on market access, business and management skills, and communications skills;

- o Much of the content reflects ‘agro-ecological’ methods – working with locally available resources rather than high dependence on external inputs. Techniques such as integrated pest management, crop rotation, organic fertiliser and green manuring, soil health management, biological pesticide preparations, ecological insect traps, and eco-system management are usually promoted.

It is clear from surveys that most CBE agents value the knowledge and capacity they gain from their respective trainings. They report that Practical Action’s training packages have proven useful, both for boosting their own home production, and for advising and providing services for their fellow community members. Whilst many request further training, especially in business development and processing techniques; for most, the knowledge they acquired, reinforced by practical exercises, has furnished them with the skills needed to practice and advise in their communities.

Practice

In this final section, we turn to look at the ways that extensionists are supported to work in practice. Several important factors have enabled – and on occasion, impeded – success.

Recognition and certification

In all of the case studies reviewed in this document, extensionists who meet the grade at the end of their training (either with a formal test, or more informal assessment by the trainer) have been presented with a certificate to mark the completion of their course and verify their skills learned. These certificates were almost always signed by a senior district official and senior Practical Action staff member. However, in every instance, in Kenya, Bangladesh, Sudan, and Peru, there has been a struggle to have official recognition and legal standing accorded to these

certificates.

CBE agents have found their certification to be vital. Not only a mark of achievement, such a certificate is important to validate their practice so that the community, and in some cases officials, can recognise the extensionists as differentiated from the rest and licensed to practice. In Sudan and Bangladesh, extensionists have been able to obtain credit for their operations based on their certificate. Certification has enabled extensionists to be invited for upgrading training with government agencies, and to obtain inputs from the government and suppliers (and, in Sudan, from the UN). Some para-vets have been employed to deliver government vaccine programmes (Sudan and Peru).

Nevertheless, there is great uncertainty regarding the legitimacy and authority of these certificates, and this has proved problematic for many. The most extreme example of this is in Kenya where, despite the endorsement of the Kenya Veterinary Board of the AU-IBAR guidelines, and Government officials running para-vet training, there is no official recognition given to the role of the community based animal health workers once they are trained; many District Veterinary Officers have refused to validate Practical Action’s certificates with their signature. In Bangladesh, Practical Action had to work extremely hard to form good relationships with government officers – through close collaboration, sharing plans and progress, inviting staff on field visits – to encourage them to present this certificate; however it was still only issued by Practical Action, and had no legal standing or formal recognition. There have been frequent requests from active community extensionists in Peru that the Practical Action certificate should be upgraded, through recognition from state institutions – as one extensionist puts it:

“There is no benefit of the certificate as it is only issued by Practical Action. It would have greater validity if it were approved by a university or the government... Then communities and institutions would accept me more easily and I would have more income.”

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Equipment and incentives provided

Newly trained extension agents are often provided with some equipment to allow them to practice as extensionists, and to kick-start their business. Agricultural extension agents in Darfur are provided with a donkey, in order to enable them to travel more easily to visit clients; they are also given sprayers and other tools, better enabling them to provide money-earning services. Some are also provided with seeds to use in their business, and a very few receive a cash incentive for providing a community service (at the discretion of their Village Development Committee).

As part of the AU-IBAR scheme, Kenyan para-vets receive a start up drug kit worth 15-25 thousand Kenyan shillings (US\$200-300), for which trainees, supported by their community, contribute 25 percent of the value. Peruvian Kamayoq receive very little equipment in comparison to other countries in this case study – only 27 percent of extensionists received anything. Like other CBE schemes, the Peruvian extensionists receive no salary or stipend – the only payments they receive are charges for the services they provided their clients, for which most gained some modest income to supplement their income (though with great variance); in general community based animal health workers are able to make more money by providing their services than other types of extensionists.

Organisation of Community Based Extensionists

Community extensionists who are well organised are able to provide ongoing support to one another, and also access external support, e.g. follow up training from government and private bodies.

Peru is the only country where Practical Action has successfully facilitated the formation of a formal association of CBEs. The Kamayoq Association is a registered legal entity with its own premises, whose membership is open to CBE graduates, aiming to strengthen their capacities by organising group activities and managing community development proposals. This organisation organises opportunities for further training; every quarter, short courses are hosted

to update and reinforce knowledge. These are facilitated by the CBE trainers, with subjects chosen on the basis of home visits to communities. The Association also opens opportunities to Kamayoq to compete for service contracts and provides information on market opportunities.

In other countries, trained extensionists are bound together only in very informal networks, though many suggest that formal organisation would benefit them.

Ongoing institutional support

Forging good relationships with governments, local officials, suppliers and local businesses is an important for facilitating CBEs in updating knowledge, accessing further training and carrying out additional support activities. By facilitating such linkages, Practical Action has been able to promote the long term sustainability of the technologies and services that were introduced: farmers and CBE agents could continue to obtain relevant inputs, advice and services beyond the availability of Practical Action staff; this has often had the positive side-effect of promoting better government services in those communities alongside community extension.

In most countries, strengthening linkages with government extension services has been achieved by involving government staff in delivering CBE training, as well as facilitating visits to communities to help orient the government staff to the needs and priorities of communities. Community based extensionists have in turn been encouraged to visit and make demands on government staff, increasing their understanding of the needs of poor communities and the benefits of working cooperatively with CBE agents.

Through close involvement with local government institutions, Bangladeshi extensionists have had opportunities for further training. This situation is similar in Sudan – where certificates and good working relationships have enabled some extensionists to contact the Ministry of Agriculture and be invited for further training. In Kenya, where there has been more flux in

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extension projects, para-vets have been able to access further training from other NGOs, and at one point, Practical Action was involved in offering refresher training in a 7 day course to help practitioners keep abreast of disease and pharmaceutical trends. Of those sampled in Samburu, however, only 39% had been on a field exposure visit. In Peru, some animal health workers have been able to gain additional training and formal certification from SENASA (the state organisation responsible for animal and crop health). This has enabled those individuals to boost their professional credentials, and to be employed to conduct government vaccination campaigns. SENASA has also provided access to a reliable and guaranteed supply of agricultural inputs and veterinary medicines.

Government officials have seen the value in CBE agents being able to deliver important services to communities they cannot otherwise reach. In Sudan, regional governments have recognised the value that extension agents provide in linking with local communities. Agricultural CBE agents have been able to carry messages to their communities and from them back to the Ministry of Agriculture, to exchange information on pest and disease monitoring; similarly animal health extension agents can link the Department of Animal Resources with rural farmers, reporting on what they see in the field.

Despite this recognition of the benefits of CBE systems, there has nevertheless often been some suspicion on the part of officials, particularly when it comes to community based animal health workers. Governmental authorities in Darfur, Sudan, have used para-vets to deliver vaccination services only with reluctance, fearing that engaging them will confer official status on them. Officials have assented to para-vets delivering vaccines for disease outbreaks only due to the exceptional state of insecurity in the region; they sometimes challenge CBE agents when they come across them in the field (though most are satisfied on production of a Practical Action certificate); and, much to the frustration of para-vets, they have banned the use of live vaccines for lack of refrigeration facilities. In Kenya, despite the difficulties in gaining official government recognition and sanction, local authorities have found para-vets useful in monitoring and mobilising against disease outbreaks – in particular, outbreaks of *Peste des Petits Ruminants*

(PPR) disease. So some District Veterinary Offices have come to see the para-vets as an essential part of their delivery strategy, particularly on the back of Practical Action links with these offices much more systematically in recent times.

For individual extension agents, linkages with officials and businesses have been equally important – though sometimes difficult to access. Agro-dealer shops have been a key source of information and input supplies for most Kamayoq (extension agents). In Kenya, para-vets have forged links with pharmaceutical drug suppliers in some areas, to ensure more reliable access to legitimate supplies (there are many counterfeit drugs in circulation). Supporting these business relationships is an important factor in their training.

CONCLUSION

This report has shown that success in implementing a community based extension approach has relied on good practice in working with communities, ensuring rigorous and appropriate selection procedures, and delivering effective and empowering training, complete with follow up support and supply lines. The benefits to the individual livelihoods of those who are trained, and even more so, to the services that communities receive, have been impressive. There are a number of particular key factors that Practical Action project officers have identified have contributed to success in their programmes:

- Work closely with communities. The acceptance of community based extension systems by communities has been a key feature for success. When communities have understood the benefits that CBE systems can bring them – through good community mobilisation and conscientious explanation – the extension agents have had support and encouragement, and have been well selected. This acceptance has also been a key means to encourage recognition by local government.
- The skills and knowledge that extensionists gain in training must be appropriate to local needs, cultures, and ecosystems – preferably identified through community input. This

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means that training staff must be reoriented away from promoting 'new ideas', to working with people to improve their current practice, building on local knowledge. Training must be comprehensive enough for trainees to deliver unique services and skills to their clients, engendering confidence from their communities.

- Practical Action has relied upon field staff who have excellent technical skills and are respected and expert in their fields (agriculture, extension and veterinary practitioners). This has given them credibility in forging relationships with local officials and in designing training.
- Investing effort in developing a good working relationship with government service providers has been important. With government support, CBE agents can feel empowered in their work, and can access training and supply lines to better service their communities.

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