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Understanding agribusiness-based advisory services

Findings of a learning trajectory

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Introduction

In many low- and middle-income countries, agribusinesses¹ are deeply engaged in providing services to small- and medium-scale farmers. Such services can include agricultural advisory services or extension. Yet this phenomenon of agribusiness-based advisory services (ABAS) has received relatively little attention in the study of and discussions on advisory services (Babu & Zhou, 2016; IDH, 2016, 2017). This is a critical oversight, as agribusinesses are increasingly present as service providers, and hence shape the prevailing service landscape for smallholder farmers. Importantly, agribusinesses face various challenges in their role as service providers, with impacts both on the agribusinesses themselves and on their ability to contribute to inclusive agricultural development.

KIT Royal Tropical Institute, Agriterra, Moyee Coffee and the Food & Business Knowledge Platform have joined forces to initiate a focused joint learning trajectory on ABAS, lasting from September 2017 until May 2018, to better understand these challenges and identify ways to address them.

The partners have formulated and prioritised the following key questions as the focus of this work:

- 1 How do agribusinesses collect, process and use farmers' **feedback** and data on their advisory services?
- 2 How do agribusinesses realise **synergy** with other institutions and agencies in providing advisory services?
- 3 How can longer-term **sustainability** of advisory services, including mechanisms for cost recovery, be achieved?
- 4 What are key factors contributing to or hampering (technology) **adoption** by farmers and how can these be maximised or addressed?
- 5 What are the farmer-level **development outcomes** of the services provided?

This report discusses the findings of the learning trajectory. It presents evidence on the contribution of agribusinesses to the promotion of inclusive agricultural development, and on the choices they make in operating advisory services under competitive pressures. The report also highlights concrete areas where the different service delivery models by agribusinesses could be improved.

1 Including privately owned businesses and farmer cooperatives with important business activities, but excluding non-governmental organisations (NGOs) and governmental institutions.

Methodology

In a collaborative effort, the four partner organisations jointly shaped the content and direction of the learning trajectory during two main workshops. During the first workshop (September 2017), we identified the key research questions, which we further developed into a study framework with operational questions (Appendix I).

We then proceeded to collect secondary and primary data on ABAS cases. Cases were selected based on purposeful sampling (i.e. looking for information-rich cases) as well ease of access to key informants and secondary information. We excluded cases where ABAS were tied to externally funded public-private partnership projects, and only selected cases where service provision was part of the regular operations of agribusinesses.²

In total, 29 cases were selected, distinguishing between:

- 1 *Internal cases* – cases related to the partners of the learning trajectory (8 cases),
- 2 *External cases* – included in the analysis through interviews (13 cases),
- 3 *Literature cases* – included in the analysis based on existing documentation only (8 cases).³

For the 21 internal and external cases, we reviewed existing reports and documents and interviewed – often by Skype – a key informant for additional information. Often, this was done in two rounds, with the second interview reserved for follow-up questions and deeper analysis of particularly relevant or innovative experiences. A two-week field visit to Kenya and Uganda enabled additional data collection through direct interactions with staff in relation to six cases. Data was analysed by the authors of this report and initial findings were presented during a second workshop in March 2018, during which the four organisations reflected on and enriched the insights of the study.

² Not all cases proved completely free from donor support.

³ Cases based on the book by Babu & Zhou (2015).



Credits: Serena Collina

Additional data collection being carried out through field visits in Kenya and Uganda.

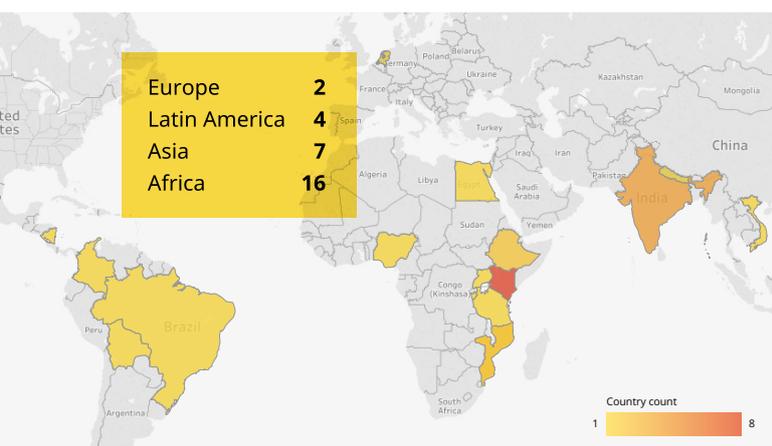
An international *Reference Group* of individuals working on, or interested in, the topic played an important role in the learning trajectory by sharing experiences and information and assisting with the identification of relevant cases. The Reference Group currently comprises 48 individuals from 39 different organisations worldwide.

Parallel to this study, an MSc thesis research project (Collina, forthcoming) was carried out that covered five of above cases as well as three other cases – all in Kenya. Although the final thesis was not available at the time of writing, this report does include some of its preliminary findings.

Overview of the cases

Appendix II presents a full list of the 29 cases studied. Figure 1 shows the countries where the cases are located. Some cases may operate in multiple countries but the figure focuses only on the countries of operation that were discussed in the interviews.

Figure 1: Countries of operation of cases studied



As Figures 2a, 2b and 2c show, the cases were quite diverse in terms of size of the agribusiness, geographical coverage and type of organisation.⁴ This diversity offered the opportunity to explore relevant experiences and innovative ideas across contexts. For the same reason, the study did not limit itself to cases in one particular sector (see Figure 2d).

An important aspect in the analysis later proved to be the position of the agribusiness in the supply chain (Figure 2e). The major distinction is between agribusinesses that are supplying inputs to and those that are sourcing products from farmers. Some do both, but always with a main interest in one of these two activities. In our definition, ‘input supply+’ agribusinesses are those focusing on input supply with additional sourcing services and ‘sourcing+’ are those focusing on sourcing but also providing inputs.

Figure 2a: Size of entity

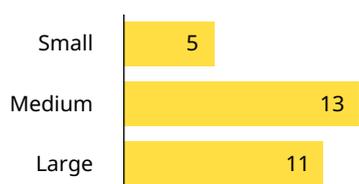


Figure 2b: Geographical coverage

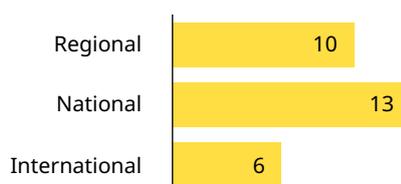


Figure 2c: Type

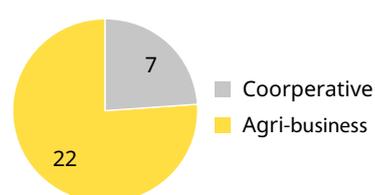


Figure 2d: Sector of focus of entity

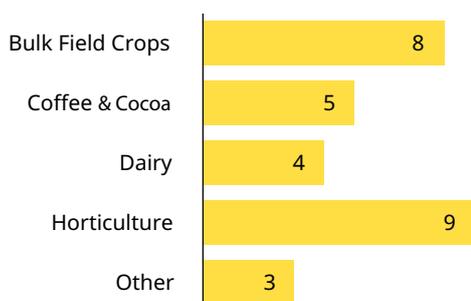
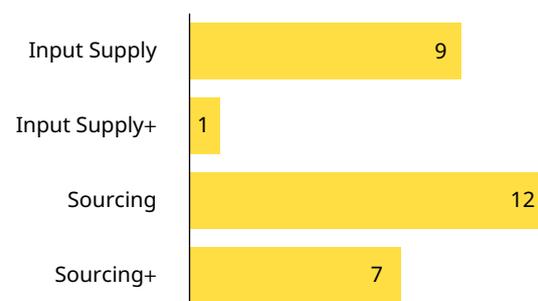


Figure 2e: Position in the supply chain



⁴ Size is defined according to the number of employees (small <50; medium 50-499; large ≥500) while geographical activity refers to business operations in one or multiple provinces (regional), throughout a country (national), or in multiple countries (international).

The organisation of agribusiness-based advisory services

Basic set-up

When establishing advisory services, agribusinesses need to decide whether or not to *create their own capacity* for this. The vast majority (24) of the agribusinesses have chosen to set up their own capacity and provide advisory services themselves. Five have contracted a third party to handle the advisory services and field the relevant staff – be this another agribusiness (Tata), a non-governmental organisation (NGO) (SEKEM, CEIBO) or a government-based agency (Heineken through EUCORD, see Best Practice 1). This choice is often part of a business policy related to whether to focus on the core business of sourcing or producing and selling inputs. However, it can also be part of a development strategy to build advisory service capacities in other organisations (such as farmer organisations), which may be better placed to provide inclusive services in the long run.

Agribusinesses often try to increase their reach by explicitly giving a major role to farmers as advisors to other farmers. Six cases presented evidence of this; another four systematically involve agro-vets and other retailers in their advisory services.

Is it possible to give advisors, who, to be effective in their work, require a relationship of trust and credibility with farmers, other important tasks related to quality control and/or direct handling of sales or purchasing? The majority of the agribusinesses felt that their advisors could provide advisory services hand-in-hand with these other activities without negatively influencing their open relationship with farmers. However, eight had chosen to allow advisors to dedicate themselves solely to advisory services.

Advisor-farmer staff ratio

An important factor with impacts on the effectiveness and efficiency of advisory services is the ratio between advisors and farmers served. This ratio differs significantly between the cases (Table 1).

Table 1: Advisor-farmer ratio analysis

Advisor-farmer ratio	Number of cases
< 49	5
50-199	9
200-499	3
> 500	7
No information	5

Best Practice 1: ABAS working with government extension – lessons from Heineken/EUCORD

In Ethiopia, government extension agents are important actors in rural areas. To increase local sourcing of barley for its brewery, Heineken, together with the Belgium-based NGO EUCORD, engaged in systematic collaboration with the government extension service to reach large numbers of farmers. To this end, they undertook action at three levels:

- 1 Signing of a formal memorandum of understanding with the Ministry of Agriculture at regional level,
- 2 Capacity-building of field staff and their coordinators on effective barley production,
- 3 Putting in place a monitoring and incentive system that includes payment of small 'stipends' based on activities undertaken as confirmed by farmers' signatures on activity reports.

Frequent staff turnover and difficulties in synchronising work agendas were mentioned as factors reducing the effectiveness of this approach to some extent.

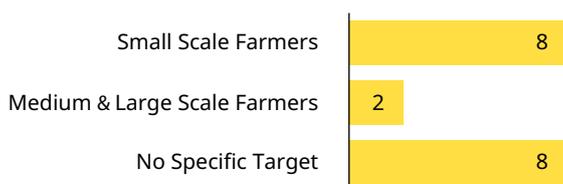
Many factors contribute to the choices made in this regard. Our cases suggest a few general trends. Agribusinesses sourcing organic produce and those in the export-oriented horticulture sector often have staff-intensive systems, with fewer than 200 farmers per advisor. The need to meet quality standards in these cases means close interaction with farmers is necessary, and the relatively high value of the produce sold makes this ratio possible.

By contrast, many – but not all – input supply agribusinesses and three farmer cooperatives that have organised their agricultural service provision relatively recently have high numbers of farmers (more than 500) per advisor. Agribusinesses that delegate advisory tasks to lead farmers also tend to have higher ratios. It is these factors rather than the commodity or sector of interest to the agribusiness that appear to determine the advisor–farmer ratio.

Farmer reach

All agribusinesses and cooperatives work with farmers who have *moved out of subsistence* farming. Of the 18 cases with further information on types of farmers reached, 8 claim to work with smallholder farmers (as defined in their specific context) (Figure 3). This choice is made because the nature and policy of the agribusiness (DADTCO, Caravela) and/or the nature of the product sourced or sold is most relevant for smallholder farmers. Almost the same number of agribusinesses mentioned not reaching out to or targeting a specific category. Field visits in Kenya suggested that this often implied that they reached medium to larger farmers. A few agribusinesses specifically target medium-sized farmers as the most relevant to their business case.

Figure 3: Types of farmers reached by agribusinesses



Most agribusinesses and cooperatives do not specifically address young farmers (Box 1), nor do they target either *men or women farmers*. However, quite a few do monitor whether clients are men or women. Of the eight agribusinesses with which we discussed this in detail, a majority indicated that more than 30% of farmers reached were women. Two of these agribusinesses have activities specifically designed to reach women and build their capacities – but only as part of externally funded projects. Women’s involvement is said to be linked to the nature of the commodity and/or to local socio-economic factors, such as migration of men.

Box 1: How can ABAS reach youth?

The advisory services of the eight agribusinesses in Kenya studied as part of the MSc thesis research mentioned above pay little attention to reaching youth. This seems to be related to the general lack of targeting of the services in question, but also perhaps to perceptions of staff and managers that youth are not interested in farming. The MSc study identified a number of best practices that can help agribusinesses link with and support younger farmers, particularly when they want to start farming:

- *Linking* young farmers to other farmers, other agribusinesses and financial institutions,
- *Specific financial services* for young farmers/ members, e.g. low-interest loans,
- *Aggregation support*, where the agribusiness collects produce to sell it in bigger volumes and at higher prices,
- *Employment creation*, e.g. training youth to use apps and other tools to offer paid services to other farmers who are not online,
- *Services for the small landholdings* that most youth have, e.g. advising the use of vertical bags for vegetable production.

Best Practice 2: A community-based information system – EID Parry Indiagriline

Indiagriline is a web-based agro-portal addressing the specific information needs of the rural farming community in southern India. The content, all in the local language of Tamil, has been developed using the in-house expertise of EID Parry's Sugar and Farm Inputs Division and Corporate R&D Lab, working with local universities, researchers, NGOs and others. The portal is equipped with mouse-overs and voice-overs and has been designed with touchscreen panels in conjunction with an offline web-rom, to make downloads faster. Several other utilities are being added as the site develops. Farmers and other community members can access the information by using Indiagriline's physical portals, known as 'Parry's Corners', which are basic information centres franchised to local entrepreneurs.

(Source: Singh, undated)

Content and methods

Most ABAS focus on the technical aspects of production, including post-harvest management and record-keeping for certification. Some also include wider concerns such as environmental issues, food safety and health aspects, mostly as part of their own concern with the issue. 'Farming as a business' features prominently in service provision in only five cases; otherwise, technical messages dominate.

It is striking how many of the agribusinesses and cooperatives rely on a number of quite conventional *extension methods and tools*, such as demonstrations, farmer group training, field days and individual farm visits. These methods are known to be useful in putting across focused technical messages. Five agribusinesses mentioned the importance of using experiential and adult learning methods, such as farmer field schools. These not only put across a specific technical message but also build farmers' capacity to initiate and handle change within their farms and thus create space for less frequent advisor-farmer interaction and thus a reduction in costs.

Eight agribusinesses and cooperatives include some form of *joint experimentation or applied research* with farmers as part of or linked to their advisory services – something that is often less noticeable in public extension. This experimentation may involve just agribusiness staff and farmers testing a new product under local conditions, but can also involve researchers in handling more complex innovation activities.

Agribusinesses mentioned the use of *information and communication technology (ICT)-based tools* to reach farmers, but less than expected. They seem to feel that such tools are not yet sufficiently developed for wider application, and that farmers have limited access to and skills in using mobile phones, particularly smartphones.

Smartphones play an increasing role in reaching farmers.



Credits: Serena Collina

Box 2: Is ABAS different?

The advisory services of agribusinesses that were part of this study present a number of features that seem to distinguish them from those of other entities, such as public agencies:

- An emphasis on securing loyalty from clients by establishing *long-term relationships* and building trust,
- A well-organised link between advice and the supply of relevant production inputs,
- A systematic series of training events to cover the different stages of the crop cycle,
- Farmer member networks with membership cards that bring additional services to farmers and increased farmer loyalty to the agribusiness.

At the same time, the following challenging features can be observed:

- The often single-commodity focus, limiting attention to (impact on) the wider farming system and livelihoods,
- The danger of promoting over-application of agribusiness products to increase sales (Babu & Zhou, 2016),
- The use of highly standardised technical knowledge packages – a strength of the current ABAS cases – which reduces attention to relevant farmer innovation and adaptation.

The following emerged:

- Phone-based SMS services and/or WhatsApp groups are used to send focused alerts to farmers, for public relations and marketing and sometimes to communicate problems in crops and their solutions (N-Agro in Nepal).
- Several agribusinesses are developing web-based learning platforms, hoping to attract younger farmers with this service. Caravela, sourcing coffee in six countries in Central and Latin America, produces its own training videos, which it posts on its platform. EID Parry, a large agribusiness sourcing sugar cane in India, has a well-advanced web-based learning platform known as Indiagriline (see Best Practice 2).
- Specifically developed mobile phone-based apps for spreading agricultural information are also used, such as in the Tata case in India (called Mobile Kheti). The reasons mentioned for the relatively restricted use of such apps included limited access to smartphones and the complexity of the apps themselves.

Conclusion

There is great diversity in the way agribusinesses organise and operate their advisory services. Choices made depend on the businesses themselves, the sector they operate in and the markets they focus on, as well as on their context.

Generally, agribusinesses could further improve and focus the set-up of their services by:

- Making strategic choices on the advisor-farmer ratio,
- Paying more attention to issues related to 'farming as a business',
- Getting more informed on the possibilities of using interactive adult education-based methods to build farmer competences beyond basic technical ability,
- Following rapid developments in more advanced ICT-based communication tools, while maximising the current use of basic tools such as WhatsApp and SMS.

Farmer feedback mechanisms

Feedback mechanisms on agricultural advisory services refer to all efforts undertaken to generate, process and use information from farmers on whether the services are carried out well (performance) and lead to the farming improvements aimed for (effectiveness). Information is considered *direct* if it is obtained from farmers with the main purpose of understanding their views on the advisory services. It is called *indirect* when farmer data collected for other purposes is used to analyse service performance.

Indirect feedback

Most agribusinesses are very much aware of the importance of collecting farmer-level data and information. To assess farmers' response to their advisory services, they rely mostly on *indirect* information.

In the case of *sourcing agribusinesses*, key data collected includes that on the volume and quality of products obtained from farmers. This is important business information for the agribusinesses and determines prices paid to farmers. Indirectly, they believe, this provides them with information on the effectiveness of the advisory services – such as related to whether farmers have been able to increase yields and quality. However, volumes sold by farmers to the agribusinesses may also increase for other reasons – such as because of reduced sales to others. This limits the value of these indicators. The data also does not explain reasons for any changes observed. Agribusinesses sourcing organic or otherwise certified products are required to collect detailed information to monitor farmers' compliance with certification requirements.

Asking for farmer feedback is often done informally at the end of an event.



Input supply agribusinesses regularly collect data on volumes of products sold to farmers and, less frequently, on reasons for (lack of) product uptake. This is part of the sales administration or sometimes carried out through focused client surveys. This information can be an indicator of the effectiveness of the advisory services, as it gives some insight into the uptake and appreciation of seed varieties, fertilisers and other inputs. It does not reveal, however, whether farmers use such inputs properly, and whether the advisory services have played their role well. In the case of specific problems (e.g. with uptake of a new variety), information is sometimes collected to better understand whether such problems are related to the product itself (e.g. unsuitability to a specific context) or to incorrect usage by farmers.

Sourcing and sales data becomes much more useful if combined with more detailed farmer information, for example collected when farmers become clients or members of the agribusiness. Meru Greens, Sidai and Moyee Coffee, for example, collect quite detailed farmer data, including on land size, farm GPS coordinates, crops grown or animals held, labour availability, production levels and prices obtained. This helps them target their interventions, monitor changes and/or learn about impacts. In larger agribusinesses and cooperatives, coordination of farmer information between different departments (sales, advisory services, membership administration, quality management) can be a challenge.

Direct feedback mechanisms

With the exception of CEIBO, a farmer cooperative in Bolivia (see Best Practice 3), none of the agribusinesses has a system in place for the regular direct collection of feedback from farmers on the quality of their advisory services. CEIBO evaluates the delivery and costs of advisory services with its members regularly, while the other cooperatives suggested that they did so to some extent. Caravela aims to start doing it. SEKEM includes hours and types of advisory support in its contracts with farmers.

Best Practice 3: Organizing farmer feedback on services – the case of CEIBO

CEIBO is a second-level farmer cooperative with a leading position in the cocoa value chain in Bolivia. CEIBO has organised its advisory services in a separate, independent, organisation, called PIAF. PIAF is currently resourced by CEIBO but its independent status allows it to seek resource diversification. The mobilisation of feedback from farmers on these advisory services has been institutionalised at three levels. Field advisors generate farmer feedback regularly during their farmer visits. The control system put in place for farmers involved in organic cocoa production creates a second mechanism for collecting feedback from farmers. Finally, the delivery and costs of the advisory services are evaluated with farmer members during regular cooperative meetings, held four times a year.

Many agribusinesses indicated that they relied on informal communication to monitor their advisory services, especially through lead farmers and during field days or training events, with information 'kept' in the heads of field staff or in their note books. In the case of sourcing agribusinesses, the supply of products by farmers to the agribusiness provides a good moment for such informal feedback. Cooperatives such as Mukurweini in Kenya mentioned informal communication relatively often. Mukurweini is now planning to put in place a more organised (web-based) feedback system.

Generally, processing and acting on informally collected and undocumented information can be a challenge, and the interviews suggested that this was done on an *ad hoc* basis only. Suppliers of inputs showed more of an interest in this type of feedback, probably as it directly links to their sales. For instance, Kenya Highland Seeds organises monthly meetings of field advisors to discuss their feedback from the field.

At least eight agribusinesses use additional direct farmer data collection activities in the form of focused surveys, such as at the end of a season. Field staff generally have responsibility for these. The focus is often on technical, farming and product-processing issues. A few questions to farmers on the relevance and implementation of the advisory services could easily be inserted.

Agribusinesses can be subject to review by third parties. We found evidence of this in five cases. Often, these reviews are linked to projects co-funded by others. All the reviews have included surveys to obtain direct farmer feedback. Only two of these cases have seen systematic review of the performance and effectiveness of their advisory services. For example, the effectiveness of the Tata Kisan Sansar network in technology advisory and delivery services has been subject to a number of reviews by research teams linked to the Indian Agricultural Research Institute in New Delhi (see Mukherjee et al., 2011).

Most of the above information is processed and used by the agribusinesses internally. Only six cases, including two member-based cooperatives, mentioned regular sharing of key information and main learning with farmers. Recent developments in ICT that allow almost real-time linking of data systems with mobile phones expand the potential to communicate key information back to farmers, as shown by agribusinesses like Moyee Coffee.

The use of information and communication technology

Farmer-level data and information are collected, processed and managed using a large diversity of relatively new ICT tools and platforms. Box 3 lists those mentioned in the cases studied. Nine agribusinesses mentioned having tablet- or phone-based systems for data collection by field staff and initial processing but the actual use of these systems is not always without problems (Collina, personal communication). Developments in this continue to increase in pace; we include a few recent advances as Best Practice 4.

Box 3: Commonly used platforms for handling farmer-level data

- Microsoft SharePoint, a standard MS software,
- Fulcrum, a UK-based mobile app for data collection and management,
- Replib, a US-based mobile app to monitor customer history and accounts,
- Mobenzi, a South African monitoring and field data management platform,
- Microsoft Access, a standard MS software,
- CropWalker, a UK-based PC-running farm recording tool,
- Safaricom Business,
- MIO, a South African developed tool for managing distribution systems with field-based people,
- Blockchain, a bext360 platform to manage data along the full value chain.

Best Practice 4: Recent advances in ICT-based data and feedback systems

Farmer Field Book: Olam Cameroon, part of the international Olam Group and not among the current case studies, uses the so-called Farmer Field Book to gain insights into the impacts of its service delivery and to improve its operations. The Farmer Field Book is a package for data collection and analysis developed by Agri-Logic and others to collect data from approximately 150 farmers on a daily basis.⁵ Data collected covers farm profile, farm activities (labour and inputs), farm yields and costs and farmer revenues. The data is used to track the impact of the service packages and the degree of adoption of agricultural practices. Farmers involved receive an overview of their agronomic performance and their economic profit and loss statement (IDH, 2016).

CoCo feedback platform: Digital Green⁶ is a global organisation that empowers smallholders with partnerships and technology solutions. It designed the CoCo platform – Connect Online Connect Offline – to collect data on attendance at video screenings and farmer adoption resulting from these. The dashboard and programme analytics of CoCo allow for data organisation by video type and geography to inform decision-makers, such as agribusiness managers, on which videos lead to high adoption rates.

Information management linked to commercial distribution: Sidai Africa Ltd, an agribusiness providing inputs to livestock owners and farmers in Kenya, uses the MIO mobile platform app, developed by Celstra in South Africa, to manage its field-based commercial distribution system. This includes an inventory management system, a customer relationship management tool, route planning applications for field staff with tracking devices on their motorbikes and functionalities to conduct questionnaires. Before introducing this app, Sidai Africa Ltd could track and locate products until the point of sale in shops. MIO increases visibility and enables the generation of information on all stock and where it is in real time.

Conclusion

While generally attaching considerable importance to farmer-specific information to improve business strategies and target services and products, agribusinesses pay relatively little attention to mobilising systematic feedback from farmers on advisory services. To understand the effectiveness and performance of such services, most agribusinesses rely on data collected for general business purposes, such as on volume and quality of produce sold to the agribusiness, or type, quality and volume of products bought. There are, however, important limitations in using such data to assess their advisory services.

There is scope to strengthen the effectiveness of their advisory services if agribusinesses:

- Systematically generate feedback from farmers on the services provided,
- Ensure farmers' feedback available among staff is captured and processed well,
- Include advisory service-related questions in existing monitoring and evaluation tools/surveys where feasible,
- Seek expert advice on the choice in software for collecting and processing farmers' feedback and other relevant information.

5 <http://agri-logic.nl/farmerfieldbook/>

6 <http://www.digitalgreen.org/coco/>

Synergy and collaboration in providing advisory services⁷

Seeking synergy and collaboration with other agencies in providing advisory services can help agribusinesses increase reach, save costs and enhance effectiveness.

The cases in this study give evidence of collaboration of agribusinesses and cooperatives with other actors, focused mostly on *supporting the main business of the agribusiness*. Agribusinesses mobilise financial services from relevant agribusinesses to support sales of their products and/or link up to organise access to equipment or other inputs. Advanced examples of such collaboration are the value chain policy group organised by one of the cooperatives in the Netherlands and the annual rice sector review conference organised by Loc Troi Group in Vietnam. Agribusinesses and cooperatives also enter

into collaboration with others to identify and access farmers as future clients.

As far as *advisory services* are concerned, systematic collaboration and seeking synergy with others is less evident. Concrete examples of collaboration on advisory services include the five agribusinesses that outsource their advisory services to others. Quite a few agribusinesses collaborate with government extension, but only a few (Heineken, Real IPM, Meru Greens) suggested they did this in a systematic manner, delegating important roles to government staff (see Best Practice 1). Apart from saving on costs, this also helps integrate relevant knowledge in the government extension service, ensuring longer-term availability. A special case is the FIPS model of collaboration between agribusi-

Agribusinesses work together with others in building the capacity of their staff.



Credits: Bertken de Leede

⁷ The study purposely tried to exclude cases of ABAS that hinged on externally funded public-private partnerships, instead zooming in on what agribusinesses do as part of their longer-term regular operations.

nesses and NGOs to create farmer experimentation in input use (Best Practice 5).

Agribusinesses do work together in an organised manner with universities, research institutes, national networks, NGOs and international standard-setting networks in developing the *content* of their advisory services and in related *staff capacity-building*. Both farmer cooperatives (Mukurweini, UOCG and COSUN) and private companies (Sidai, Caravela, Frigoken, N-Agro) have organised such collaboration.

In providing advisory services on the ground, collaboration with others is often *ad hoc*, drawing in resource persons if and when needed. When this concerns government extension staff, it is common practice to provide some form of incentive, though a few felt that paying incentives to staff to do what is considered their regular job should be avoided. Working with others to organise a joint field day is another example of such collaboration.

A few specific interesting forms of collaboration emerged from the cases.

- Secondment of students or interns providing important additional manpower to the advisory services teams of agribusinesses such as BINDZU and Sidai,

- Joint innovation development and research, when there is openness from research institutes and universities to work with the private sector in testing and/or co-creation of new technologies (e.g. Mukurweini, Multi-Trex, COSUN).

Constraints mentioned by agribusinesses that hamper collaboration with others in providing advisory services include the following:

- Differences in basic approaches when specific interest parties do not fit,
- Issues of bureaucracy and difficulties in synchronising planning,
- High staff turnover at government extension services,
- Basic lack of skilled staff on the side of government extension,
- Political interests in other organisations,
- Disagreement on funding: who pays for what?

Overall, it seems that most agribusinesses do not systematically work together and coordinate with other organisations in the provision of their advisory services to farmers. There are good examples of specific forms of collaboration, such as with universities and other resource organisations in developing extension content and staff capacity-building, and with research organisations in testing or jointly developing new products or practices.

Best Practice 5: Facilitating business-NGO collaboration – FIPS Africa

Farmer Input Promoters (FIPS) Africa is a non-for-profit agribusiness that works with partners in the private sector that have relevant technologies or farm inputs: improved varieties of seeds, different types of fertilisers, tools, vaccines or crop protection packages. FIPS works with agribusinesses to help adapt these tools, packages or technologies to fit local farmer contexts. The basic approach is to offer farmers (small amounts of) a number of inputs or other options. Farmers can experiment with these in their own fields at very low risk. Farmer then take informed decisions on which inputs they continue to use and from which agribusinesses. Options may come from multiple, possibly competing, agribusinesses, as in open field days organised by FIPS, which allow competitors to present their services. Otherwise, options may come from one agribusiness only, by means of a cost-sharing arrangement with the agribusiness, to allow for use of their products only.

Sustainability of the services

To ensure the sustainability of advisory service provision, agribusinesses and cooperatives need to recover their costs. Many do so but not always consciously and/or systematically, or with clear insights as to whether costs match (projected) benefits.

A critical look at the costs of services

Often, the largest cost items for agribusinesses in providing advisory services are the 'fixed' costs of staff. Their transport and related working costs (motorbikes, petrol, accommodation in the case of staying overnight) add to these. Efficiencies can be achieved by servicing more farmers per given cost level. Caravela, a coffee sourcing agribusiness with 30 advisors (23% of its employees) visits coffee farmers in remote areas. Providing advisory services in these conditions is expensive in terms of staff and mobility requirements.

Other, variable, costs of advisory services include expenses on demonstrations and field experiments,

field days and other training activities. These costs can be managed by increasing or decreasing the number of activities organised or the number of participants, or through cost-sharing arrangements with other agribusinesses and/or participants.

As in other business operations, agribusinesses and cooperatives can and do make investments in their advisory services to reduce recurrent costs in the long run. Examples include investments in training materials (videos, web-based communication tools) or infrastructure such as offices and training venues.

An IDH study in 2016 found that the costs of advisory services of nine agribusinesses in the cocoa and coffee sector ranged from \$4 to \$38 per farmer. It was not always clear, though, whether or not staff costs were included in these figures. In the case of Tata (this study), training costs per farmer, excluding staff salaries, are an estimated \$6 per farmer; again, this figure is of course context- and case-specific.

Agribusinesses often work with lead farmers to reduce the costs of advisory services.



Credits: Mark Kauw

Covering the costs of advisory services

In most cases, funding for services comes out of regular agribusiness operations. This also reflects case selection in the current study, which focused on self-funded services.^{8,9} Costs can be absorbed – consciously but often less consciously – through a margin on the price of products sold to farmers. In such cases, costs are often managed internally under the marketing cost area of the agribusiness. In the case of sourcing companies, they are covered from a margin obtained on purchasing and selling farmers' produce.

In both models, farmers do pay for the service delivery, but indirectly. Asking for payment would probably go against the marketing value of the service and its loyalty-building purpose. Farmers do contribute in kind to demonstrations and tests by providing land, water and labour. A major sourcing agribusiness included in the 2016 study by IDH is working towards payment by farmers for the services as the basic model for longer-term sustainability, but this has faced considerable challenges.

It proved difficult for agribusinesses in this study to distinguish advisory service costs from other costs. They found it even harder to estimate what these costs implied for prices paid to or obtained by farmers. Meru Greens in Kenya estimates that service provision amounts to about 10% of the production costs of farmers. Only a few agribusinesses mentioned having very specific budgets and fund allocations for advisory services (Best Practice 6).

A few agribusinesses, such as Sidai, BINDZU and Real IPM, cover part of their advisor costs by offering paid training services to NGOs, agribusinesses and governments, and – sometimes – to large commercial farmers. In its most advanced form, this can develop into what is sometimes called a 'Farming Academy', which functions on the basis of paid courses and advisory work. The Fresh Academy just launched in Vietnam, for example, aims to operate as a financial sustainable centre for extension and training.¹⁰

Best Practice 6: Budget arrangements to finance advisory services

Caravela and BAMSCOS have specific arrangements to create and allocate budget room to cover the costs of advisory services. Caravela pays all technical advisory work from its regular operations by allocating \$0.10 per pound from the sales of coffee to its Grower Education Programme. This covers advisor salaries, trainings and e-learning labs. BAMSCOS, a Kenyan dairy cooperative, has organised an additional KSh 0.50 per litre of milk (1.5%) to go into the budget for advisor salaries and meetings between the advisor and members.

Direct benefits of advisory services for agribusinesses

Whether it pays to invest in advisory services is a critical question for agribusinesses. For the input suppliers, the main benefit is an increase in sales. Advisory services also help increase productivity and thus farmer income and power to purchase the agribusiness's products. Agribusinesses also mentioned deeper understanding of which products worked well for which farmers and why as another important benefit generated by advisory services, which helps them focus their business.

The sourcing agribusinesses benefit through an increase in the volume of produce sourced. This is particularly important in sectors like dairy and sugar cane, as processing often requires a certain volume to be cost-effective. Another important factor is that advisory services lead to improved quality of the produce, particularly when sold to markets with specific requirements.

All mentioned the important role played by advisory services in creating loyalty among farmers to sell to or buy from the agribusiness. In the case of one supplier, farmers had indicated that the availability of

8 In line with findings by IDH (2016) on service delivery models suggesting higher chances of longer-term sustainability if costs are covered and systematically integrated into regular agribusiness operations.

9 In spite of this purposeful selection process, in at least eight of the cases donors co-funded part of the costs of the advisory services. Several acknowledged the challenge in continuing such services post-project.

10 www.freshstudio.vn/index.php/news-publications/item/362-successful-launch-of-the-fresh-academy-in-vietnam

good advice was more important than the products on offer. Good services, when an agribusiness stands out from its competitors, can attract new farmers as clients. However, investing in advisory services also runs the risk of farmers benefiting from them yet still deciding to do business with other agribusinesses.

IDH studies in 2016 and 2017 tried to quantify the above benefits and link these to the quantified costs of services using agribusinesses' overall financial data. Crucial as such an analysis could be for agribusinesses, it proved a demanding exercise, producing reasonable results in only a few cases.

Controlling and reducing costs

In our analysis, given that staff salaries are the main cost item, efforts to manage costs need to consider these. The advisor–farmer ratio provides a first important entry point for looking at staff costs. Is the current ratio in line with that of similar organisations? Can it be reduced without reducing the effectiveness and good name of the service?

This question cannot be answered without looking at how the advisors function in their interac-

tions with farmers. It is likely that they could support more farmers if they moved away from close supervision or almost co-management towards building the capacities of farmers to manage their farms themselves. This would create space for the advisors to support new farmers (see Gordon *et al.*, 2015 in the case of SEKEM). Agribusinesses like Rio Una in Brazil sourcing organic vegetables apply this strategy. Generally, there is scope to invest more in building the extension and communication competences and skills of advisors next to their technical skills, as shown by agribusinesses like Sidai and Caravela.

Many agribusinesses limit the number of own staff while maintaining the effectiveness of their advisory services by involving so-called 'lead farmers' as farmer advisors in service provision (Heineken, DATCO, Meru Greens, EID Perry). One agribusiness trains farmers to develop skills as farmer scientists, enabling them to find local, low-cost and sustainable solutions to agricultural challenges (IDH, 2017). How to best set up and organise a network of farmer advisors is an area of study in itself. Box 4 summarises insights and main considerations from the current study.

Box 4: Setting up a farmer advisors' network

Broadly, there are two main options in organising and incentivising farmer advisors. One lies in recognising them as 'assistant staff', linked to the agribusiness through the provision of incentives (a small stipend per month, free tools and equipment, access to regular capacity-building). The model allows agribusinesses to coordinate the work of farmers but brings with it the need for continued funding support. The other option is to encourage lead farmers to become self-funded advisory service providers with (franchised) or without a formal link with the agribusiness. The community-based facilitators of Equator Seeds Limited Uganda and the 'village cocoa doctors' under the Mars agribusiness Cocoa Academy are examples of this approach (IDH, 2016; Okelai *et al.*, 2017). These generate income from other activities, such as aggregation of produce, linking farmers to financial services or sales of inputs and seedlings. In the Heineken case in Ethiopia, the involvement in other activities focusing on income generation seriously reduced the possibilities for advisory tasks. The quality of the advisory services provided by the farmer advisors and the limited scaling momentum led Caravela to again include training events facilitated by own staff, as this enabled it to attract larger groups of new farmers and to adopt a training approach to build farmer capacities beyond technical ones. In all cases, the selection of lead farmers requires serious attention and needs to go beyond who is the best farmer technically. One dairy cooperative under BAMSCOS in Kenya purposely selects young farmers as lead farmers, and feels that interest among young people in joining the cooperative is now increasing (Collina, forthcoming).

Best Practice 7: Structuring advisory services through retailers – the Tata Kisan Sansar Network

The TKS network was set up by Tata Chemicals, a large, northern India-based, fertiliser agribusiness that is part of the Tata group of agribusinesses. The TKS model consists of around 30 farmer information and resource centres ('hubs') linked to and feeding into more than 800 retail shops, which in turn serve around 25 villages each. According to information from the agribusiness, the network reaches close to 3 million farmers. The central idea is that the shops and hubs provide all the support services farmers need – through the one-stop-shop concept – thus integrating knowledge with commercial inputs and other sales. The shops have links and agreements with a host of other agribusinesses, to include sales of their products, such as seed, equipment, etc. The sustainability of the system is ensured as each hub and each TKS operates as a self-supporting entity under a franchise agreement between a local 'entrepreneur' and Tata. These local entrepreneurs have their own networks and understanding of the local dynamics needed to run an effective one-stop-shop. To support the network, Tata still fields an advisor team, the costs of which are covered from its own (marketing) budget.¹¹

Several agribusinesses selling inputs, such as Sidai, Tata, Rijkzwaan and Kenyan Highland Seeds, reduce costs by systematically involving agro-distributors and retailers in providing technical advice to farmers. Staff of the agribusiness are tasked specifically with training these retailers to give quality advice. Training retailers requires the provision of tailor-made solutions to fit their availability. Quality standards can be increased by means of specific franchise agreements and monitoring these carefully (Best Practice 7).

Increased use of ICT-based methods and tools is another major option to reduce costs per farmer reached, in spite of the initial investment needed. The earlier discussion of the organisation of ABAS presents the various ways in which ICT applications are used by the agribusinesses in this study in providing advisory services, and some of their limitations.

In addition to above, specific cost reduction options mentioned were efficiency gains through the planning of the physical routes of advisors, the use of modest venues and working through farmer groups rather than individual farmers. Several agribusinesses (DATCO, Heineken Ethiopia, Meru Greens) undertake specific efforts to transform their extension and training materials into uniform packages for use by other advisory services operating in the area, to increase their reach.

Conclusion

All agribusinesses underlined the importance and benefits of advisory services for their core business, though often without being able to compare effectively these benefits with costs incurred. The fact that the costs of these services are covered from the main business of course contributes to their sustainability. Agribusinesses could learn from the efforts of some of the companies and cooperatives discussed and/or make the (management of the) costs of advisory services more explicit, allowing for well-founded choices as well as external transparency.

Apart from following up on the potential to realise case-specific efficiency gains, such as through improved planning of work or choice of facilities used, agribusinesses could improve cost effectiveness by:

- Looking at the earlier discussion on the advisor–farmer ratio and consider options to improve this,
- Create a solid system for lead farmers and/or agro-input retailers to undertake a considerable part of the advisory services and
- Increased use of ICT, including use of videos that can also be accessed through internet.

¹¹ See also www.tatachemicals.com/Service/Tata-Kisan-Sansar

The challenge of adoption

Understanding (non-)adoption

Essentially, adoption refers to farmers engaging in and using practices that are being promoted by advisory services. These can be technical production methods, business skills, post-harvest handling, environmental practices or ways to address health and safety issues. Certified agribusinesses or cooperatives handling organic produce interviewed for the study often understood adoption as compliance with certification standards that they monitored closely. This may not always be fully correct, as there may be different ways to reach the required standards – some recommended and others advised against.

Several input-supplying agribusinesses indicated that the issue of adoption and reasons for non-adoption was not relevant to them. They claimed to find

out by trial and error what worked for them and what did not. The agribusiness focuses on products that work (i.e. sell) and drops those that do not. Understandable as this is, it misses out on the opportunity to learn why certain products do not work and/or do not sell well and whether or not this is caused by the way farmers have applied them.

Only two agribusinesses specifically mentioned that *adoption could be partial*. Others missed this important distinction that reflects what often happens in practice, limiting their analysis and understanding of adoption and non-adoption.

Analysis of non-adoption

Extension education theory distinguishes between three distinctly different sets of factors that

Adapting advisory services to actual farmer conditions improves adoption.



Credits: Bertken de Leede

determine whether farmers apply new practices and knowledge on their own farm or not (e.g. Röling, 2002):

1. Farmers do **not (fully) know** and understand the new practices and their benefits.
2. Farmers are **not able to do so**, e.g. because of lack of resources, limited availability of materials or restrictive policies.
3. Farmer are consciously **not willing to accept** them, e.g. because of the way they see the benefits and costs versus benefits,¹² the profitability and/or the risks involved, or because practices are not relevant for them.

The study discussed with resource persons from 15 agribusinesses the main reasons for non-adoption. Together, they gave 28 reasons for non-adoption. 'Coding' these along the above three categories leads to interesting conclusions.

Agribusinesses rarely see the quality and effectiveness of their advisory services as a key factor influencing farmer adoption. Only twice did they link non-adoption to farmers *not yet fully knowing* the new practices and their benefits – a task of their advisory services.

On the other hand, agribusinesses and cooperatives often linked non-adoption to farmers *not being able to do so* (12 mentions). They realise the financial constraints farmers face when investments are needed and access to finance is difficult. Others referred to labour constraints or practical issues such as lack of access to power or geographical location.

Ten times, agribusinesses linked non-adoption to factors that imply that farmers are *not willing to accept* new practices because of their doubts related to profitability (cost-benefit comparison) or because of the risks involved.

While together the cases give a comprehensive view of the complex set of factors that influence farmer adoption, there were striking differences in the perceptions of the agribusinesses involved. In more than half of the 15 cases in this analysis,

resource persons mentioned only a single reason for non-adoption. Only five pointed to more than three different possible reasons. There is scope for these businesses to deepen their understanding in this regard.

Strategic responses to non-adoption

A first strategy to address the issue of non-adoption would involve some form of monitoring and *structured learning* on it within the agribusiness – which, as we saw in the discussion on farmer feedback mechanisms, is a challenge.

Agribusinesses in this study showed three sets of strategic responses to improve adoption levels. First of all, while *planning* the (content of) their advisory services, agribusinesses take actual farming conditions into account as much as possible. Products promoted will be selected to fit agro-ecological conditions and resource availability, increasing the likelihood of adoption. Field experiments with farmers play a role too, to test recommendations in local conditions and/or adapt them to these (Best Practice 8). Even where there is no specific strategy, simple trial and error can help in finding out what works where (Real IPM).

Best Practice 8: Integrating on-station and on-farmer research – Afrisem-Rijkzwaan

When the suppliers of inputs are also the producers of them, interaction with farmers in testing and further developing new products becomes a key strategy. Afrisem, a research and development centre of the large seed agribusiness Rijkzwaan in Tanzania, develops new varieties that fit the conditions of small and medium farmers. It runs a breeding programme on the Afrisem farm, the results of which are carefully tested in an early stage with selected lead farmers. Other farmers are exposed to the most promising varieties out of this process during field days, and encouraged to further try them out. Monitoring of these informal 'experiments' generates further insights into what works well under which conditions.

12 Costs and benefits here refers not just to economics but also to social, cultural and other advantages and disadvantages.

A second strategic response mentioned by six agribusinesses is to clearly identify *sub-categories of farmers* according to their specific features and conditions. This allows the agribusinesses to *address each category differently* – with different recommendations, different products or even different methods. There is room for other agribusiness to consider also using this approach.

The third and most commonly used strategy proved to be providing incentives to farmers to encourage acceptance of advisory service messages and products. Where there is a basis for longer-term provision of these incentives, they do support adoption. When incentives are given for only limited periods of time, their effect is likely to be short term only.

Most commonly used are incentives directly at the level of farmers (11 cases). This includes the payment of a premium price when quality or quantity targets are met. A guaranteed market and price and/or technical assistance as part of contract farming represents another form of incentive. The study was not able to look in detail at these systems (e.g. at the timeframe over which the incentives are being offered). While a longer-term offer would be in the interests of farmers, agribusinesses operating in a volatile market seem inclined to limit the timeframe to one season only.

Some agribusinesses have reward schemes (cash or gifts) when quality or quantity standards are met, or provide subsidies to those showing willingness to adopt new ideas or practices. Recognising and promoting 'star' farmers to positions of additional responsibility (field staff, coordinator) is another form of incentive (GADC, described in IDH, 2017). Loc Troi Group in Vietnam is probably one of the more advanced agribusinesses in terms of incentive systems, giving lead farmers priority in becoming shareholders of the agribusiness and thus benefiting from its financial results (Best Practice 9).

Incentives can and are also given at other levels – for example with agro-dealers through awards or increased payments when targets are met (for sales, selling margins, costs, stock losses). Similarly, arrangements are made for staff (e.g. awards related to targets set).

Best Practice 9: Providing farmers with a range of incentives – Loc Troi Group in Vietnam

Loc Troi Group, formerly known as AGPPS and the largest manufacturer and distributor of crop protection products in Vietnam, provides farmers who do well with a range of incentives. Apart from providing free advisory services, it sells necessary inputs such as seedlings, fertiliser and pesticides to farmers at cost and with 0% interest loans. It also covers part of the transportation costs from the fields to the dryers and offers a month of rice storage for free. The group also commits to buying rice at market prices. Selected communities receive health care services and access to cultural events. It even allows active and successful farmers to become shareholders in the agribusiness. (Source: Babu & Zhou, 2016)

Conclusion

Behind the question of (partial) adoption and non-adoption, complex processes at farmer level and beyond play a role. About half of the agribusinesses comprehensively analyse the reasons for partial or non-adoption. For other agribusinesses, there is scope to deepen their analysis and understanding. Agribusinesses can improve their advisory services by:

- Giving more attention to analysis of (non-) adoption and deepening their understanding,
- Internalising this understanding within the organisation,
- Tailoring the content of advisory services to (different categories of) farmers, based on a good understanding of their respective characteristics and conditions.

Many agribusinesses use a wide range of both permanent and temporary incentive systems to encourage farmers to apply recommended practices and use their products. These generally seem to be effective. When incentives are given for limited periods of time, their effect is likely to be only short in term.

The development outcome of ABAS

The challenge

A final question relates to whether ABAS lead to positive changes in the livelihoods of the farmers reached. Does the (partial) adoption of advice given and knowledge shared lead to increased productivity, with produce of possible higher quality, and does this lead to higher income and other improvements in farmers' livelihoods? And who are those benefiting?

The current study did not allow us to undertake independent research on development outcomes. The discussion below is informed by a study for the International Food Policy Research Institute (IFPRI) (Babu & Zhou, 2016) as well as four external impact studies of agribusinesses in this study (SEKEM, DATCO, Tata, Heineken-DRC), complemented by anecdotal evidence from the interviews and the initial findings from the MSc thesis research (Collina, forthcoming). In all cases, it proves difficult to separate the outcomes of advisory services from those resulting from overall agribusiness interventions.

Outcome analysis

The literature and studies suggest that advisory services lead to significant *improvements in productivity* of the commodities targeted, through the use of recommended practices as well as related inputs. Through the services, inputs are often provided in a more timely and integrated manner, at a lower cost per unit, and accompanied by information on how to use them well. The IFPRI study also gives some evidence on how improved farmer capacity has had long-term spill-over effects on the production of other crops than those targeted.

Improved practices may go hand-in-hand with higher production costs. However, the above studies suggest substantial *increases in farmer income*. For example, the Tata study (Mukherjee *et al.*, 2011) reports 40–50% income increases from wheat production, with 20% increases in productivity. Such increases can be limited, though, to the commodity under study, while leading to reduced income from other crops or activities. But several studies

(DADTCO, 2014; EID Perry and Syngenta cases in Babu & Zhou, 2016) also looked at income at the household level and found increases in this too.

Factors mentioned as contributing to income increases included the better quality of inputs used and of the related services provided (credit, guaranteed marketing), as well as lower costs per unit of production. Premium prices paid for products that meet quality standards also contribute to income improvements. Linking income and livelihood data to standards on the International Wealth Index (Smits and Steendijk, 2014) and its relatively limited number of indicators is one way to structure outcome analysis, as suggested by Moyee Coffee.

Box 5: Kenyan farmers' views on agribusiness-based advisory services

In their analysis, farmers generally suggested services had a positive outcome in terms of:

- *Farming practices*. Knowledge about the specific farm activities improves productivity and reduces crop losses (24 times).
- *Access to finance*. When links are made to financial institutions, farmers can make investments and boost their businesses (6 times).
- *Networks*. Connection to farmer groups, development projects and others increases opportunities for learning and access to relevant innovations (10 times).
- *Package of services*. Members of a cooperative often receive a variety of complementary services (4 times).
- *Commercial farming*. Farmers move from low-production subsistence farming to commercial farming (8 times).
- *Markets*. After being able to meet quality and quantity requirements, farmers have a stable market by selling to agribusinesses and receive higher prices (9 times).

Recent interviews with 31 Kenyan farmers confirmed this analysis to large extent (Box 5; Collina, forthcoming). It is fair to note, though, that farmers interviewed were generally lead farmers or others with close ties with the agribusiness concerned.

Agribusinesses interviewed often use proxy indicators to monitor *livelihood changes*. These include farmers opening new businesses, improved housing, children going to school, the purchase of land or a general increase in farm land under production. One study (DATCO, 2014) found that a significant increase in the proportion of households with at least one head of livestock after two years of operation was a good proxy indication of livelihood improvement. These proxies can be useful but only if monitored in a systematic manner – which is hardly ever the case.

The IFPRI study identified increased farmer capacities in problem-solving as an important outcome in one of the twelve cases. To facilitate their operations, many agribusinesses were found to encourage farmers to organise themselves in community based-initiatives, which can lead to an increase in voice and power in dealing with others, including the businesses.

ABAS and the bigger picture

At a more general level, the IFPRI study reviews the overall functioning and role of agribusiness-based advisory programmes. It concludes that these make more effective use than public extension services of recent innovations and technologies. Agribusinesses that provide integrated services tend to have more successful advisory programmes. Because of their need for longer-term consistency in the quality and quantity of production bought or sold, ABAS also provide continuity in their support to farmers, which is often not the case with public advisory services.

Increased productivity is often reported as an outcome of ABAS.



Credits: Ninoska González

The same study also identifies potential limitations of ABAS:

- Services may have limited scale and scope, in terms of geographical coverage and numbers and types of farmers reached. For example, they may exclude subsistence farmers working on staple crops.
- They may focus on a specific commodity, with limited attention to the wider farming system.
- Where advisory services are part of contract farming, issues related to the fairness of the rules of contracts and their enforcement on farmers' side can be an issue.
- Smallholder farmers with limited alternatives and power run the risk of being exploited by agribusinesses.
- Because farmers pay indirectly for advisory services, a lack of transparency can create a sense of mistrust on the part of farmers.

Agribusinesses and the need to look at outcome?

The current study shows that – with a few exceptions – most agribusinesses do not pay systematic attention to the outcomes of their operations for farmers and their livelihoods, though almost all have implicit assumptions as to how farmers benefit. At best, they refer to earlier-mentioned proxy indica-

tors or to impact studies supported and co-funded by development partners.

One might argue that monitoring and assessing the outcome of any intervention at farmer household level is a complicated and challenging task, and one beyond the scope of work of agribusinesses. This may have been the case in the past, but customers as well as the general public are increasingly interested in knowing not only the source of agricultural produce but also how it is being produced and the impact this has on the producers and the environment. Monitoring development outcomes in terms of increased income and improved livelihoods for farmers is thus an increasingly important profiling and marketing tool, especially, but not only, for agribusinesses with an ethical or environment-based business case.

A number of innovative methods to undertake and report on outcome monitoring are currently being developed and used. These include the Living Income methodology,¹³ used by Moyee Coffee alongside modern ICT options such as the Blockchain platform to collect, handle and share relevant information widely, thus increasing transparency along the chain (Best Practices 10 and 11).

Best Practice 10: The Living Income approach for assessing outcome

Moyee Coffee, sourcing and processing quality coffee in Ethiopia, works towards farmers earning what is called a 'living income' through profitable farms and involvement in value-adding activities. A living income refers to the net income a household needs for all its members to have a decent standard of living. Instead of applying the comprehensive but demanding Anker model that is part of this approach, Moyee has estimated the living income by quantifying specific locally relevant items such as food, water, housing, education, health care, transport and clothing. For this, it has undertaken desk research on living income data from Ethiopia, used data from own farmer intake questionnaires as well as additional information collected during harvesting and delivery of the beans. This of course produces only an estimation of farmer income, but this will help Moyee set targets and monitor the outcomes of its work. *(Source: FairChain, forthcoming)*

13 <https://www.living-income.com/>

Best Practice 11: Creating full transparency in the chain – the Moyee Blockchain pilot

In 2017, Moyee started to use the Blockchain platform to give stakeholders – farmers, roasters and consumers – access to data across the entire chain. It provides full transparency around origin, quality, pricing and margins obtained. At the point of collecting the coffee, the platform instantaneously creates cryptotokens to represent the value of the commodity. As the commodity flows through the entire supply chain, new tokens are automatically created. These tokens increase in value as the beans move through the supply chain. Farmers are also paid through Blockchain. Data in the coffee chain is stored digitally in Blockchain, locked by means of a cryptographic key so it cannot be tampered with.¹⁴

Conclusion

A review of existing data and studies suggests that ABAS lead to significant improvements in the productivity of the commodities targeted and to commodity-related farmer income. The few studies that look at outcomes in terms of income changes at the household level find increases here too.

Very few agribusinesses themselves look systematically at the impact of their advisory services. Some argue that monitoring and assessing impact is a complicated task beyond the scope of their work. However, as customers as well as the general public are increasingly interested in knowing not only the source of agricultural produce but also how it is being produced and the impact this has on farmers, several innovative agribusinesses are investing in monitoring and widely sharing relevant information.

Generally, agribusinesses reach farmers engaged in market-oriented agriculture and producing commodities of interest to agribusinesses. This also demarcates the potential development outcomes of ABAS.

ABAS are potentially important mechanisms for farmers to improve the way they farm.



Credits: Anne Rappoldt

14 www.moyeecoffee.com/blockchain-concept

Conclusion

Advisory services of agribusinesses are potentially important mechanisms for small and particularly medium farmers to improve the way they farm, increase the volume and quality of production and enhance their livelihoods. Important limitations relate to their reach – they cover only specific geographical areas and work only with already market-oriented farmers (men and women) – and their focus – attention is often on only one or a few commodities, ignoring (impacts on) other parts of the farming system.

This explorative study informs agribusinesses and their partners on how advisory services are being

shaped under various conditions, as well as on choices being made and the rationale for these. This will enable critical reflection on own practices and possible areas of improvement.

Overall, agribusinesses can improve their advisory services by making service provision – the delivery mechanisms, their quality, adoption, costs and impact – an explicit agenda item. In other words, they need to move beyond the assumption that their advisory services work, to develop a basic but solid theory of change and related business plan for the advisory services, and monitor these to improve them further.

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Appendix I – Study framework

Basic description of the case

The agribusiness / cooperative

- Name, address, contact person, his/her function
- What is the main activity or purpose of the agribusiness / cooperative?
- What is its geographical coverage?
- Can you give an indication of the size of the business / cooperative? (E.g. annual turn-over, number of employees, number of members, number of (farmer) suppliers, number customers,...)

The set-up of advisory services

- What is the definition of 'advisory services' used by the agribusiness / cooperative?
- What is the purpose of the advisory services? What are the main objectives?
- What do you expect as key results or impact from the advisory services?
- Who provides the advisory services? What is their position in the organization? What is their position in the stakeholder network?
- For whom are the advisory services? How are the farmers selected? Are there different farmer categories?
- Who is responsible/ the owner for the content-program and its development?
- What is the main content of the advisory services (e.g. skills, technical support to improve production (quality/quantity), training, demo's, research)?
- How are these advisory services linked to other services provided by the agribusiness (e.g. marketing support, financial support, assistance with input supply or marketing,...)?
- Where do advisor get their knowledge from and (how) is this updated? Which other competences do advisor need / have to be effective?
- What are the activities or practical tools used in providing advisory services?

Farmer feedback mechanisms

- What are the main channels, ways, to obtain information and feedback from farmers on what the agribusiness / cooperative promotes through advisory services?
- For each of the above: How is feedback organized? Which methods and tools are used to generate the feedback? Who is handling these and how do they work? How often is feedback elicited?
- How many farmers are involved in giving feedback? Which type of farmers? How are they selected (sampling)?
- How and by whom are feedback and data processed into valuable and accessible findings and conclusions (e.g. data management systems)?
- What is the relation between those who collect and process the data (and findings/opinions) and those who provide the services?
- What is done to ensure that lessons are used and that findings are integrated in the advisory services and business practices?
- Are there other ways in which data from farmers are collected not linked to the advisory services? If so, which are these and what do they cover?

Alignment and synergy with others

- Are there other organizations involved in providing advisory services? If so, which and what is the role of each in terms of content, quality and coverage?
- Is there competition between the organizations? What is the effect for the farmers?
- Which of the other organizations do you cooperate with? Why (not)?
- What is the motivation of each organization to cooperate or coordinate services?
- How do you align and/or coordinate interests of the different parties?
- Who pays for collaboration and/or coordination with others?
- What are main challenges in cooperating or coordinating with other organizations in providing advisory services? How can these be addressed?

The business case of advisory services

Cost recovery

- When are advisory services (financially) sustainable in your view?
- What are the real costs of providing the advisory services (e.g. costs of staff, education and training programmes, experimentation and research)?
- How and by whom are these costs financed (e.g. agribusiness, government, donors, farmers, others)? How is this organized?
- Are farmers contributing financially for the services? How?
- Do farmers give non-financial contributions to or in return for the advisory services?
- What are the benefits of the advisory services for the agribusiness/cooperative. Can you give evidence for this? Are these benefits high enough to justify the costs of the advisory services?
- What are the costs of the extension services relative to the number of farmers reached or the total turnover of the agribusiness?

Institutional arrangements

- How do you organize the advisory services in such a way that they are financially sustainable?
- How have you formalized these in terms of rules, agreements, contracts?

Farmer adoption

Analyzing non-adoption

- To what extent does the agribusiness/cooperative experience that farmers do not apply what is being promoted through the advisory services? Why? What are specific examples of this?
- In such cases is there complete zero adoption or partial adoption or adaptation of recommended practices?
- To what extent is there a lack of application because farmers do **not yet fully know** and understand the new practices and their benefits? Please elaborate.
- To what extent is there a lack of application because farmers are **not able to do so**, e.g. due to lack of resources, availability of materials, restrictive policies? Please specify.

- To what extent is there a lack of application because farmers are **not willing to accept** them because the way they see costs versus benefits, doubts on profitability or on risks involved; or because the practices are not relevant for them?

Strategic choices to response to non-adoption

- How does the agribusiness/cooperative learn about non-adoption and analyze the factors influencing it? How are farmers involved in this process? (Refer to section on feedback mechanisms),
- How does the agribusiness/cooperative analyze and plan content of the advisory services in terms of applicability under farmer conditions?
- Does the agribusiness/cooperative identify specific categories and sub-categories of farmers for its advisory services? If so, on which aspects are these categories based?
- Does it target advisory options and messages for each category? If so, how does this work?
- Does the agribusiness/cooperative provide incentives to farmers to encourage application of new knowledge and practices? If so, which are these and how are they organized?

Development outcomes

- Do farmers benefit from the advisory services? How? Do you have evidence for this?
- How many farmers benefit from the services in the above way?
- Which farmers benefit the most? To what extent do the advisory services reach disadvantaged members of the population (the poor, women, youth and elderly, marginalized ethnic groups)? How, if at all?

Key lessons and learnings

- What are you most proud of in the work of the advisory services?
- What do you consider the most successful elements, methods or tools from this case? Why?
- What are the main challenges of this case?
- What are the main areas for improvement of this case? What are first steps to be made in your opinion?
- Could the lessons learned also be applied in other contexts/by other agribusinesses/cooperatives?

Appendix II – List of cases

	External cases	Case country	Type	Position in the chain	Product	Size	Geographical coverage
1	Bindzu	Mozambique	Agri-business	Input supply	Horticulture	Small	Regional
2	Caravela Coffee	Colombia and other	Agri-business	Sourcing	Coffee	Medium	International
3	Frigoken Ltd	Kenya	Agri-business	Sourcing+	Horticulture	Large	National
4	Heineken	Ethiopia, Burundi	Agri-business	Sourcing	Sorghum, rice, maize, barley	Large	International
5	Kenya Highland Seed	Kenya	Agri-business	Input supply	Horticulture	Medium	International
6	Meru Greens	Kenya	Agri-business	Sourcing+	Horticulture	Medium	National
7	N-Agro	Nepal	Agri-business	Input supply+	Horticulture	Small	National
8	Real IPM	Kenya	Agri-business	Input supply	Crop protection	Medium	National
9	Rijkzwaan	Tanzania	Agri-business	Input supply	Horticulture	Large	International
10	SEKEM	Egypt	Agri-business	Sourcing	Food, textiles, pharmaceuticals	Large	National
11	Sidai Africa	Kenya	Agri-business	Input supply	Dairy	Medium	National
12	Tata Chemicals: Tata Kisan Sansar	India	Agri-business	Input supply	Fertilizer	Large	National
13	United Organic Coffee Growers	Uganda	Cooperative	Sourcing	Coffee	Small	Regional
Internal cases							
14	BAMSCOS	Kenya	Cooperative	Sourcing+	Diary	Medium	Regional
15	CEIBO	Bolivia	Cooperative	Sourcing	Cocoa	Medium	Regional
16	DADTCO	Mozambique	Agri-business	Sourcing	Cassava	Small	International
17	District Agricultural Co-operatives Federation	Nepal	Cooperative	Sourcing	Horticulture	Medium	National
18	For Farmers	Netherlands	Cooperative	Input supply	Dairy	Large	National
19	Moyee Coffee	Ethiopia	Agri-business	Sourcing	Coffee	Small	National
20	Mukurwe-Ini	Kenya	Cooperative	Sourcing+	Dairy	Medium	Regional
21	Suiker Unie	Netherlands	Cooperative	Sourcing+	Sugar beets	Large	National
Literature cases							
22	EID Parry	India	Agri-business	Sourcing+	Sugar	Large	Regional
23	Jain IS	India	Agri-business	Sourcing+	Onion	Large	Regional
24	Kenya Horticulture Exporters	Kenya	Agri-business	Sourcing	Horticulture	Medium	Regional
25	Loc Troi Group (formerly AGGPS)	Vietnam	Agri-business	Input supply	Crop protection	Large	National
26	Multi-Trex Integrate Foods	Nigeria	Agri-business	Sourcing	Cocoa	Medium	National
27	Rio de Una	Brazil	Agri-business	Sourcing	Horticulture	Medium	Regional
28	Sarveshar	India	Agri-business	Sourcing	Rice	Medium	Regional
29	Syngenta	Nicaragua	Agri-business	Input supply	Horticulture & crop protection	Large	International

Understanding agribusiness-based advisory services

Findings of a learning trajectory



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