Field report

Sustainable support for food processing SMEs in Uganda

PETER FELLOWS, MIKE DILLON, BARRIE AXTELL and MICHAEL LUBOWA

This report describes an approach to support for small and medium food processing enterprises in Uganda that meets many of their identified needs in a financially sustainable way. The components of support provision were: 1) identification of small and medium-sized enterprise (SME) needs in specific food sub-sectors; 2) provision of training to SME owners; 3) selection of potential trainers and advisers from among participants and provision of training for local trainers and consultants to provide ongoing support; and 4) creation of an independent, not-for-profit company to coordinate SME support, create linkages with other institutions, and supply equipment, materials, information, training, and consultancy services on a commercial basis. This was intended to enable financial sustainability and long-term support for food processing SMEs.

Keywords: food processing, SMEs, training, consultancy services, Midway Centre

SUPPORT FOR SMALL-SCALE FOOD processors requires a multi-disciplinary approach, involving sciences (biochemistry, engineering, microbiology), social aspects (confidence building, negotiating, and selling skills), and business aspects (marketing, business planning, financial management). Intended beneficiaries are existing or aspiring entrepreneurs, or farmers who wish to diversify into processing.

In the early 1990s, the Ugandan Government was beginning to achieve stability and economic growth after decades of rebel activity and civil war. It was recognized that many Ugandan entrepreneurs or aspiring entrepreneurs knew the basics of processing foods for local sale to neighbours, but lack of knowledge to address variations in product quality and the requirements for producing a packaged product for distant sale and consumption were issues that needed to be addressed. Following unstructured interviews with a selection of small-scale food processors, the problems that faced these small and medium-sized enterprises (SMEs) were identified as those that are *intrinsic* to the business and those that are *extrinsic*.

Dr Peter Fellows (pfellows@btinternet.com) is a consultant at Midway Associates, UK; Dr Mike Dillon is a consultant at Midway Associates, UK; Barrie Axtell is a retired consultant at Midway Associates, UK; and Michael Lubowa (mlubowa@yahoo.com) is Managing Director at Midway Centre, Uganda.

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Intrinsic problems of food processing SMEs

Under-developed business management skills, knowledge, and resources:

- poor planning skills;
- inadequate management of finances;
- little market research – most SMEs operate in a vacuum, isolated from customers and may produce products that do not meet consumers' needs;
- under-developed entrepreneurial characteristics, confidence, and assertiveness in selling or negotiating;
- lack of trusting relationships and networks with suppliers and retailers;
- little market orientation – most do not see the value or understand the concepts of marketing;
- supply-led distributor mentality;
- lack of capital for expansion.

Under-developed technical skills, knowledge, and resources:

- few links between market research and product development;
- little recognition of opportunities for product diversification;
- poor understanding of quality requirements by consumers;
- inadequate sorting or grading of raw materials;
- inadequate hygiene and quality assurance;
- poor production planning;
- use of inappropriate technologies.

Extrinsic problems of food processing SMEs

Lack of available equipment and materials:

- little information on alternative or affordable technologies;
- lack of affordable equipment, limited possibilities for importation, little production of equipment by local metal workshops;
- lack of affordable ingredients and packaging materials;
- variable, often low quality, raw materials.

Inadequate support services:

- Teaching institutions have insufficient commercial awareness and few skilled staff with experience/understanding of SMEs.
- Art schools and design departments in universities have few links to support SMEs in label and packaging design. Few printing companies can supply high quality labels.
- Entry requirements for academic courses are too high, courses are too long, not practically oriented, too expensive, and not tailored to meet SME needs. No follow-up or outreach programmes.
- Private sector consultants lack skills and professionalism. The few local consulting companies are not proactive in support of SMEs.

- Poor access to research institutions. R&D institutions under-resourced and have few skills to identify SME requirements. Promotion and status for 'high-tech' research rather than appropriate solutions to local problems.
- Engineering workshops lack knowledge of designs for equipment to compete with imported equivalents. Equipment is always prototype and therefore expensive. Poor facilities for welding stainless steel and poor availability of steel. Engineering training institutions do not focus on the needs of SMEs.
- Bureaux of standards do not adequately protect manufacturers against inferior imported materials.

Inadequate finance:

- high cost of finance for small loans, banks do not target SMEs for loans, collateral required in form of land titles for a loan;
- banks do not have skills or internal mechanisms to properly assess business proposals by SMEs.

Lack of coordinated policy:

- SMEs have little lobbying power/no influence over legislation or services provided by support institutions;
- poor coordination and little cooperation between government institutions, NGOs, or the private sector;
- sometimes conflicting government policies, for example over taxation and promotion of SMEs.

Training approach

Many entrepreneurs or aspiring entrepreneurs knew how to process traditional foods for immediate sale to neighbours, but the concept of producing a packaged product for distant sale and consumption by unknown people was new to many of the intended beneficiaries. Therefore training was required to introduce concepts of standardized production and packaging, marketing, quality assurance, production monitoring, and control of finances, with the aim of upgrading the small-scale food processing sector in the country. Some previous training programmes had fallen short of expectations because of a lack of understanding of participants' needs or a lack of skills and experience by trainers. Midway Associates therefore developed an approach that addressed these deficiencies for Ugandan food processors. A similar approach has also been adopted by SIDO in Tanzania (Mchomvu, 2011).

The 5-year programme, operating from 1995 to 1999 had the following phases:

1. Work with a counterpart institution to identify food processing sub-sectors that are important nationally (in Uganda, these were the bakery, dairy, cooking oils, fruit and vegetable, and fish processing sectors).
2. Prepare the project idea and a business plan for financial sustainability with the counterpart institution. Submit a joint funding proposal, with diminishing annual funding as local funds were generated over the project life.

3. Conduct initial needs assessments by questionnaire and visits to SMEs and local trade associations (e.g. the Uganda Fish Processors and Exporters Association; see UFPEA website).
4. Implement the programme in phases:
   - Conduct technical and business training to provide assistance to SMEs in each sub-sector.
   - Use discussions with participants on training courses to confirm and expand the needs assessment and to identify the demand for additional support in each sub-sector.
   - Identify needs for information, equipment, packaging, and ingredients.
   - Use results of feedback and needs assessments to plan a work programme on an annual basis, with the aim of providing greater responsiveness and flexibility in the provision of support.
   - Identify potential local trainers from among participants of each commodity course and business management course.
   - Conduct training of trainers (TOT) courses for local trainers and provide support and assistance to enable local trainers to design and hold courses.
   - Provide assistance to establish administrative systems for an independent, local, not-for-profit agency (the Midway Centre) to manage sale of equipment, information, and materials and to coordinate provision of local training and consultancy services that would provide a mix of receipts to achieve financial sustainability (Lubowa, 1998).
   - Identify potential local consultants from among participants on each commodity course and business management course.
   - Conduct training of advisers (TOA) courses for local consultants and provide support and assistance to establish a consultancy network.
5. Monitor each phase and discuss evaluations with the local institution and funders on an annual basis.
6. Assess the benefits of each phase to SMEs.
7. Annually monitor progress in implementation of the business plan and adjust targets as needed to achieve progress towards financial sustainability from course fees and sales of equipment, information, and materials.

Identifying and addressing the needs of food processing SMEs

One of the most difficult problems facing food processing trainers was to deliver training at a level that was appropriate to the needs of participants. Too frequently, food scientists or technologists were more interested in demonstrating to trainees how much they knew about their subject, rather than listening to what the trainees wanted to learn. As a result trainees were 'blinded by science' and emerged from courses having learned little and believing that food processing was a difficult subject. To overcome this, a first step was to conduct a detailed training needs assessment using questionnaires and informal discussions with a representative

sample of small-scale processors. The aims were to find out what were their main problems and what they wanted to learn on a training programme. This was then used to guide the trainer in course design, content, and training methods. Many potential trainees focused on their lack of knowledge of how to produce high quality foods or the types of equipment needed for commercial production and they had little understanding of other aspects required for operating a successful food processing business. The trainer therefore needed to introduce ideas such as contracts with suppliers, conducting market research, calculating sales prices, and arranging agreements with retailers during the discussions, to determine whether participants consider these to be important for them. In short, the trainer needed to have a good understanding of participants' specific needs, in order to design and implement a course that met those needs. Additionally, the discussions identified the most acceptable duration for the training and whether it should be held in a single block or divided into short components, spread over several weeks, to accommodate the trainees' other commitments.

Different approaches were needed to address both intrinsic and extrinsic factors. Intrinsic constraints were initially addressed by provision of training and information resources by UK-based trainers. However, the high cost of training by international consultants prohibited this approach as a sustainable solution. Midway Associates therefore devised a programme that identified and trained trainers who could then design and implement local training programmes in a way that was affordable and met the requirements of SMEs. The programme also identified and trained local consultants to operate commercial consultancy services in a professional manner, in a way that had not been previously attempted. Consultants were trained to provide on-site advice, technical or management audits, and information to SMEs at an affordable cost. Extrinsic constraints had more varied causes and required a different approach. These were addressed through the creation of networks involving government institutions and NGOs to influence their policies on behalf of SMEs. The independent Midway Centre met other extrinsic needs by provision of information, equipment, and materials on a commercial basis.

This form of support was intended to produce the following benefits:

- improved knowledge and practical skills of trainers and entrepreneurs;
- permanent improvements in product quality and the range of processed foods available on the local market;
- increased productivity of food processors through the introduction of high quality food processing equipment and more efficient processing methods;
- increased profitability of enterprises;
- increased availability of technical and business information for the food sector.

This resulted in the activities described in Table 1 to address the identified needs.

Table 1 Activities designed to meet identified needs of food processing SMEs

Need	*Activity*
Business management skills/ knowledge	All sub-sector commodity training, TOT, TOA courses
Entrepreneurial characteristics	All training courses
Confidence and assertiveness	Not specifically addressed by assertiveness training, but participative training style encouraged confidence building
Trusting relationships, forming networks with suppliers and retailers	Encouraged on training courses and informally through discussion
Market orientation/market research	Training in marketing and market research/product development
Lack of capital	Not addressed directly by project, links to other credit providers encouraged
Under-developed technical skills	Addressed on all sub-sector commodity courses
Quality requirements	Quality assurance courses, TOA courses, all sub-sector commodity courses
Opportunities for product diversification	Provision of market research and product development courses
Lack of information	Provision of information on all courses, sales of published information
Lack of affordable, appropriate equipment	Assistance to select equipment, sales of imported equipment, training of local SME engineers
Lack of affordable ingredients and packaging	Provision of information, assistance to select appropriate ingredients and packaging, sale of ingredients and packaging
Support services:	
- teaching institutions	Informal influence. Training programme materials adapted and used by some local institutions
- development agencies	Informal influence, establishment of networks
- private sector consultants	TOA courses, employment through Midway Centre
- research institutions	Training of selected staff, use of facilities, influence to provide greater assistance for SMEs
- engineering workshops	Equipment manufacturing courses, informal contact, encouragement of contacts with food processing SMEs to source equipment locally
- Uganda Bureau of Standards	Staff training, local consultants
Finance	Information on finance available from other institutions
Policy	No direct provision but informal influence via networks. Support to Midway Centre manager for lobbying, building networks and influencing other agencies/government

Training approach

Once trainers had an understanding of the areas to be covered on a course and the depth of knowledge that was required by participants, the next issue was how to implement the training. Too many local trainers believed that they were the fount of all wisdom on a particular subject and that if they talked to participants for long enough, some of this wisdom would be absorbed. The approach resulted in trainers standing and talking in front of rows of seated people, many of whom gradually fell asleep and none of whom learned much. The Midway approach to implementing training was first to involve participants in *doing* rather than listening and second to structure the programme in a way that participants could learn from each other's experience and knowledge – in other words to implement a participative approach to training. This approach was feared by some trainers, either because they were afraid that they might be asked a question to which they did not know the answer (and therefore lose the respect of participants) or because they were not in constant control of the group and could not predict what would happen during a session. In response to these genuine fears, it was necessary to first conduct a training of trainers (TOT) course to give trainers confidence in their own abilities and encourage them to loosen control of the training process. It also gave them a range of new (to them) training techniques to add to their repertoire which encouraged participation. The outcome of TOT courses was more relaxed and confident trainers, who were able to guide group discussions, exercises, and team work in practical production sessions that promoted better and longer lasting learning by participants.

To select products to include in training courses, trainers needed to have an awareness of the local market and to advise trainees that, for some, there was either little demand or high levels of competition – either of which would make their business more difficult than for other products.

The products selected for training programmes were all potentially capable of supporting a successful small business. Where data on demand was not readily available, the trainers conducted preliminary surveys to gain an understanding of which products were likely to be successful. Many trainers also wished only to include the production technology and quality control, ignoring the commercial realities of production and the socio-economic environment in which the entrepreneurs would operate. Midway introduced a requirement that market research should be the starting point when considering which foods to include in a training programme and there should also be a detailed understanding of production planning, marketing/selling, agreements with suppliers and retailers, financial management, and preparation of feasibility studies among others, which may take up to 60–70 per cent of a course with 30–40 per cent devoted to technical issues. If other producers were already successfully meeting the demand for a product, it was irresponsible for trainers to raise the expectations of participants by teaching them how to make the food and implying that they could operate successfully. A more likely result would be that new producers would invest in a business and fail, or they would copy existing products but make them to a lower quality to reduce costs. This could lead to consumer mistrust, causing both original producers and newcomers to fail together. These business aspects were

not only the ones that participants required greatest assistance with, but they were also the ones that some food scientists and technologists had least competence in dealing with. It was therefore necessary to employ a business trainer who had experience of small enterprise development, to work alongside technical trainers.

Training facilities and equipment

The training environment was particularly important when conducting courses for small-scale processors. There was a dilemma that many trainers fail to recognize: training facilities needed to be clean and hygienic, to maintain the quality of products and to meet health and hygiene legislation, but to achieve this many trainers hired a university or research institution pilot plant for a course. While this met legislative requirements, it also sent the wrong message to small-scale producers, whose reactions included: 'If this is what is needed to do food processing, how could I ever afford the investment to get started' or 'These people do not understand the situation that I am in, so how is this training going to be relevant to me?' Expensive or inappropriate facilities and equipment therefore had the effect of making trainees distrust the trainers' understanding of their needs and made the trainers' job more difficult before they had started. Where possible, Midway used a compromise in which the selected training rooms had the correct design and construction to meet legal requirements without expensive fixtures, fittings, and equipment that were beyond the reach of participants. A Technical Brief on building design for food processing is available from Practical Action (2014) and this is equally suitable for the design of an appropriate food processing training room. An alternative was to hire production facilities from local entrepreneurs for training. The entrepreneurs required assurance that courses would not train competitors, but this was acceptable if trainees came from another district or the training concerned different product types.

Similar considerations applied to the selection of equipment: imported equipment from industrialized countries could have benefits in demonstrating design concepts or meeting a need when no locally manufactured alternatives were available, but a more sustainable approach was to contract local metal fabrication workshops to build equipment for the courses, providing designs and photographs where possible to assist them. This not only enabled the workshops to promote their products, but made more affordable and repairable equipment available for entrepreneurs. The approach also stimulated the local engineering workshop sector and diversified the benefits of training. Midway took this a stage further and held courses for engineers in 'Design and Manufacture of Food Processing Equipment', which also put manufacturers and potential customers directly in touch with each other.

Finally, there was the requirement for follow-up and refresher training to enable participants to practise their new skills, reinforce knowledge, and make mistakes without financial risk within the safe environment of a training programme. Links to networks, including the Uganda Cottage Food Processors Association (UCOFPA), the Uganda Fish Processors and Exporters Association (see UFPEA website), the Uganda Small Scale Industries Association (see USSIA website), and the Uganda Oilseed Producers and Processors Association (see UOSPA website) assisted this.

Activities

A summary of the project activities is shown in Table 2.

Table 2 Summary of training and other project activities

Activity/training course	*Date*	*Duration (weeks)*	*Location*
Survey of food processing industries in Uganda	June 1995	-	-
Food quality management and assurance	Oct–Nov 1995	1	TC
Bakery as an industrial enterprise	Nov–Dec 1995	1	HW
Food drying as an industrial enterprise	Jan 1996	1	HW
Marketing your business and your product	Jan 1996	1	TC
Design and fabrication of food processing equipment	Feb 1996	3	HW
Fruit and vegetable processing as an industrial enterprise	Feb 1996	1	HW
Dairy processing as an industrial enterprise	Mar 1996	1	SME
Business planning for manufacturing enterprises	Mar 1996	1	TC
VAT and your business	Apr 1996	1	TC
Results of survey of sector support requirements	Apr 1996	-	TC
Training of trainers	Jul 1996	2	TC
VAT and your business	Jul 1996	1	TC
Consultants' training	Sept 1996	2	TC
Pilot consultancy	Sept 1996	-	-
Dairy processing	Sept–Oct 1996	1	SME
Design and fabrication of food processing equipment	Oct–Nov 1996	3	HW
Extraction of edible oils	Oct–Nov 1996	1	SME
Advanced bakery skills	Feb 1997	1	HW
Market research and product development	Feb 1997	1	TC
Business planning for manufacturing enterprises	Mar 1997	1	TC
Training of advisers	May 1997	1	TC
Pilot consultancy	May 1997	-	-
Advanced bakery course	May 1997	1	HW
Training of trainers	Jun 1997	2	TC
Design and manufacture of food processing equipment	Jun–Jul 1997	3	HW
Hygiene and quality assurance in fish processing Establishment of Midway Centre	Jul 1997	1	SME
Dairy processing	Jul 1997	-	-
Training of advisers	Jul–Aug 1997	1	SME
Marketing strategies for food manufacturers	Aug 1997	1	TC
Cooking oil processing for managers	Aug 1997	1	TC
Food product development	Aug 1997	1	SME
Food marketing	Aug 1997	1	HW
Drying as a small business	Sept 1997	1	TC
Business planning for manufacturing enterprises	Nov 1997	1	HW
Fruit and vegetable processing	Nov 1997	1	TC

Activity/training course	*Date*	*Duration (weeks)*	*Location*
Training of advisers	Jan 1998	1	HW
Training of trainers	Feb 1998	1	TC
Market research and product development	Mar 1998	2	TC
Financial management	Mar 1998	1	TC
Training of trainers	Mar 1998	1	TC
Training of consultants	May 1998	2	TC
Training of consultants – audits	Jun 1998	1	TC
Pilot consultancy	Aug–Sept 1998	1	TC
Training of trainers	Sept 1998	-	-
Training of advisers	Sept 1998	2	TC
Quality assurance and HACCP	Oct 1998	1	TC
Training of consultants – diagnostics	Feb 1999	1	TC
	Apr 1999	1	TC

Note: TC = classroom-based training centre, HW = hired workshop, SME = hired production facilities in a small-scale business premises (e.g. at Mbarara and Entebbe for dairy processing, Entebbe for fish processing, and Lira for oil processing)

Outcomes and impact of the training

The lessons learned may be summarized as follows:

1. Support for SMEs should be market oriented and operate in ways that address the actual needs identified by SME owners. Training was also needed in confidence building and negotiating/selling skills for SMEs.
2. Trainers and consultants should have adequate skills to assess SME needs and to design and implement interventions that meet those needs. This required a reorientation of attitudes and a more commercial approach by academic trainers and consultants.
3. TOT and TOA programmes are required to achieve professional levels of support.
4. Assistance was needed by SMEs to identify and obtain equipment and specialist materials. Information was also required on technology choices, product ideas, sources of materials and equipment, markets, management methods, and credit provision.
5. Well-established networks were needed between support agencies, government institutions, credit providers, and private sector service companies.
6. Workshops/seminars were required to bring together research institutions and SMEs to discuss needs and constraints, with a view to re-orienting research programmes to benefit SMEs.

7. Bank staff and private sector accountants required more training to assess business plans submitted by SMEs and advise on legal and financial issues.
8. To be sustainable, the costs of providing training should be affordable to SME owners without external subsidies. In practice it was found that this was achievable with groups of around 15 trainees. The planned cost-recovery rose from 20 per cent in year 1 to 70 per cent in year 3, and 100 per cent by year 5.

Midway Centre Ltd continues to provide consultancy services and Michael Lubowa may be contacted for further information. An engineering company, TIMOS Fabricators, partnered with Midway Centre to fabricate biomass-fuelled fruit dryers. Midway's role is to market the equipment and provide after-sales services such as training clients' staff in the operation and maintenance of equipment, product costing, quality assurance, packaging, marketing of final products, and sourcing markets (mainly export markets) for clients.

In total, an estimated 500 small-scale entrepreneurs received training and many individual firms have improved their product range and quality as a result. This was particularly evident in the bakery industry where micro- and small-scale bakeries have diversified into products ranging from pastries to confectionery, wedding cakes, and events cakes. One trainee, Mr K, subsequently became a bakery trainer, managed an outlet for a large-scale bakery, and by 2003 had established his own bakery on the border with Rwanda, producing bread for the aid camps in that area.

After completion of the project, many other institutions and NGOs who had sent staff, and private individuals who had participated in the training, started their own training programmes. Some of their courses were replicas of the Midway approach, whereas others infused new features in their training. For example, Makerere University started an incubator unit (http://ftbic.mak.ac.ug/) with a training programme for upcoming entrepreneurs using practical training built-in for commercial food processing. The incubator is now a one-stop centre for product development. Similarly, Makerere Business School (www.mubs.ac.ug) is using a model approach adopted from the Midway programme in practical training in market research and product development to train students pursuing a marketing career. Many small training schools in food processing, akin to vocational schools, have started in up-country areas with funding from UNIDO as part of its programme on 'enhanced competitiveness and sustainability development with particular emphasis on agro-industries and micro- and small-scale enterprises (subcomponent: food)'. A group of trainees from the Midway courses established the Uganda Cottage Scale Food Processors Association, primarily juice and flour processors, which subsequently became affiliated to the Uganda Small Scale Industries Association (see USSIA website), which continues to provide training for its members. Other umbrella organizations that benefited from the training programme included the Uganda Fish Processors and Exporters Association (UFPEA) and Natural Pride Uganda Ltd (NAPU) for dried organic fruit processors. An independent evaluation (UNIDO, 2009) found that these organizations were instrumental in motivating their members to establish food safety systems as preconditions for exports:

In each organization, most member companies are active and participate in the training offered. In the fishery sector, Uganda is a harmonized or category 1 country, recognized to comply with EU control requirements for the safety of fish products. Dried organic fruit companies were assisted to participate in trade fairs and exhibitions and some now export their products to countries like Germany. The Food Component has also played an important role in building up qualified human resources for food safety and quality control in the country (UNIDO, 2009).

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