

Sustained training mission on improving food hygiene in Botswana

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This work was part of an European Union (EU) funded programme titled 'Better Training for Safer Food in Africa'. The main objective was to ensure that officials involved in food control in countries trading with the EU, in particular developing countries, are properly informed and trained to verify compliance with the EU food safety requirements. In Botswana the objective of this work was to build sustainable knowledge and skills of local food business operators in good hygiene practices.

A total of eight small or medium enterprises participated. They manufacture products with very different risk profiles including dairy, meat, sorghum flours, peanut butter, morula jams and sweets.

The work was divided into three main missions. Mission one allowed a technical introductory seminar on Hygiene Assessment System (HAS) methodology and Pre-requisite Programmes (PRPs). This was attended by two representatives (the owner of the company and the production manager) of

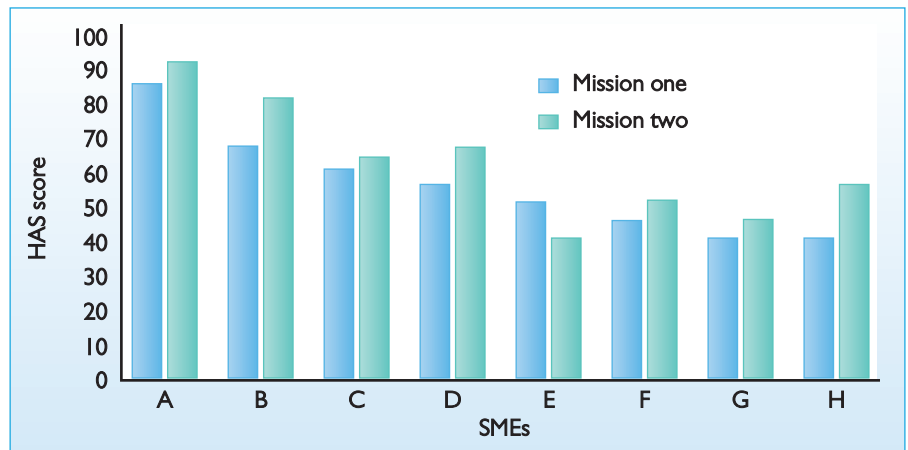


Fig. 1. The hygiene assessment score (HAS) of eight SMEs at Mission one and two.

the selected eight SMEs. This was followed by site inspections and hygiene assessments to determine the base-line score using the HAS methodology.

The HAS score of risk feature one, quality of GHP delivery in practice, was determined by assessing 10 PRPs (water hygiene, personal hygiene, training of staff, cleaning of premises and equipment, structure and maintenance of premises, maintenance of equipment and fittings, hygienic processing of food, waste disposal, traceability and pest control.

Each PRP was given score of 4, 3, 2 or 0 based on whether it has been documented, that it is satisfactory and also if there is practical implementation and adoption of the protocol by the management and staff.

The assessed scores of the ten PRPs were summed up, and the resulting sum divided by 10 to find the mean score for all the PRPs. The mean number was rounded up or down according to the following protocol.

- a: The mean is less than or equal to 4, and more than or equal to 3.5.
- b: The mean is less than 3.5, and more than or equal to 2.5.
- c: The mean is less than 2.5, and more than or equal to 1.5.
- d: The mean is less than 1.5, and more than or equal to 0.0.

Accordingly the ratio score was then awarded on the basis of a=10, b=7, c=3 and d=0. The score for the risk feature of the PRPs was then calculated as the ratio score (as awarded for the PRPs) multiplied by the weighting of 3.

The ratio scores of the other stand-alone risk features were determined using the protocol a=10, b=7, c=3, d=0. Each stand alone score was multiplied by its associated weighting, to give the score for the risk feature. The scores of all the risk features (Table 1) were added to determine the HAS score of each SME. The SMEs received relevant bespoke advice and information on how they can improve their baseline score.

Similar methodology was used in Mission

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Table 1. Basic Good Hygiene Practice audit sheet in terms of food safety risk.

Output features: (define output) and (units of output)							
Output of: _____ () units per day () units per week () units per month () units per year							
Staff numbers: 0-5 5-15 15-5 >50 Notes: _____							
Risk features	a	b	c	d	Ratio	Weighting	Score
1 Quality of GHP Delivery in practice	Good	Acceptable	Poor	Unacceptable	10 7 3 0	3	
2 Hygiene training of staff	Trained and clear of duties	Reported as trained but unsure	Untrained but early initiative evident	Unacceptable not trained and no initiative evident	10 7 3 0	2	
3 Status of premises maintenance	Well maintained	Partially maintained	Poorly maintained	Unacceptable	10 7 3 0	2	
4 Status of workforce	Stable and managed	Transitional but managed	Poorly staffed and ill managed	Unacceptable	10 7 3 0	1	
5 Status of PRP documentation and records	Comprehensive PRP documents and records	Most PRP documents and records available	Inadequate PRP documents and records	Unacceptable Lack of PRP documents and records	10 7 3 0	1	
6 Status of management	Graduate	Accredited technician	Basic hygiene training	Unknown or no training	10 7 3 0	1	
Overall score							

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two to audit the improvement in good hygiene practice of each SME. Mission two also included a one day HACCP course that included topics such as introducing the principles of HACCP and understanding their relationship with GHP/PRPs. The course was attended by two representatives of each SMEs.

The third mission involved a two and half day seminar that was designed to revise the principles of food hygiene and GHP, and revise the implementation of PRPs and cover the comprehension and implementation of the Codex HACCP principles into a hygiene plan for an SME. The local expert was tasked with interim advisory visits between each mission to assess hygiene during production.

After auditing of the SMEs in Mission one, it was observed that five out of the eight SMEs have been operating with demonstrable food safety risks as indicated by the low HAS score (Fig. 1). The five SMEs, namely D, E, F, G and H with scores lower than 60 are premises that represent a material risk and would under EU conditions be experiencing active regulatory enforcement. A HAS score of 70 would suggest a level of hygiene that is of an acceptable risk, although legal compliance would require independent inspection.

After the auditing the SMEs in Mission two, it was observed that the majority of SMEs

indicated some progress towards improvement of their hygiene management system as evidenced by the increase in the HAS score compared to the Mission one.

In fact, two SMEs (A and B) HAS scores had risen to beyond the point of tangible risk from food safety hazards of an environmental origin (70+) and these SMEs were validated to implement a HACCP based food safety management system. SMEs C and D also pushed their HAS scores above 60 and thus reduced their food safety risk.

These SMEs were both experiencing problems with Botswana Bureau of Standards in seeking national accreditation of their management competence (for ISO as well as HACCP accreditation). It appears that delays in adoption of food safety management systems is creating an unhelpful and constraining situation. The impression gained is that it is not the attainment of hygienic standards that is the principal constraint for a number of well managed food businesses; but rather, it is the failure in the desirable and official recognition of competent and safe companies. Until there are functional and reliable mechanisms for such accreditation there is serious inhibition about investment in hygiene and food safety. Such investments then appear to be ill-supported by government, or they appear to be of no officially recognised consequence.

The selected SMEs appeared eager to receive advice. The achievement of hygiene

standards inevitably costs money, either in time, in overheads, or in capital investment, and in the fiscal costs of regulation. The cost of hygiene controls may have discouraged some SMEs from making early progress since it affects profitability.

Change arises when the customers of the food business seek higher quality. Consumer awareness is therefore another part of the set of conditions that have to be active and valid for comprehensive consumer protection to be made manifest. Those food businesses that are well managed and which do wish to invest in food safety accreditation are finding that they are unable to obtain it from any national body representing government.

Therefore the three serious constraints on progress for protecting food consumers in Botswana are poor consumer awareness about food safety issues; and no currently available formal recognition of the achievement of food safety standards within the government system, and inadequate regulatory mechanisms and out-of-date legislation.

The work method of bringing together regulators and food business operators under the guidance of an experienced auditor/trainer works well.

It was observed that engaging the HAS methodology allowed verification of food safety risk reduction arising from SMEs' more focused and increased knowledge of food hygiene management. ■