

# FOOD FOR THOUGHT

**SIRIM Enhances Food Quality and Safety in Malaysia**

It is said that nothing brings Malaysians together better than food. With so many diverse ethnic groups and cultures calling this country home, a love of food has become a unifying denominator. Social implications aside, food is big business in Malaysia. According to the Malaysian Investment Development Authority (MIDA), the food processing sector accounted for around 10 percent of the country's manufacturing output in 2019. In addition, Malaysia enjoys a positive balance of trade when it comes to processed food – exporting RM21.76 billion worth and importing RM20.27 billion.

SIRIM: SYMBOLISING EXCELLENCE



Not so long ago this year, Malaysians were greeted with the rather unpleasant news that a number of food factories were closed owing to unhygienic conditions. These included a bean curd factory in Cheras, a noodle factory in Segambut, and four factories in Penang. The health violations included having cockroach infestations, rat droppings being found on the production floor, and unsavoury working conditions.

These cases are not entirely unique though, as other cases of unhygienic food production have been reported before. However, given that F&B is such an important – and growing – sector (particularly for exports), it has become increasingly vital for manufacturers in Malaysia to demonstrate their adherence to quality standards.

In Malaysia, the main laws governing food safety are the Food Act 1983, the Food Regulations

1985, and Food Hygiene Regulations 2009 which regulate the manufacturing, preparation, handling and distribution of food in order to ensure they are safe for consumption.

That being said, both the Food Act and the Food Regulations only highlight what are forbidden and the penalties that will be imposed for violating them. Food quality and safety practices have to be a more proactive process in which a commitment to standards is reflected across the value chain.

And this is where SIRIM Berhad comes in. Malaysia's leading industrial research and technology organisation, SIRIM – through its various subsidiaries – offers services that help companies in the F&B value chain ensure that they comply with both local and international food safety and quality requirements.



As Malaysia becomes an increasingly important source of manufactured food and drinks, it is vital that factories comply with safety and health regulations. And they can achieve that by partnering with SIRIM.



By engaging SIRIM QAS's testing, inspection and certification services, food manufacturers can ensure that their manufacturing processes meet stringent international quality standards.

## Assuring Quality Management

One such subsidiary is SIRIM QAS International which, as the premier testing, inspection and certification (TIC) provider in the country, offers services that ascertain that the management, manufacturing and quality control processes of F&B companies are in line with internationally acceptable standards.

For quality management, SIRIM QAS is a pioneer who has been accredited by the Department of Standards Malaysia to certify compliance with ISO 9001: Quality Management System. This standard acts as a mark that indicates a stringent commitment to consistently producing quality and safe food products. This in turn opens up markets for the organisation, thus allowing them to be a part of the Malaysian food export sector.



Cases of food poisoning from poor manufacturing practices can severely affect businesses. Manufacturers should protect themselves against such possibilities by getting themselves certified with MS 1514 Good Manufacturing Practices for Food and MS 1480 Hazard Analysis and Critical Control Point schemes.

## Guaranteeing Food Safety

It is important for organisations in the F&B value chain to ensure food safety and hygiene, and also to demonstrate that they have done so. This is where the MS 1514 Good Manufacturing Practices for Food certification scheme comes in. Not only does this particular scheme help food manufacturers assure customers that they are following best practices in food manufacturing process, MS 1514 is also a prerequisite to the implementation of the Hazard Analysis and Critical Control Points (HACCP) programme, which is the epitome programme for Food Safety Management.

The MS 1480 Hazard Analysis and Critical Control Point (HACCP) certification scheme uses a scientific and systemic approach to identify and

control hazards and in doing so, ensures that the food is safe for consumption. This standard is applicable to all businesses in the preparation, processing, manufacturing, packaging, storing, handling, supply and sale of food.

Aside from HACCP, SIRIM QAS also offers certification for ISO 22000: Food Safety Management System. What's interesting about ISO 22000 is that it is both a stand-alone standard while, at the same time, it can be implemented alongside MS 1514 and MS 1480. The ISO 22000 is a broader food safety system fully based on quality principles but also incorporates the HACCP principles and regulations and it is recommended that those in the food manufacturing supply and value chain get themselves certified for it, as well as the other two schemes.

## Enhancing Safety and Sustainability

Today, sustainability has become a key focus area and this has led to consumers becoming more concerned that their food are sourced using sustainable means. The ISO 14001 Environmental Management System standard audits food producers and ensure that they and their suppliers have adhered to environmental best practices as well as sustainable agriculture best practices.

It is also important for food manufacturers to ensure that their workers are properly trained and follow occupational health and safety

mandates. This is because accidents increase the risks of food contamination. By implementing Occupational Health and Safety Management System, companies can demonstrate that they are committed to workplace safety and assure consumers that the risks of contamination because of workplace accidents have been minimised.

SIRIM QAS also offers product certification and testing services that demonstrate that food products have been tested and verified as being of high quality and free from chemical impurities. In an ever competitive market, such certification marks are key to securing consumer confidence.



With consumers becoming more concerned over whether their food are produced in a sustainable manner, manufacturers need to assure them by getting the necessary certifications such as ISO 14001 Environmental Management System.

## Training and Consultancy

Certifications such as the aforementioned ISO, MS and OHSAS standards are vital for any F&B manufacturer or related company to demonstrate that their products are of high quality, safe and hygienic. However, before they can be certified as such, organisations need to ensure that they are properly equipped to pass the requisite audits.

This is where SIRIM STS comes in. Another SIRIM subsidiary, SIRIM STS provides training and consultancy services that help companies in the F&B industry strengthen their management and production processes so that they comply with ISO 22000, HACCP, GMP and Halal standards.

To date, SIRIM STS has aided more than 300 companies in the F&B industry in achieving the necessary certifications that have enhanced their market appeal. It should also be noted that the organisation's services are not just limited to Malaysia, and that it has also conducted training and consultancy overseas. This includes HACCP training in Brunei, Halal Auditor training in Japan, and Halal Cosmetic training in Nigeria.

Furthermore, SIRIM STS has also come up with a number of certification programmes for people seeking to or already working in the F&B manufacturing industry. These are the Certified Food Safety Management System Professional, Certified Halal Auditor and Certified Halal Executive Programmes, as well as the Certified Food Safety Management System Executive programme for graduates.

Under the Certified Food Safety Management System Professional programme, participants will undergo a 10-day course where they will be taught aspects of food safety management systems (FSMS), namely ISO 22000, HACCP and GMP requirements, as well as a brief introduction to Halal prerequisites and food safety auditing.

Halal is also a fast growing industry, and Malaysia is a key supplier in the global Halal food market. In fact, in 2018, the country was estimated to export around RM35.4 billion worth of Halal products.



The Halal food market is one of the fastest growing in the world today, and SIRIM STS can help manufacturers ensure that they comply with strict Halal requirements.



Recognising the huge potential of the Halal sector and the importance of ensuring that Halal food products meet stringent religious laws, SIRIM STS has been approved by JAKIM (the Department of Islamic Development Malaysia) to provide Certified Halal Executive and Certified Halal Auditor training.

These two programmes ensure that participants will be equipped with the knowledge and skills pertaining to MS 1500: Halal Food – Production, Preparation, Handling

and Storage standards. This in turn increases trust in the veracity of Malaysian-made Halal food products and enable Malaysian companies with the required certification marks to further penetrate the international Halal market.

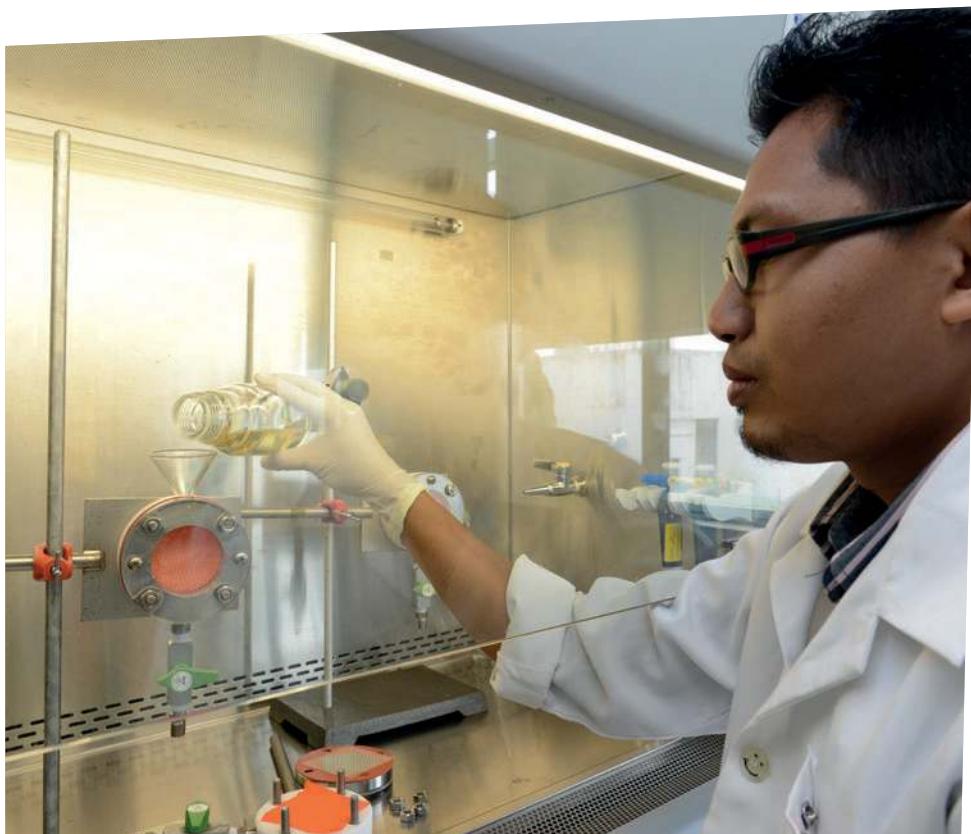
Since the launch of the programmes in 2019, a total of 37 people have received Halal Executive and Halal Auditor certifications and 51 graduates have received Certified Food Safety Management System Executive.



## Testing for Quality

Another member of the SIRIM group that is playing a key role in ensuring food safety and quality is the SIRIM Industrial Biotechnology Research Centre (IBRC). The Centre carries out a variety of tests on raw, semi-finished and finished products to ensure that they meet regulatory requirements. These include checking their nutritional value safety and shelf life, as well as detecting the amount of adulterants and microbe contaminants in them.

Furthermore, F&B products that claim to have beautifying and health enhancing effects, such as slimming, whitening, detoxification and anti-oxidant properties are also tested to verify the authenticity of their claims. In addition, the Centre also carries out authentication tests of food and drink products to ascertain if they have the requisite amount of active ingredients, such as sialic acid in bird's nest drink and eurycomanone in tongkat ali drinks.



By carrying out tests on raw, semi-finished and finished food and drink products, the team at the SIRIM Industrial Biotechnology Research Centre ensures that the ingredients and nutritional standards of food and drinks are as stated.

## Strengthening Technology Adoption

Being Malaysia's leading research and technology organisation, SIRIM is also proactive in helping Malaysian companies – especially SMEs – boost their use and application of technology in their manufacturing processes.

A technology audit of the F&B sector shows that there is much to be done in this respect. The results reveal that most F&B manufacturers are still dependent on manual production, with some utilising semi-automated or standalone machines at best rather than integrated automated production line.

In addition, there is a decided lack of process improvement and proper production planning, which is mostly done on an order to order basis rather than at a consistent level. Furthermore, only 60 percent of the firms audited have a dedicated person in charge of studying technology trends and management.

All in all, the use of technology in Malaysia's F&B manufacturing industry has far to go. The good news however is that the SIRIM-Fraunhofer Programme, has a number of initiatives that will help organisations improve and upgrade their use of technology. To date, more than 2,700 SMEs have benefitted from the programme.



With the help of the SIRIM-Fraunhofer Institute, SMEs in the food and drink industry are able to enhance their use of technology thus saving time and manpower.

Today, food security is one of the main concerns in the world. Rather than just being a matter of there not being enough food, the issue with food security is whether there is enough quality, safe and hygienic food. By partnering with SIRIM, companies in the Malaysian F&B manufacturing industry can play a key role in strengthening our nation's food security as well as establish Malaysia as a key supplier of food to the world.