HOT SOURCE

EXPERT INSIGHTS INTO SAFE, SUSTAINABLE AND HIGH-QUALITY FOOD

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SGS VIETNAM FOOD LAB

SGS

DEAR READER,

Growing demand, rising populations and increasing regulation make food one of the most challenging industries to operate in. In this issue of Hot Source, we look at the challenges posed by China's tough new rules for food imports, cross-border food fraud, standards for genetically modified and genetically engineered foods, and new packaging regulations.

In recent years, Chinese officials have uncovered several serious food safety scandals. In response, the 2015 Food Safety Law was developed and came into effect in October last year. We explore the changes and what they mean for businesses importing food, products and ingredients.

Following a food safety theme, Europe's Food Fraud Network (FFN) recorded 108 cases of cross-border food chain issues in 2015, an increase of more than 300% on 2013. The FFN figures offer an insight into cross-border food fraud and its scale.

Driven by demands for transparency in the supply chain and for declarations on food packaging, SGS has developed two standards for genetically modified and genetically engineered foods, which audit and verify processes across the supply chain, we explore the schemes in detail.

In packaging, the British Retail Consortium has released the latest edition of their packaging standard. A significant move towards standardising the production of packaging materials, not just within the food industry but also in other sectors, it brings quality into the risk assessment process.

We also look at SGS's Special Session, presented at GFSI earlier this month, Shaping Food Safety Culture in Food Service – Challenges, Opportunities and Key Drivers, exploring the global threat imposed by unsafe practices in both food production and handling.

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SGS AGRICULTURE AND FOOD TEAM

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CROSS-BORDER FOOD FRAUD ON THE INCREASE

Europe's Food Fraud Network (FFN) recorded 108 cases of cross-border food chain issues in 2015, an increase of more than 300% on 2013.

Food adulteration and contamination, accidental or intentional, has never been acceptable, but in 21st century food processing and production it is now identifiable and preventable. The FFN, established following the horsemeat scandal of 2013, is a pan-European mechanism to ensure the rapid exchange of information between national authorities and the Commission in cases of suspected fraudulent practices.

EXCHANGES IN MORE DETAIL

In 2015, alleged violations were mostly related to labelling non-compliance (mostly with regard to ingredient mislabelling), suspicion of illegal export of animal by-products (ABPs), and prohibited treatments and/or processes applied to certain foodstuffs (e.g. addition of synthetic glycerol to wine).

The majority of exchanges that took place in the Network in 2015 concerned ABPs, followed by exchanges on fish and fish products. Importantly, however, statistical conclusions related to potential "food fraud" cases in Europe cannot be drawn from this data, given that Member States may also exchange information outside of the FFN and that cases which do not have a cross-border dimension, i.e. which occur at purely national level, are not exchanged via the Network.

FOOD SAFETY SCHEMES

Product supply chains employ a variety of quality, safety and food safety schemes to ensure the policies and processes are in place to source and ensure incoming raw ingredients are of the desired product and quality.

SECURE, INSTANT ACCESS TO PRODUCT INFORMATION

Quick and easy access to information is essential for effective product management. SGS eVision lets you capture all the technical and legal information relating to a product. This online tool allows access to real time information in an intuitive, yet secure manner, so users can ensure that their products meet relevant industry regulations and their own quality standards. Subsequent food sample testing verifies the success of these schemes.

NEW TECHNOLOGY TACKLES FOOD FRAUD AND SUPPORTS ACCURATE LABELLING

The presence of unexpected ingredients can be a result of deliberate contamination (fraud), a genuine mistake, a lack of training in identifying raw materials, insufficient control in the supply chain or documentation checks.

The food industry loses some $10-15 billion annually to fraud. Next Generation Sequencing (NGS) DNA analysis is the newest, and most powerful, tool in the food industry's battle to protect operations, customers and consumers, and to eliminate food fraud. Not only can this type of testing be used to confirm species authenticity and drive improvements in traceability, it also has the added benefit of being able to ascertain species, as required for food labels.

NGS DNA diagnostics can identify the biological content of a food sample, processed or unprocessed, for a wide variety of foods including:

- Meat
- Plants
- Seafood
- Mushrooms

Other popular techniques include:

ELISA: a very useful and quick 'targeted' technique, although it has some drawbacks, such as interference from some matrices, cross reactivity and potential impacts from cooking or heating

PCR: an effective tool, but also uses a 'targeted' approach. This means you set out to look for a named species, for example, donkey, horse, goat and pig. However, if that sample contains duck, reindeer, red deer, crocodile and dog, PCR will not give a positive result

This is where the 'untargeted' approach of NGS proves key to highlighting meat and seafood substitution. NGS DNA analysis will confirm, with just one test, all the meat species that are present to confirm, for example, that the meat in a burger is solely beef.

SGS considers this to be a positive technique, confirming species, including Latin names, to help ensure the accuracy of food labels and to meet legislative requirements. In addition, NGS DNA analysis can be employed to check for allergen contamination. NGS DNA diagnostics can provide:

- A cost-effective and timely process
- Virtually unlimited results
- A full biological breakdown
- Very sensitive analyses
- Fast turnaround times (typically 7-12 working days, although a 24 hour turnaround can be offered)
- Competitive pricing

SGS NGS SERVICES

SGS has a bespoke partnership with a specialist in molecular biology, Biopremier. This complements our extensive global network of ISO 17025 food testing laboratories. Biopremier is ISO 17025 accredited for NGS-based species identification, ISO 13485 certified, and a national reference lab in molecular biology for the European Commission (EC).

For the complete range of SGS services and support visit www.foodsafety.sgs.com or send an email to food@sgs.com.

CHARON WILLIS

Global Food Testing Business Development Manager
Phone: +44 (0) 203008 7860
E-mail: Charon.Willis@sgs.com
SGS Agriculture and Food

RISK BASED SYSTEMS IN PACKAGING MANUFACTURE

The British Retail Consortium (BRC) has recently released the latest edition of their packaging standard. This is a significant move towards standardising the production of packaging materials not just within the food industry but also in other sectors that were perhaps previously overlooked.

DOES QUALITY POSE A SAFETY RISK?

One of the changes within the standard is to include quality within the risk assessment. This will no doubt pose some challenges to the way the hazard analysis is currently used. For example, in some circumstances, is quality more important than the potential food safety risk presented by the packaging material?

As risk assessment has now been covered under ISO 9001, clearly there is a move for risk assessment to be considered as a broader topic within any management system. For some time, Hazard Analysis Critical Control Point (HACCP) has served as the standard historical approach for packaging manufacturers, mostly at the demand of their customers. With a move towards encompassing quality attributes within the assessment, is HACCP really fit for purpose?

CONSIDERING A MODIFIED HACCP

One important element of a HACCP-based system is the Decision Tree, which is essentially the tool for establishing the Critical Control Points (CCPs) within a system. However, the traditional HACCP approach does not consider quality. It only covers physical, chemical and microbiological hazards that have an effect on food safety. Is it possible to embed quality into this model? Arguably, probably not, if the Codex approach is taken, which is specifically related to food safety.

So what needs to be considered is a modified HACCP. This would include all the components of the traditional approach but with some additional hazards included, impacting on the functionality of the packaging, rather than on the safety of the product contained within the packaging.

For example:

- Excessive flash on the thread area of a blown bottle
  This in itself may have no overall effect on the safety of the beverage, but may present a safety risk to the consumer
- Mixing of closures in a manufacturing plant
  This is not likely to present a food safety risk. However it may pose an unacceptable quality defect at the bottling plant, leading to loss of production and downtime

So how can the risk assessment be modified to ensure that all possible hazards are considered? In order to meet the requirements of ISO 22000, a HACCP-based model must be used. Simply changing to a more simplistic model is not necessarily workable.

If the risk assessment is modified in this way, is it appropriate to use the decision tree which specifically relates to food safety hazards? The answer lies in considering what the decision tree is for. Through the assessment of the risk, it is possible to identify those that are not adequately controlled through the prerequisite programme. By applying the decision tree, further evaluation can be made of the hazards posing the highest possible risk and therefore needing extra levels of control. Hence, it would be reasonable to continue the use of the decision tree but to modify the language used. For example, rather than CCPs, CQP (critical quality points) can be identified.

In principle, this could make the risk assessment a much longer and more unwieldy document. However, if there is a well-managed and controlled quality management system in place, these aspects could be covered through this activity. The quality aspects would then become part of the prerequisite programme without needing to be reconsidered within the HACCP.

This implies that the quality related hazards would need to be clearly identified and shown to be controlled through the quality system.

If the examples above are reconsidered:

- Excessive flash on the thread area of a blown bottle
  The flash may develop over time and may not necessarily be straightforward to detect. Over time, the sampling frequency may need to be increased to ensure that the issue can be detected
- Mixing of closures in a manufacturing plant
  The rogue closure may be present as a result of poor line clearance, so it may be necessary to consider increasing inspections following a design change, or including a vision system specifically to detect a rogue closure

A BROADER APPROACH TO HACCP

Due to poor implementation or understanding of HACCP within the packaging industry, packaging companies may wrongly identify a number of CCPs which are not food safety issues. Including quality and functionality in the risk assessment can help the business focus its attention on those areas that are significant.

In conclusion, adopting a broader approach to risk assessment makes it possible to not only demonstrate that you are managing your food safety risk but also dealing with more significant and potential risks to brand and quality.

For the complete range of SGS services and support visit www.foodsafety.sgs.com or send an email to food@sgs.com.

NEIL MILVAIN

SGS Global Product Manager – Packaging
Mobile: +44 (0) 7785 464696
E-mail: Neil.Milvain@sgs.com
SGS Agriculture and Food

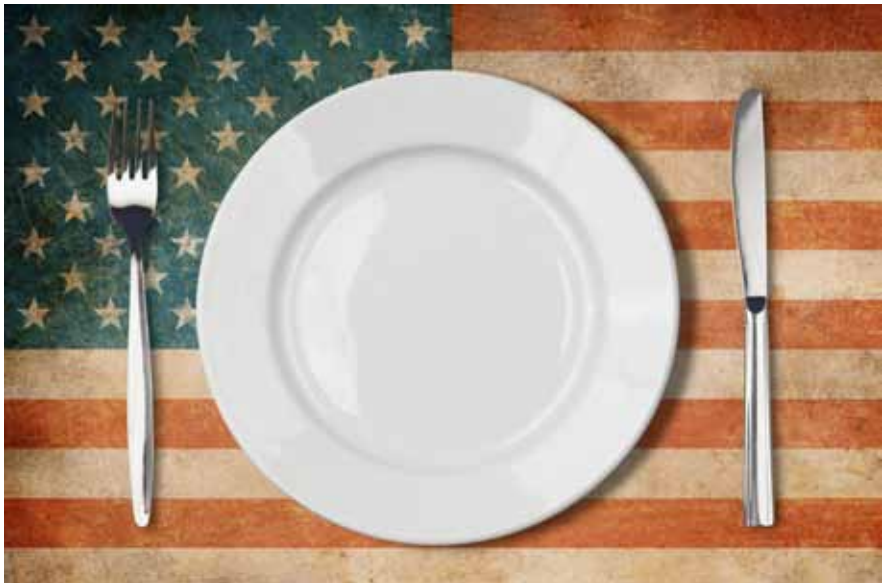
FOOD SAFETY MODERNISATION ACT (FSMA), SUMMARY OF WHAT HAS AND WILL CHANGE

The Food Safety Modernisation act (FSMA) was signed into law on January 4, 2011 and while some sections of the law came into force immediately it wasn't until September and November of 2015 that five of the core regulations were finalised. A further two core rules, the Sanitary Transportation and Intentional Adulteration rules, will be finalised on March 31 and May 31 2016, respectively.

CURRENT GOOD MANUFACTURING PRACTICES (CGMPS) AND PREVENTIVE CONTROL RULES

The two cGMP and preventive control final rules, one for humans and the other for animal foods, were published on September 17, 2015. The cGMP rules for humans were updated to add mandatory employee training, replaced the word must with shall, removed those items that were voluntary or made them mandatory, and required allergen cross-contact controls. The cGMP rules for animal foods were created for the first time. These rules were developed for the animal food industry, rather than leaving companies to simply apply the human cGMPs to an animal food facility. These rules also require mandatory employee training in food safety and hygiene. Compliance to these rules is one to three years, company revenue or employee numbers dependent, from publication of the final rule.

The preventive controls part of the rules requires the industry to re-evaluate food safety plans for an additional hazard, radiological, and to determine preventive control points in addition to the already established Critical Control Points (CCPs). Many of these preventive controls will involve changing food safety systems from HACCP to Hazard Analysis Risked-Based Preventive Control (HARPC). The human food industry has one to three years to comply with this rule from the date of publication, and the animal food industry has two to four years to comply. Both are dependent on the revenue or number of employees. The exception will be the supply-chain part of the



preventive control rule, for which the compliance date is six months after the supplier's cGMP and preventive control or produce safety compliance date.

The personnel who develop and verify these new HARPC food safety programs must have the knowledge and experience to perform this, or take an approved US FDA course that has been developed, for the human food business, by the Food Safety Preventive Control Alliance (FSPCA). This course is 20 hours long, has no prerequisites or tests but must be taught by an instructor that has been through the FSCPA lead instructor course. They do recommend personnel taking this course have knowledge of cGMPs and HACCP.

OPERATIONS NOT COVERED BY THE PREVENTIVE CONTROL RULES

These rules do not apply to farms (primary production and secondary activities) and retail establishments. A primary production farm is an operation under one management, in one general location which raises crops, harvests crops and/or raises animals. These farms can pack, or hold, raw agriculture commodities (RACs) of theirs, or others. They can manufacture/process, pack or hold processed food so long as all such foods are consumed on the farm, another farm of the same management, or if the manufacturing processing falls into limited categories. A secondary activities farm is not located on a primary production farm, but is devoted to harvesting, packing and/or holding RACs. The primary production farm (or farms) that grow, harvest and/or raise the majority of the RACs must own, or jointly own, a majority interest in the secondary farm activities. There are some exemptions and modified requirements for certain facilities.

[1] *http://www.fda.gov/Food/GuidanceRegulation/FSMA*

OTHER EXEMPTIONS AND MODIFIED REQUIREMENTS FOR PREVENTIVE CONTROL RULES

Seafood and juice facilities that adhere to the HACCP regulations, those involved in the manufacturing, processing, packing and holding of dietary supplements and/or alcoholic beverages at certain facilities are exempt. Low acid canned food, for microbiological hazards only, is exempt as those regulations already cover this hazard. Grain elevators and warehouses that store only RACs intended for further distribution or processing are also exempt.

There are modified requirements for qualified facilities, such as very small businesses, for facilities that only store packaged foods that are not exposed to the environment, and modified requirements for certain human food by-products used for animal foods.

OPERATIONS NOT COVERED BY THE cGMPs

For human food, the cGMPs do not apply to farms, fishing vessels that don't require registration, solely holding and/or transporting RACs, and establishments solely engaged in the shelling, drying, packing and/or holding of nuts without additional manufacturing or processing. For animal food, they do not apply to farms that don't have to register, solely holding and/or transporting RACs, and establishments solely engaged in the shelling, drying, packing and/or holding of nuts without additional manufacturing or processing, and those solely engaged in ginning of cotton without manufacturing or processing.

On November 27, 2015 three more rules were finalised which include the Produce Safety rule, Foreign Supplier Verification Program (FSVP) and the accredited third party certification rule.

PRODUCE SAFETY RULE

This rule covers raw fruits and vegetables including nuts, with some exemptions and variances. For the produce rule there are six major sections that apply to all produce; agricultural water, biological soil amendments, domesticated and wild animals, worker training and health and hygiene and equipment, tools and buildings, growing, harvesting, packing and holding activities, and one requirement section that applies to sprouts. A majority of the elements in this rule are standard practices for safe produce but some of the practices, such as the agricultural water requirement, will have more impact than others.

AGRICULTURAL WATER

No detectable level of generic E. coli would be allowed in water used for hand washing, food contact surface application, ice that is applied directly to produce and for sprout irrigation, so untreated surface water will not be allowable for these purposes. If positive E. coli is found, water is to be immediately discontinued for these uses and corrective actions must be taken before the water can be used for any of these purposes.

For water applied directly to produce other than sprouts, the generic E. coli amount is to be a geometric mean of 126 or less CFU/100 ml, with a maximum level of 410 CFU/100 ml. If criteria are not met, corrective action is to be taken as soon as possible, but no later than the following year. Farmers using non-compliant water will have three options. Treat the water, allow time for microbes to die off in the field, or allow time for microbes to die off between harvest and end storage or through washing.

EXEMPTIONS AND COMPLIANCE DATES

The exemptions are; produce that is not a raw agricultural commodity, produce rarely consumed raw (as per the US FDA item list), food grains, produce used for personal or on-farm consumption and farms with a three year average value of produce sales of less than $25,000 USD.

Except for sprouts, compliance dates will be two to four years from the date of publication dependent on produce revenue, except for the water quality standards testing and record keeping requirements, which are an additional two years beyond the compliance dates for the rest of the rule. Sprout growers will have one to three years, dependent on their size, to comply with the regulations, with no additional time to meet the water requirements.

FOREIGN SUPPLIER VERIFICATION PROGRAMME (FSVP)

This rule applies to all importers of human and animal foods, and additives,

including food packaging and other food contact materials, into the United States. Importers will be responsible for determining known or reasonably foreseeable hazards with each food. Importers must evaluate the risk of each food, based on hazard analysis and the foreign supplier's performance. Based on this information, the importer is to approve the suppliers and establish the appropriate supplier verification activities. The importer is responsible for conducting supplier verification activities and for the corrective actions for any non-conformance of these activities. These procedures must be documented and be followed by the importer. FSVP programmes will be specific to each food and supplier. This programme must be re-evaluated every three years, or when new information about a hazard or the supplier's performance is made known.

EXEMPTIONS AND MODIFIED STANDARDS

Importers of dietary supplements and/or ingredients may be required to comply with most of the FSVP requirements, excluding the hazard analysis, but the verification procedure would require evaluation of the facility's compliance to the dietary supplement cGMP regulations. There are modified requirements for certain foods from foreign suppliers from countries which have an equivalent programme, as determined by the US FDA. There are modified requirements for very small importers whose sales ceiling is $1 million USD for human food, and $2.5 million for animal food. Importers for certain types of small supplier will also have modified requirements. These firms are qualified facilities as per the preventive control rules or produce rule, farms not covered by the produce rule and shell egg producers with fewer than 3,000 laying hens.

Exempt from the FSVP are juice, fish and fishery products (all subjected to HACCP regulations), as well as food for research or evaluation, food for personal consumption, alcoholic beverages and certain ingredients used in them. Also exempt is food imported for processing and future export, low acid canned food regarding microbial hazards, and certain meat, poultry and egg products as regulated by the United States Department of Agriculture Food Safety Inspection Service.

COMPLIANCE DATES

The importer must comply with whichever is the latest compliance date, which is 18 months from date of publication (May 27, 2017), or 6 months after the supplier is required to comply with the preventive control rule or produce safety rule. If the importer is also a manufacturer or processor that is to adhere to the supply-chain part of the preventive control rule, instead of the FSVP, then the date required by the rule is the compliance date of the supply-chain rule.

ACCREDITED THIRD PARTY CERTIFICATION

Certifications produced by this programme can be used by foreign entities for participation in the Voluntary Qualified Importer Programme (VQIP) and to prevent harmful produce being imported into the US. The US FDA has the option to require specific foods being imported into the US to be accompanied by a certificate produced through this programme. While not required, this certification can be used for the supply-chain programme or for the FSVP on-site audit verification.

As per this rule, accreditation bodies can apply to the US FDA to be reviewed and approved. Once an accredited body is approved, then certification bodies (auditors) can apply to be reviewed and approved by the accreditation body.

Certification bodies will be allowed to perform two types of audit, consultative and regulatory. The consultative audit is a gap assessment of compliance to the regulatory standard, and standard industry practices. The regulatory audit is for compliance and certification. Before this programme can be implemented the US FDA proposed user fees must be finalised.

SANITARY TRANSPORTATION OF FOOD AND FEED

This rule applies to shippers, carriers, and receivers who transport food that will be consumed or be transported throughout the United States (US). This rule applies to those same companies outside the US in regards to food and feed being exported to the US. This rule will not apply to the transportation of pre-packaged shelf stable foods, live animals and raw agricultural commodities when transported by farms.

The concentration of this rule is to prevent practices that create food safety risks, such as the failure to properly refrigerate foods, inadequate cleaning between loads and failure to protect food during transportation.

Compliance dates will be two years after the final rule is published for small businesses, which are those employing less than 500 people or for carriers having less than $25.5 million in annual receipts, and one year after the final rule is published for all other businesses.

FOCUSED MITIGATION STRATEGIES TO PROTECT FOOD AGAINST INTENTIONAL ADULTERATION

This proposed rule applies to both domestic and foreign facilities that manufacture, process, pack or hold food and are required to register with the US FDA. The following facilities/ operations are exempted; farms, alcoholic beverages under certain conditions, feed for animals, holding foods except foods in liquid storage tanks and the packing, repacking, labelling or relabelling of food where the container that contacts the food remains intact. Very small businesses – those with less than $10 million in total annual sales – are exempt, but they require documentation to prove it.

The US FDA has identified four key activities of concern for intentional adulteration: bulk liquid receiving and loading, liquid storage and handling, secondary ingredient handling and mixing and similar activities.

Facilities with any of these activities or other qualified operations would have to perform a vulnerability assessment of the operation. Facilities need to identify the process points/steps that mitigation strategies would reduce the risk of intentional adulteration and to create a written food defence plan. The latter must include the actionable process steps to reduce intentional adulteration, the focused mitigation strategies, monitoring, correction actions, verification, training and record keeping at these steps.

Compliance dates will be three years after the final rule is published for very small businesses, two years after the final rule is published for small businesses (a business with less than 500 people) and one year after the final rule is published for all other businesses.

Based on the other rule finalisation it is unlikely that these two proposed rules will be finalised exactly as proposed. Even with two rules yet to be finalised, based on the current compliance dates of all the rules, some companies will be required to comply with cGMP or part of the Preventive Control rule by September 19, 2016. For others, it is possible that full compliance with some parts of these rules, such as the water requirements in the produce rule, will not take place until almost 2022. In all areas and for all companies, there is a lot of work to be accomplished between now and the compliance deadlines.

For the complete range of SGS services and support visit www.foodsafety.sgs.com or send an email to food@sgs.com.

JIM COOK

Food Scientific and Regulatory Affairs Manager
Phone: +01 973-461-1493
E-mail: James.Cook@sgs.com
SGS Agriculture and Food

STANDARDS TO ADDRESS GROWING DEMAND FOR GMO DETAILS

Consumers in the USA are increasingly aware of issues impacting the food they eat; this includes the use of genetically modified organisms (GMOs) and genetically engineered (GE) ingredients, and they want to know more.

GMO AND GE

Debate has raged for many years over the pros and cons of GMO/GE food, feed and ingredients. Indeed, around the world regulation of GMO products, and their acceptability to different national markets, varies widely. Many studies have been conducted into GMO and GE foods, with differing outcomes and conclusions, thereby ensuring that consumers, the final arbiter of acceptance, are influenced by different opinions.

Natural selection and selective breeding for specific desirable traits are both activities that lead to changes in seed and plant properties. GMO and GE techniques take this one step further, but with strict controls on safety related to cross-contamination.

Driven by the twin demands of transparency in the supply chain and a desire to voluntarily declare that processed food is manufactured without GMO or GE ingredients, SGS has developed a new standard, the SGS No GE Ingredients Supply Chain Process Verification Standard (US Version), which audits and verifies processes across the supply chain, to support this claim in the USA. Though not an accredited scheme, this standard can effectively support consumer confidence.

Certification of food and ingredients outside the USA has been a common SGS service for many years. This activity is covered under the SGS Non GMO Supply Chain Standard, which is based on the European Union's Directive and legal framework. Supply chains anywhere in the world can actively use it, even though it is also not an accredited scheme.

THE SGS NO GE INGREDIENTS SUPPLY CHAIN PROCESS VERIFICATION STANDARD (US VERSION)

Applicable only to food and pet food industry operators in the USA and their suppliers for the US market, the No GE standard has been developed in accordance with guidance from the Food and Drug Administration (FDA) and the US Department of Agriculture (USDA) as well as taking into consideration US federal and state guidance and proposed and passed laws

Increasing demand from consumers in North America, to be able to choose to eat food with No GMO or No GE ingredients, allows farmers in the USA and abroad to reach new markets. Recent studies indicate that demand for No GMO and No GE foods produced in the USA is higher than for organically produced food.

GMO/GE WITHIN SCOPE

The plant varieties that fall under the GE and GMO consideration are rapidly increasing and many developed varieties await homogenisation by authorities. The list of organisms falling within the scope of the SGS No GE standard is based on the Centre for Environmental Risk Assessment's (CERA) guidance.

The No GE standard can be applied to processed and unprocessed food and beverages for human consumption, as well as pet food, and the Non GMO standard also includes feed and beverages for animal consumption and pet food.

WHICH SUPPLY CHAIN STAKEHOLDERS CAN BE INCLUDED?

SGS's No GE and Non GMO standards can be applied to all processes in the supply chain, including:

- Seed production and supply
- Farming
- Trading
- Storage
- Transportation
- Processing
- Packaging

ROUTE TO CERTIFICATION

Compliance to this standard is confirmed by a process verification audit. On successful audit completion, certification will be granted. Certification is valid for three years with annual surveillance audits.

Testing, as a route to further assurance, is an important tool to demonstrate compliance. In Brookings, South Dakota, SGS provides state of the art laboratory services. Outside the USA SGS has integrated these services into our global network of food testing laboratories.

GENERAL REQUIREMENTS

Facilities must implement effective methods for evaluation of the GE/GMO status of an ingredient, define a sampling, testing and monitoring plan based on a risk assessment with application of the HACCP principles, and ensure that commingling of non-GE/GMO and GE/GMO derivatives does not occur during transport, in storage or during production.

Both standards require the operator/processor to have in place appropriate mechanisms in the event of an issue with products produced under these standards, such as the commingling of non-GE/GMO and GE/GMO derivatives. This includes the requirement for a market removal plan if comingling occurs.

From the farm to retail point of sale, SGS's new standards demonstrate the GMO/GE status of food and its ingredients, with third party verification of the processes in the supply chain.

For the complete range of SGS services and support visit www.foodsafety.sgs.com or send an email to food@sgs.com.

BRUNO WIDMER

Business Development Manager
Phone: +41 22 739 94 68
E-mail: Bruno.Widmer@sgs.com

CHRIS RANSCHAERT

Technical Governance
Phone: +32 3 570 9784
E-mail: Chris.Ranschaert@sgs.com
SGS Agriculture and Food

[1] *http://www.fooddive.com/news/the-battle-between-organic-non-gmo-labels-rages-on/410514/*

TOUGH NEW RULES FOR IMPORTING FOOD TO CHINA

Over the last few years Chinese officials have uncovered a number of serious food safety scandals. These include: the injection of clenbuterol into pork; the recycling of cooking oil; the selling of pork from sick pigs; the manufacture of medicines made with toxic gelatine, and the passing-off of rat and fox meat as fit for human consumption. In response to this and other changes to the Chinese food industry, on April 24, 2015 the Standing Committee of the National People's Congress passed a number of amendments to the PRC Food Safety Law. The 2015 Food Safety Law, as it is known, came into effect on October 1, 2015.[1]

BROADER REGULATORY POWERS

The expanded PRC Food Safety Law, the law has increased the number of articles from 104 to 154, covers every facet of China's food industry and seeks to create a, "refined food safety regulatory system that gives food safety regulators broader and more robust supervisory powers."[2]

The new law also seeks to expand the scope of the regulatory authority in an attempt to bring third-party online suppliers under the auspices of the new law. Article 62 states, "The provider of a third-party online food trading platform shall register the legal names of food traders admitted to the platform and define their food safety management responsibilities".

SPECIALLY PRESCRIBED PRODUCTS

The new law also seeks to introduce special measures concerning health foods, baby foods, and GMO foods, bringing them within the remit of the Food Safety Law.

The 2015 Food Safety Law makes special provision for health food, which must adhere to the catalogue of prescribed functions drawn up by relevant government departments. Health foods are considered to be foods that claim to have specific health functions and include ' special dosage' that would include vitamins and mineral supplements. The law also requires that products be listed under one of two headings: 1) those that require registration; and (2) those that require record-filing. This represents a major department for the registration of health foods and will reflect whether a health food uses an ingredient not covered by the health food ingredient catalogue and whether a health food is imported to China for the first time. In addition, products listed under the health food category will be required to display the warning, "health food cannot be a substitute for drugs."[3]

The new law also brings into effect quality control measures pertaining to the manufacture of baby and toddler foods. Each batch of infant formula food must be inspected before it leaves the factory and producers will be required to file a record with the local food and drug administration concerning: ingredients; additives; product formulations; and labelling.

The 2015 Food Safety Law also requires the recipe of the product to be registered with the CFDA and, in addition, baby formula and toddler formula cannot be repackaged.[4]

The new law also requires GMO products to be labelled in an obvious position.

[1] *Food Safety Law of the People's Republic of China (2015 Revision)[Effective]* http://www.fdi.gov.cn/1800000121_39_4037_0_7.html
[2] http://www.chinalawinsight.com/2015/04/articles/healthcare/selected-highlights-of-the-amended-prc-food-safety-law/
[3] http://www.chinalawinsight.com/2015/04/articles/healthcare/selected-highlights-of-the-amended-prc-food-safety-law/
[4] http://www.chinalawinsight.com/2015/04/articles/healthcare/selected-highlights-of-the-amended-prc-food-safety-law/

IMPORTED FOODSTUFFS

The 2015 Food Safety Law also seeks to bring imported foodstuffs under stricter control and bring them into line with domestic rules concerning food safety.

During the last 10 years, China's food industry has seen a four-fold growth in the levels of food being imported – an increase that averages 17.6% year on year. The evidence suggests this trend is likely to continue, with 2015 reporting a 21% increase. With China's greater reliance on imported foods, comes the need for greater oversight in order to ensure food safety standards are maintained.

Currently, imported and exported foods are supervised and administrated by The Entry-Exit Inspection and Quarantine Department of the State. All imported and exported food must meet the National Food Safety Standard of China.

The 2015 Food Safety Law has sought to strengthen and extend the power of the Entry-Exit Inspection and Quarantine. The importer is now required to hold all necessary vouchers, including contracts, invoices, packing lists, and bill of loading, as well as other relevant documents relating to quarantine and entry/exit procedures at the place where the customs declaration is made.[5]

In addition, "new food additive varieties and new varieties of products related to foods," will need to submit the correct licensing certification documents in Article 63 of the 2015 Food Safety Law.[6] Products which do not have the correct documentation will be deemed hazardous to people's health.[7]

The 2015 Food Safety Law also requires that those exporting to China will require registration in accordance with Article 65. Registration will last for 4 years, but organisations found to be in contravention of the rules will have their permits revoked.[8]

The amended law also prescribes that imported pre-packed food and food additives shall require Chinese labels or instructions. The labels and instructions need to comply with the provisions of the 2015 Food Safety Law, and other relevant laws, and shall state the place of origin of the food, as well as the name, address and contact details of the domestic supplier.

The Chinese government has also introduced, in Article 69, the requirement for the State Entry-Exit Inspection and Quarantine Bureau to set up an information gathering network. This will collect and integrate information from domestic and international food safety organisations, along with data collated by the Entry-Exit Inspection and Quarantine Bureau. The Bureau is then tasked with notifying the relevant authorities in order to assist in the maintenance of high food standards.[9]

HARSHER PUNISHMENTS

In addition to seeking to widen the effectiveness of authority oversight, the 2015 Food Safety Law has also introduced a number of new penalties. Domestic and international companies which are found to be breaking the law, stand to face harsher criminal, administrative, and civil liabilities. For

importers of foodstuffs to China, the first penalty will be the removal of the right to trade in China.

The advice from China is that, "foreign investors and firms should be more prudent than ever to ensure compliance with the new guidelines for food safety and sale in China to avoid the possibilities of a food recall and subsequent loss in profit."

For the complete range of SGS services and support visit www.foodsafety.sgs.com or send an email to food@sgs.com.

EVELYN SUN

Food Manager China
Phone: +86 (021) 6140 2561
Email: evelyn.sun@sgs.com
SGS Agriculture and Food

[5] *Article 35 http://www.fdi.gov.cn/1800000121_39_4037_0_7.html*
[6] *Article 37 http://www.fdi.gov.cn/1800000121_39_4037_0_7.html*
[7] *Article 38 http://www.fdi.gov.cn/1800000121_39_4037_0_7.html*
[8] *Article 39 http://www.fdi.gov.cn/1800000121_39_4037_0_7.html*
[9] *Article 42 http://www.fdi.gov.cn/1800000121_39_4037_0_7.html*

SHAPING FOOD SAFETY CULTURE IN FOOD SERVICE – CHALLENGES, OPPORTUNITIES AND KEY DRIVERS

More than 100 delegates joined speakers from the World Health Organization (WHO), Rotana Hotel Group and Taylor Shannon International at the SGS Special Session "Shaping Food Safety Culture in Food Service – Challenges, Opportunities and Key Drivers", held at GFSI 2016 in Berlin.

Led by Peter Hvidberg, Global Business Manager, Travel & Hospitality, SGS, the session explored the global threat posed by unsafe practices in both food production and handling.

SETTING THE SCENE

Opening the session and introducing the topic, Mr Hvidberg set the scene with statistics to demonstrate the extent of food and waterborne disease outbreaks in Europe. A recent report published by the European Food Safety Authority (EFSA) and the European Centre for Disease Prevention and Control (ECDC), confirmed that in 2013, the European Union (EU) saw:

- 5,196 food-borne and water-borne outbreaks
- 43,183 human cases
- 5,946 hospitalisations
- 11 deaths

In these figures, 22.2% of outbreaks were associated with restaurants, hotels, cafes, pubs and bars (EFSA Journal 2015; 13(1): 3991). The figures speak for themselves, but in the 21st century social media can exacerbate the reputational damage to businesses. Bad news travels faster now than ever before.

To ensure food and consumer safety, as well as to protect businesses and brands, some of the areas that need to be addressed include:

- Safety system failures
- Breaches of food safety regulations
- Processing problems

- Human errors
- Handling and preparation mistakes
- Food safety knowledge gaps
- Food safety culture

It is apparent that there is a definite need for a more co-ordinated approach across the whole food supply chain.

GLOBAL SCALE

Building on the introduction, Dr Angelika Tritscher, Head of Risk Assessment and Management, WHO, introduced the audience to the WHO's global foodborne disease report. Every year, foodborne disease outbreaks, from all sources, cause:

- 33 million healthy life years to be lost
- 1 in 10 people to fall ill
- 420,000 deaths

At face value, these numbers hide the disparity between age groups and rich and poor areas. Children under five years of age make up only 9% of the global population, yet they suffer 38% of foodborne illnesses. Diarrheal diseases account for more than half the disease burden, and non-typhoidal *Salmonella* causes the most deaths.

Food service, said Dr Tritscher, can help prevent this. The WHOs Five Keys to Safer Food[1] are simple, logical actions that need to be consistently adhered to by everyone involved in the food service industry.

BARRIERS AND DRIVERS

Mr Muhammad Ihsanullah, Director of Food Safety & EHS, Rotana Hotel Group explored the human factors that hinder and drive food safety in the hospitality sector.

[1] *http://www.who.int/foodsafety/consumer/5keys/en/*

No one issue is at the root of food safety failures, but there is a combination of factors. In its majority, the food service industry relies on compliance behaviours, the personal actions that must be carried out by each individual consistently. However, in a truly international industry, businesses and organisations face a raft of barriers, such as employees':

- Cultural background
- Upbringing
- Misconceptions
- Traditions

Cultural norms do not always translate into compliance with food safety regulations. For example, in some countries, it is not common practice to use thermometers in cooking, or refrigerators.

Training and education is the route to success, in combination with supervision, leadership, motivation and employee engagement. Food safety is the responsibility of everyone in a food service organisation, and it must ingrained into business practices.

FOOD SAFETY CULTURE

With extensive experience in the food service industry, Dr Joanne Taylor, Training and Research Director, Taylor Shannon International, helped the audience improve their understanding of what the term "food safety culture" really means, and how it impacts an organisation. Dr Taylor explained that this culture is essential to the success of a business, and that the failure to understand and consider organisational culture can badly impact a company. It's about more than just good systems. Once implemented, a system must also be consistently applied. A successful organisational culture is built on four pillars:

- People
- Processes
- Purpose
- Proactivity

The people pillar touches on some of the issues raised by Mr Ihsanullah, such as employee empowerment, training and communication as well as reward and teamwork. Processes looks at how people and the processes they follow are managed, whether departments are working together to a shared objective, and if systems are effective or a burden. In the purpose pillar, a successful food safety culture should communicate food safety to everyone, be promoted as a core value with improvements being seen on the ground in employees' objectives and everyday activities. Proactivity relates to a wider understanding of customers, risk foresight, learning lessons and sharing improvements/best practice across sites.

Following the presentations, participants joined lively discussions on the key barriers and drivers to compliance behaviours within a food service establishment, and how a food safety culture can build on the foundations of established food safety management systems to improve performance in the food service industry.

FREE WEBINAR SUMMARY

Watch SGS's free on-demand webinar: GFSI Special Session Recap for a summary of the key discussion points from the SGS sponsored GFSI Special Session on 'Shaping Food Safety Culture in Food Service – Challenges, Opportunities and Key Drivers'.

For the complete range of SGS services and support visit www.foodsafety.sgs.com or send an email to food@sgs.com.

DR EVANGELIA KOMITOPOULOU

Global Customised Solutions Manager – Food
SGS SA
Phone: +44 7824 089985
Email: evangelia.komitopoulou@sgs.com
SGS Agriculture and Food

SGS VIETNAM FOOD LAB

SGS Vietnam testing capabilities for the food and agriculture industries

INTRODUCING THE SGS VIETNAM FOOD LAB

- Employees: 42
- Laboratories: 1 food laboratory including microbiology, wet chemistry, and hi-tech laboratories
- Laboratory space: 1,400m^2
- Location: Ho Chi Minh

TESTING SERVICES

SGS Vietnam's agriculture and food laboratory delivers a full and diverse range of testing and analysis services on commodities and food.

- Antibiotic residues
- Pesticide residues
- Mycotoxins
- Nutritional analysis
- Vitamins
- Heavy metals and minerals
- Microorganisms
- GMOs
- Antioxidants
- Preservatives
- Additives

Products covered include: seafood, beverages, milk and dairy products, agricultural products and honey.

ACCREDITATIONS

ISO 17025 (seafood, beverages, milk and dairy products, agricultural products, and honey), MARD (seafood and agricultural products) and GAFTA (grains and feed).

SCOPE & SCALE

SGS had established its first food lab in Ho Chi Minh City in 2001, conducting microbiological and chemical testing. In 2012 and 2013, capacity and capabilities were expanded following investment in Liquid Chromatography-Mass Spectrometry/Mass Spectrometry (LC-MS/MS) and Gas Chromatography-Mass Spectrometry/Mass Spectrometry (GC-MS/MS) to facilitate the development of new tests focusing on antibiotics, pesticides, mycotoxins and vitamins.

On January 21 2016, SGS opened Vietnam's first commercial Bio Safety Level 2 Food laboratory. This new laboratory is capable of handling 'Risk Group2' microorganisms. Therefore, the new food laboratory has been designed to meet Bio Safety Level 2, as required by the Vietnamese government.

SGS delivers food testing services to a wide range of clients covering the food supply chain, including food and feed processing companies in the seafood, grains, nuts, cereals, vegetables, honey, milk, dairy, feed, confectionery and beverage sectors.

Opening ceremony January 21 2016

Microbiological Testing Lab

Chemical Testing Lab

Contact:

SGS VIETNAM LTD.
SGS Building
119-121 Vo Van Tan, District 3
Ho Chi Minh City
Vietnam
Phone: +84 8 3935 1920
Email: sgs.vietnam@sgs.com
SGS Agriculture and Food

SGS WEBINARS

For a complete list of SGS seminars, courses and webinars, please check our events calendar.

WEBINAR	LANGUAGE	WEBINAR STATUS & LINK
Halal Certification: Live webinar April 14, 2016	EN	Register here
GFSI Special Session Recap: Shaping Food Safety Culture in Food Service	EN	On-demand
Supply Chain Transparency	EN	On-demand
BRC Packaging Issue 5: An overview of key requirements and benefits	EN	On-demand
FSSC Packaging: Overview of requirements, suitability and benefits for your business	EN	On-demand
GFSI Global Markets Programme explained: A comparison between BRC and IFS options	EN	On-demand
BRC Global Standard for Food Safety – Issue 7	EN	On-demand
BRC Agents & Brokers	EN	On-demand
How well do you know your Supply Chain?	EN	On-demand
Food Defence / Food Fraud	EN	On-demand

UPCOMING SGS FOOD EVENTS

For more events, please check the online events calendar.

EVENT	COUNTRY	LOCATION	DATES	EVENT TYPE	STAND #
American Spice Trade Association Annual Meeting 2016	USA	Scottsdale, Arizona	April 10-13 2016	Annual Meeting	17

SAFEGUARDS

SafeGuards, are SGS technical bulletins concentrating on new product standards, regulations and test methods.
Subscribe to SafeGuards: www.sgs.com/ConsumerSubscribe
Browse the SafeGuards Library: www.sgs.com/safeguards

THE LATEST SAFEGUARDS

- Ministry of Public Health Notification No 367 Introduces and Enforces New Food – View
- Eu Amends Maximum Levels For Tropane Alkaloids in Certain Cereal Based Foods – View
- Canada Proposed Mrls of Mandestrobin in Foods – View
- EU Announces Amendment of Maximum Residue Levels for Pesticide Residues – View
- US EPA Amended Tolerance Level of Pendimethalin In Foods – View
- EU Imposes Special Conditions on Groundnut Capsicum and Nutmeg Imports – View
- Indonesia Food Safety Control on Importation and Exportation of Fresh Food – View
- India Amends the Food Safety and Standards Contaminants Toxins – View

NEW WHITE PAPER – COMPARING GLOBAL FOOD SAFETY INITIATIVE (GFSI) RECOGNIZED STANDARDS

UPDATED GFSI WHITE PAPER

This updated white paper aims to provide an overview of the Global Food Safety Initiative (GFSI) and what it means for an international food safety standard to be GFSI approved. It then goes on to discuss each of the GFSI approved schemes individually looking in detail at the key schemes which are offered by BRC, FSSC 22000, IFS Food, SQF Code, and Global G.A.P. For each of these, the requirements, benefits and certification processes are reviewed. There are five further schemes that are covered in brief. The most generic of the schemes and those most commonly adopted by branded goods manufacturers (FSSC 22000, BRC, SQF Code and IFS) are then compared, by discussing the criteria, similarities and differences between the schemes. It also includes a brief overview of alternative programmes that support small and medium sized businesses by providing a steppingstone prior to full GFSI food safety certification. The paper then looks at the merits of a customised single food audit and elaborates on the benefits using a case study as an example. The case study highlights how food safety standards have an extensive crossover with environmental, health & safety and quality standards; and although there is rarely one 'optimal fit' food safety standard for any given organisation, a combination of schemes brought together in one audit procedure may be a suitable solution.

Download your copy of: Comparing Global Food Safety Initiative (GFSI) Recognised Standards

OUR WHITE PAPERS – LEARN MORE ABOUT FOOD QUALITY, SAFETY & SUSTAINABILITY

UNDERSTANDING GLOBAL OLIVE OIL QUALITY, GRADING AND LABELLING REQUIREMENTS

The olive oil industry faces increased pressure to prove that its products live up to the quality and origin on the bottle. Consumers are now more aware than ever, that olive oils may not always be what is claimed or advertised. Recent poor harvests and increasing demand for olive oil once again raise the risk of olive oil adulteration or fraud for short-term financial gain. To protect olive oil's longterm reputation, all those involved in the supply chain must remain vigilant at this time against such activity – and ensure consumer confidence and demand for olive oil remains high. The purpose of this white paper is to provide an overview of the voluntary industry standards and government/ state regulations relating to olive oil. It aims to promote an understanding of the grading, quality, regulatory and labelling requirements of the industry, and to outline some of the current issues relating to adulteration and contamination.

Download your copy of: Understanding Global Olive Oil Quality, Grading and Labelling Requirements White Paper

UNDERSTANDING, MONITORING AND MEETING THE DIFFERING GLOBAL MAXIMUM RESIDUE LIMITS (MRLS) FOR PESTICIDES IN FOOD AND FEED PRODUCTS

The purpose of this white paper is to provide an overview on current thinking within the food industry for how best to manage pesticide residue risk in food products and supply chains. The aim is to promote an understanding of the origins of pesticide residues, and current industry challenges due to increasing regulations for the management and compliance of products destined for the EU, US, China and Japan. This paper is aimed equally at those organisations with established pesticide residues risk control and management plans as well as those considering development and implementation of risk protocols.

Download your copy of: Understanding, Monitoring and Meeting the Differing Global Maximum Residue Limits (MRLs) for Pesticides in Food and Feed Products White Paper

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SUPPLY CHAIN MANAGEMENT: HOW WELL DO YOU KNOW YOUR SUPPLY CHAIN?

In early 2015, SGS invited food industry experts to take part in a survey – Current Industry Practices in Supply Chain Management: How Vulnerable is Your Supply Chain?

This document looks at the subject, its definition, practices and risk management. We also review the survey's key findings to provide insight on the risks and challenges facing the industry's supply chains, as well as examining their causes and potential impacts. It is aimed at organizations with established supply chain management procedures, as well as those considering the development and implementation of risk management strategies.

Download your copy of: Supply Chain Management: How Well Do You Know Your Supply Chain?

PROLIFERATION, REGULATION AND MITIGATION OF PERSISTENT ORGANIC POLLUTANTS (POPS) IN CONSUMER PRODUCTS AND SUPPLY CHAINS

The purpose of this white paper is to provide an overview on current thinking within the consumer goods industry for how best to manage POPs risk in consumer products and supply chains. The aim is to promote an understanding of the origins of POPs, current industry challenges due to increasing EU and US regulations, and the principles of POPs management and compliance. This paper is aimed equally at those organisations with established POPs control and management plans as well as those considering development and implementation of POPs risk protocols.

Download your copy of: Proliferation, Regulation and Mitigation of Persistent Organic Pollutants (POPs) in Consumer Products and Supply Chains

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TRANSPARENCY-ONE: SUPPLY CHAIN VISIBILITY

This white paper discusses the profound transformation taking place in food shopping and shopper behaviour, and the challenges in monitoring the supply chain and measuring product compliance to drive consumer trust. This document aims to promote understanding of the tool, the risk factors that drive supply chain compliance today and how it can be computed in a way that allows organisations to adapt quickly to improve supply chain quality and safety.

Download your copy of: Transparency-One: Supply Chain Visibility

To view more white papers from SGS experts please visit the SGS White Paper Library.

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Please contact:
food@sgs.com

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WHEN YOU NEED TO BE SURE

SGS