The Right Ingredients

Food quality requires **building a culture** while adhering to standards

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In 50 Words Or Less

- Food safety standards are based on the principles of hazard analysis and critical control points (HACCP).
- Regardless of the standard, an organizationwide safety mindset is necessary to implement a quality and food safety management system.
- Organizations can follow 10 important requirements to HACCP to guide in establishing a quality culture.

IN *OUT OF THE CRISIS,* W. Edwards Deming writes, "Everyone doing his best is not the answer. It is first necessary that people know what to do."[1]

To ensure that people know exactly what to do, all activities within the organization should be system oriented. When it comes to food safety management systems (FSMS), various international standards are in practice worldwide. Some of the best known examples include:

1. British Retail Consortium Global Standard for Food Safety (BRC GSFS).[2]
2. International Food Standard.[3]
3. Food Safety System Certification—a combination of ISO 22000:2005 and PAS 220.[4]
4. Safe Quality Food Institute codes.[5]
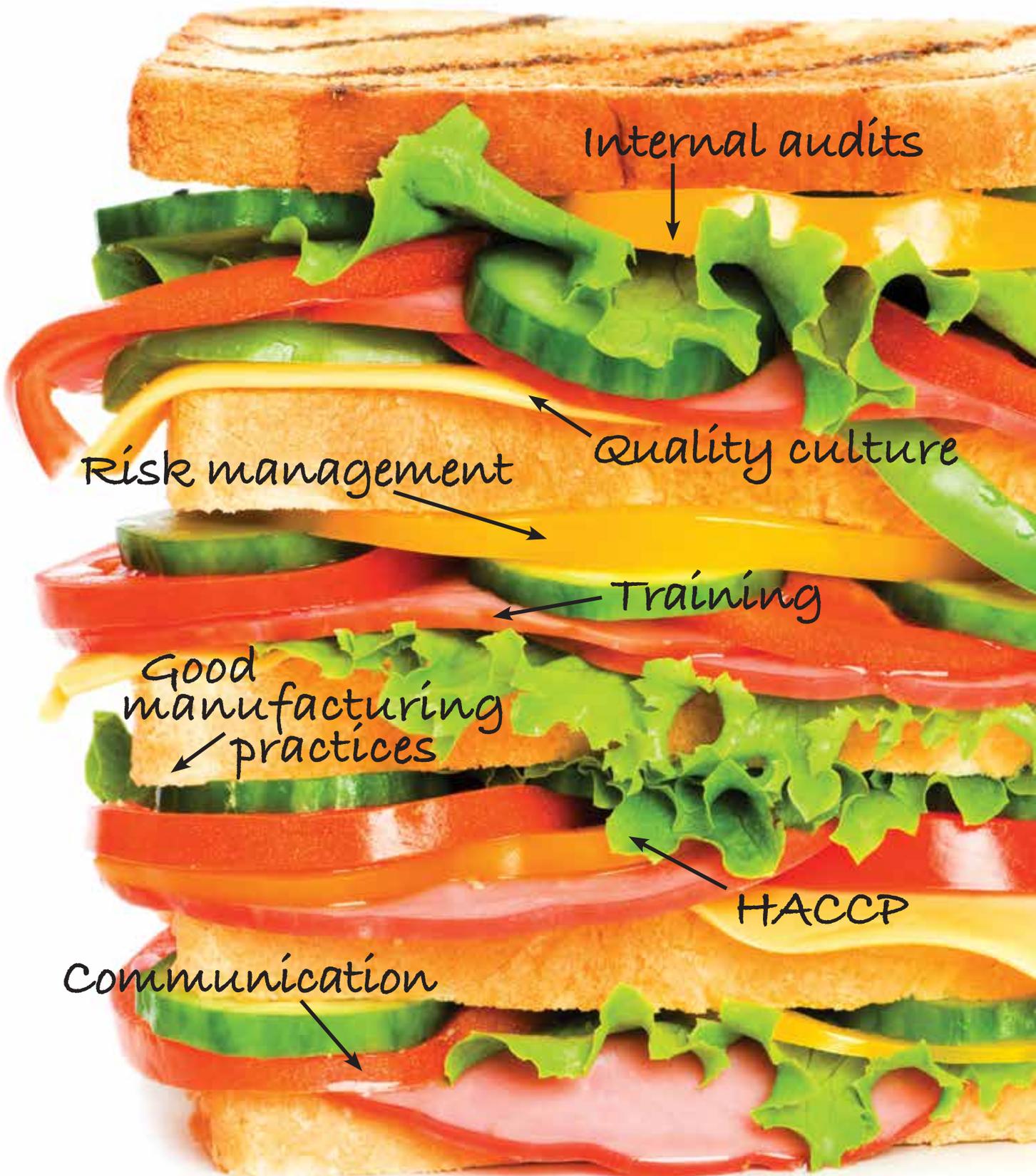
Internal audits

Quality culture

Risk management

Training

Good manufacturing practices

HACCP

Communication

All of these standards focus on the implementation and systematic maintenance of quality and food safety requirements, and all are approved by the Global Food Safety Initiative.[6] In addition, many other food safety standards exist at the national level.

Every food safety standard is based on the principles of hazard analysis and critical control points (HACCP), which means you must evaluate all possible hazards in your process and ensure each is being controlled at one stage or another. When implementing an FSMS, any one of the above-mentioned standards can be adapted. The results will be almost the same as long as the system is implemented with a true quality mindset.

Therefore, you shouldn't be confused when choosing the relevant food safety standard to adhere to if the objectives are to:

1. Ensure that food being delivered to customers and consumers is safe.
2. Be confident no external failures or customer complaints will occur.
3. Be confident there will be no product recalls.
4. Ensure there will be no major or critical internal failures.
5. Delight customers.
6. Ensure minimal rework and high productivity.
7. Achieve success by earning more profit and promoting a social cause by helping people maintain healthy eating habits.

Changing the culture

Top management and factory heads should understand that adoption of HACCP or a food safety standard requires a total culture shift. Everyone is equally responsible for implementing and maintaining HACCP so that it is reflected in each and every activity. For this to happen, top management must fully understand the requirements of HACCP, and organizational policies and goals should reflect this.

In general, organizations establish food safety and quality policies and goals according to the requirements of the standard they're following. Sometimes, implementation of these policies and goals, however, is limited to audits and are often not fully adopted within the entire organization because of lack of cultural change.

A HACCP culture must be brought into an organization through top management. Organizational leadership must continually watch for gaps between what is planned and what actually occurs during implementa-

tion. Knowing the missing links is the first step toward implementing a true food safety and quality management system.

While working as a HACCP team leader for many years, I have developed a list of the top 10 critical requirements for getting desired results from a HACCP system.

1. GMPs and PRPs

Adoption of good manufacturing practices (GMP) or prerequisite programs (PRP) is an inherent requirement for managing a food business. Well-implemented PRPs or GMPs include:

- Control of establishment design and facilities.
- Control of operation.
- Maintenance and sanitation.
- Transportation.
- End-product specifications.
- Risk assessment.
- Personal hygiene.
- Customer complaint management.
- Pest control.
- Product recall and traceability.
- A training program.
- A cleaning and sanitation program.[7]

These PRPs should never be compromised under any circumstances because any deviation in a PRP will result in undesired results and lack of a real HACCP culture. GMPs and PRPs should be the way of life in the organization.

2. Special care for CCPs

By definition, a critical control point (CCP) is a step in a process specifically designed to control a potential hazard. Most food safety hazards occur because a CCP was bypassed or mishandled.

Any complaint related to food safety—for example, a physical, chemical or biological hazard—is also likely due to a bypassed CCP. Consider a few examples:

- **Salmonella was found in a product.** The primary investigation should start with determining whether the product was given some type of treatment for microbial reduction. The answer should be yes. The next step—steam sterilization, pasteurization or ethylene oxide sterilization, for example—is another CCP. Was that performed properly?
- **A metal piece was found in the product.** The primary investigation should start with whether there

was a metal detector to ensure the product is free of metallic hazards—a CCP. The answer should again be yes.

CCPs need special attention. Top factory-level management must check how CCPs are being handled and, in cases of deviation, take immediate corrective and preventive actions.

3. More than marketing

The objective of system implementation must be more than creating a marketing tool. Governmental bodies already have realized the importance of HACCP. Compliance has become a mandatory requirement for all importers, exporters and domestic food handlers. Because of this, food handlers strive to get HACCP certification as quickly as possible.

In this era of globalization, food handlers know that without HACCP, their businesses cannot survive. HACCP certification gives tremendous confidence to customers and consumers, and can boost business; therefore, HACCP also has become a marketing tool.

It's important to remember, however, that while the prime objective of a HACCP system is to enhance customer confidence in the safe delivery of quality food, it's only possible to achieve this safety when HACCP is adopted as a quality strategy and not used solely as a marketing tool to attract business.

4. Not just for the auditor

Organizations often forget day-to-day maintenance of their HACCP systems until an audit is near or customers are expected to visit the operation. Words such as shipment, production, target achievement and sales cannot take precedence over words such as quality and food safety.

At one organization, for example, an internal audit was to be conducted every month, but because of various routine issues and urgencies, no one had time to update records. So the records were only updated when the audit neared.

Auditors will come for one or two days, and customers may visit occasionally, but the remaining 340 days are yours. You must decide how you are going to maintain your system's requirements.

Ensuring that system implementation is not for auditors alone will benefit your organization. It will allow everyone—from top management to the shop-floor employees, customers, investors and ultimately society—

to see the results of HACCP and remain delighted and healthy.

5. Not just the team leader's responsibility

Responsibility for system implementation and maintenance is not the team leader's alone. Standards recommend there be a team leader or management representative responsible for the dissemination, establishment and maintenance of a system.

Clause 5.5 of ISO 22000:2005 states, "There should be a food safety team leader, who irrespective of other responsibilities shall have responsibility and authority to ensure the food safety management system is established, implemented, maintained and updated."[8] Clause 2.12 of BRC GSFS states, "The HACCP food safety team shall have a designated and qualified team leader who shall be able to demonstrate competence and experience of HACCP."[9]

Some organizations interpret this to mean that the team leader is responsible for all HACCP-related activities, because everyone else, including other department heads, has other work to do.

Systems require a job profile of each individual who directly or indirectly affects food safety be established after due discussion with the system coordinator. This is in addition to getting input from respective department heads. During induction into the system, it's important the inductees understand their roles and responsibilities and are actually doing what they are supposed to do.

6. Close communication gaps

Communication gaps, specifically semantic barriers, are responsible for many external and internal failures and for inconsistency or variability in output.

Standard operating procedures (SOP) and work instructions are easily established and documented, but a major gap is in knowing whether users clearly understood SOPs and work instructions. Often in routine operations, everyone assumes what he or she is doing is right.

It is most critical for top management to ensure adequate communication. There should be measurement tools, such as staff interviews and written examinations, to ensure communication has been successful—that everyone knows what to do and is motivated to do his or her best.

The challenge is to get shop-floor worker, in particular, to understand the desired requirements. To ensure that each and every unit complies with the quality and

food safety requirements, you must ensure requirements have been properly communicated—again and again—and someone is closely and constantly monitoring them, making corrections in the case of deviations and communicating the requirements again.

7. Review meetings and internal audits

Internal audits and management review meetings (MRM) are two of the most important tools for ensuring continuous improvements.

An internal audit is performed to assure top management that the organization is compliant with the food safety systems being implemented. Gaps—if any—are highlighted as nonconformities, observations or opportunities for improvement. Based on the internal audit report, corrective and preventive actions are taken by the respective process owners.

The purpose of an MRM is to review the company's FSMS to ensure desired results are being achieved, review customer complaints and review internal audits. Strict conducting of internal audits and MRMs at the frequency defined by the organization will give best results.

Internal audits will show any system gaps. The MRM will ensure proper corrective and preventive actions have been taken and the system is continually suitable. Top management should ask team leaders about the progress of internal audits and MRMs, rather than limiting these requirements for audit purposes alone.

8. Overcome constraints

Constraints are always present. Just as food safety is nonnegotiable, however, any sort of constraint that may affect food safety must be overcome.

Monthly HACCP and GMP audits, HACCP verifications and other quality checks will automatically highlight your organization's constraints, including process manpower and system constraints.

Consider an example of manpower constraints: During an internal audit, it was observed that two workers were wearing rings inside the plant, which was not allowed per plant policy. Upon investigation, it was concluded that those workers were new and not aware of plant policy.

Further investigation revealed a high rate of worker turnover. This was a chronic issue and the assumption was that, in general, unskilled positions have high turnover.

It is the responsibility of top management and middle-level management to do everything possible to overcome such constraints.

9. Factory manager's role

The culture of every organization varies depending on the vision and leadership of top management. In the same way, culture varies from one manufacturing unit to another, depending on the focus and leadership styles of the respective factory heads.

Apart from quality assurance, the factory manager has an important role to play in bringing a suitable HACCP culture into the manufacturing unit. A common assumption is that the factory manager is always under pressure to ensure shipments are made within committed timeframes, and when this pressure dominates, the focus on quality and food safety may be diverted. There is less interest in motivating teams for training, management review meetings lack effective results and less focus is placed on internal audit findings. It is often tough for production workers to take care of quality when they are under pressure to produce.

Pressure should never be more important than quality. Management does not ask for overcapacity production. Workers work, machines run, raw material is supplied in time. Those in charge must ensure both quality and quantity.

10. Training

A small change in the mindset of the production team, including shift supervisors, fitters and workers, can provide wonderful results, but this is a challenge. To overcome this challenge, here are a few critical points:

- Continuous training programs should be established for everyone in the organization. The HR manager, along with FSMS team leader and respective heads of departments, should establish a training calendar, with an option for emergency training programs.
- Senior management should understand the importance of training. No program will be successful unless top management shows interest. Top management should pay special attention to establishment and implementation. Critical team members often do not participate because of emergency work from which their superiors won't release them.
- Effective and results-oriented training is crucial. Training related to quality and food safety, in which the target is to establish a culture, is always different

from other training. It involves not only knowledge sharing, but the participant must also be inspired to learn and apply a new, positive mindset for quality and food safety.

- Every training program should be evaluated. Participants should be made aware of training objectives. At the end of the training, there should be an exam—preferably objective-type questions—or suitable on-the-job evaluation techniques such as observing participants' performance closely for a specified number of days or interviews with participants. A person who scores less than the expectation should be provided a special session in the presence of the department head.

Train your people and continue training them. You will see a quality culture develop. Don't merely meet requirements for the auditor; meet them for your organization.

If you understand the in-depth meaning of food safety and quality system requirements and implement these requirements in full, your product will speak for the effectiveness of your system. With a solid HACCP culture,

your organization will grow and contribute to a healthy global society. QP

REFERENCES AND NOTES
1. W. Edwards Deming, *Out of the Crisis*, MIT Press, 1982.
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4. For more information, see the Food Safety System Certification 22000 website, www.fssc22000.com/en.
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6. Global Food Safety Initiative, for more information, visit www.mygfsi.com.
7. U.S. Food and Drug Administration, "Code of Federal Regulations Title 21," www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/cfrsearch.cfm?crfpart=110.
8. International Organization for Standardization, *ISO 22000:2005, clause 5.5*.
9. British Retail Consortium, *Global Standard for Food Safety, clause 2.12*.

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