



## HACCP

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The Hazard Analysis and Critical Control Point system (HACCP) is a preventative system that is used to safely produce food products throughout the agricultural sector. It is a common-sense application based on technical and scientific principles. This system focuses on the concept of prevention rather than inspection. To have a successful HACCP program it should be integrated with existing programs. By using HACCP in conjunction with Good Manufacturing Practices (GMPs), Standard Operating Procedures (SOPs), and Sanitation Standard Operating Procedures (SSOPs), you are able to make a safe food product as well as be able to prove that it is safe.

### **HACCP includes seven principles:**

- Principle 1. Conduct a hazard analysis:** Prepare a list of steps in the process where hazards are reasonably likely to occur and describe the preventative measures that can be taken. This hazard analysis includes physical, chemical, and biological hazards.
- Principle 2. Determine the critical control points (CCPs):** CCPs are located at any point where hazards need to be prevented, eliminated, or reduced to acceptable levels.
- Principle 3. Establish critical limits (CL):** Critical limits (CL) are a minimum and/or maximum value that must be met within each CCP to control a hazard. These limits may be set for preventative measures such as time, temperature, titration, water activity, etc.
- Principle 4. Establish monitoring procedures:** Monitoring procedures are planned observations or measurements of a CCP. This helps to identify trends of a process, identifies when there is a loss of control and a corrective action needs to be taken, and also provides written documentation for use in verification. The CCP must be monitored either continuously or on a reliable interval.
- Principle 5. Establish corrective actions:** Corrective actions must be developed for possible deviations at each identified CCP. When a deviation occurs, a corrective action should already be assigned so the CCP can be brought back into control.
- Principle 6. Establish verification procedures:** Those activities other than monitoring, that determine the validity of the HACCP plan and that the system is operating according to the plan (NACMCF, August 1997). The purpose of verification is to ensure CCPs and CLs are being controlled and monitored. This can be accomplished through internal record review, external record review, and ongoing verification activities. Calibration of monitoring devices, direct observation of monitoring activities, and pre-shipment record reviews are examples of verification.
- Principle 7. Establish record-keeping and documentation procedures:** This includes HACCP plan supporting documentation and records generated during the operation of the plan.

The USDA Pathogen Reduction and HACCP Systems final rule has been in place since July 25, 1996. This rule called for mandatory HACCP systems, microbiological testing (generic *E. coli* and *Salmonella*) and Sanitation Standard Operating Procedures (SSOPs). HACCP places responsibility for ensuring food safety appropriately on the food manufacturer or distributor and encourages food companies to compete more effectively in the world market and further reducing barriers to international trade.