

**Standard Sanitation Operating Procedures (SSOP's)for GMC's  
Packaging Facilities.**

CPF/PAPF.

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## **Overview**

World agriculture in the twenty-first century is faced with three main challenges: 1) to improve food security, rural livelihoods and income; 2) to satisfy the increasing and diversified demands for safe food and other products; and, 3) to conserve and protect natural resources. These challenges have been articulated by the international community through the World Food Summit Plan of Action and the Millennium Development Goals with specific targets to be met by 2015.

These challenges can be tackled in part through a Good Agricultural Practices (GAP) approach - a means to concretely contribute to environmental, economic and social sustainability of on-farm production resulting in safe and healthy food and non-food agricultural products. A GAP approach can address the demand-side priorities of consumers and retailers, the supply-side priorities of producers and laborers, and those institutions and services that are bridging supply and demand. While a GAP approach may respond to the growing demands of increasingly globalized and integrated agricultural sectors, it can have important implications for local and national markets.

Food should be produced under conditions that minimize contamination, as food-borne illnesses can be fatal and repeated incidences are likely to negatively impact the local trade, tourism, production and access to regional and international market, resulting in damage to the agriculture sector, loss of income and employment. We all have a responsibility to ensure that food is safe for consumption and this can be achieved if Good Agricultural Practices (GAP) are employed throughout the entire production chain.

## **Cleaning and Sanitation**

It is important to implement cleaning and sanitation (C&S) procedures at every step from “farm to fork” to help prevent the transmission of human diseases in foods. Food residues serve as substrate for the growth of human pathogens and can attract and support all types of pests that transmit those pathogens. Further, C&S can help improve the shelf life and quality of perishable commodities because it reduces the load of decay-causing microorganisms.

C&S is implemented in two distinct steps: clean first and then sanitize.

### **Cleaning**

Cleaning is simply the complete removal of unwanted matter, eg: soil, excess roots and fiber etc, by using appropriate detergent, chemicals and scrubbing in the proper manner as is necessary to remove the unwanted materials.

**What Do I Clean?** Literally everything must be subjected to C&S. All surfaces that contact fruits and vegetables directly must be given special attention. This includes, but is not limited to, hands, gloves,

utensils, knives and other cutting tools, harvest containers, cutting boards, tables, conveyors, ice makers, ice storage bins and aprons. Surfaces that are not in direct contact with food also must be cleaned, including walls, ceilings, floors, light fixtures, fans and drains.

**What Should I Know About Cleaning Tools?** The cleaning tools themselves can be a major source of microbial cross contamination if they are not cleaned, sanitized and properly stored after use. These include brooms, mops, squeegees, buckets, sponges, scrapers, foaming equipment, and pressure washers, water guns and any other cleaning tool. Once they are cleaned, they should be dried and stored in a dry secure location.

Tools should be properly identified for the locations in which they are used and should only be used in these locations. For example, tools that are used to clean toilet facilities might be labeled with red paint or tape. These should be used solely for that purpose. Tools that are used to clean walls and floors might be labeled with a yellow color and those used for packing machinery might be blue. Workers should understand the meaning of the coding system and take care to keep tools in their proper locations.

Minimize the use of wood for any purpose. Common wooden handles on tools can absorb water and harbor microorganisms. Plastic or metal tools are more appropriate because they can be cleaned more thoroughly. Tables in food handling areas should not be constructed of wood, even if the wood is coated with food-grade paint. The paint can chip and exposed wood can harbor microorganisms.

## **Sanitizing**

Sanitizing is a procedure for treating food contact surfaces that destroys most disease-producing bacteria and viruses, substantially reduces the number of other undesirable microorganisms and does not adversely affect the product or its safety for the consumer.

Surfaces must be properly prepared for sanitizing. First and foremost, the surface must be physically clean. One cannot sanitize a dirty surface because organic soils will consume the sanitizer or form a protective barrier over contamination. Detergent residues must be rinsed well because they will neutralize many sanitizers. Many detergents are alkaline with a negative charge while many sanitizers are acidic with a positive charge. Sanitizing can be done with either heat or chemicals.

**Thermal Sanitizing** This can be done with dry heat, but most often involves the use of hot water or steam. The exposure to heat should be for a specific time at a specific temperature.

**Chemical sanitizers** are a group of compounds that have dramatically different properties, yet they all achieve a common purpose. Some are chlorine or iodine based. Quaternary ammonium compounds (quats) have become widely used in recent years. There also are acid-anionic sanitizers, such as peroxide and peroxyacetic acid.

Chlorine-based sanitizers are the most commonly used sanitizers in food applications. All forms of chlorine are broad spectrum germicides.

Equipment or articles sanitized with the solution must be allowed to drain adequately before contact with food.

Solutions used for sanitizing equipment shall not exceed 200 parts per million (ppm) available chlorine. About one tablespoon (1/2 fluid ounce, 15 ml) of typical chlorine bleach per gallon of water is the maximum that should be used for sanitizing food contact surfaces, according to federal regulation. If higher concentrations are used, the surface must be rinsed with potable water after sanitizing. Contact times of one to five minutes are usually sufficient to achieve a thorough kill, depending on chlorine concentration and organic load.

Locating a disinfectant foot foam, foot bath, or foot spray at all entrances and exits to all production and finished product storage areas. There will be a reduction in contaminants been brought into the facilities by footwear of persons entering.

Note: This solution of chlorine that would be use in the Foot Baths would have to be closely monitored so as to reduce the potential of been contaminated, and be changed on a regular basis depends on its usage and effectiveness.

## Standard Sanitation Operating Procedure(SSOP)

### Cleaning and sanitizing of Packaging Facility.

	<b>Activity</b>	<b>Sanitizing Agent</b>	<b>Remarks.</b>
Before Shipment	<ul style="list-style-type: none"><li>• Packing house is clean.</li><li>• Has been sanitized prior to use, with appropriate solution (Soap Detergent, Chlorine etc...)</li><li>• Sinks are clean, sanitized and ready for use.</li><li>• Bins are cleaned and sanitized, with covers on them.</li><li>• Other packhouse equipment is in clean and sanitized state, e.g. Trolleys, Jacks, Treatment bins, expendables, Tables, Tarpaulins, and Scales.</li><li>• Washroom is clean, Sanitized with the relevant hand washing liquids and toilet paper.</li></ul>	Soap Detergent, Chlorine	
During Shipment	<ul style="list-style-type: none"><li>• To reduce the unwanted buildup of waste from the shipment, the packhouse assistant would be available to immediately remove and dispose of the unwanted waste.</li></ul>		
After Shipment	<ul style="list-style-type: none"><li>• Removal and disposal of all waste from shipment.</li><li>• Complete wash down/cleaning of sinks, floors and equipment used in shipment.</li><li>• Sanitizing of all areas within and around the packaging facility.</li><li>• Cleaning and sanitizing of rubbish receptacles.</li></ul>	Soap Detergent, Chlorine	

## Reference

- *Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables. FDA October 1998*
- *Good Agricultural Practices Manual for Agricultural Operations. Ministry of Agriculture, Food and Rural Affairs, Ontario*
- *Training manual in good Agricultural practices, Fruit and Vegetables sub sector. Ministry of Agriculture, Guyana School of Agriculture and IICA, 2011.*
- *Guidelines for the Use of Chlorine Bleach as a Sanitizer in Food Processing Operations, William McGlynn (Extension Horticulture Food Scientist), Oklahoma.*