

CHAPTER 4

GOOD MANAGEMENT PRACTICES
FOR
SHELLING PLANT OPERATIONS

Revised 2016

Revision by Steve Calhoun and John Takash
GMA Safe Shelling of Peanuts revised by APSA Working Group
*(incl. Darlene Cowart, Rhonda Starling, John Takash)**
Edited by Steve Calhoun

Previous Authors

Mark Spooner

Joey Trice

Lewis M. Carter Manufacturing

These Good Management Practices are not standards nor are they mandatory, but represent consensus thinking on best practices in each area and it is strongly recommended that they be followed.

THE PEANUT SHELLING SYSTEM

A. PROCESS DESCRIPTION

The peanut shelling system will usually consist of farmer stock storage facilities, shelling facilities, and dry and/or cold storage facilities.

A program should be implemented to ensure that no hazardous material remains in the finished product. The prerequisite programs necessary are Sanitation Program, Good Manufacturing Program, Pest Control Program, Customer Complaint Program, Chemical Control Program, Product Recall/Traceability Program, Supplier Controls, Product and Packaging Specifications, Preventative Maintenance, and Training.

The plant location should promote the production of a clean product. The area should be well drained, paved, or kept graded to prevent the collection of water.

Buildings should be designed and constructed to promote good sanitation standards. Buildings should also be sound and free of breaks to prevent the entrance of insects, rodents, water, and excessive dust.

The shelling process should promote the production of a wholesome, safe, and clean product. Equipment should be designed and installed in a manner that will be conducive to good sanitation practices.

Packaging, production, storage, and shipping areas should be designed to prevent product degradation and cross-contamination prior to customer receiving product.

B. CRITICAL AREAS

1. Farmer Stock Storage (The following items should be included in the appropriate program.)

Farmer stock should be stored in a warehouse that is clean, dry, well ventilated and pest free.

- Ventilation systems should be louvered and screened to prevent entrance of insects and birds.
- Routine inspection programs should be developed and maintained to monitor farmer stock quality.
- Areas around storage facility should be free of grass, weeds, debris, and any extraneous material to prevent rodent harborage. A program must be in place to maintain the areas surrounding storage facilities. (Mowing and spraying)
- All pest control must be performed or supervised by personnel possessing a valid commercial applicators license. This person should have direct responsibility for regular inspection of the storage structures and provide reports to the appropriate authorities that have responsibility to act as warranted. Control must be maintained over all on site chemicals. A designated locked area with limited access by personnel is recommended.
- Bait stations should be installed at approximately 50' intervals around exterior of buildings and maintained with approved bait. Stations should be secured and locked to prevent entry of unauthorized personnel. Stations should also be numbered and a master listing maintained to monitor rodent activity at each stations. All stations should be checked routinely to document activity. Tin Cats (no poison) should be used in areas

open to product (Dump pits, etc.) at 25' intervals.

- Pesticide usage should be minimized and used only as required to maintain farmer stock quality. All locations need an effective Integrated Pest Management program (IPM).
- Farmer stock unloading and storage areas should be free of standing water, including elevator wells and dump pits, and maintained in a sanitary manner.
- All lighting fixtures should be covered with approved shatter resistant covers or use shatterproof bulb. Lights on front end loaders and other handling equipment must be covered with approved shatter resistant covers.
- Use of glass containers in or near farmer stock storage areas should be prohibited. Signs should be posted to identify these areas.

2. Shelling Plant and System (The following items should be included in the proper program.)

- Plant operations should be focused on production of peanuts that are clean and free of extraneous material and unwholesome defects.
- Buildings should be designed and constructed to facilitate good sanitation practices. Ceilings, floors, and walls should be kept in good condition to prevent product contamination. All wall to floor joints should be free of breaks to prevent product residue build-up and rodent entrance.
- All building openings should be screened or otherwise protected to prevent insect and rodent entry. All personnel doors should be self-closing. All pesticide usage must be documented on a chemical log sheet. Pest control programs need to include a map of the facility traps and bait stations, copy of license of pesticide applicator, SDS sheets and checklists of activity. All training must be documented.
- All steps in the shelling process should be identified in a “flow chart” diagram. The flow chart should identify, with sufficient detail, the processes within the shelling system.
- A formal program should be established to identify and document sanitation schedules, procedures, and product quality parameters. Employees should be trained in the proper methods cleaning within the shelling process.
- Proper sanitation at regularly scheduled intervals is the best prevention of insect activity. The use of chemical insecticides should be minimized and use only insecticides approved for food products.
- Painted surfaces should be inspected regularly to ensure peeling paint does not contaminate product flows.
- All lighting fixtures should be covered with shatter resistant covers or use shatterproof bulb.
- Rest rooms and break areas should be maintained in a sanitary manner. Signs should be posted instructing employees to wash their hands with an approved disinfectant soap prior to returning to their work area. Glass containers should not be permitted in the plant including break areas and policies should be established to prevent food and food products in the production areas. No Smoking policies should be put into place with

designated smoking areas (If smoking is allowed in break areas).

- All waste products and materials should be placed in approved containers, identified, and disposed properly. This will eliminate the possibility of waste material finding it's way into edible product.
- A written plan should be in place to prevent the introduction of foreign material into the product. This plan should include a policy regarding the wearing of special apparel (such as hats, uniforms, hair and beard nets) in the work place. No jewelry should be allowed in the plant. These policies should be communicated and strict adherence granted to them.
- A rodent control program should be established to identify and control the possibility of rodent infestation in the production area. This program should include a master plan to identify the location and rodent activity of exterior and interior rodent devices.

3. Packaging and Shipment

- Magnets and or metal detectors should be installed in the packaging product flow to ensure any metal is removed prior to packaging. A program should be in place to measure proper operation.
- Packaging materials should be inspected before use to ensure cleanliness and sanitation.
- All shipping containers should be identified to ensure lot integrity!
- A “check off” list should be established and utilized prior to loading any vehicle with shelled peanuts. The “check off” list should ensure the vehicle is clean, dry, water tight, and free of objectionable odors.
- After loading and confirming contents all shipping vehicles should be properly sealed to assure integrity.
- Bulk handling facilities should be enclosed or otherwise equipped to ensure product purity and cleanliness. Magnets and screens should be strategically located in the production flow to remove foreign material, which might be present. Such devices should be cleaned on a daily basis and routinely checked for performance to meet preset specifications.

C. **FOOD SAFETY**

Shelling facilities must comply with the Food Safety Modernization Act (FSMA) Current Good Manufacturing Practice and Hazard Analysis and Risk Based Preventive Controls for Human Food unless they qualify under one of the exemptions. Requirements under this rule can be found on the FDA FSMA website. Following are key aspects of a food safety plan.

- **Hazard Analysis:** The plan must identify and evaluate hazards for each type of food manufactured, processed, packed, or held at the facility.
- **Preventive Controls:** The plan must identify preventive controls that significantly minimize or prevent hazards. Preventive controls include process controls, food allergen controls, sanitation controls, and a recall plan.
- **Monitoring Procedures:** The plan must document procedures to ascertain that preventive

controls are consistently performed.

- **Corrective Actions:** The plan must identify steps to take if preventive controls are not adequately implemented, to minimize the likelihood of problems reoccurring, to evaluate the food for safety, and to block problem food from entering commerce.
- **Verification:** The plan must spell out verification activities and document that preventive controls are effective and consistently implemented.

Details of implementing a food safety plan are available on FDA's website. Training curricula and guidance documents are being developed for delivery to organizations once all the FSMA rules are final. The American Peanut Council is directly involved in these efforts and will make resources available to help organizations comply with the new rules.

Additional food safety practices can be found in the Industry Handbook for Safe Processing of Nuts published by the Grocery Manufacturers Association as well as the Addenda, Industry Handbook for the Safe Shelling of Peanuts.

References:

Food Safety Modernization Act:

<http://www.fda.gov/Food/GuidanceRegulation/FSMA/ucm359436.htm>

Industry Handbook for Safe Processing of Nuts:

http://www.gmaonline.org/downloads/technical-guidance-and-tools/Industry_Handbook_for_Safe_Processing_of_Nuts_1st_Edition_22Feb10.pdf

*Addenda. Industry Handbook for the Safe Shelling of Peanuts:

http://www.gmaonline.org/downloads/technical-guidance-and-tools/Addendum_I_rev_NutIndustryHandbook_Safe_Shelling_of_Peanuts_19May10.pdf

Flexible Intermediate Bulk Container (FIBC) SPECIFICATIONS (Approved 6/15/15)

These specifications are Guidelines for FIBC manufacturers. The American Peanut Council does not test containers made by individual manufacturers and therefore do not certify that any bag does, in fact, meet APC specifications. The Council accepts no liability for containers that do not meet APC specifications.

- Capacity:** Maximum weight of 2,400 Pounds (1090 kg.) whole redskin or blanched kernels, 2200 Pounds (1000 kg) split kernels, or 1,000 Pounds (454 kg) inshell peanuts.
- Type:** U-panel (Four Side Seams), non-baffled.
- Material:** 100% Woven Virgin Recyclable Polypropylene (FDA Food Grade). 21 CFR 170.39
- Size:** 34” X 41” X 63” ID (+1/2 or –0)
86 cm X 104 cm X 160 cm ID (+1.25 cm or –0 cm)
- Color:** All fabric components shall be opaque white
- Fabric Cut:** All fabric components shall be either sonic cut or heat cut. Heat cut and or Sonic cut must be sewn to the outside on all seams.
- Body Fabric:** 6.5 oz. per sq. yd (220 gm per sq. meter) + or – 3%, uncoated and breathable (minimum 40 cfm) fabric (meets ISO 21898:2004 Section 4.1 & Annex A) standard for intermediate bulk container fabrics) with 50% tensile strength retention after 200 hours of UV-B exposure. Air permeability not to be achieved by skipped tape or irregular weaving. Tape count must be a minimum of 11 X 12 per sq. inch.

Top Fabric:	4.0 oz. per sq. yd. (135 gm. per sq. meter) + or – 3%, uncoated and breathable (minimum 40 cfm) fabric (meets ISO 21898:2004 Section 4.1 & Annex A) with 50% tensile strength retention after 200 hours of UV-B exposure. Air permeability not to be achieved through skipped tapes or irregular weaving.
Fabric Elongation (Warp %)	Maximum 18%; Minimum 15%
Fabric Elongation (Weft %)	Maximum 18%; Minimum 15%
Fill Spout:	14” (36 cm) diameter X 12” (30 cm) long, 4.0 oz. per sq. yd. + or – 3% (135 gm per sq. meter) uncoated and breathable (minimum 40cfm) fabric with ¾” (1.9 cm) X 18” (46 cm) tie tapes (2). Air permeability not to be achieved through skipped tapes or irregular weaving. All components of Fill Spout must be tucked and hemmed.
Discharge Spout:	14” (36 cm) diameter X 12” (30 cm) long, 4.0 oz per sq. yd. + or – 3% (135 gm per sq. meter), uncoated and breathable fabric with tie tape closure. Bonnet bottom shall be pajama closure. Air permeability not to be achieved through skipped tapes or irregular weaving. All components of Discharge Spout must be tucked and hemmed.
Safe Working Load:	6 to 1, per ISO/TC 122 international standard for bulk bags. Totebag must be capable of stacking a minimum of 4 bags high.
Lift Loops/Straps:	Four sewn loops 8” (20.3 cm) above top of bag with inside loop sewn to seam at top of bag. Loop must have 7 1/2 “(19.0 cm) minimum ID opening. One lift strap shall be located on each corner, white, with minimum tinsel strength of 4,400 pounds (1996 kg).
Sewing:	Minimum 2 rows, 3 chain stitches per inch, sewing per each seam. 2000 Denier (minimum) continuous filament 100% Virgin polypropylene threads (FDA Food Grade) Seams can also be overlock stitched on outside. These specifications are Guidelines for FIBC manufacturers. The American Peanut Council does not test containers made by individual manufacturers and therefore do not certify that any bag does, in fact, meet APC specifications. The Council accepts no liability for containers that do not meet APC specifications.

Bag

Certification:

FIBC manufacturer must provide certification on each shipment that all bags meet APC specifications, comply with US and EU regulations for food contact packaging. FIBC manufacturer must supply declaration of compliance with each shipment. These include but are not limited to:

- Framework Regulation (EC) No 1935/2004
- Regulation (EC) No 2023/2006
- Regulation (EU) No 10/2011 and amendments
- European Directive 82/711/EEC and amendments
- European Directive 85/572/EEC and amendments
- EN 15593:2008-05 Packaging

This FIBC is intended as a one use totebag.

Bag Tag

To State:

“Meets APC Standard (June 2015) “, also should contain supplier name/address with warning and use label and date of manufacture. Tags must also comply with ISO 21898 (Section 7) standard for bag tag.

Tag should include a 22-digit traceability code per the attached specification to include a barcode as well.

Printing

On Bag:

Printing on bag should state in 3” (7.6 cm) black ink letters “FOR PEANUTS ONLY”. This must appear on the two narrow panels. All printing on tote bag must be with food grade ink.

Document

Pouch on Bag:

All APC Specification totebags must have pouches sewn on per the following specification:

- 1) Pouch will be sewn 14 inches below the right corner of the short side of the totebag on the vertical seam. Opening to be on top of the pouch
- 2) The pouch must have 10 inch (25.4 cm) X 13 inch (33.02 cm) usable area minimum and must be sewn along the 13-inch (25.4 cm) side.
- 3) The opening in the pouch should be on the 10-inch (25.4 cm) side and oriented to the outside and on the top of the pouch.
- 4) The pouch must be a minimum of 3 mills (0.1182 inch) thick and clear.

- **FLEXIBLE INTERMEDIATE BULK**
 - **CONTAINER (FIBC)**
 - **CERTIFICATION**
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• PROPERTIES	• TEST METHOD	• REQUIREMENT
• Fabric		
• Fabric Weight	• ASTMD-3776	• Per Specification
• Tensile Strength Straps	• ASTM D-5035	• 4,400 lbs. (Minimum)
• <u>UV Resistance & Strength Retention</u>	• <u>ISO 21898:2004</u> • <u>(Section 4.1 & Annex A)</u>	• <u>>50% After 200 Hours of UV-B Exposure</u>
• Breathability, CFM	• ASTM D-737-96	• Per Specification
• Completed FIBC	•	•
• Top Lift	• CFR 178.812	• 6:1 @2,400 Lbs.
• Compression	• CFR 178.815	• 5:1 @2,400 Lbs.

Totebag Traceability Code & Barcode

(02)XXX(03)XXXXXXXXXXXXXXXXXXXX

1. Tote
Mfg ID

2. Traceability descriptor

1. 3 Digit Tote Manufacturer ID-Obtained from the American Peanut Council
2. 15 Digit Traceability descriptor-Should allow seller to identify the source of the tote bag's original manufacturer (i.e., P.O number or Order Number)
3. 02 & 03 – These are application identifiers and tell the barcode scanner and server what Information follows. 02 and 03 should only be in parentheses in the visual reader below the barcode.
4. 22 character human readable code should appear directly below barcode.
5. Must comply with Code 128 specifications with a minimum height of .375 “
6. Barcode must be readable from 2 feet.