

**FNS Handbook 501**

**Chapter VII: Warehousing & Inventory Control**

**CHAPTER VII**  
**WAREHOUSING AND INVENTORY CONTROL**  
**SECTION 1 - WAREHOUSING OF USDA COMMODITIES**

**7100 GENERAL**

The ITO/State agency must provide storage space for USDA commodities that:

- A. Is of adequate size;
- B. Protects against the elements, infestation, and theft;
- C. Has temperature controlled areas for perishable foods;
- D. Is accessible to program participants; and
- E. Can be reached by carriers delivering USDA commodities.

Listed below are the warehousing and storage practices that are required to assure proper protection and efficient management of commodities.

**7110 STORAGE SPACE**

The amount of storage space needed will be determined by the volume, types of commodities, quantity, packaging and allowable floor loads. The ITO/State agency must provide sufficient floor space to allow air circulation and to permit ease of cleaning, inventory, inspection, and handling of foods.

**7120 DETERMINATION OF SIZE AND SPACE**

The ITO/State agency must use the following factor to determine the amount of storage space required: The minimum amount of storage space needed to store one case or bag of a commodity is 1.5 cubic feet.

**7130 STANDARDS FOR STORAGE FACILITIES**

- A. ITOs and State agencies must ensure that storage facilities have obtained all required Federal, State and/or local health inspections and/or approvals and that such inspection/approvals are current.
- B. Facilities for the handling and storage of USDA commodities must:
  - 1. Be sanitary and free from rodent, bird, insect and other animal infestation;
  - 2. Include safeguards against theft, spoilage and other loss;
  - 3. Provide for the maintenance of foods at proper storage temperatures;

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4. Provide for the stocking and spacing of foods in a manner so that USDA-donated foods are readily identified;
  5. Provide for the storage of food off the floor in a manner to allow for adequate ventilation; and
  6. Include other protective measures as may be necessary.
- C. Storage facilities must be structurally sound and provide protection from the elements and extremes of temperature. The warehouse must be:
1. Tightly constructed;
  2. Waterproof;
  3. Well-ventilated;
  4. Insulated (if practical);
  5. Well-lighted; and
  6. Accessible for deliveries.

**7131 Warehouse Floors**

Warehouse floors must be smooth and level to facilitate operation of the hand and/or mechanically powered equipment used to handle and transport commodities. Floors must be capable of supporting the maximum weight of the heaviest commodities stacked floor to ceiling. The ITO/State agency must procure the services of a safety engineer to determine and certify the load bearing capacity of the floor prior to use of the warehouse.

**7132 Warehouse Windows and Doors**

The ITO/State agency must provide screens for windows and doors to prevent entry by rodents, insects, and birds. In addition, windows must be shielded adequately to protect the commodities from direct sunlight. Windows and doors must have strong locking devices to prevent theft.

**7133 Fire Prevention Equipment**

The ITO/State agency must provide hand or power operated fire extinguishers to meet the minimum standards of the National Fire Protection Association (NFPA). More information on these standards can be found at the NFPA web site at [www.nfpa.org](http://www.nfpa.org).

**7140 TYPES OF STORAGE FACILITIES**

The ITO/State agency must provide three types of storage facilities to assure proper protection of USDA commodities. The three types of facilities are dry, refrigerated, and freezer storage. The allocation notice will include the temperature requirement for each food item.

**7141 Dry Storage Areas**

The majority of USDA commodities can be adequately warehoused in dry storage areas. The desirable temperature to maintain in dry storage areas is 50° to 70° Fahrenheit (F). In hot humid climates where temperatures of 50° F to 70° F cannot be maintained, it may be necessary to install air-conditioning to keep the temperature from going above 70° F. Temperatures above 70° F in dry storage areas may result in increased insect activity in grain products and bulging and swelling of canned goods. In climates where the temperatures may drop below freezing, a heating system may be necessary to keep canned goods from freezing. Temperature below 32° F can result in the freezing of canned goods and render the food unfit for human consumption.

**7142 Refrigerated Storage Areas**

Only a few USDA commodities, such as cheese and fresh produce, require refrigerated storage. However, the storage life of many other foods such as grain products and dried fruits is greatly prolonged by the use of the refrigerated storage. The desirable temperature to maintain in refrigerated storage is 36° F to 40° F. Temperatures above 50° F can result in deterioration such as rancidity, loss of flavor, and loss of texture. Temperatures below 32° F can result in clumping of products and loss of flavor.

**7143 Freezer Storage Areas**

Several USDA commodities require freezer storage. The required temperature for freezer storage is 0° F and below. Temperatures above 0° F can result in butter becoming rancid and off flavor, and also result in oil seepage from the product.

**7144 Temperature Controls**

Wherever USDA commodities are stored, reliable thermometers must be provided by the ITO/State agency to assure that proper temperatures are maintained. Temperature readings must be taken and recorded at least daily both outside and inside refrigerated and freezer storage, and more often if there is difficulty in maintaining the desired temperature.

**7150 TRIBAL/STATE/LOCAL HEALTH DEPARTMENT POLICIES**

The ITOs/State agencies should consult with their Tribal, State, and/or local Health Departments on policies concerning warehouse management and the storage and handling of food.

**SECTION 2 - STACKING USDA COMMODITIES****7200 STACKING USDA COMMODITIES**

The ITO/State agency must ensure that USDA commodities are stacked in accordance with USDA's recommendations. The proper stacking of commodities can help prevent damage from excess weight on the bottom layers, and facilitate the required physical inventory count. In addition, the proper stacking of commodities will help to ensure the safety of persons working in the warehouse. Recommended stacking procedures are as follows:

- A. Stack commodities of a kind together (i.e., canned goods next to canned goods, bagged foods next to bagged foods, etc.);
- B. Commodities must be stacked on pallets, or dunnage, in uniform quantities to allow easy inventory (see Exhibits V-1 and V-2, attached, for illustrations); and
- C. Commodities must not be stacked to a height that would create unstable pallets or that would endanger the food handlers.

**7210 VENTILATION OF STORAGE FACILITIES**

The ITO/State agency must store foods in such a way to allow air circulation in the warehouse. Good ventilation retards growth of bacteria and molds, prevents mustiness and rusting of metal containers, and minimizes caking of powdered foods. Maximum air circulation can be achieved by the following storage methods:

- A. All commodities must be stacked off the floor on pallets or dunnage;
- B. All commodities must be stacked at least 18 inches from any walls and at least 2 feet from the ceiling; and
- C. All stacks of commodities must be separated by at least 24 inches.

**SECTION 3 - HOUSEKEEPING PRACTICES****7300 HOUSEKEEPING PRACTICES**

Cleanliness and sanitation are essential to proper storage of USDA commodities. The ITO/State agency must practice the following housekeeping methods:

- A. On a weekly basis or whenever there has been a movement of food, clean and sweep the entire storage facility;
- B. At least weekly, clean areas that harbor insects, such as corners, window sills, under pallets, and behind and between stacks of food;
- C. Immediately clean up foods that have been spilled;
- D. On a daily basis, dispose of refuse, garbage, and debris;
- E. On a daily basis, remove empty cartons and sacks from the storage area; and
- F. Keep the area around the exterior of the warehouse free of debris, garbage, and excess vegetation.

**7310 INSECT CONTROL**

Insects destroy or render unfit for human consumption enormous quantities of food each year. Infestation may occur even under ideal warehouse conditions; therefore, the ITO/State agency must give continuous attention to proper storage procedures. The following commodities are susceptible to insect infestation:

- A. Dried beans and peas;
- B. Grain products (e.g., flour, cornmeal, rice, cereals, etc.);
- C. Dried fruits (e.g., dried plums, raisins, apricots, etc.); and
- D. Nonfat dry milk.

**7311 Sources of Insect Infestation**

The chief sources of infestation are:

- A. Live insects, eggs or larva undetected in the product at the time of harvest;
- B. Cracks in floors and walls;
- C. Live insects, eggs or larva undetected in the pallets, dunnage, or packaging of commodities received in shipment from federal inventory or the vendor; and
- D. Unsanitary conditions, such as spilled food, dirt, or garbage in the warehouse.

**7312 Detecting Insect Infestation**

Methods of detecting infestation include:

- A. Inspections for infestation at frequent intervals and especially in warm weather. Adult insects are attracted to light, and can be found around windows and window sills; and
- B. Opening and examining boxes and bags for live larvae, webbing, moths, holes, or partially consumed foods.

**7313 Methods of Reducing and Eliminating Insect Infestation**

Following are storage practices that reduce or eliminate insect infestation:

- A. Good housekeeping practices eliminate areas where insects live;
- B. The most effective way of eliminating insects is by fumigation. Fumigation services should be rendered by a reputable licensed company on a regular basis at a minimum of at least once per month. Improper use of some fumigants may result in an explosion or fire or in ill effects to food handlers from exposure to the chemicals used. Before contracting with a fumigating company, the firm should be required to show evidence of public liability, property and fire insurance, and workmen's compensation; and
- C. Commodities susceptible to infestation may be placed in a cooler or chilled storage space as a means of reducing insect activity. This type of storage is highly recommended, especially during the summer months when the temperature in dry storage areas can not be controlled.

**7320 RODENT CONTROL**

Rodents destroy or render unfit for human consumption large quantities of food each year. Federal Food and Drug Administration regulations prohibit the use of foods that have been contaminated by rodents. Because rodents are a menace to health by spreading disease, the ITO/State agency must take every precaution to protect commodities from rodents.

**7321 Sources of Rodent Infestation**

Rodents enter storage areas through:

- A. Open windows and doors;
- B. Ventilation and drainpipes;
- C. Burrowing under floors; and
- D. Carried into storage areas with containers of food.

**7322 Methods of Reducing or Eliminating Rodent Infestation**

The ITO/State agency must take the following steps to reduce or eliminate rodent infestation:

- A. Maintain good housekeeping practices. Rodents will not remain where food and shelter are not available;
- B. Seal and screen all outside openings to the warehouse that are 1/4 inch or larger;
- C. Screen fans and ventilation openings; and
- D. Install traps, the standard method for eradication of rodents. However, in an area with heavy rodent infestation, a combination of trapping and poisoning may be necessary. If rodent poisons are used, it must be done by a reputable licensed company.



**SECTION 4 - INVENTORY CONTROL****7400 INVENTORY CONTROL**

The ITO/State agency must keep accurate records of the amount of each USDA commodity in inventory and the quantities of each item moving in and out of storage.

**7410 PERPETUAL INVENTORY RECORD**

The ITO/State agency must maintain a perpetual inventory record for each commodity. If one kind of commodity is received in different size containers, a separate inventory record must be maintained for each container size. The perpetual inventory records must include the following information:

- A. USDA commodity item;
- B. Unit size;
- C. Date received;
- D. Amount received;
- E. Date withdrawn;
- F. Amount withdrawn;
- G. Purpose for withdrawal; and
- H. Balance on hand.

The ITO/State agency must provide a perpetual inventory record form that is acceptable to the appropriate FNS Regional Office. Perpetual inventory records may be automated at the discretion of the ITO/State agency provided it is acceptable to the Regional Office.

**7420 PERSON(S) DESIGNATED TO MAINTAIN INVENTORY RECORDS**

The ITO/State agency or local agency must designate one person to keep the inventory records. The ITO/State agency must also assign a backup person capable of maintaining the inventory records during any absence of the primary inventory keeper. The person(s) maintaining the inventory must set aside a specific time for posting the entries on a daily basis.

**7430 INVENTORY CONTROL PROCEDURES**

The ITO/State agency or local agency must date stamp or mark in pen the date received on the containers of commodities as they are placed in storage. This is an effective method to ensure that the first-in, first-out (oldest stock used first) distribution procedure is followed. Commodity containers must not be removed from cartons until they are to be distributed. The amount of each commodity received and placed in storage must be added to the perpetual inventory records.

**7431 Maintaining a Supply**

The ITO/State agency must maintain a supply of available commodities sufficient for up to 3 month's distribution for each food group. Local agencies must maintain a minimum of 1.5 month's supply of available commodities for each food group. (Note: ITOs/State agencies that are participating in commodity ordering/distribution pilot programs may be advised to maintain a different level of commodities for each food group.)

**7432 Withdrawal of USDA Commodities from Inventory**

The ITO/State agency or local agency must inspect each commodity before releasing it for distribution to ensure that it is in good condition. If a commodity item was processed on one or more different dates, the oldest item must be removed from storage first (i.e., first-in, first-out). If the commodity is being removed from a central storage facility for shipment to a distribution center, the ITO/State agency must count the containers as they are removed and record the amount withdrawn on the perpetual inventory record.

**7440 PHYSICAL INVENTORY**

The ITO/State agency or local agency must take a monthly physical inventory of each commodity (preferably after the distribution to eligible households), and record the quantities counted of each commodity item and the date the count was taken.

**7441 Reconciliation of Physical and Perpetual Inventories**

The ITO/State agency or local agency must reconcile the physical inventory with the perpetual inventory, and record any overage and shortages in each commodity item. The ITO/State agency must submit Form FNS-152, Monthly Distribution of Donated Foods to Family Units, (see Exhibit G, attached) that documents the data obtained in the physical inventory with the perpetual inventory record. Shortages must be reported to the appropriate FNS Regional Office in accordance with Chapter IX, below.

**7442 Reconciliation of Issuances and Physical Inventory**

The ITO/State agency or local agency must determine, at least monthly, the amounts of each commodity distributed by totaling the recorded amounts of each of the issuance sheets. The total amount of each commodity distributed must be reconciled with the physical inventory, and any overage and shortage recorded.