



# **INVENTORY MANAGEMENT**

**July 2017**

**Child and Adult Nutrition Services  
South Dakota Department of  
Education**

## INVENTORY MANAGEMENT

- Inventory management systems are a critical component in the management of a Child Nutrition Program.

## INVENTORY MANAGEMENT

- An effective inventory management system will ensure that foods are maintained safely and in keeping with the financial management goals of your program.

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## MAINTAIN FOOD SAFELY

- SFA's are required to ensure that food is stored in a manner to protect them from spoilage, infestation, damage, or other conditions that may jeopardize the safety of the food.

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## FOOD SAFETY

- At minimum, include in the schools HACCP plan SOPs related to:
- Storage
- Receiving Deliveries
- Date marking
- Product Recalls

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## FOOD SAFETY

- Foods that show signs of spoilage, infestation, or other visible defects should not be used regardless of the product dates or when the foods were received.
- These foods are generally considered not fit for human consumption.

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## FOOD STORAGE

- Proper food storage practices ensure that food is maintained in a safe manner and that the shelf life is maximized.

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## SHELF LIFE

- FIFO (first in, first out)
- Food cases or containers should be marked with the date of receipt/storage.

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## PRODUCT DATES

- Product dates are considered in conjunction with FIFO for determining which food is used first out of storage.
- Expiration/Use by date
- Best if used by date
- Sell by date
- Closed or coded dates

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## EXPIRATION/USE BY DATE

- The last date that the manufacturer recommends for consuming for best product quality.



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## BEST IF USED BY DATE

- The last date recommended by the manufacturer for consuming the product for best quality.

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## SELL BY



- The date by which the manufacturer recommends that a store sell the food product. The quality starts to diminish after this date.

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## CLOSED OR CODED DATES

- The packing numbers used by the manufacturer (Pack dates)
- May be perpetual calendar dates with each day given a consecutive number (example: January 1 may be represented as 001).
- These pack dates may be several months prior to when the school receives the product. This should not be interpreted as a use by date; however they are often needed for recalls.

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## GOOD FINANCIAL MANAGEMENT

- A good inventory management system ensures that the maximum value is generated from food and supply investments.
- Determine purchasing needs
- Reduces waste
- Monitors for theft
- Provides the information needed to identify and monitor food costs

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## FINANCIAL MANAGEMENT

- Measures to manage the quantity of food on hand are an essential component in managing cost.

### Goal:

- Keep on hand no more, no less than what is needed.

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## FINANCIAL MANAGEMENT

- Minimum quantities to keep on hand, or a re-order point, for each item should be established and used in conjunction with inventory records to determine the purchasing needs of the school.
- This re-order point is called a Periodic Automatic Replacement level, or a PAR level.

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## PAR LEVELS

- Periodic Automatic Replacement level
- The quantity of each item that is sufficient for production needs.

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## PAR LEVELS

- Frequency of deliveries
- Past inventory usage for the upcoming planned menus.
- Project usage using recipes and anticipated participation if no prior history is available.

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## PAR LEVELS

- To use the inventory records and the established Par levels to determine purchasing needs:

$$\begin{array}{r} \text{Established Par Level} \\ - \text{ Number on hand} \\ \hline \text{Purchasing Need} \end{array}$$

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## FOOD COSTS

- Food costs are such a large portion of the cost of a meal in every school that even minor gains in efficiency can result in significant savings to the bottom line.

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## FOOD COST

- Informed management decisions that impact food costs cannot be made without a periodic count of your inventory on hand.
- A physical inventory count must be conducted on a monthly basis.
- A perpetual inventory may be conducted on a daily basis.

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## PHYSICAL INVENTORY - MONTHLY

- Physical Inventory is the process of physically counting all food, milk and supplies in inventory stores.
- Should be conducted during the same time period each month. (month end)
- The inventory record used should identify all food, milk and supplies the amount on hand and the Value for each item.

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## PERPETUAL INVENTORY - DAILY

- Perpetual inventory updates the number of items on hand by subtracting and adding the items used and received on a daily basis.
- At any given time the balance on hand should be the amount in inventory.
- The perpetual inventory is reconciled each month when the physical inventory is conducted.

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## SINGLE INVENTORY MANAGEMENT

- USDA donated foods are treated the same as purchased food in a schools inventory management system.
- They are subject to the same safeguards and effective management practices as all other foods.

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## INVENTORY RECORDS

- Inventory records are needed to record the inventory counts for all items.
- Items should be listed according to the areas in which they are stored (refrigerator, freezer, dry storage area, etc.).
- Separate inventory records into food inventory and non-food inventory in order to enable financial monitoring of food costs.

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## INVENTORY RECORDS

- The unit of measurement for each item should describe how the item is stored or how it is purchased.
- Such as:
  - Case
  - Pack
  - Each
  - Pound

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## INVENTORY RECORDS

- The cost per unit assigned to each purchased item is the cost paid for the product.
- The cost per unit assigned to USDA Foods should be the value of the USDA Foods and not the actual dollar amount expended by the SFA to obtain them.

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## FINANCIAL ACCOUNTING OF USDA FOODS

- By law, the value of USDA Foods is recorded as revenue to the Child Nutrition Program at the time when it is received.
- This revenue is offset by simultaneously accounting for the value of the USDA Foods as an expenditure for purchased food.
- The value of the USDA Foods is the cost that should be assigned per unit in the inventory records.

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## FINANCIAL ACCOUNTING OF USDA FOODS

- The SFA must determine the method they will use to establish value of the commodity.
- Method used must be used consistently throughout the program year.
- Document the method used for future reference, as well as in backup documentation of the actual values used.

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## FAIR MARKET VALUE – USDA FOODS

- Federal law allows a few different methods of valuing a school district's inventory of USDA Foods.
- Fair Market Value (FMV) at the time a district receives the product
- The actual price paid by USDA
- The Commodity File Price

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## FAIR MARKET VALUE WHEN RECEIVED

- Prices in the market-place may not be for products that match the USDA specification and they may vary regionally.
- Documenting how a price was derived is not easy.
- May result in each unit in inventory is different depending when it was actually delivered.
- For example, USDA Foods chicken may be received several times during the school year, the inventory may include cases from each individual delivery. The value assigned in inventory may be different to reflect each time the product was received.

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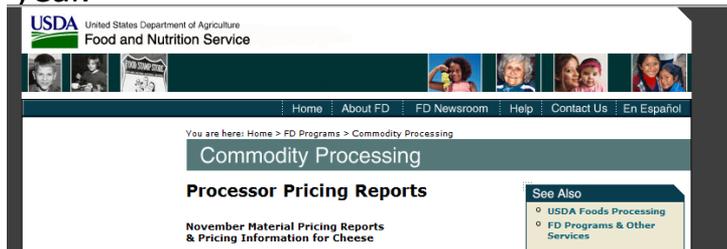
## ACTUAL PRICE PAID BY USDA

- May encounter the same issues as using the Fair Market Value when it's received.
- May not necessarily equate to the actual fair market value of the USDA foods received.

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## COMMODITY PRICE FILE

- Fixed price list for all USDA foods that they may purchase the following year.
- Rolling 12-month average of the prices actually paid.
- Published by USDA on November 15<sup>th</sup> each year.



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## INVENTORY RECORD

INVENTORY CONTROL SHEET				
Name of School:				
Area:				
Inventory period: _____ to _____				
Food item	Unit of Measurement-- size & description	# of units on hand	Unit cost	Value on Hand

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## INVENTORY COUNTS

- Record in increments such as  $\frac{1}{4}$ ,  $\frac{1}{2}$  or  $\frac{3}{4}$  when whole increments of the products are not in stock.
- Example:
  - If a case of catsup packets is open and half of the case has been used, then the physical inventory count of the catsup packets on hand is  $\frac{1}{2}$  case.

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## INVENTORY COUNTS

- After all items in inventory have been counted, the value of each item on hand should be calculated by multiplying the number of units on hand times the cost per unit.

Food item	Unit of Measurement-- size & description	# of units on hand	Unit cost	Value on Hand
Beef, Ground	LB	50	\$3.99	\$199.50

## TOTAL VALUE OF FOOD ON HAND

Beef, Ground	LB	50	\$3.99	\$199.50
Beef, Patties	128 Case Pack	2	\$50.00	\$100.00
Chicken, breast, boneless	LB	30	\$2.89	\$86.70
Total Value on Hand				\$386.20

- The total value on hand is the ending inventory value for the current month.
- The ending inventory value of the current month is the beginning inventory value for the next month.

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## COST OF FOOD USED

- The beginning and ending monthly inventory values and the expenditures for purchased food for the month are used to determine the cost of the food used.

$$\begin{aligned} &\text{Beginning inventory} + \text{food purchases} - \text{ending inventory} \\ &= \text{cost of food used} \end{aligned}$$

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## COST OF FOOD USED

- Determine the cost to produce program and nonprogram foods.
- Determine adequate pricing to cover the cost of producing meals.
- Monitor inventory management efficiency
- Menu planning changes that may be needed.



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## INVENTORY MANAGEMENT EFFICIENCY

- Common measures to monitor inventory efficiency:
  - Days of inventory on hand:
    - $\text{Ending inventory} \div \text{average daily food cost} = \text{days of inventory on hand}$
  - Inventory turnover rate:
    - $\text{Number of serving days} \div \text{days of inventory on hand} = \text{turnover rate}$

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## INVENTORY MANAGEMENT EFFICIENCY

- The industry standard with a weekly delivery is 7-10 days of inventory on hand and an inventory turnover rate of 2-3.
- These calculations can be completed after the Physical Inventory has been completed for the month.

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## DETERMINING DAYS ON HAND AND TURNOVER RATE

- Step 1:
  - $\text{Total Cost of Food Used} \div \text{Number of days in the month} = \text{Daily Food Cost}$
- Step 2:
  - $\text{Ending Monthly Inventory} \div \text{Daily Food Cost} = \text{Number of Days of Inventory on Hand}$
- Step 3:
  - $\text{Number of days in the month} \div \text{Number of Days of Inventory} = \text{Inventory Turnover Rate}$

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## DETERMINING DAYS ON HAND AND TURNOVER RATE

- Cost of food used ÷ Days in month = Daily Food Cost  
$$\$13,570 \div 20 = \$678.50$$
- Ending Monthly Inventory ÷ Daily Food Cost = Number of Days on Hand  
$$\$7,020 \div \$678.50 = 10$$
- Days in month ÷ Number of Days on Hand = Inventory Turnover Rate  
$$20 \div 10 = 2$$

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## INVENTORY MANAGEMENT SYSTEM

- Can be a manual system, electronic system such as using excel or a software system.
- All inventory management systems should provide the same information regardless of the format used in order to effectively manage your Child Nutrition Program.

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# QUESTIONS?

## CANS

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# INVENTORY MANAGEMENT

## JULY 2017

This training credits for 45 minutes of training in  
**Key Area 2 Operations**  
2510: Inventory Management

Your Name:

Date of Training:



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