



2011 Conference: Banking on Our Future

# Best Practices in Warehouse and Inventory Management

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Second Harvest Food Bank  
of Santa Clara and San Mateo Counties

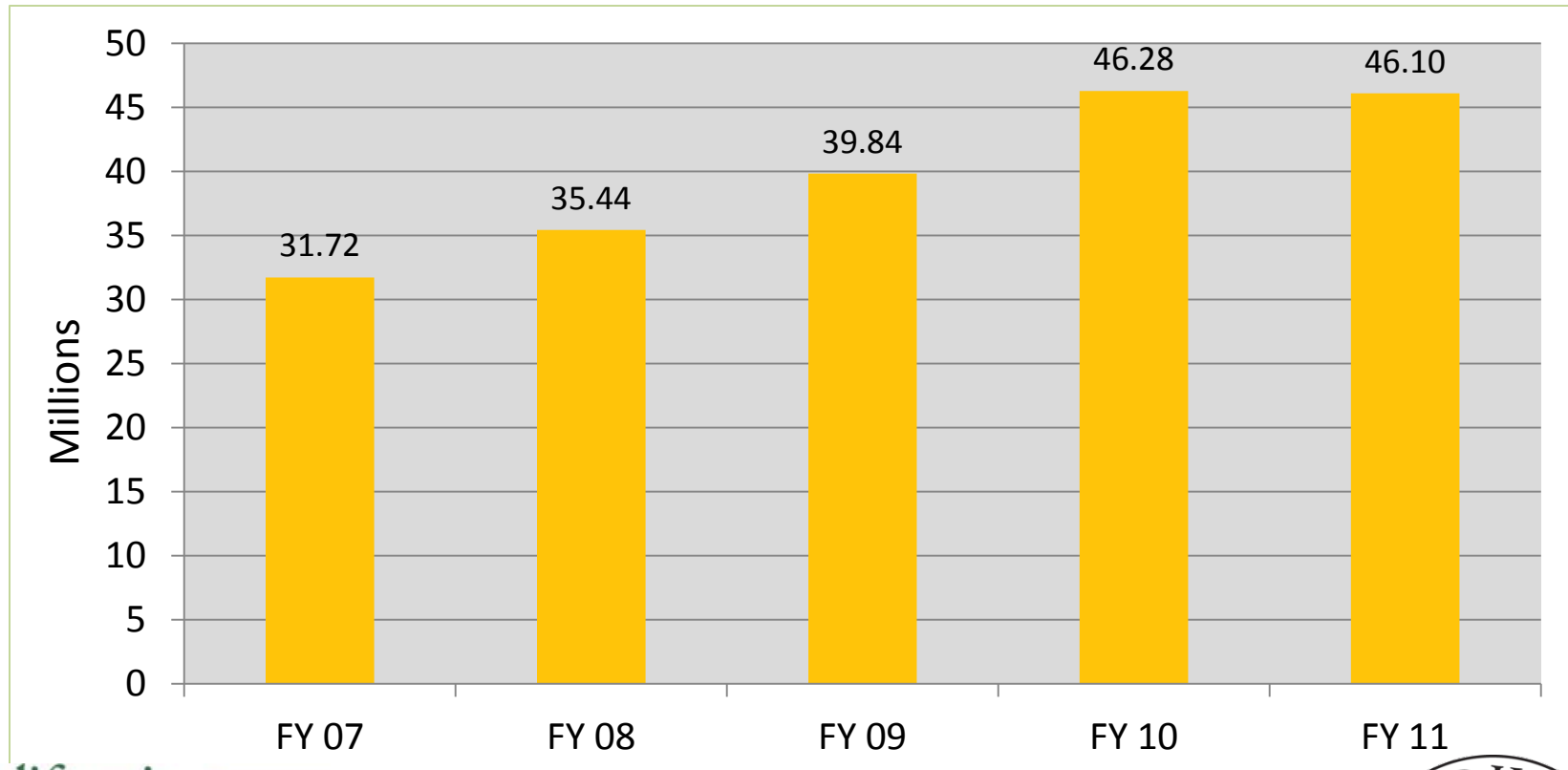
September 20, 2011

# Second Harvest Food Bank Overview

- Services two counties: Santa Clara and San Mateo
- Distributed over 46 million pounds of food in FY2011
- Fed an average of 240 thousand individuals per month
- 2 Distribution facilities:
  - Santa Clara – 60K sf. (50K sf. warehouse)
  - San Mateo – 22K sf. (18K sf. Warehouse)
- Product mix: 75% donated and 25% purchased
- Produce represents 20 million pounds of food distributed
- Programs include Brown Bag, Family Harvest, Mobile Pantry, Produce Mobile, KidsNow



# Total Pounds Distributed 5 Year Trend



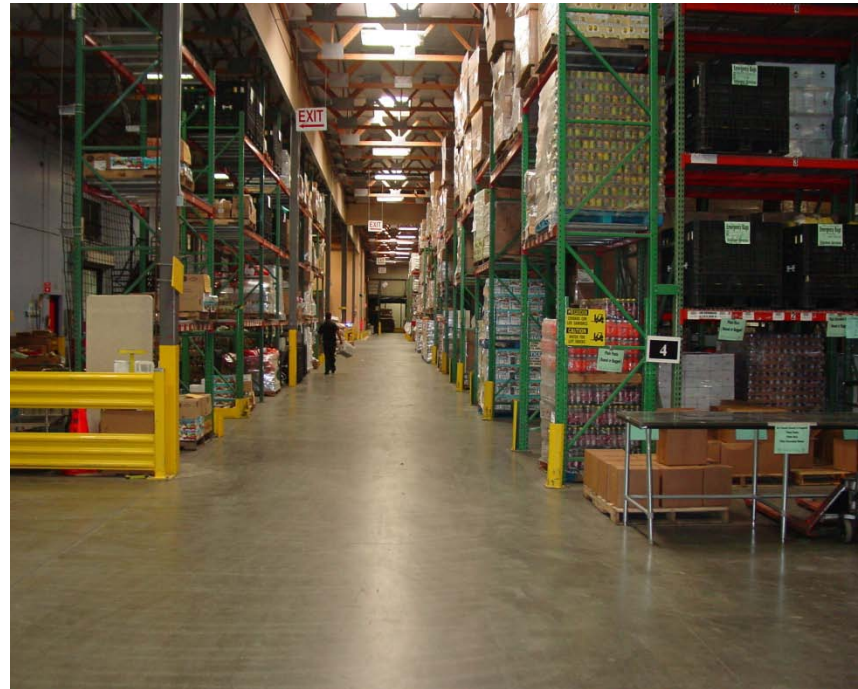
FY 10 includes Stimulus Program



# Warehouse Management

## Best Practices:

- Housekeeping
- Receiving
- Storage
- Shipping
- Safety



# Warehouse Management

- Housekeeping
  - Sanitation
  - Pest Control
    - Interior and exterior traps with weekly monitoring by outside service
    - High speed exterior doors to keep pests out and reduce loss of heat and/or cold
  
- Receiving
  - All incoming products are recorded on Incoming Inventory form
  - Products are inspected, counted, weighed and tagged before put away
    - Temperatures taken on incoming trucks and product

Incoming Inventory				
Date	Order #	Receiver:	All Frozen and Refrigerated	
Truck Time In:		Out:	Start:	End:
			Temperature Reading =	
Item #	Description	Pack Size	Expiration Date	Quantity
				y



# Warehouse Management

- Storage
  - Cooler: 2700 sf – 260 pallet positions
  - Freezer: 2700 sf – 230 pallet positions (push back rack in Santa Clara)
  - Dry: 2360 pallet positions
  - Temperature Log Form

Temperature Log									
Date									
Freezer	1								
	2								
Storage Cooler	1								
	2								
Distribution Cooler	1								
	2								
Warehouse	1								
	2								



# Warehouse Management

- Shipping
  - All orders are verified prior to loading onto trucks
  - 15 refrigerated trucks ranging from 28 ft to 53 ft.
  - All trucks are cleaned and safety checked





# Warehouse Management

- Safety
  - Warehouse
    - Racks are bolted to cement ground with protectors, wire mesh shelving and netting
    - In ground scales: Calibrated Quarterly
    - Enclosed lighting fixtures
    - Cooler/Freezer have Plastic strip doors for efficiency
    - Material safety data sheet (MSDS)
    - Training – Forklift certification and Material handling
    - In house mechanic
  - Food Handling
    - Products are stored based on requirement, ie. cooler, freezer or dry
    - Salvage is segregated away from inventory
    - All plastic bins are washed with high pressure hot water
    - Training – ServSafe certification





# Warehouse Management Highlights

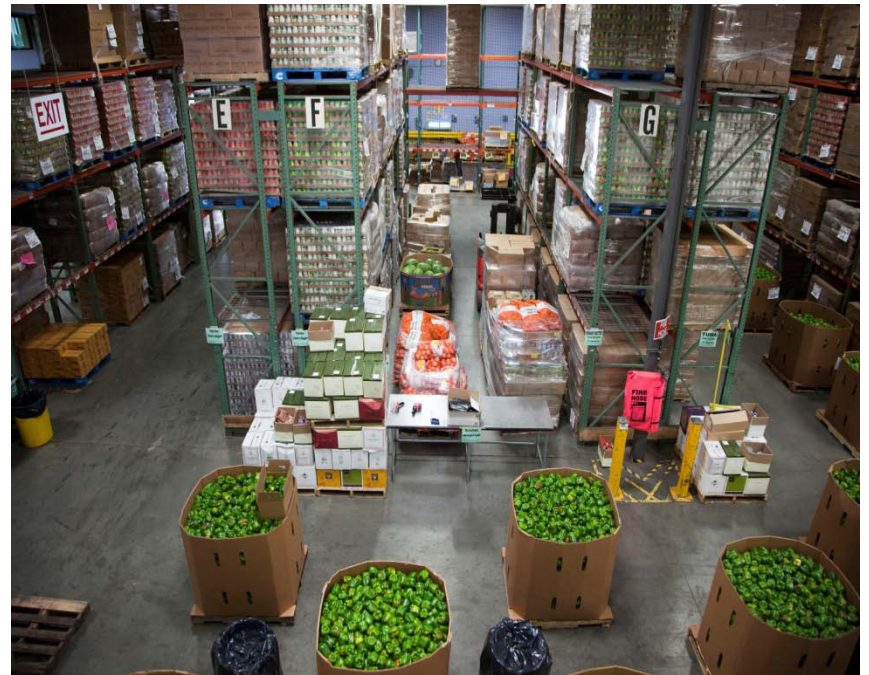
- Grew 45% in 5 years by:
  - Changing the receiving and shipping processes; 2<sup>nd</sup> shift added
  - Increasing the number of vehicles from 7 to 15
  - Cross training employees
  - Measuring productivity for each warehouse specialist
- Virtual warehouse
- Reduce garbage (food waste) by utilizing pig farmers
- Scale has auto-wrap for both safety and efficiency
- High speed roll up doors to reduce loss of heat/cold and keep pest out
- Solar panels installed in 2010 decreasing electricity bill by 50%
- Back up generator and command center for emergency



# Inventory Management

## Best Practices:

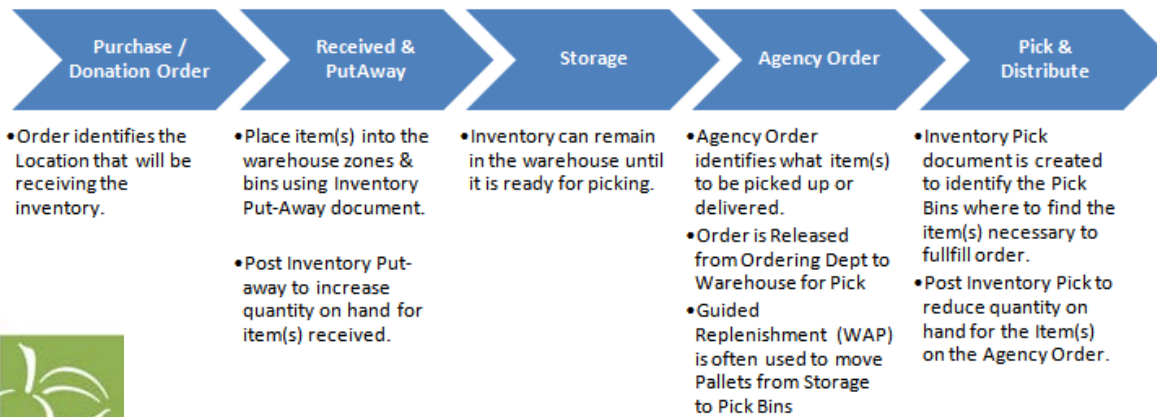
- Inventory Flow
- Inventory Accuracy
- Inventory Turns



# Inventory Management

- **Inventory Flow**

- Manages the movement of food between locations and programs
- Calendars for incoming product and outgoing deliveries
- Operations/Inventory/Food Resources/Services/Volunteer Services work hand-in-hand to get the right products to the right people
- Online ordering/ Menu creation (push)



# Inventory Management

## Incoming Produce Calendar

	Date	Day	Delivery	PO / DO#
1	9/1/11	Thu	Pears (28 lg totes) Stone Fruit - CANCELLED Potatoes (480 sacks)	21422 21428 21406
2	9/2/11	Fri	Onions (850 sacks) Potatoes (840 Sacks)	21419 21519
3	9/3/11	Sat		
4	9/4/11	Sun		
5	9/5/11	Mon	LABOR DAY	
6	9/6/11	Tue	Ag Against Hunger Cabbage (32 lg totes) Onions (600 sacks) Stone Fruit (34 bins) Celery (960 trays)	21462 21478 21498 21527

Excel spreadsheet with vlookup function to populate calendar

September 2011				
Monday	Tuesday	Wednesday	Thursday	Friday
			1	2
			Pears (28 lg totes) Stone Fruit - CANCELLED Potatoes (480 sacks)	Onions (850 sacks) Potatoes (840 Sacks)
5	6	7	8	9
LABOR DAY	Ag Against Hunger Cabbage (32 lg totes) Onions (600 sacks) Stone Fruit (34 bins) Celery (960 trays)	Carrots (19 lg totes) Pears (10 lg totes) Watermelon (54 sm totes) Airdrome (4 bins) Bell Peppers (56 sm totes) Honey Dew (54 sm totes)	Pears (28 lg totes) Stone Fruit (14 bins) Tomatoes (42 sm totes) Potatoes (480 sacks)	Onions (850 sacks) Watermelon (60 sm totes) Potatoes (840 sacks) Stone Fruit (44 bins) Squash (40 lg totes)
12	13	14	15	16
Ag Against Hunger Airdrome (4 bins)	Merced Sweet Potatoes (40 bins) Cabbage (32 lg totes)	Carrots (19 totes) Onions (600 sacks) Stone Fruit (34 bins)	Stone Fruit (14 bins)	Apples (36 sm totes) Potatoes (480 sacks)



# Inventory Management

- Inventory Accuracy
  - Inventory Management System – Ceres 2009
  - Bar coding: Both Pallet tags and rack locations
  - Management
    - Not just sitting behind computers, knowing the daily warehouse activity
    - Audited yearly by Berger/Lewis, audited bi-yearly by USDA/FA
    - Receiving/Inventory are separate departments for Financial Controls
    - Cycle Count: Warehouse scans, inventory reconciles



# Inventory Management

- Inventory Accuracy
  - Pallet Tag with storage requirement and expiration date

COOLER  
1-SM  
September 15, 2011



**30146**

EGGS  
15/1 Doz Cartons @ 23#

**CASES: 34**

Total Lbs: 782

COUNT PER LAYER: 12 CASE WT: 23

REC'D DATE: 07/07/11

EXP. DATE: 08/03/11

**PLT-199208**

**COOLER**





# Inventory Management

- Inventory Accuracy
  - Pallet Tag with Special Pallet

014-102-B  
P-SC  
September 15, 2011



**30268**

PEANUT BUTTER  
12/18oz Jars @ 14#

**CASES:**

**126**

Total Lbs: 1,764

**SAN MATEO**

COUNT PER LAYER:

14 CASE WT:

14

REC'D  
DATE: 07/07/11

EXP.  
DATE: 12/31/9999

**PLT-199178**





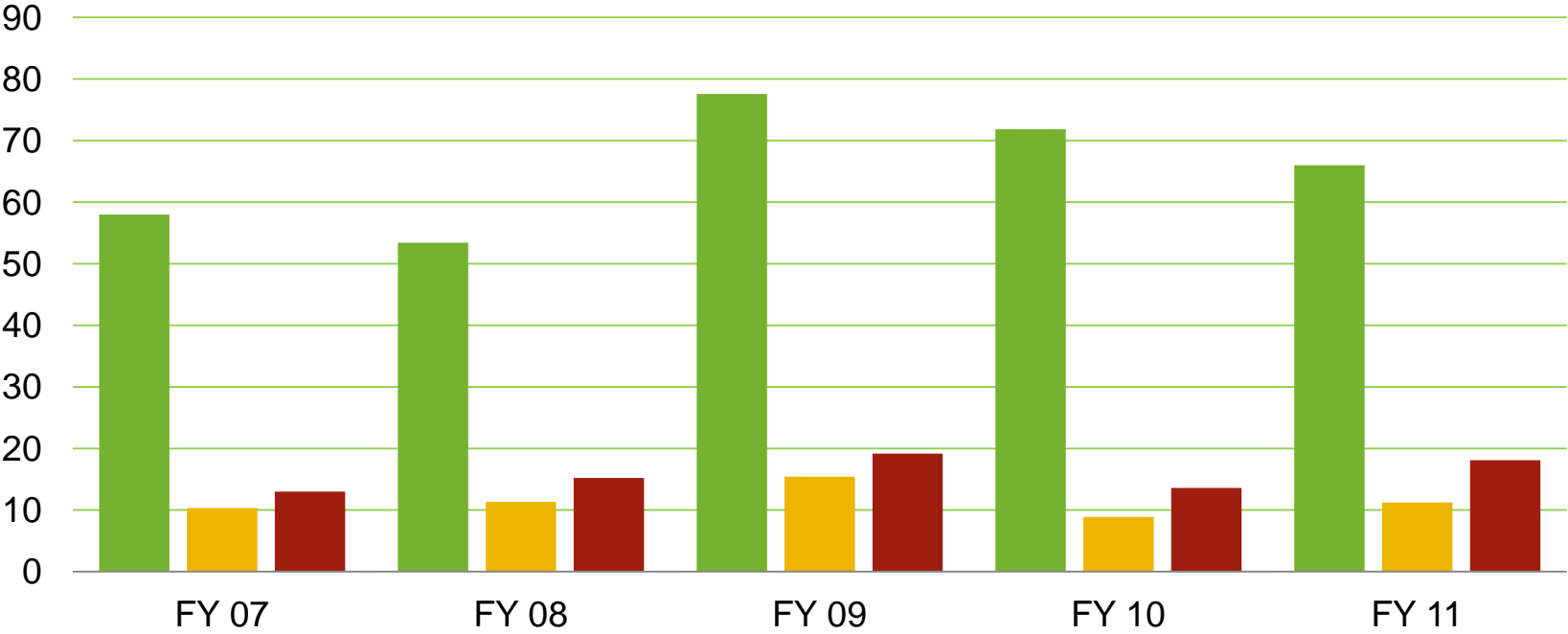
# Inventory Management

- Inventory Turns
  - FIFO/FEFO
  - Measure Produce turns and Non Produce
  - Forecasting program needs to ensure product on hand and not excess



# Inventory Management

## 5 Year Trend – Inventory Turns



■ Produce Turn   ■ Non Produce Turn   ■ Total Turn



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# Managing the Flow of Food

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Load Balancing, Inventory and Warehouse  
Management for Food Banks

John Curry, Consultant

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# Outline of Presentation

- Load Balancing
  - Procurement
  - Allocation
- Inventory Management
  - Planning
  - Turns, Expiration Dates and Capacity Utilization
- Warehouse Management
  - Managing Multiple Locations
  - Year-End Closures

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# Load Balancing: Procurement

- Understand supply: costs, timing, seasonality and storage requirements
- Create a baseline of consistent products
- Develop capacities to take advantage of one-time opportunities
- Adapt to long-term trends

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# Load Balancing: Allocation

- Determine agency demand
- Determine distribution capacity
- Commit to and secure commitments for distribution levels
- Push the product out!



# Graph of Basic Push Distribution Model

		Item:	Potatoes	Onions	Cottage Cheese
		Lbs or units per case:	50	50	24
		Lbs or units per family:	2.5	2	1
UoS	Agency	Cases:	Potatoes	Onions	Cottage Cheese
100	A		5	4	4
150	B		8	6	0
200	C		10	8	=ROUND((\$D9*H\$4/H\$3),0)

- Key Inputs:
  - Agency units of service (UoS)
  - Pounds or units per case of each item
  - Pounds or units to distribute to each UoS
- Additional Possible Variables:
  - Family size
  - Preference for items
  - Frequency for distribution

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# Load Balancing: Making the Market

- By balancing procurement (supply) and allocation (demand), you will achieve an equilibrium which provides a stable and consistent supply of foods to your clients
- This initial baseline equilibrium can be used to plan future growth and strategic changes
- It can only be achieved via effective inventory and warehouse management

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# Inventory Management: Planning

- Must know what is coming in and where it will go
- Track product in food bank via inventory management software
- Communication is key:
  - For large loads, must inform warehouse
  - For odd products, must inform agency relations

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# Inventory Management: Turns, Expiration Dates & Capacity Utilization

- To maximize effectiveness of product and space, must turn product quickly
  - Push model aids in this
  - Knowledge of expiration date extensions key
- Increasing turns dramatically increases functional warehouse capacity—feed more people more food in the same space

# Expiration Date Extensions from SFFB

Bakery Items			
Product	Shelf Storage Past Code Date	Refrigerator Storage Past Code Date	Freezer Storage Past Code Date
Bagels	1 day	7 days	2 months
Bread Sliced	4 days	14 days	3 months
French loaf, etc	1 day	14 days	2 months
Cakes Angel food	2 days	7 days	2 months
Chiffon, sponge	2 days	7 days	2 months
Chocolate (unfrosted)	2 days	7 days	4 months
Pound cake	4 days	7 days	6 months
Cookies	3 weeks	2 months	10 months
Croissants	1 day	7 days	2 months
Danish	2 days	7 days	2 months
Muffins	2 days	7 days	2 months

Refrigerated Foods Extensions	
Product	Storage Life Past Code Date
<b>Beverages</b>	
Juices	
Citrus juices, pasteurized (orange, grapefruit, etc.)	7 days
Odwalla, Naked Juice (100% juice and smoothies)	consume by code date
Punches, juice blends	14 days
<b>Dairy Products</b>	
Butter	1-3 months
Cheeses Hard cheese (cheddar, swiss, etc.)	6 months
Shredded Cheese (parmesan, mozzarella, etc.)	1 month
Cottage Cheese	21 days
Cream Cheese	60 days
Dips (sour cream based)	14 days
Eggs (whole)	5 weeks
EggBeaters (egg substitute)	60 days
Margarine	6 months
Milk (all varieties)	7 days
Sour Cream	21 days
Whipping Cream/Aerosol Whipped Cream	30 days
Yogurt	10 days
<b>Deli Products</b>	
Fruit, cut	consume by code date
Hot Dogs, Lunch Meats (bologna, Ham, etc.)	consume/freeze by code date
Lunchables	consume/freeze by code date
Pesto	consume/freeze by code date
Salsa	consume by code date
<b>Dough Products</b>	
Cookie Dough	consume/freeze by code date
Pasta (fresh)	2 days
Pie Crust (ready-to-bake)	consume/freeze by code date
Tube Cans (biscuits, rolls, pizza dough, etc.)	consume by code date
<b>Soy Products</b>	
Dips (soy/tofu based)	7 days
Soy Milk	7 days
Tofu (all varieties)	21 days

Code dates on products do not mean that food is unfit for consumption!  
Please refer to these handy guidelines for code date extensions

Shelf-Stable Foods Extensions	
Product	Storage Life Past Code Date
<b>Staples</b>	
Beans, Dried (pinto, red, black, etc.)	12 months
<b>Canned Goods</b>	
High Acid (pineapple, tomatoes, pickles, etc.)	18 months
Low Acid (meats, beans, corn, soup, etc.)	5 years
Cereal (hot and cold varieties)	12 months
Coffee, (and Decaf)	Ground in Cans Instant
	2 years 12 months
Egg Noodles, Dry	2 years
Flour	White Whole Wheat
	12 months 1 month
Pasta, Dry (spaghetti, macaroni, penne, etc.)	2 years
Rice	Brown Rice White or Wild
	12 months 2 years
Sugar	Brown, Raw White, Granulated
	4 months 2 years
<b>Beverages</b>	
Bottled Water (all varieties)	12 months
Capri Sun	2 months
Cocoa, Cocoa Mixes	indefinitely
Crystal Light	2 months
IZZE Sparkling Beverage	12 months
Juice Boxes/100% Juice	6 months
Powdered Drink Mix	6 months
Sodas	Diet (cans or bottles) Regular (cans or bottles)
	3 months 9 months
<b>Condiments &amp; Snacks</b>	
Beef Jerky	12 months
Chocolate Syrup	2 years
Condiments (bbq sauce, jam/jelly, ketchup, mayo, mustard, salsa, salad dressing, syrup, olive/vegetable oil)	12 months
Cookies, Packaged	2 months
Crackers (Saltines, Ritz, Triscuits, etc.)	8 months
Evaporated Milk	12 months
Granola Bars (Nutrigrain, Nature Valley, etc.)	12 months
Microwave Popcorn	18 months
Peanut Butter	9 months
Popcorn (dry kernels)	2 years
Slim Jims	18 months
Vegetable Oil Spray	2 years
Vinegar	2 years

Developed by Cecile Cukurs of the San Francisco Food Bank  
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# Warehouse Management: Managing Multiple Locations

- **Commercial storage:**
  - should be used to accommodate supply peaks to maximize use of available product
  - can also supplement for large loads or slower-moving items if main warehouse space limited
- **Satellite distribution:**
  - if product demand similar, try to mirror supply
  - automate replenishment process to achieve greater efficiency

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# Warehouse Management: Year-End Closures

- Some food banks meet auditors' requirements while also continuing distribution:
  - Ask auditors if they are willing to count certain areas at certain times, if so, continue distribution around audit
  - Schedule receiving around audit by moving loads a day or two in either directions
  - Count and close less-used sections of warehouse first



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# In Sum: Flow of Food

- Managing food flow key to food bank's success
- Utilizing procurement planning and push distribution will create supply/demand equilibrium and satisfied clients
- Effective inventory and warehouse management are the foundation of this balance
- Plan everything, and be prepared for the unplanned

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