

Trends in the Marketing of Fresh Produce and Fresh-Cut/ Value-added Produce

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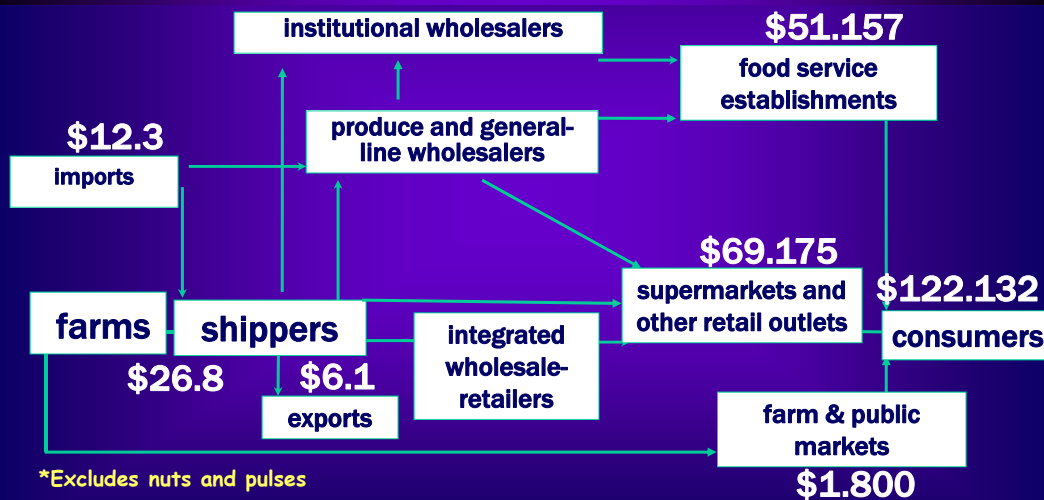
for

UC Davis Fresh-Cut Products Short Course

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U.S. Fresh Fruit and Vegetable* Value Chain, *Estimated Dollar Sales, Billions, 2010*



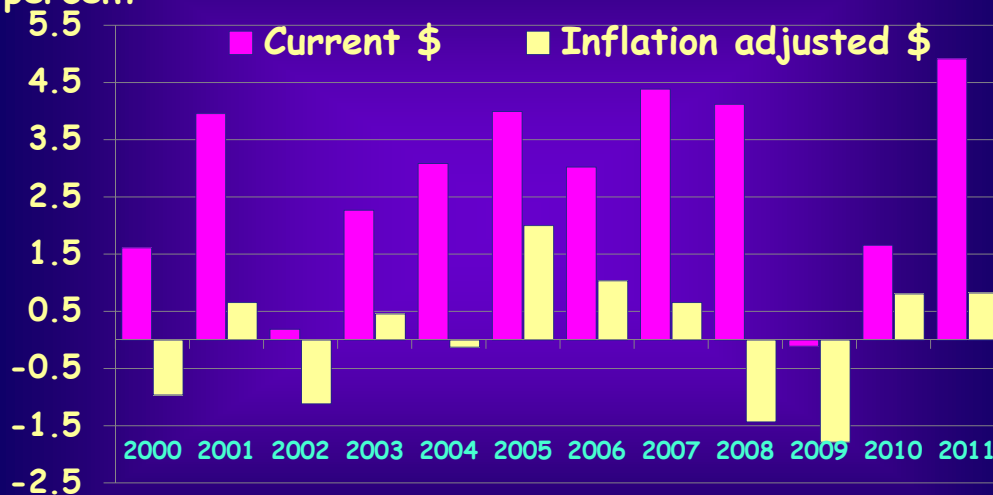
Source: Cornell and UC Davis compilations based on US Census, ERS/USDA, NASS/USDA and other data. Preliminary estimate.

The Economic Downturn is Transforming the US Food Marketing System

- The economic downturn has had a major effect on the food marketing system. More than originating new trends, it intensified pre-existing forces driving greater competition at all levels of the food system, such as, channel blurring. Margin pressure!
- This means ever more pressure for firms to increase productivity and efficiency in order to survive on lower net margins (margins that were usually already thin, including store-wide retail margins).
- This despite growing food safety, traceability and sustainability expectations, which increase costs.
- Food retailer mergers are up again as well as mergers or joint marketing arrangements between shippers.

Growth of Sales at Traditional Foodstores, 2000-2011, in Current and Constant Dollars (2000 base)

percent



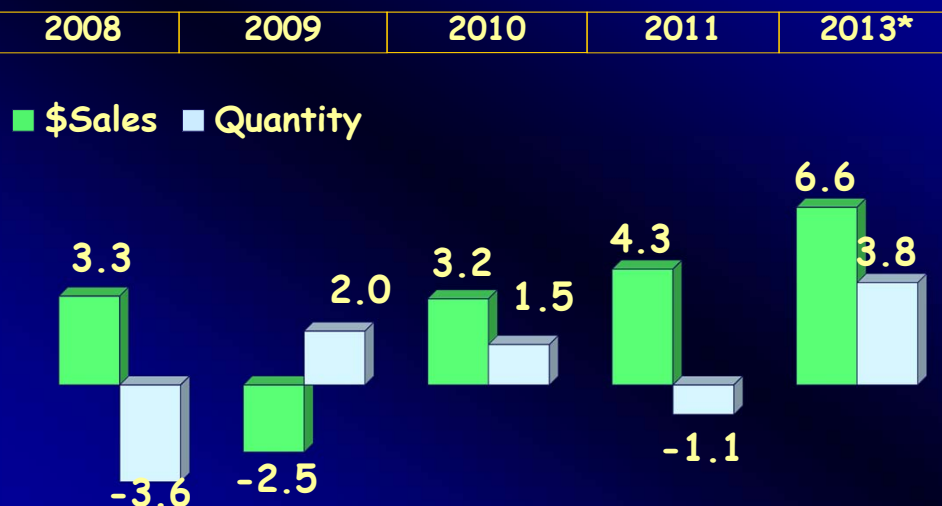
Sources: USDA, ERS calculations using data from U.S. Census Bureau, Economic Census of Retail Trade, Merchandise Line Sales, 1997, 2002, 2007; and Bureau of Labor Statistics, Consumer Price Index, 2000-11.

Consumer Behavior

- In 2009, the quantity of food sold in food stores declined.
- "I buy only what I need." Consumers concerned about food waste.
- This is likely negatively impacting fresh produce buying patterns.
- Plus, consumption rates of fresh produce increase markedly with income level. So, more low income people means a challenging environment for the produce industry.
- Bifurcation of US consumers: high income consumers (about 18% of households earn >\$100,000/yr) are loosening the reins again and spending at upscale retail outlets and for premium produce, including value-added produce. Value-added took a big hit at outset of the recession but has finally recovered.
- Meanwhile, lower and lower middle income consumers are very constrained, and there's more of them.
- 46.6 million people (nearly 1 in 7 Americans) were on food stamps in FY 2012 vs 17.3 million in 2000.
- Foodservice is only now recovering to pre-recession real \$ sales; operators making sure to offer more lower price menu options today.

USA Select Supermarket* Fresh Produce Dept. Performance During the Economic Downturn, % Change vs. Prior Year

*Excludes club stores, supercenters, part of conventional grocery and other alternative formats, not same store sales. In 2013 includes Walmart Supercenters, Sam's Club and Target.



Source: Perishables Group FreshFacts® powered by Nielsen, 52 weeks thru 4/27/2013 for 2013.

US Select Supermarket* Value-added Produce Sales: Dollars and Quantity, % Change from 2009** to 2008

*Excludes club stores, supercenters, part of conventional grocery and other alternative formats.

■ Weekly \$Sales/Store ■ Weekly Quantity Sold/Store



Source: Perishables Group FreshFacts® powered by Nielsen; **52 weeks ending July 4, 2009.

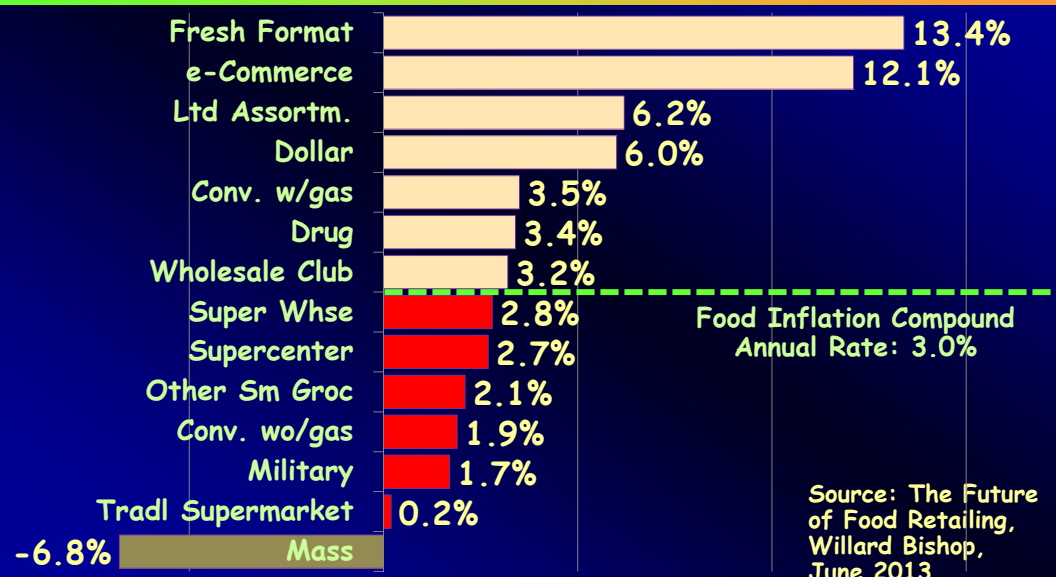
Food Industry Trends

- Shoppers more focused on finding the best value for specific items and willing to shop multiple channels Shoppers migrating towards retailers with clearly defined value credentials (whether high or low end)
- Many retailers lowered prices to close the gap with discount competitors, squeezing store-wide margins
- As of 2008 many retailers experienced numerous quarters of same store negative sales
- Cost-cutting to maintain margins, seek efficiency gains
- Lowering inventory levels, SKU RAT, painful lessons learned quickly!

Food Industry Trends

- Retail corporate restructuring to eliminate duplication and generate cost savings.
- New pricing initiatives, and more targeted pricing to specific consumer segments using loyalty card data.
- Ongoing new format development, e.g., smaller, price impact or fresh food formats, incl. by traditional grocery retailers.
- Expansion of Target's P-Fresh and Super Target formats, Walgreen's entry into food, etc. If drug stores succeed with produce it should create new demand.
- Private labels help retailers to increase consumer loyalty, many offering tiered private labels with different value propositions; all levels help retailers to combat discount retailers.

Forecast of Compound Annual Sales Growth Rate vs. Inflation 2012-2017



Food Industry Trends

- E-commerce potential for fresh produce. Europe ahead. Click 'n collect, delivery, in-store pickup, other models emerging. Amazon Fresh foray in Los Angeles market.
- C-store potential for fresh produce. If successful would open up a new distribution channel and expand demand (vs cannibalization of conventional retail).
- Rapid emergence of social media as a tool for communicating value propositions to consumers; most retailers not fully exploiting. Great opportunities for retailers and suppliers. Need to tie shipper website info and promos to retailer social media platforms for push-out.
- New merger wave at retail and shipper levels.

Supply Chain Imperatives

- Mutual dependency between buyers and sellers: need much more information sharing and collaboration vs adversarial relationships
- Streamline supply chain, improve vertical coordination - involves identifying mutually beneficial strategies and tactics, e.g., promotions, packaging, logistics, category development holds potential
- Identify which activities add more value than cost
- Eliminate non-value-adding activities
- Information technology and ability to manage BIG DATA holds potential for both internal firm-level and system-wide efficiency gains

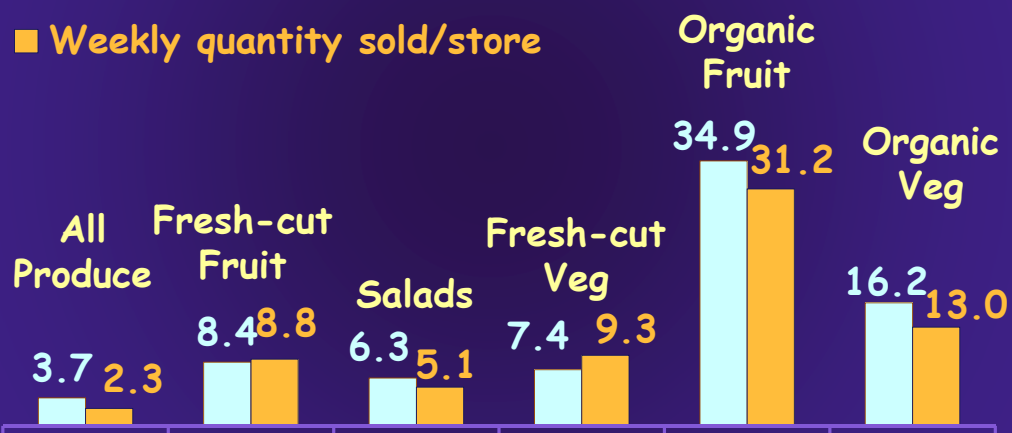
Value-added/Fresh-cut Produce Trends

Overview

Fresh-cut Fruit (excl over-wrap, jars and cups) and Fresh-cut Veg, Organic and Total Produce Sales in Select US Food Retailers, % Change Q2 2013 vs Q2 2012

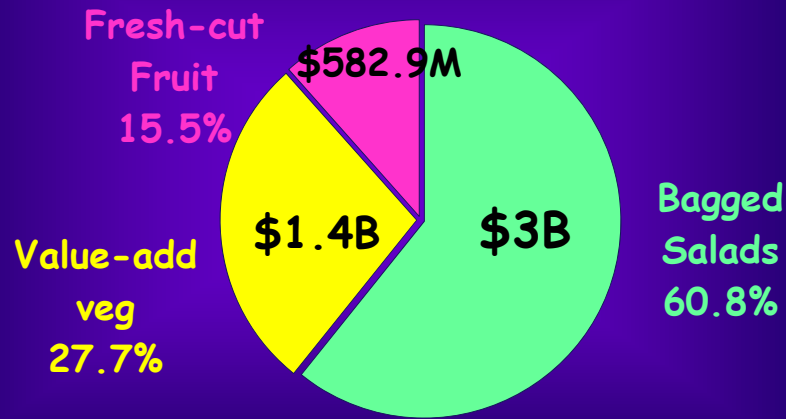
■ Weekly \$ sales/store

■ Weekly quantity sold/store



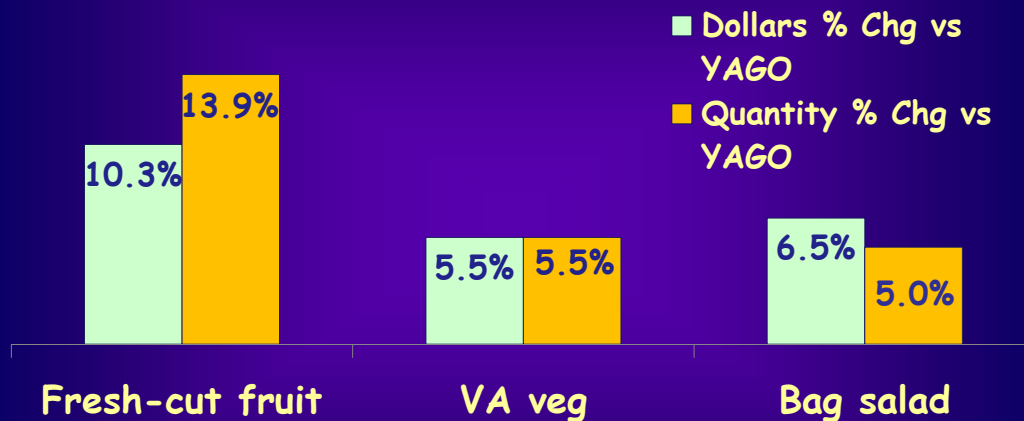
Source: FreshFacts® on Retail, Q2 2013, Perishables Group/United Fresh Foundation.

Estimated Value-added Produce Sales in Select US Retailers, Shares by Type, \$5.0 Billion Total (for this national sample), 2013*



Source: Nielsen. *52 weeks ending July 13, 2013. **Includes fresh-cut and fruit in juice.

Fresh-cut Fruit (excl fruit in juice), Valued-added Veg, and Bagged Salad Sales in Dollars and Quantity in Select US Retailers, 2013*



Source: Nielsen

*52 weeks ending July 13, 2013

Value-added Fruit defns vary, for this source it includes:

Source:
United
Fresh
Foundation,
FreshFacts
on Retail
Q2 2012.

1. Overwrap

Typically sold in a tray with plastic overwrapping. Contains words like quartered, halved, sliced, wedge, eighth, and wrapped. 19.3 % of VAF sales.

2. Fresh Cut Fruit

Cut fresh, no preservatives. Contain high level of value-added characteristics such as chunk, cubed, cored, cup, cut, wedge, spear, sliced, boat. 72.4 % VAF sales.

3. Jars and Cups

Perishable fruit in juice or preservatives, typically sold in a plastic cup or jar. Contains words like syrup, with or in juice, refrigerated, and chilled. 8.2% VAF sales.

Value-added Veg Excludes Bagged Salads but Includes:

Source:
United
Fresh
Foundation,
FreshFacts
on Retail
Q2 2012.

1. Side Dish

Includes fresh vegetables such as broccoli and cauliflower typically served as side dishes. Can often be cooked in the microwave directly in the bag. 54.6% of VAV sales.

2. Trays

Comprised of vegetable-only trays with/without dip. Trays may also have a protein component or a nontraditional side (bean dip, hummus, breadsticks, etc.). 19.5% of VAV sales.

3. Snacking

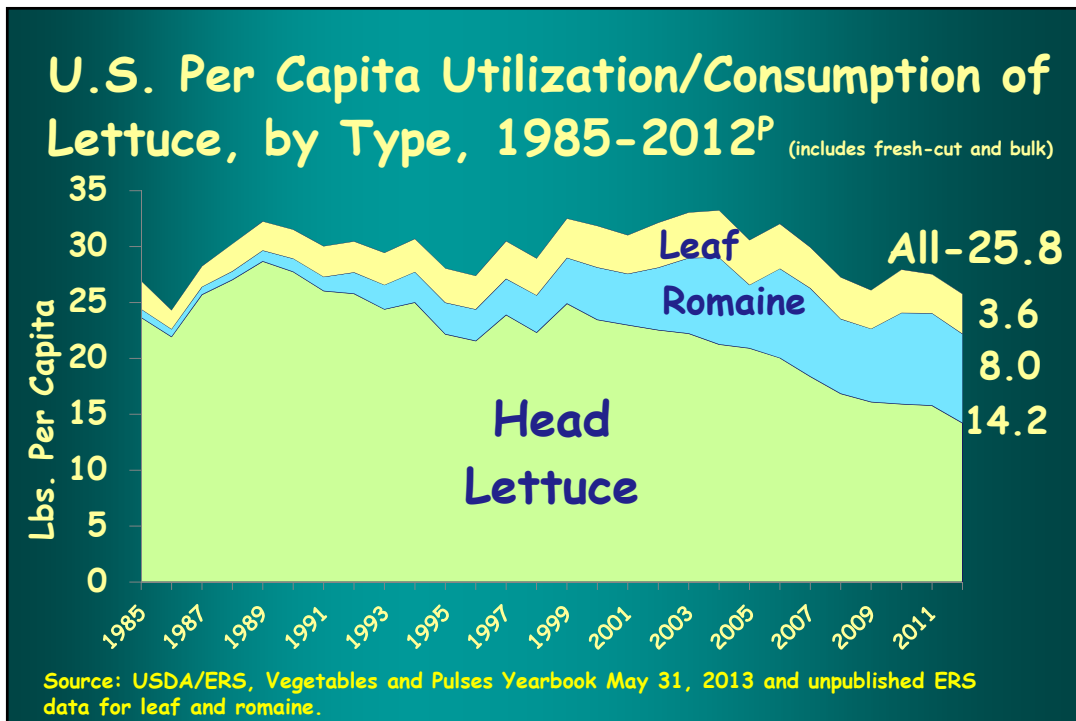
Single-serving sized (5 oz or less) vegetable items typically consumed as a snack or on the go. Often include dip. Keywords include snack, dip, bundle, pack and multi-pack. 8.8% of VAV sales.

4. Meal Prep

Items ready to incorporate into recipe or meal. Includes carrots, vegetable blends and medleys. Preparation varieties include diced, sliced, chopped, shredded; also soup mix, fajita mix, pico de gallo, kabob, stew mix, stuffing mix. 17.2% of VAV sales.

Value-added/Fresh-cut Produce Trends

Lettuce/Bagged Salads



Leading US Fresh Market Vegetable States in 2012:
 Geographic concentration of production (due to climate) limits local sourcing potential, yet it is growing in the summer/fall

Area Harvested		Production		Value	
State	% of Total	State	% of Total	State	% of Total
CA	44	CA	49	CA	50
FL	11	FL	9	FL	11
AZ	7	AZ	7	AZ	7
GA	6	GA	5	WA	5
NY	4	WA	4	GA	4

Source: Vegetables 2012 Summary, USDA/NASS, January 2013




Long-term trend is that bulk to process and wrapped shipments are up: Monterey County Head Lettuce Shipments 1990 vs 2012

Product Form	Million Cartons*		Percent Share	
	1990	2012	1990	2012
Bulk to Process	6.9	15.9	15%	34%
Wrapped	14.2	24.6	30%	52%
Naked	26.1	6.7	55%	14%
TOTAL	47.2	47.2	100%	100%

* 50 lb carton-equivalent units, may not sum to 100 due to rounding

Source: Monterey County Ag Commissioner, 1991 and 2012 annual reports



Recent trend is that bulk to process shipments are down: Monterey County Head Lettuce Shipments 2011 vs 2012

Product Form	Million Cartons*		Percent Share	
	2011	2012	2011	2012
Bulk to Process	18.0	15.9	38%	34%
Wrapped	23.6	24.6	50%	52%
Naked	5.6	6.7	12%	14%
TOTAL	47.2	47.2	100%	100%

* 50 lb carton-equivalent units, may not sum to 100 due to rounding

Source: Monterey County Ag Commissioner, 2012 and 2011 annual reports

Monterey County Leaf Lettuce Production, by Type, 2012

Crop	Cartons, Acreage	Cartons, thousands	Value, thousands	Carton Share
Butter Leaf	1,527	1,871	16,016	2.2%
Endive	423	447	3,844	0.5%
Escarole	317	333	2,811	0.4%
Green Leaf	7,792	8,119	75,588	9.6%
Red Leaf	2,047	2,149	18,546	2.6%
Romaine	38,485	39,216	383,140	46.6%
Leaf, bulk	N/A	32,059	294,300	38.1%
Total	80,468	84,194	794,245	100%

Source: Monterey County Crop Report 2012, Ag Commissioner.

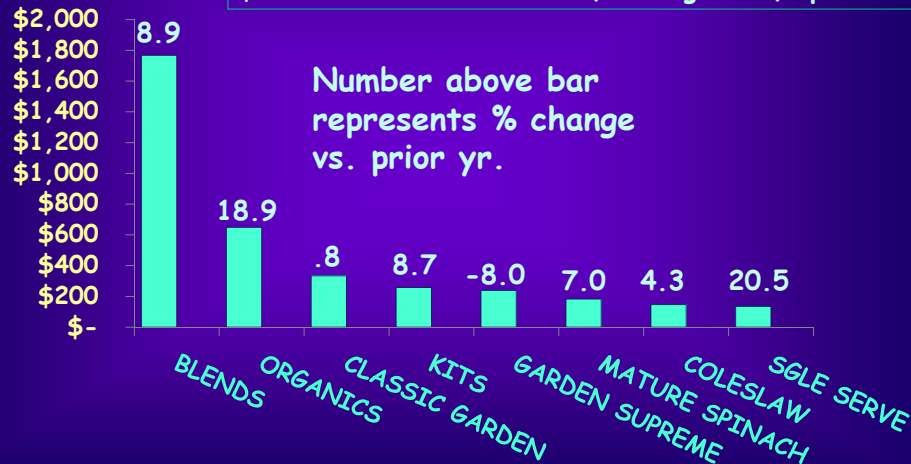
Top 10 Vegetable Sales and Pricing in Select US Food Retailers, Q2 2013 vs. Q2 2012

Product	Weekly \$ Sales per Store	Percent Change vs. Q2 2012	Weekly Vol. per Store	Percent Change vs. Q2 2012	Avg Retail Price	Percent Change vs. Q2 2012
Packaged Salad	\$3,431	6.3	1,312	5.1	\$2.62	1.2
Tomatoes	\$2,848	3.3	1,300	0.8	\$2.19	2.5
Potatoes	\$2,208	-8.5	3,478	-4.1	\$0.63	-4.5
Cooking Veggies	\$1,763	4.1	1,044	-0.2	\$1.69	4.4
Onions	\$1,528	8.3	1,527	-1.9	\$1.00	10.4
Peppers	\$1,422	1.8	646	2.4	\$2.20	-0.6
Lettuce	\$1,339	2.0	750	-5.5	\$1.78	8.0
Carrots	\$851	-0.0	503	0.3	\$1.69	-0.3
Mushrooms	\$813	-0.5	342	-0.6	\$2.38	0.1
Cucumbers	\$788	5.9	820	2.3	\$0.96	3.5

Source: FreshFacts® on Retail, Q2 2013, Perishables Group and United Fresh Foundation.

Bagged Salad Key Segments: \$ Sales and Annual Growth Rates in Select US Food Retailers, 2013*

\$Millions



Source: Nielsen *52 weeks ending July 13, 2013

US Retail Bagged Salad Category Market Shares by Key Firm (% total \$ sales) and Point Change in Market Share 2013* vs 2012

	% Share	Share Pt. Change
Private label	29.5	2.5
Fresh Express	29.5	(2.6)
Dole	20.9	(1.1)
Earthbound Farm	5.9	0.1
Ready Pac	3.7	(0.7)
Organic Girl	2.5	0.6
All Other	4.8	NA

Source: Nielsen *52 weeks ending July 13, 2013

Index of US Packaged Salad Sales (\$) by Spectra Lifestyle/Behavior Stage, All Channels

Behavior / Stage	LIFESTYLE						Total	% Total \$
	Cosmopolitan Centers	Affluent Suburban Spreads	Comfortable Country	Struggling Urban Cores	Modest Working Towns	Plain Rural Living		
Start-up Families HHs with young children only <6	83	104	82	45	47	50	73	6.3%
Small Scale Families Small HHs with older children 6+	76	92	69	43	43	38	64	5.2%
Younger Bustling Families Large HHs with children (6+), HOH <40	54	72	57	31	37	38	51	3.8%
Older Bustling Families Larger HHs with children (6+), HOH 40+	134	213	161	61	74	84	144	16.3%
Young Transitionals Any size HHs, no children, <35	87	76	79	58	51	56	67	7.3%
Independent Singles 1 person HHs, no children, 35-64	118	95	105	44	44	51	78	9.5%
Senior Singles 1 person HHs, no children, 65+	85	82	85	51	58	48	68	6.0%
Established Couples 2+ person HHs, no children, 35-54	177	210	198	96	113	100	163	18.6%
Empty Nest Couples 2+ person HHs, no children, 55-64	151	172	167	79	85	80	135	13.7%
Senior Couples 2+ person HHs, no children, 65+	117	154	158	65	90	89	121	13.2%
Total	111	141	126	56	64	65	100	
Percent Total \$	16.5%	33.4%	23.2%	5.8%	12.4%	8.6%		

Sources: Spectra BehaviorScope: Total Dollars / Spectra 07C/PG-Kids-Revision3 52wks (Total Dollars)

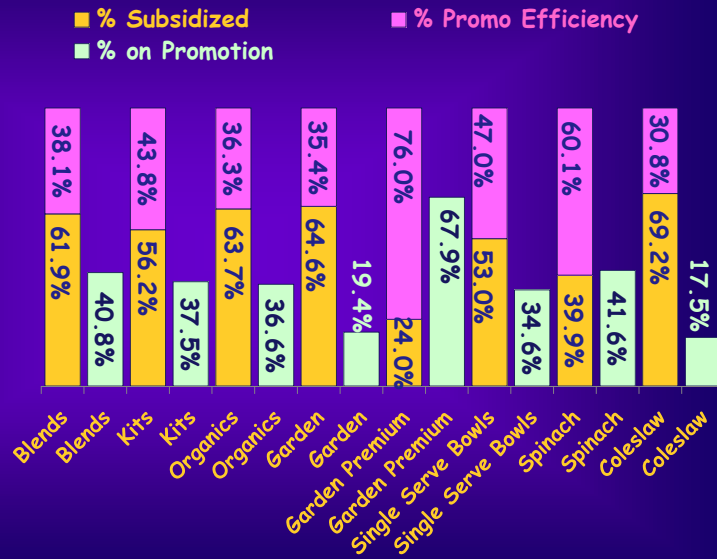
Promotional Measures in Action for Packaged Salads

The garden premium subcategory sold 67.9% volume on promotion.

- At 76% promotional efficiency, this subcategory demonstrated the highest promotional efficiency.

The coleslaw subcategory demonstrated the lowest promotional efficiency, 30.8%.

- Percent subsidized volume in coleslaw was 69.2%.
- Only about 30% of the volume sold on promoted weeks was unexpected.

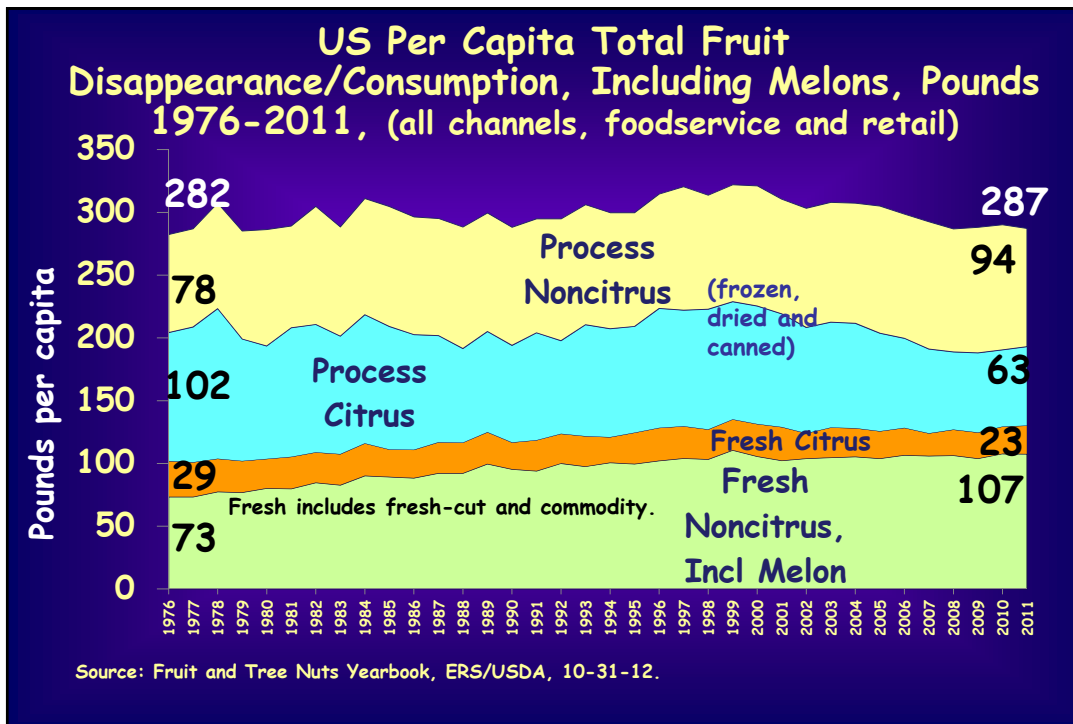


Source: Perishables Group
FreshFacts® powered by Nielsen

Promotional Efficiency - Volume. Packaged salads, Retailer X, 52 wks ending 03/28/09.

Value-added/Fresh-cut Produce Trends

Fruit

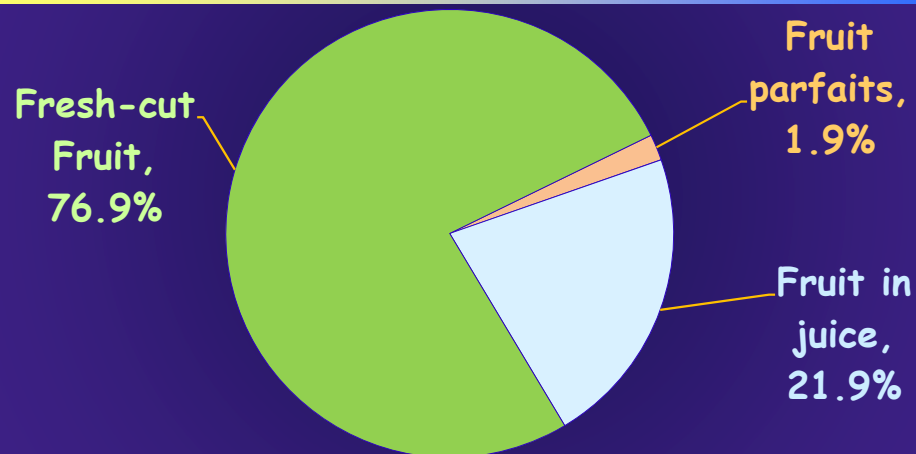


Value-added Fruit Category Sales and Pricing in Select US Food Retailers, Q2 2013 vs Q2 2012

	% Change vs. Q2 2012		
	Weekly \$ Sales / Store	Weekly Vol. per Store	Average Retail Price
Value-Added Fruit	3.9	-4.7	9.0
Fresh-Cut Fruit	8.4	8.8	-0.3
Jars & Cups	-10.1	-18.8	10.7
Overwrap	-12.7	-17.9	6.4

Source: FreshFacts® on Retail, Q2 2013, Perishables Group and United Fresh Foundation.

Value-added Fruit by Key Subcategory, Share of U.S. Dollar Sales in Select Retailers, (\$582.9 million total in this national sample, excluding overwrap)



Source: Nielsen, 52 weeks ending July 13, 2013.

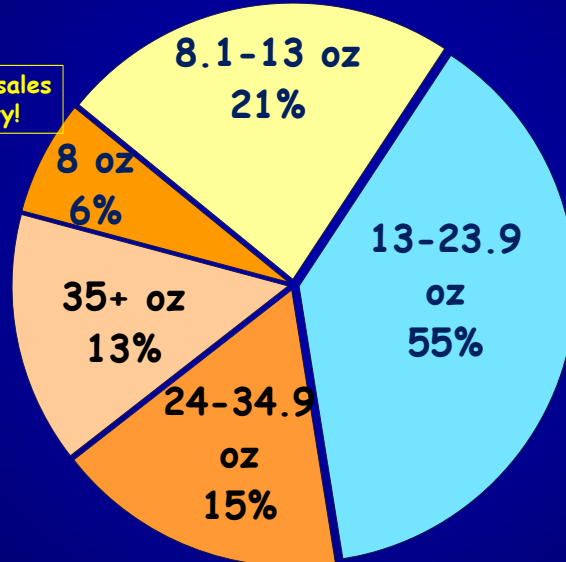
US Select Retailer Fresh-cut Fruit (excludes other VAF) Category Shares by Key Item in Dollars and Quantity 2013,* (\$448.4 million total sales in this national sample)

Item	Dollar Share %	Unit Share %	Growth in Unit Sales %
Mixed Fruit	33.6	21.3	11%
Apples	21.3	33.2	14%
Pineapple	15.5	16.2	12%
Watermelon	13.3	12.7	12%
Cantaloupe	4.8	5.4	14%
Mangos	4.4	3.6	21%
Mixed Melon	2.7	2.5	-4%
All Other	2.2	2.4	76%
Berries	1.6	1.8	59%
Honeydew	0.8	1.0	51%

Source: Nielsen *52 weeks ending July 13, 2013

Fresh-cut Fruit Shares, by Packaged Size, in Select US Food Retailers, 2013

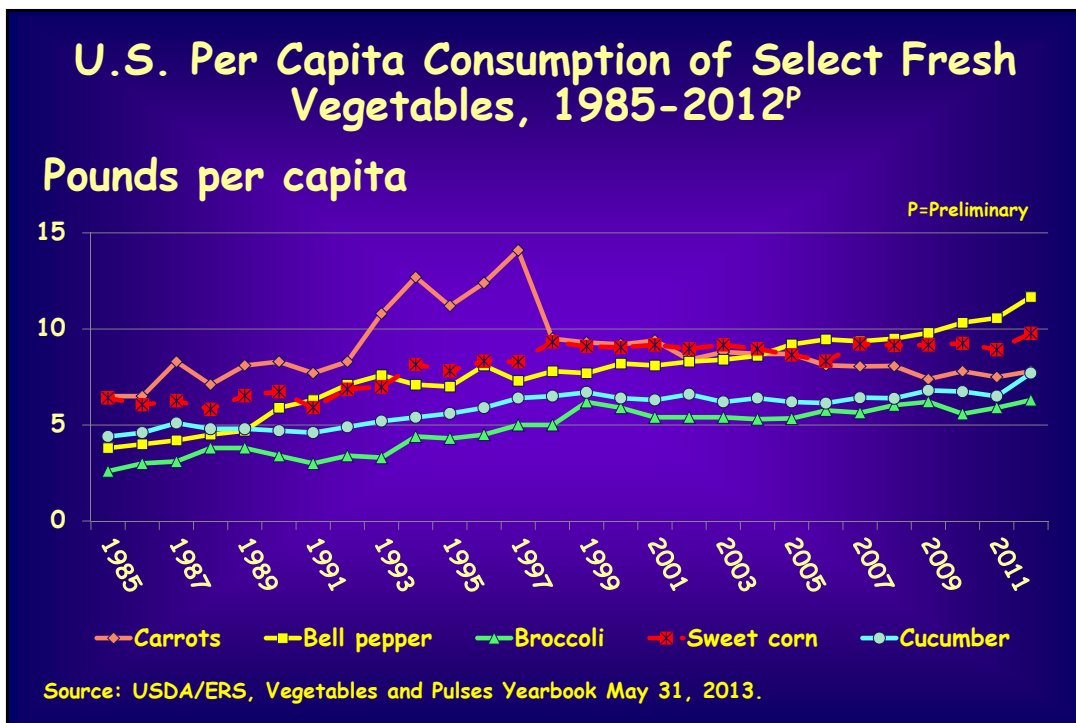
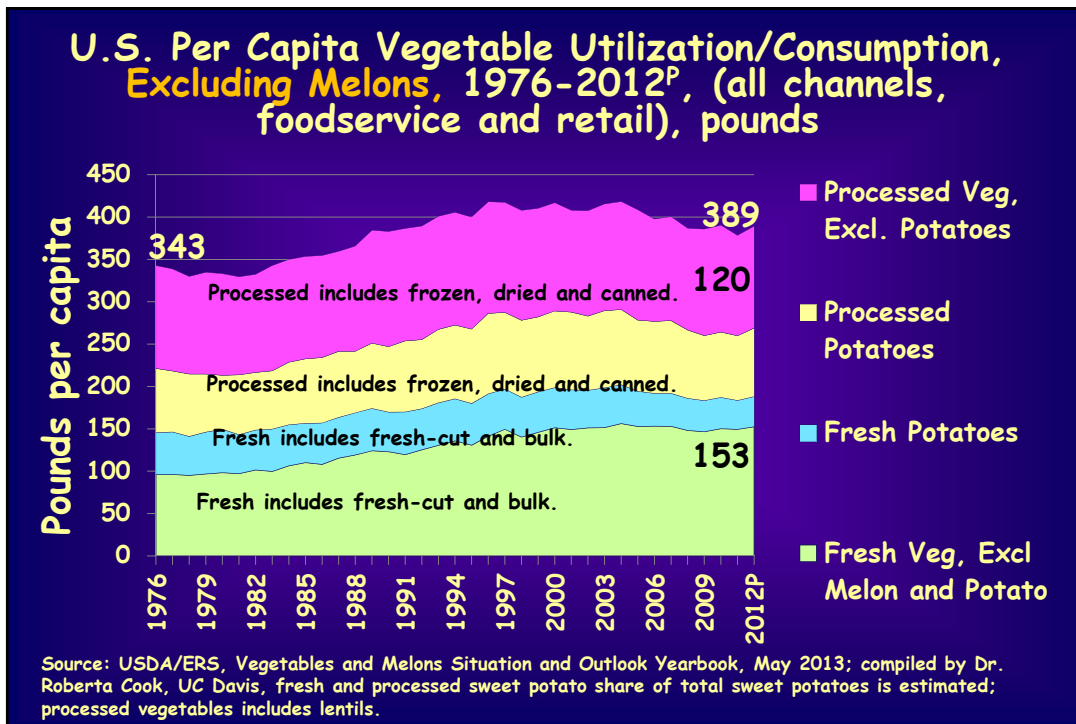
8 oz up 52% in \$ sales and 35% in quantity!



Source: Nielsen
52 week data
ending July 13,
2013

Value-added/Fresh-cut Produce Trends

Vegetables

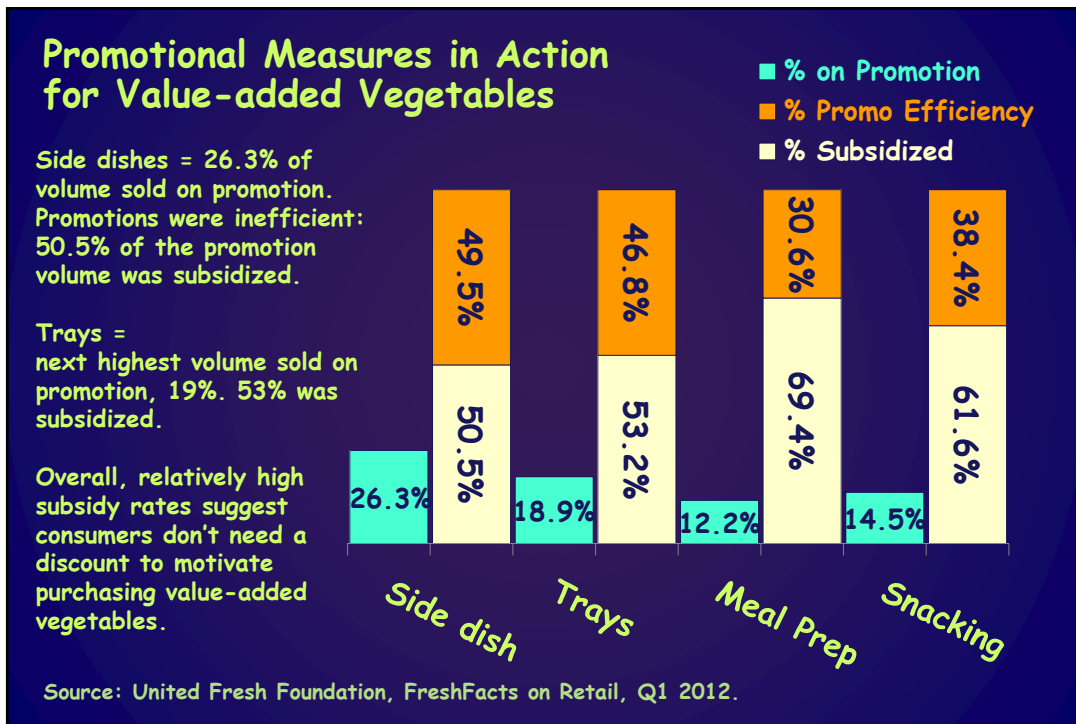


Value-added Vegetable Category Sales and Pricing in Select US Food Retailers, Q2 2013 vs Q2 2012			
	% Change vs. Q2 2012		
	Weekly \$ Sales / Store	Weekly Vol. per Store	Average Retail Price
Value-Added Vegetables	7.4	9.3	-1.7
Side Dish	10.4	11.0	-0.5
Trays	-0.3	3.4	-3.6
Meal Prep	3.3	2.7	0.6
Snacking	12.1	15.2	-2.7

Source: FreshFacts® on Retail, Q2 2013, Perishables Group and United Fresh Foundation.

US Fresh-cut Veg Category Shares of Dollar Sales, by Key Item, in Select US Supermarkets, 2012*	
<u>Item</u>	<u>Share (%)</u>
Carrots	47%
Mixed Veg	19%
Green Beans	7%
Greens	4%
Broccoli	4%
Snap/Snow Peas	3%
Onions	3%
Pico de Gallo	1%
All Others	12%
Total	100%

Source: Nielsen *52 weeks ending July 14, 2012



Branded vs. Private Label

Private Label Share of Food Spending in U.S. Supermarkets, Excluding Other Store Formats, 1989 and 2007-2011

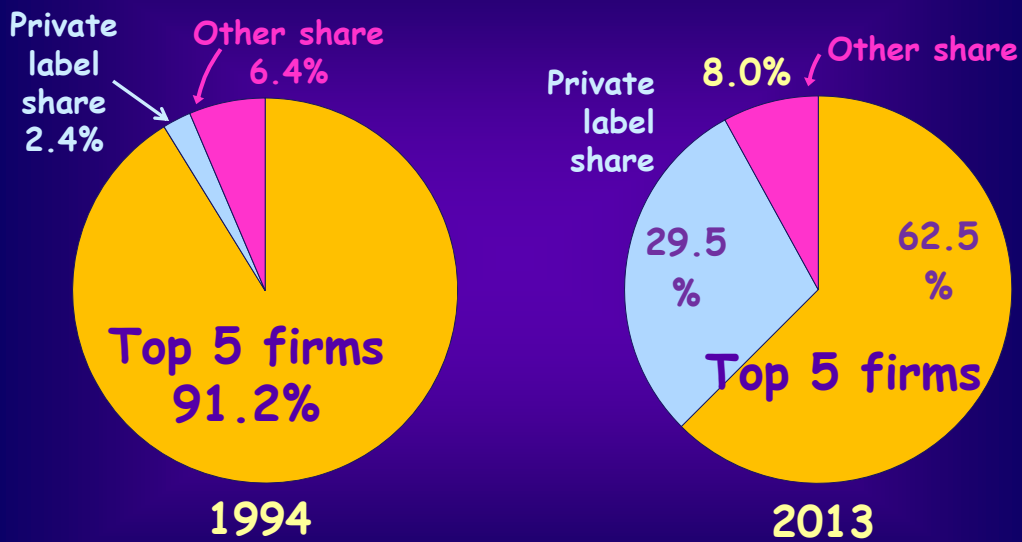
Dollar Share Unit Share

1989	11.6	15.3
2007	18.0	21.4
2008	19.2	22.5
2009	19.6	23.9
2010	19.9	23.7
2011	20.4	23.8

Private label share of US fresh produce dept sales, 11% in 2012. (Nielsen)

Source: The Nielsen Company/PLMA, and various *Private Label Magazines*

U.S. Supermarket Bagged Salad Market Shares, Top 5 Firms and Private Label, Share of Dollar Sales



Sources: 1994 - IRI; 2011 - Nielsen *52 weeks ending July 14, 2012

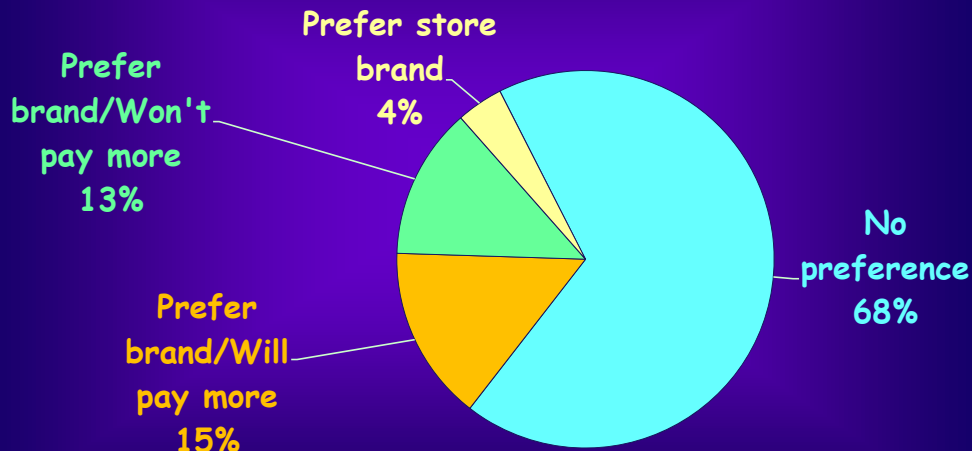
US FRESH-CUT VEGETABLE CATEGORY MARKET SHARES AND SALES GROWTH RATES BY KEY FIRM, IN SELECT US FOOD RETAILERS, 2013* [Total Category Sales \$1.4B]

Firm	Share %	Growth in \$ Sales %
Private label	39.9	5
Eat Smart	5.9	1
Greenline Foods	4.9	6
Grimmway Farms	2.9	1
Mann's Sunny Shores	2.6	1
Bolthouse Farms	2.5	19
Veg Glory	2.3	21
All other	39.0	7

Source: Nielsen *52 weeks ending July 13, 2013

Example: Branded Importance to US Consumers of Fresh-Cut Fruit is Low

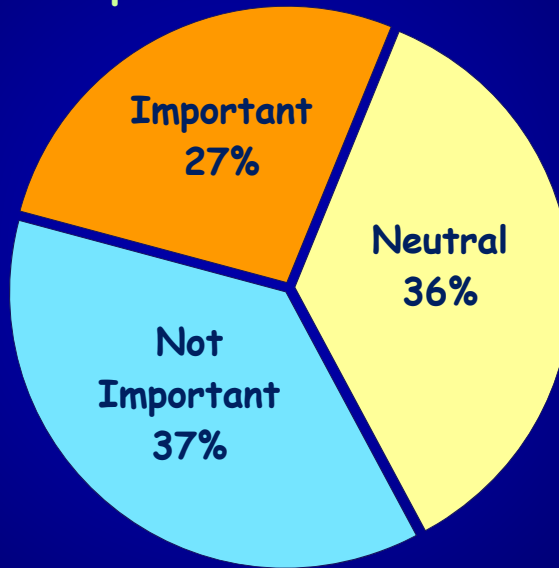
(brand loyalty is also low for bulk fresh produce)



Source: "Fresh Summit 2007 Ripe for the Picking," Perishables Group, Oct. 2007.

Also, 74% of Fresh-Cut Veggie Consumers Have No Preference

Importance of a Produce Brand to US Consumers, not specific to value-added produce



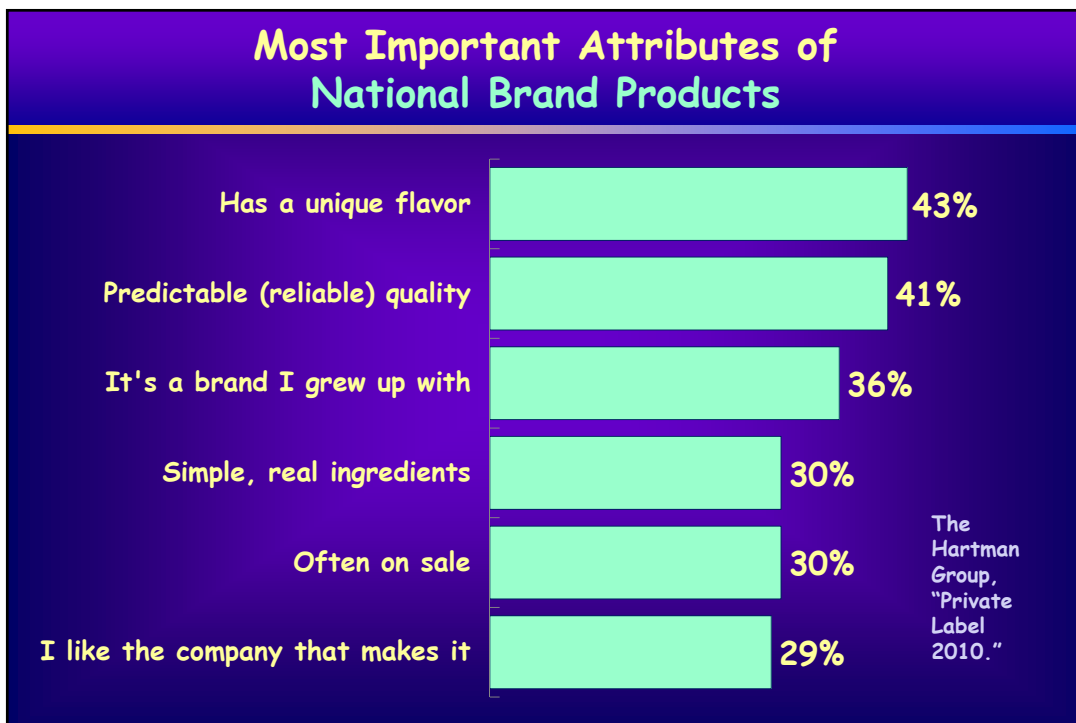
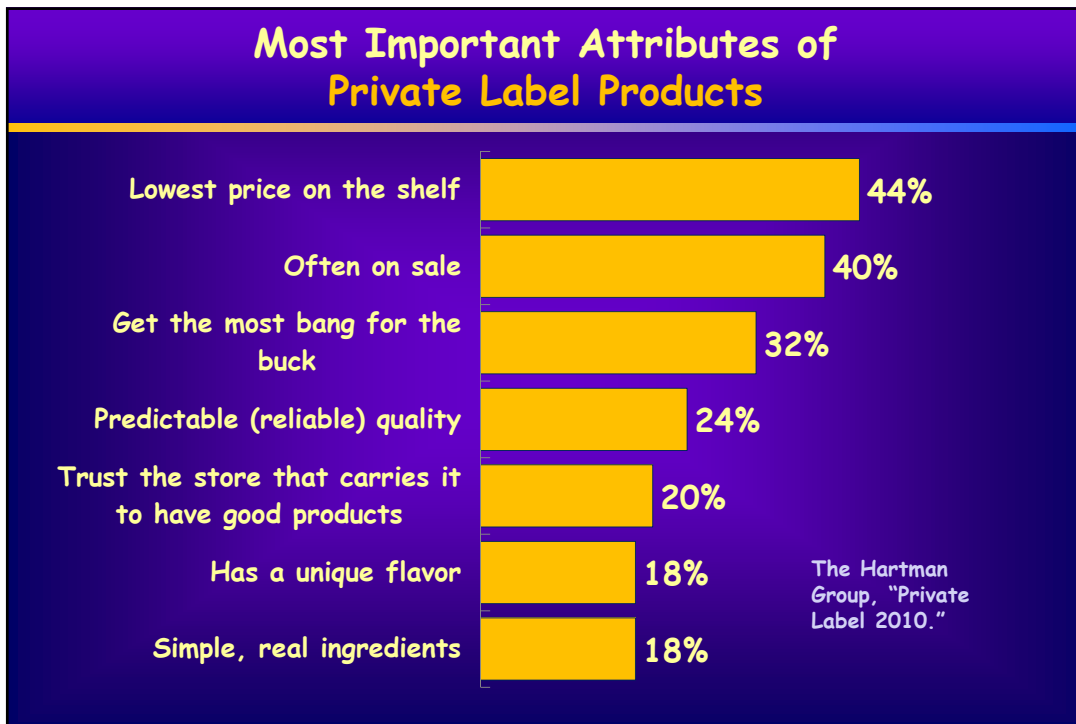
Source: Identifying Consumer Trends in the Produce Category, PMA/Hartman, 2011.

Factors Most Associated with Produce Brands,

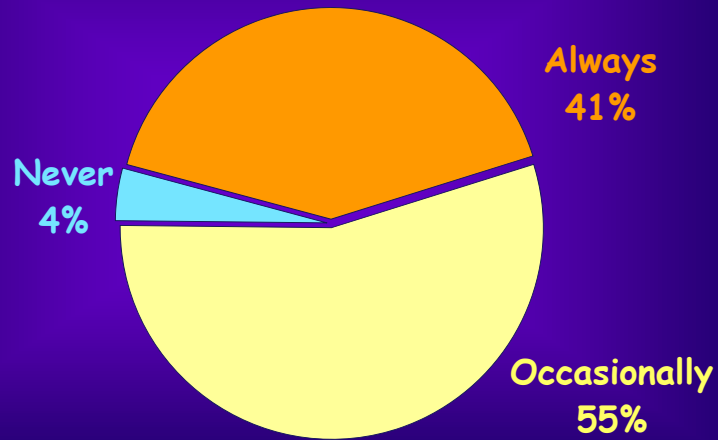
comparing attitudes of consumers who say brand is important with those that don't



Source: Identifying Consumer Trends in the Produce Category, PMA/Hartman, 2011.

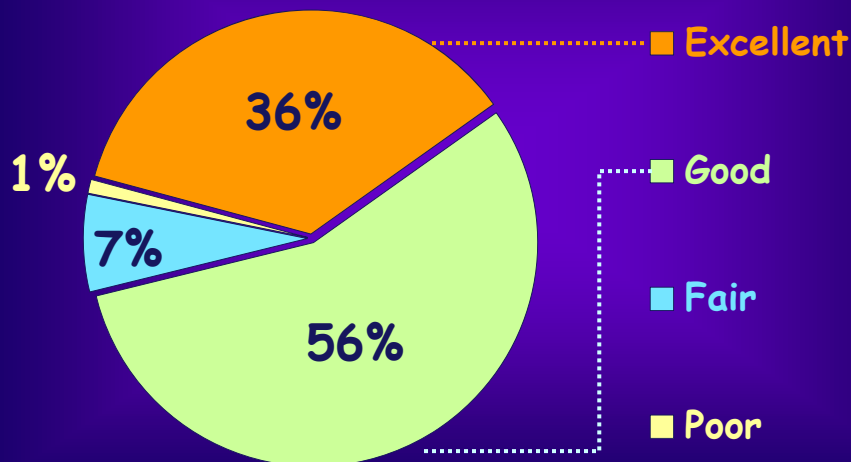


Frequency of Purchasing Private Brand Items at the Primary Store, 2011



Source:
U.S.
Grocery
Shopper
Trends
2011, FMI.

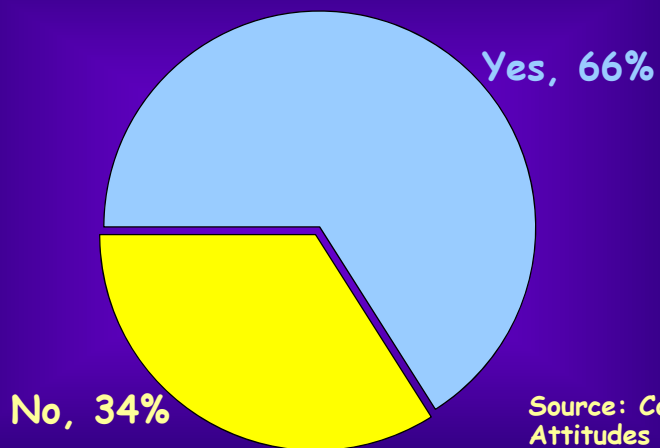
Rating Private Brand Products at the Primary Store, 2011



Source:
U.S.
Grocery
Shopper
Trends
2011,
FMI.

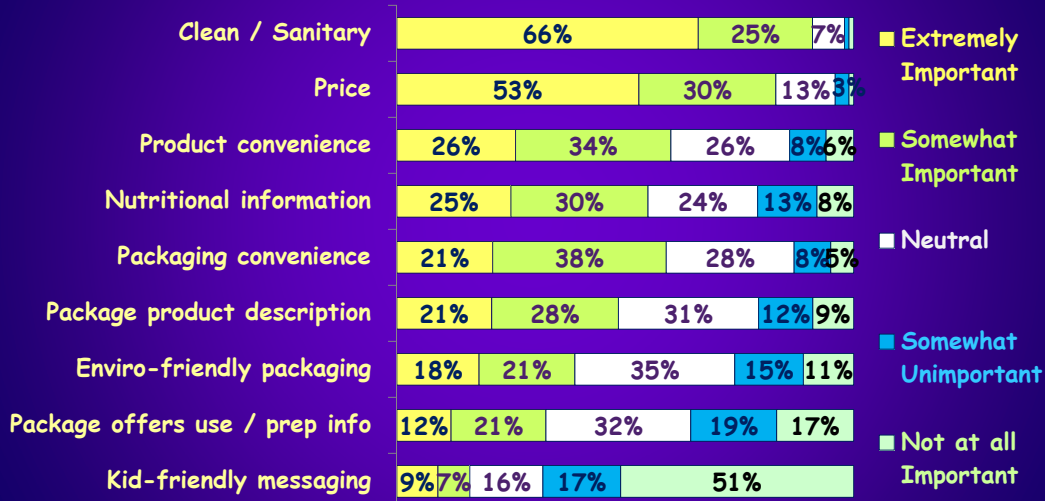
Consumer Attitudes

2011: Excluding packaged salads do you ever purchase packaged pre-cut produce?



Source: Consumer Attitudes Toward Packaged Fruits and Vegetables, PMA Aug. 2011.

Factors Considered in Consumer Decisions to Purchase Packaged Produce



Source: Consumer Attitudes toward Packaged Fruits & Vegetables, PMA, 2011.

Factors that Discourage Consumers from Purchasing Packaged Produce



Source: Consumer Attitudes toward Packaged Fruits & Vegetables, PMA, 2011.

Understanding Value-added Fruit and Veg Produce Shoppers, excludes bagged salads

- Essence: a new tool from Nielsen Perishables Group's FreshFacts® Shopper Insights powered by Spire, that segments consumers into 16 shopper groups and forty segments.
- Healthy Living Couples and Healthy Living Families are the most important shopper groups for value-added produce, buying the largest share of value-added fruit and veg.
- Healthy Living Couples are affluent, have no children in the home and tend to be 55-75+. They try to eat right but don't count calories.
- Healthy Living Families are affluent to lower income levels, have children in the home and tend to be 35 to 54. Like Healthy Living Couples, they try to eat well without counting calories, and they rely on simple meal solutions and fresh ingredients.
- Value-added produce lends well to both groups, as the highly affluent tend to do in-home cooking using fresh ingredients, and middle income or less affluent consumers tend to go to simple or quick meal solutions.

Source: FreshFacts® on Retail, Q2 2012, Perishables Group/United Fresh Foundation.

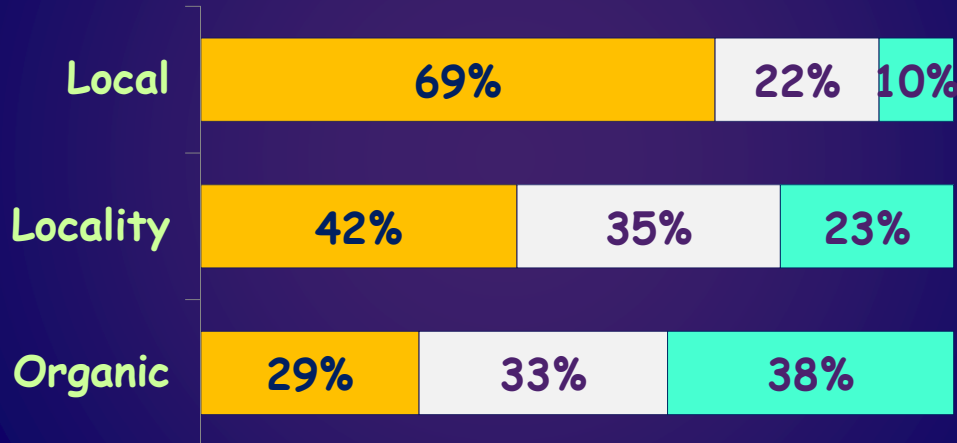
Understanding Value-added Fruit and Veg Produce Shoppers, excludes bagged salads

- Healthy Living Couples had the largest contribution to value-added fruit (VAF), accounting for 26.9% of sales in the 52 weeks ending July 14, 2012.
- The next largest group was Healthy Living Families, contributing 17.3% to VAF sales.
- On average, these two shopper groups purchase VAF 4.7 and 5.2 times/household/year, respectively.
- Healthy Living Couples contributed 30.3% to value-added vegetable (VAV) sales in the 52 weeks ending July 14, 2012.
- Healthy Living Families contributed 16.3% to the VAV category.
- Healthy Living Couples average 4.3 purchase trips/household per year for VAV, and Healthy Living Families 4.2 trips.
- Natural/Organic households contributed 7.5% of VAV sales.

Source: FreshFacts® on Retail, Q2 2012, Perishables Group/United Fresh Foundation.

Importance of Fresh Produce Characteristics to USA Consumers

■ Important ■ Neutral ■ Unimportant



Source: Identifying Consumer Trends in the Produce Category, PMA/Hartman, 2011.

Schools Offer New Opportunities for Produce and Targeted Product Launchings on the Rise



Conclusions

- Value-added produce has faced challenges during the economic downturn but is recovering.
- Firms at all levels of the fresh produce supply chain must take management practices to a higher level.
- Better information technology is a necessary but not sufficient condition for meeting today's/future standards for efficiency.
- Firms must develop cultures of continuous improvement and innovation.
- Understanding consumer segments as they relate to preferences for a product/retail format is vital.
- Fresh-cut produce leads in category development but there is still great potential for improvement, reducing shrink and increasing sales and profits.