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

$51.157
food service establishments

$69.175
supermarkets and other retail outlets

$122.132
consumers

$1.800
farm & public markets

in institutional wholesalers
produce and general-line wholesalers

imports $12.3

farms $26.8

shippers $6.1

exports

integrated wholesale-retailers

*Excludes nuts and pulses

Source: Cornell and UC Davis compilations based on US Census, ERS/USDA, NASS/USDA and other data. Preliminary estimate.
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.
US Food Retailer Mergers & Acquisitions 2007-2013 (and likely to be higher in 2014)


In 2009, the quantity of food sold in food stores declined.

“I buy only what I need.” Consumers are increasingly concerned about waste; negative impact on fresh produce demand.

Plus, consumption rates of fresh produce increase markedly with income level. So, more lower income people means a challenging environment for the produce industry.

48 million people (nearly 1 in 7 Americans) were on food stamps (SNAP) in 2012 vs 17.3 million in 2000.

Economic growth should stimulate produce demand.
<table>
<thead>
<tr>
<th>Year</th>
<th>$Sales</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>3.3</td>
<td>-3.6</td>
</tr>
<tr>
<td>2009</td>
<td>2.0</td>
<td>-2.5</td>
</tr>
<tr>
<td>2010</td>
<td>3.2</td>
<td>1.5</td>
</tr>
<tr>
<td>2011</td>
<td>4.3</td>
<td>-1.1</td>
</tr>
<tr>
<td>2013</td>
<td>4.8</td>
<td>0.2</td>
</tr>
</tbody>
</table>

Source: Perishables Group FreshFacts® powered by Nielsen.
Fresh-cut, Organic and Total Fruit and Vegetable Sales in Select US Food Retailers, % Change 2013 vs 2012

- Weekly $ sales/store
- Weekly quantity sold/store

Organic Fruit: 22.1%
Organic Veg: 18.2%

All FruitVeg*:
- Freshcut Fruit: 8.8%
- Salads: 6.7%
- Fresh Cut Veg: 11.2%

*Excludes other produce (such as salad dressings, toppings, etc.), which is 10% of produce dept sales dollars and 5% of quantity.

Source: FreshFacts® on Retail, Trends 2013, Perishables Group and United Fresh Foundation.
Higher income and socially conscious foodies are driving demand; their preferences lean to organic, convenience (fresh-cut), flavor, local.

The former slide shows that fresh-cut and organics grew whilst quantity (physical volume) sold of the rest of the items in the produce dept declined (since overall quantity sold was stagnant despite the growth in fresh-cut and organics).

For mainstream consumers, positive attitudes about wellness benefits of fresh produce not translating into purchases. Improved flavor might help.

Perception that produce costs more and may be wasted. Better shelf-life might help.
Forecast of Compound Annual Sales Growth Rate vs. Inflation 2012-2017

- Mass: -6.8%
- Tradl Supermarket: 0.2%
- Other Sm Groc: 2.1%
- Conv. wo/gas: 1.9%
- Military: 1.7%
- Conv. w/gas: 3.5%
- Drug: 3.4%
- Wholesale Club: 3.2%
- Supercenter: 2.7%
- Super Whse: 2.8%
- Other Sm Groc: 2.1%
- Conv. w/gas: 3.5%
- Drug: 3.4%
- Wholesale Club: 3.2%
- Supercenter: 2.7%
- Super Whse: 2.8%
- Ltd Assortm.: 6.2%
- Dollar: 6.0%
- Conv. w/gas: 3.5%
- Drug: 3.4%
- Wholesale Club: 3.2%
- Supercenter: 2.7%
- Super Whse: 2.8%
- Ltd Assortm.: 6.2%
- Dollar: 6.0%
- Conv. w/gas: 3.5%
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- Wholesale Club: 3.2%
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- Dollar: 6.0%
- Conv. w/gas: 3.5%
- Drug: 3.4%
- Wholesale Club: 3.2%
- Supercenter: 2.7%
- Super Whse: 2.8%

Food Inflation Compound Annual Rate: 3.0%

Source: The Future of Food Retailing, Willard Bishop, June 2013
Changing marketing channels for fresh produce

- New marketing channels handling produce: convenience store potential, drug stores, dollar stores, e-commerce.
- Europe ahead in E-commerce. Click 'n collect, delivery, in-store pickup, other models emerging. Amazon Fresh foray in Los Angeles market.
- Major initiative to increase fresh produce on foodservice menus but many barriers (uncertain pricing, consistent availability and quality).
- Growing international trade provides more redundancy in supply which may help large foodservice users to add produce items to the menu.
Supply Chain Imperatives

• Mutual dependency between buyers and sellers: need much more information sharing and collaboration

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

Bagged Salads 60.8%

Value-add veg 27.7%

Fresh-cut Fruit 15.5%

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

Source: United Fresh Foundation, FreshFacts on Retail Q2 2012.
Value-added/Fresh-cut Produce Trends

Lettuce/Bagged Salads
U.S. Per Capita Vegetable Utilization/Consumption, Excluding Melons, 1976-2013, (all channels, foodservice and retail), pounds

Source: USDA/ERS, Vegetables and Melons Situation and Outlook Yearbook, May 30, 2014; compiled by Dr. Roberta Cook, UC Davis, fresh and processed sweet potato share of total sweet potatoes is estimated; processed vegetables includes lentils and dry peas, and excludes dry beans.
U.S. Per Capita Utilization/Consumption of Lettuce, by Type, 1985-2013

(includes fresh-cut and bulk, foodservice and retail)

US Per Capita Utilization/Consumption of Fresh-market Spinach (1985-2013<sup>P</sup>)

Pounds per capita

P = Preliminary

Leading US Fresh Market Vegetable States* in 2013: Geographic concentration of production (due to climate) limits local sourcing potential, yet it is growing in the summer/fall

<table>
<thead>
<tr>
<th>Area Harvested</th>
<th>Production</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>State</strong></td>
<td><strong>% of Total</strong></td>
<td><strong>State</strong></td>
</tr>
<tr>
<td>CA</td>
<td>45</td>
<td>CA</td>
</tr>
<tr>
<td>FL</td>
<td>11</td>
<td>FL</td>
</tr>
<tr>
<td>AZ</td>
<td>7</td>
<td>AZ</td>
</tr>
<tr>
<td>GA</td>
<td>6</td>
<td>GA</td>
</tr>
<tr>
<td>NY</td>
<td>4</td>
<td>WA</td>
</tr>
<tr>
<td>Other</td>
<td>27</td>
<td>Other</td>
</tr>
</tbody>
</table>

*Excludes potatoes

Source: Vegetables 2013 Summary, USDA/NASS, March 27, 2014
**Long-term trend is that bulk to process and wrapped shipments are up:** Monterey County Head Lettuce Shipments 1990 vs 2012

<table>
<thead>
<tr>
<th>Product</th>
<th>Million Cartons*</th>
<th>Percent Share</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1990</td>
<td>2012</td>
</tr>
<tr>
<td>Bulk to Process</td>
<td>6.9</td>
<td>15.9</td>
</tr>
<tr>
<td>Wrapped</td>
<td>14.2</td>
<td>24.6</td>
</tr>
<tr>
<td>Naked</td>
<td>26.1</td>
<td>6.7</td>
</tr>
<tr>
<td>TOTAL</td>
<td>47.2</td>
<td>47.2</td>
</tr>
</tbody>
</table>

* 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

<table>
<thead>
<tr>
<th>Product</th>
<th>Million Cartons</th>
<th>Percent Share</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2011</td>
<td>2012</td>
</tr>
<tr>
<td>Bulk to Process</td>
<td>18.0</td>
<td>15.9</td>
</tr>
<tr>
<td>Wrapped</td>
<td>23.6</td>
<td>24.6</td>
</tr>
<tr>
<td>Naked</td>
<td>5.6</td>
<td>6.7</td>
</tr>
<tr>
<td>TOTAL</td>
<td>47.2</td>
<td>47.2</td>
</tr>
</tbody>
</table>

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

Source: Monterey County Ag Commissioner, 2012 and 2011 annual reports
<table>
<thead>
<tr>
<th>Crop</th>
<th>Acreage, thousands</th>
<th>Cartons, thousands</th>
<th>Value, thousands</th>
<th>Carton Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butter Leaf</td>
<td>1,527</td>
<td>1,871</td>
<td>16,016</td>
<td>2.2%</td>
</tr>
<tr>
<td>Endive</td>
<td>423</td>
<td>447</td>
<td>3,844</td>
<td>0.5%</td>
</tr>
<tr>
<td>Escarole</td>
<td>317</td>
<td>333</td>
<td>2,811</td>
<td>0.4%</td>
</tr>
<tr>
<td>Green Leaf</td>
<td>7,792</td>
<td>8,119</td>
<td>75,588</td>
<td>9.6%</td>
</tr>
<tr>
<td>Red Leaf</td>
<td>2,047</td>
<td>2,149</td>
<td>18,546</td>
<td>2.6%</td>
</tr>
<tr>
<td>Romaine</td>
<td>38,485</td>
<td>39,216</td>
<td>383,140</td>
<td>46.6%</td>
</tr>
<tr>
<td>Leaf, bulk</td>
<td>N/A</td>
<td>32,059</td>
<td>294,300</td>
<td>38.1%</td>
</tr>
<tr>
<td>Total</td>
<td>80,468</td>
<td>84,194</td>
<td>794,245</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Monterey County Crop Report 2012, Ag Commissioner.
### Top 10 Vegetable Sales and Pricing in Select US Food Retailers, 2013 vs. 2012

<table>
<thead>
<tr>
<th>Product</th>
<th>Weekly $ Sales per Store</th>
<th>Percent Change vs. 2012</th>
<th>Weekly Vol. per Store</th>
<th>Percent Change vs. 2012</th>
<th>Avg Retail Price</th>
<th>Percent Change vs. 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packaged Salad</td>
<td>$3,286</td>
<td>6.7</td>
<td>1,235</td>
<td>3.8</td>
<td>$2.66</td>
<td>2.8</td>
</tr>
<tr>
<td>Tomatoes</td>
<td>$2,545</td>
<td>3.4</td>
<td>1,166</td>
<td>1.2</td>
<td>$2.18</td>
<td>2.2</td>
</tr>
<tr>
<td>Potatoes</td>
<td>$2,515</td>
<td>1.8</td>
<td>3,821</td>
<td>-2.3</td>
<td>$0.66</td>
<td>4.3</td>
</tr>
<tr>
<td>Cooking Vegs</td>
<td>$1,743</td>
<td>7.0</td>
<td>1,061</td>
<td>-0.8</td>
<td>$1.64</td>
<td>7.9</td>
</tr>
<tr>
<td>Onions</td>
<td>$1,564</td>
<td>6.5</td>
<td>1,581</td>
<td>-0.5</td>
<td>$0.99</td>
<td>7.1</td>
</tr>
<tr>
<td>Peppers</td>
<td>$1,352</td>
<td>3.9</td>
<td>623</td>
<td>3.9</td>
<td>$2.17</td>
<td>0.0</td>
</tr>
<tr>
<td>Lettuce</td>
<td>$1,334</td>
<td>5.5</td>
<td>724</td>
<td>-3.8</td>
<td>$1.84</td>
<td>9.8</td>
</tr>
<tr>
<td>Carrots</td>
<td>$913</td>
<td>0.9</td>
<td>549</td>
<td>1.7</td>
<td>$1.66</td>
<td>-0.7</td>
</tr>
<tr>
<td>Mushrooms</td>
<td>$826</td>
<td>1.2</td>
<td>346</td>
<td>0.7</td>
<td>$2.39</td>
<td>0.5</td>
</tr>
<tr>
<td>Cucumbers</td>
<td>$714</td>
<td>7.8</td>
<td>735</td>
<td>1.6</td>
<td>$0.97</td>
<td>6.1</td>
</tr>
</tbody>
</table>

Source: FreshFacts® on Retail, Trends 2013, Perishables Group and United Fresh Foundation.
Bagged Salad Key Segments: $ Sales and Annual Growth Rates in Select US Food Retailers, 2013*

$3.063 M total salad sales, all segments, up 6.5%

Number above bar represents % change vs. prior yr.

Source: Nielsen  *52 weeks ending July 13, 2013
<table>
<thead>
<tr>
<th>% Share</th>
<th>Share Pt. Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private label</td>
<td>29.5</td>
</tr>
<tr>
<td>Fresh Express</td>
<td>29.5</td>
</tr>
<tr>
<td>Dole</td>
<td>20.9</td>
</tr>
<tr>
<td>Earthbound Farm</td>
<td>5.9</td>
</tr>
<tr>
<td>Ready Pac</td>
<td>3.7</td>
</tr>
<tr>
<td>Organic Girl</td>
<td>2.5</td>
</tr>
<tr>
<td>All Other</td>
<td>4.8</td>
</tr>
</tbody>
</table>

Source: Nielsen  *52 weeks ending July 13, 2013
## Index of US Packaged Salad Sales ($) by Spectra Lifestyle/Behavior Stage, All Channels

<table>
<thead>
<tr>
<th>Behavior / Stage</th>
<th>Cosmopolitan Centers</th>
<th>Affluent Suburban Spreads</th>
<th>Comfortable Country</th>
<th>Struggling Urban Cores</th>
<th>Modest Working Towns</th>
<th>Plain Rural Living</th>
<th>Total</th>
<th>% Total $</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Start-up Families</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HHs with young children only &lt;6</td>
<td>83</td>
<td>104</td>
<td>82</td>
<td>45</td>
<td>47</td>
<td>50</td>
<td>73</td>
<td>6.3%</td>
</tr>
<tr>
<td><strong>Small Scale Families</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small HHs with older children 6+</td>
<td>76</td>
<td>92</td>
<td>69</td>
<td>43</td>
<td>43</td>
<td>38</td>
<td>64</td>
<td>5.2%</td>
</tr>
<tr>
<td><strong>Younger Bustling Families</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large HHs with children (6+), HOH &lt;40</td>
<td>54</td>
<td>72</td>
<td>57</td>
<td>31</td>
<td>37</td>
<td>38</td>
<td>51</td>
<td>3.8%</td>
</tr>
<tr>
<td><strong>Older Bustling Families</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Larger HHs with children (6+), HOH 40+</td>
<td>124</td>
<td>213</td>
<td>161</td>
<td>61</td>
<td>74</td>
<td>84</td>
<td>144</td>
<td>16.3%</td>
</tr>
<tr>
<td><strong>Young Transitionals</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any size HHs, no children, &lt;35</td>
<td>87</td>
<td>76</td>
<td>79</td>
<td>58</td>
<td>51</td>
<td>56</td>
<td>67</td>
<td>7.3%</td>
</tr>
<tr>
<td><strong>Independent Singles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 person HHs, no children, 35-64</td>
<td>118</td>
<td>95</td>
<td>105</td>
<td>44</td>
<td>44</td>
<td>51</td>
<td>78</td>
<td>9.5%</td>
</tr>
<tr>
<td><strong>Senior Singles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 person HHs, no children, 65+</td>
<td>85</td>
<td>82</td>
<td>85</td>
<td>51</td>
<td>58</td>
<td>48</td>
<td>68</td>
<td>6.0%</td>
</tr>
<tr>
<td><strong>Established Couples</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2+ person HHs, no children, 35-54</td>
<td>177</td>
<td>210</td>
<td>198</td>
<td>96</td>
<td>113</td>
<td>100</td>
<td>163</td>
<td>18.6%</td>
</tr>
<tr>
<td><strong>Empty Nest Couples</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2+ person HHs, no children, 55-64</td>
<td>141</td>
<td>172</td>
<td>167</td>
<td>79</td>
<td>85</td>
<td>80</td>
<td>135</td>
<td>13.7%</td>
</tr>
<tr>
<td><strong>Senior Couples</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2+ person HHs, no children, 65+</td>
<td>117</td>
<td>154</td>
<td>158</td>
<td>65</td>
<td>90</td>
<td>89</td>
<td>121</td>
<td>13.2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>111</td>
<td>141</td>
<td>126</td>
<td>56</td>
<td>64</td>
<td>65</td>
<td>100</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Percent Total $**
- Very High 150+ 16.5%
- High 120-149 33.4%
- Modest 23.2%
- Struggling 5.8%
- Working 12.4%
- Plain Rural 8.6%

**Indexes**
- Cosmopolitan Centers
- Affluent Suburban Spreads
- Comfortable Country
- Struggling Urban Cores
- Modest Working Towns
- Plain Rural Living

**Sources:** Spectra BehaviorScape: Total Dollars / Spectra 07C/PG-Kids-Revision3 52wks (Total Dollars)
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.
Value-added/Fresh-cut Produce Trends

Fruit
US Per Capita Total Fruit Disappearance/Consumption, Including Melons, Pounds 1976-2012, (all channels, foodservice and retail)


Fresh includes fresh-cut and commodity.

(frozen, dried and canned)

Pounds per capita

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

<table>
<thead>
<tr>
<th></th>
<th>Weekly $ Average Retail Price</th>
<th>Weekly Vol. Sales / Store per Store</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value-Added Fruit</td>
<td>8.8</td>
<td>2.4</td>
</tr>
<tr>
<td>Fresh-Cut Fruit</td>
<td>13.2</td>
<td>15.1</td>
</tr>
<tr>
<td>Overwrap</td>
<td>-2.1</td>
<td>-10.7</td>
</tr>
<tr>
<td>Jars &amp; Cups</td>
<td>-12.8</td>
<td>-17.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% Change vs. 2012</th>
<th>Weekly $ Average Retail Price</th>
<th>Weekly Vol. Sales / Store per Store</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value-Added Fruit</td>
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<td>-10.7</td>
</tr>
<tr>
<td>Jars &amp; Cups</td>
<td>-12.8</td>
<td>-17.6</td>
</tr>
</tbody>
</table>

Source: FreshFacts® on Retail, Trends 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)

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

Source: Nielsen  *52 weeks ending July 13, 2013
8 oz up 52% in $ sales and 35% in quantity! Small pack. sizes growing, just as for bag salads.

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

Source: Nielsen 52 week data ending July 13, 2013
Value-added/Fresh-cut Produce Trends

Vegetables
Source: USDA/ERS, Vegetables and Melons Situation and Outlook Yearbook, May 30, 2014; compiled by Dr. Roberta Cook, UC Davis, fresh and processed sweet potato share of total sweet potatoes is estimated; processed vegetables includes lentils and dry peas, and excludes dry beans.
U.S. Per Capita Consumption of Select Fresh Vegetables, 1985-2013
(includes fresh-cut and bulk)

Pounds per capita

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Value-Added Vegetables</td>
<td>10.2</td>
<td>11.2</td>
<td>-0.8</td>
</tr>
<tr>
<td>Side Dish</td>
<td>13.5</td>
<td>12.1</td>
<td>1.2</td>
</tr>
<tr>
<td>Trays</td>
<td>1.5</td>
<td>5.2</td>
<td>-3.5</td>
</tr>
<tr>
<td>Meal Prep</td>
<td>6.3</td>
<td>5.9</td>
<td>0.4</td>
</tr>
<tr>
<td>Snacking</td>
<td>15.0</td>
<td>17.9</td>
<td>-2.4</td>
</tr>
</tbody>
</table>

Source: FreshFacts® on Retail, Trends 2013, Perishables Group and United Fresh Foundation.
# US Fresh-cut Veg Category Shares of Dollar Sales, by Key Item, in Select US Supermarkets, 2012*

<table>
<thead>
<tr>
<th>Item</th>
<th>Share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrots</td>
<td>47%</td>
</tr>
<tr>
<td>Mixed Veg</td>
<td>19%</td>
</tr>
<tr>
<td>Green Beans</td>
<td>7%</td>
</tr>
<tr>
<td>Greens</td>
<td>4%</td>
</tr>
<tr>
<td>Broccoli</td>
<td>4%</td>
</tr>
<tr>
<td>Snap/Snow Peas</td>
<td>3%</td>
</tr>
<tr>
<td>Onions</td>
<td>3%</td>
</tr>
<tr>
<td>Pico de Gallo</td>
<td>1%</td>
</tr>
<tr>
<td>All Others</td>
<td>12%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

*Source: Nielsen *52 weeks ending July 14, 2012*
Promotional Measures in Action for Value-added Vegetables

Side dishes = 26.3% of volume sold on promotion. Promotions were inefficient: 50.5% of the promotion volume was subsidized.

Trays = next highest volume sold on promotion, 19%. 53% was subsidized.

Overall, relatively high subsidy rates suggest consumers don't need a discount to motivate purchasing value-added vegetables.

Source: United Fresh Foundation, FreshFacts on Retail, Q1 2012.
Branded vs. Private Label
### Private Label Share in U.S. Supermarkets, Excluding Other Store Formats, 1989, 2009-2012

<table>
<thead>
<tr>
<th>Year</th>
<th>Dollar Share</th>
<th>Unit Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989</td>
<td>11.6</td>
<td>15.3</td>
</tr>
<tr>
<td>2009</td>
<td>18.3</td>
<td>23.2</td>
</tr>
<tr>
<td>2010</td>
<td>18.6</td>
<td>23.0</td>
</tr>
<tr>
<td>2011</td>
<td>19.1</td>
<td>23.1</td>
</tr>
<tr>
<td>2012</td>
<td>19.1</td>
<td>23.1</td>
</tr>
</tbody>
</table>

Source: Food Industry Review, 2013 and Private Label Magazine
Private Label Sales in US Supermarkets, 2012: Top Private Label Categories by Dollar Volume: Fresh Produce Becoming Important

- Milk: $9.5 Billion
- Bread & baked goods: $6.2 Billion
- Cheese: $6.0 Billion
- Paper products: $5.9 Billion
- Fresh produce: $4.1 Billion
- Medications & remedies: $3.8 Billion
- Deli prep’d foods: $2.6 Billion
- Frozen meat & seafood: $2.4 Billion
- Packaged meat: $2.3 Billion
- Bottled water: $2.3 Billion

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

Private label share 2.4%

Other share 6.4%

Top 5 firms 91.2%

1994

Private label share 8.0%

Other share 29.5%

Top 5 firms 62.5%

2013

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]

<table>
<thead>
<tr>
<th>Firm</th>
<th>Share %</th>
<th>Growth in $ Sales %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private label</td>
<td>39.9</td>
<td>5</td>
</tr>
<tr>
<td>Eat Smart</td>
<td>5.9</td>
<td>1</td>
</tr>
<tr>
<td>Greenline Foods</td>
<td>4.9</td>
<td>6</td>
</tr>
<tr>
<td>Grimmway Farms</td>
<td>2.9</td>
<td>1</td>
</tr>
<tr>
<td>Mann's Sunny Shores</td>
<td>2.6</td>
<td>1</td>
</tr>
<tr>
<td>Bolthouse Farms</td>
<td>2.5</td>
<td>19</td>
</tr>
<tr>
<td>Veg Glory</td>
<td>2.3</td>
<td>21</td>
</tr>
<tr>
<td>All other</td>
<td>39.0</td>
<td>7</td>
</tr>
</tbody>
</table>

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)


Also, 74% of Fresh-Cut Veggie Consumers Have No Preference
Importance of Produce Brands to US Consumers, (both value-added and bulk produce):

- Important: 27%
- Neutral: 36%
- Not Important: 37%

Factors Most Associated with Produce Brands,
comparing attitudes of consumers who say brand is important with those that don't

- **Brand Is Important**
  - Quality: 45% (77%)
  - Higher price: 34% (50%)
  - Better tasting: 26% (60%)
  - Value: 25% (50%)
  - Higher level of food safety: 20% (43%)
  - Less expensive: 13% (9%)
  - Community: 13% (4%)

- **Brand Is Not Important**

Most Important Attributes of Private Label Products

- Lowest price on the shelf: 44%
- Often on sale: 40%
- Get the most bang for the buck: 32%
- Predictable (reliable) quality: 24%
- Trust the store that carries it to have good products: 20%
- Has a unique flavor: 18%
- Simple, real ingredients: 18%

The Hartman Group, “Private Label 2010.”
Most Important Attributes of National Brand Products

- Has a unique flavor: 43%
- Predictable (reliable) quality: 41%
- It’s a brand I grew up with: 36%
- Simple, real ingredients: 30%
- Often on sale: 30%
- I like the company that makes it: 29%

The Hartman Group, “Private Label 2010.”
Frequency of Purchasing Private Brand Items at the Primary Store, 2011

- Always: 41%
- Occasionally: 55%
- Never: 4%

Source: U.S. Grocery Shopper Trends 2011, FMI.
Rating Private Brand Products at the Primary Store, 2011

- Excellent: 36%
- Good: 56%
- Fair: 7%
- Poor: 1%

Source: U.S. Grocery Shopper Trends 2011, FMI.
Consumer Attitudes
2011: Excluding packaged salads do you ever purchase packaged pre-cut produce?

Yes, 66%

No, 34%

Factors Considered in Consumer Decisions to Purchase Packaged Produce

- **Clean / Sanitary**: 66% Extremely Important, 25% Important, 7% Neutral
- **Price**: 53% Extremely Important, 30% Important, 13% Neutral, 3% Unimportant
- **Product convenience**: 26% Extremely Important, 34% Important, 26% Neutral, 8% Unimportant
- **Nutritional information**: 25% Extremely Important, 30% Important, 24% Neutral, 13% Unimportant
- **Packaging convenience**: 21% Extremely Important, 38% Important, 28% Neutral, 8% Unimportant
- **Package product description**: 21% Extremely Important, 28% Important, 31% Neutral, 12% Unimportant
- **Enviro-friendly packaging**: 18% Extremely Important, 21% Important, 35% Neutral, 15% Unimportant
- **Package offers use / prep info**: 12% Extremely Important, 21% Important, 32% Neutral, 19% Unimportant, 17% Not at all Important
- **Kid-friendly messaging**: 9% Extremely Important, 7% Important, 16% Neutral, 17% Unimportant, 51% Not at all Important

Factors that Discourage Consumers from Purchasing Packaged Produce

- Higher price: 64%
- Prefer to select own: 46%
- Quality: 26%
- Packages are too large: 22%
- Packaging is wasteful: 21%
- Desired items not available in pkg: 20%
- Size of the produce: 18%
- Packages are too small: 8%
- Other: 5%
- Most / all purchases are packaged: 6%

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 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.
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

- Local: 69% Important, 22% Neutral, 10% Unimportant
- Locality: 42% Important, 35% Neutral, 23% Unimportant
- Organic: 29% Important, 33% Neutral, 38% Unimportant

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.