

The Dynamic US Fresh Produce Industry

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Agenda

- Location of production and fresh produce basics
- Select food industry trends
- Fresh produce value chain
- International trade
- Conclusions

Location of production and fresh produce basics

Location of production matters!

- It's all about seasonality - which crop, where, when - whether imported or domestic.
- Imports, usually off-season, play important role for many, but not all crops.
- California biggest producer of most produce crops in the USA.
- For many crops CA is the only US producer, over 200 crops grown.
- CA has Mediterranean climate, long shipping seasons, usually no rainfall during harvest seasons, helps quality. Depend on winter snowpack for irrigation water.

Location of production matters!

- Locations within CA vary by crop and season, desert vs coastal vs central valley. Production starts in south in winter/spring and moves northward. Opposite in S. hemisphere.
- Each commodity has its own story to tell based on seasonal supply and demand!
- Emerging trend of greenhouses may change location of production and length of seasons for some crops.



Top 5 US Fresh Market Vegetable States* in 2015:
 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	46	CA	51	CA	58
FL	10	FL	8	FL	9
AZ	7	AZ	7	AZ	9
GA	6	WA	5	GA	4
NY	4	GA	5	WA	3
Other	27	Other	24	Other	17

*Excludes potatoes

Source: Vegetables 2015 Summary, USDA/NASS, February 2015

Market Shares of Top 5 USA Fresh Fruit Producing States,* 2009

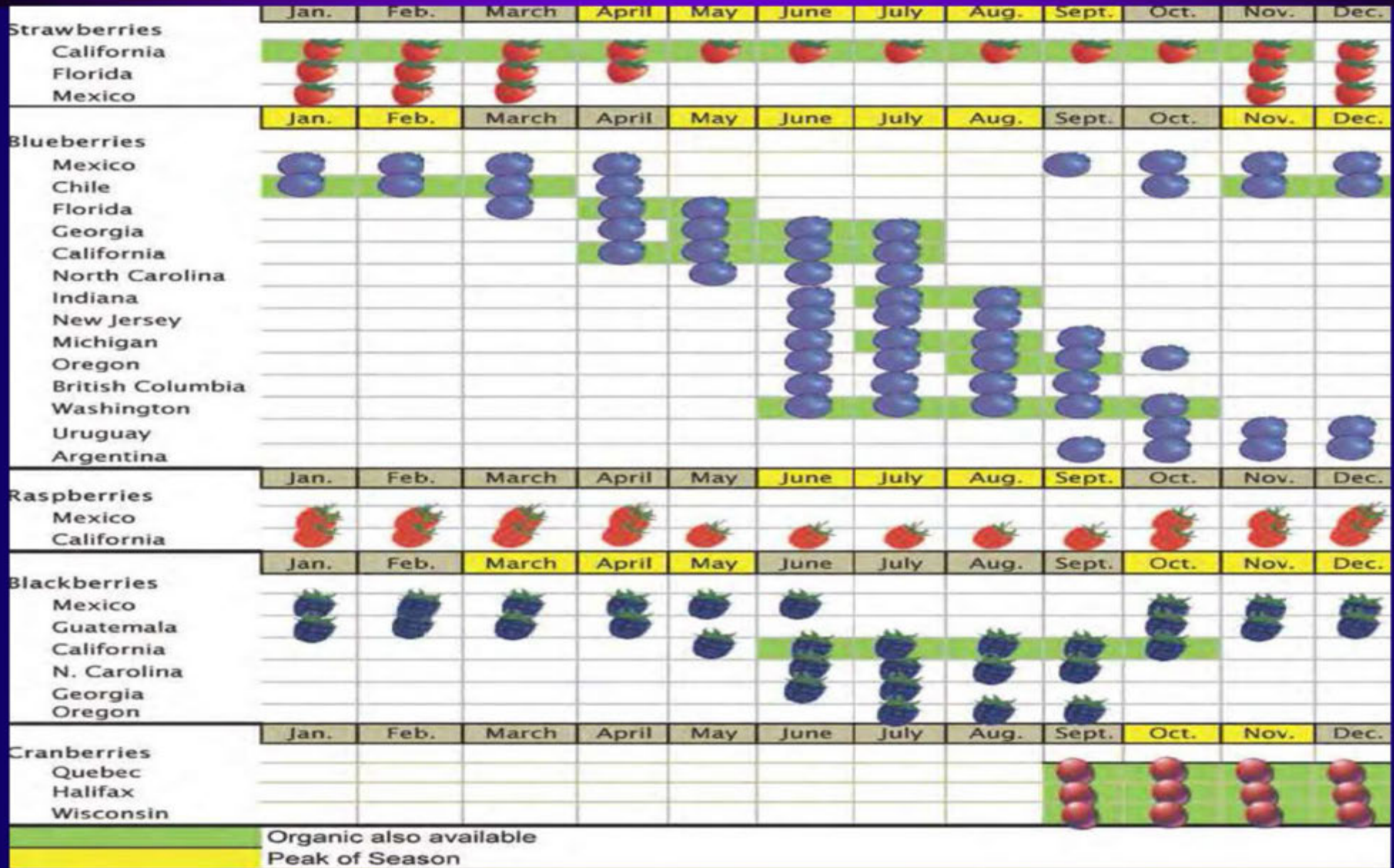
State	Percent USA Total
California	53%
Washington - leads in apples, pears, cherries	21%
Florida	8%
Oregon	2%
Michigan	2%
Other	10%
All U.S. fresh fruit	100%

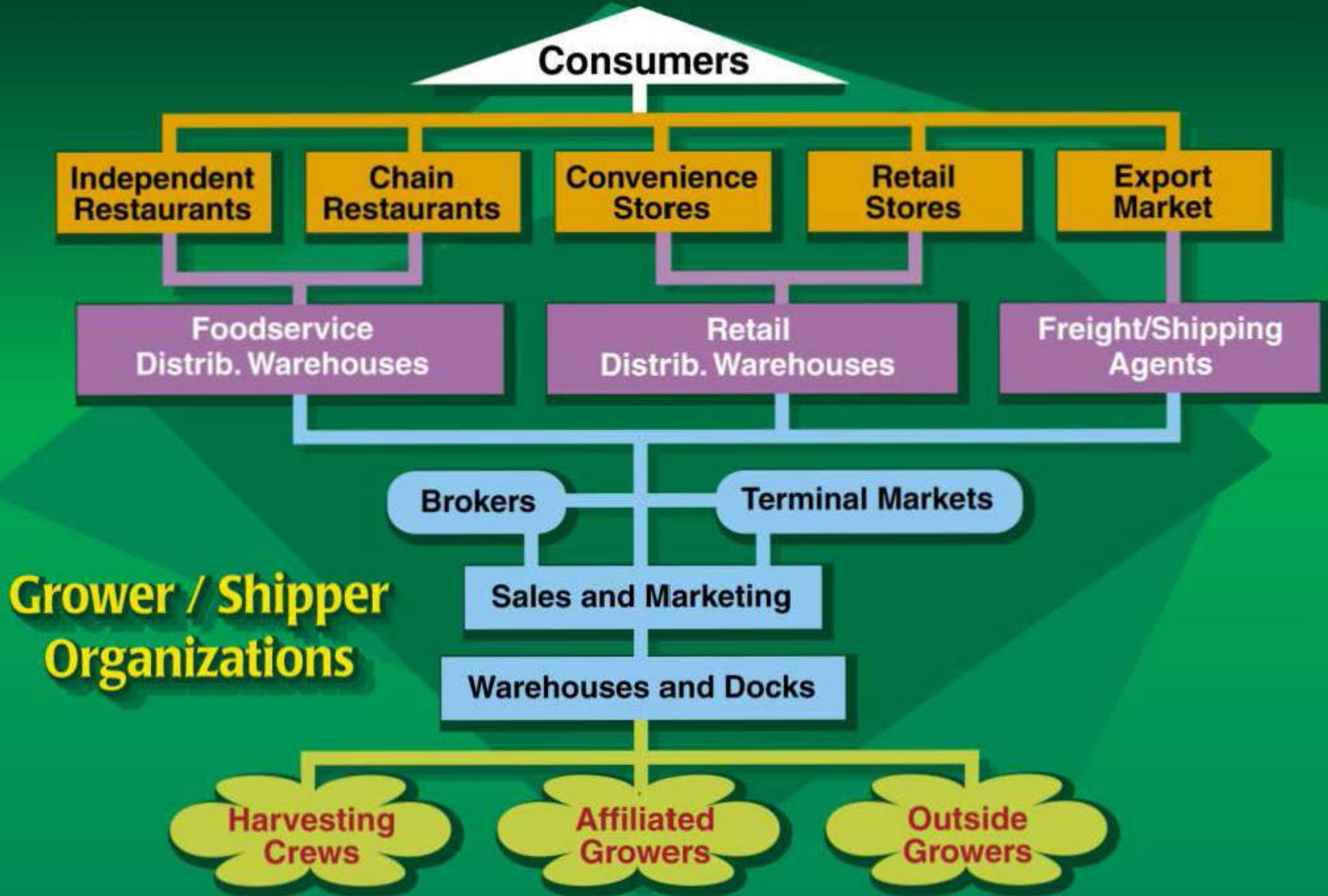
*Excludes tree nuts. Source: USDA/ERS, Gary Lucier.

Fresh Produce Marketing Basics

- Most growers do not market their own production, they have agreements with shippers or distributors to be their marketers. (price depends on the market)
- Most shippers are family-owned forward-integrated grower-shippers, supplementing their own production with that of other growers.
- Generally harvested and shipped daily; weather affects both supply and demand. Markets are risky and volatile!
- Shipping patterns are well established based on ideal growing locations in each season.

Seasonality of Naturipe Farms berry production locations





Fresh Produce Marketing Basics

- Growers and shippers are price takers.
- Growers receive the residual of the market price received by the shipper for their produce, less marketing charges, pick, pack and harvest, palletization, in some cases cooling, and other handling charges and mandated-marketing or other institutional fees.
- Shipping point prices may not always cover total costs; when they don't even cover variable costs (e.g. harvest/packing) product is left in field.
- The shipper has incentives to continue shipping if at least covering variable costs in order to meet commitments with buyers, to maintain labor and potentially earn profit margins on cooling, harvesting and marketing; sometimes there is no return to the grower (production costs are not recouped).

Fresh Produce Marketing Basics

- Shippers have big investments in facilities, technology, seed trials, research to improve efficiency, sustainability, precision farming.
- Growers/shippers require substantial capitalization to withstand low markets.
- About 20 retailers estimated to account for over 70% of US total retail food sales.
- Buyer consolidation has led to shipper consolidation - fewer, bigger firms. But suppliers are still relatively small compared with retailers.
- Retail and foodservice buyers demand yr-round supply.

Fresh Produce Marketing Basics

- Imports increasingly handled by U.S. grower-shippers that import during the off-season.
- Same requirements for foreign and domestic growers.
- Role of forward contracts increasing but challenging to manage across growers in different locations and seasons.
- Foodservice leads in forward contracting.
- As forward contracting grows for retailers as well, the marketing system becomes less focused on transactions (daily spot market) and more on building marketing "programs" designed to increase sales.

Fresh Produce Marketing Trends

- Major food safety requirements, higher cost structure. Large growers have big investments.
- Sustainability and social responsibility practices factoring into buyer-seller negotiations but don't trump price, consistent availability and volumes.
- Buyers expect suppliers to be much more data-driven in their selling/marketing approaches, requires IT investments.
- Fewer, larger buyers have enabled shippers to reduce their customer lists and to focus more on understanding the needs of key accounts - becoming account-driven and strategic.

Fresh Produce Marketing Basics

- Firms attempting to differentiate their products to get out of the “commodity trap,” but perishability will always make that challenging.
- Product differentiators: quality, color, shape, flavor, texture, culinary factors, proprietary seeds.
- Service differentiators: marketing, transportation, etc.
- Shippers focus more on understanding and communicating with consumers, attempting to stimulate consumer demand; social media facilitates.
- Branding and private label are growing simultaneously.

Historical role of branding and consumer marketing in fresh produce

- Food marketing dominated by brand-based consumer packaged goods (CPGs). Produce is an exception. Beyond the banana players and Sunkist cooperative, brands were not prevalent.
- Commodity (undifferentiated) marketing the norm.
- Where brands existed, achieving consumer brand loyalty was difficult due to: inconsistent quality and distribution (shelf-presence); seasonality; lack of differentiation.
- Produce often costs more when quality is the worst (weather related). Why should a consumer be loyal?

Historical role of branding and consumer marketing in fresh produce

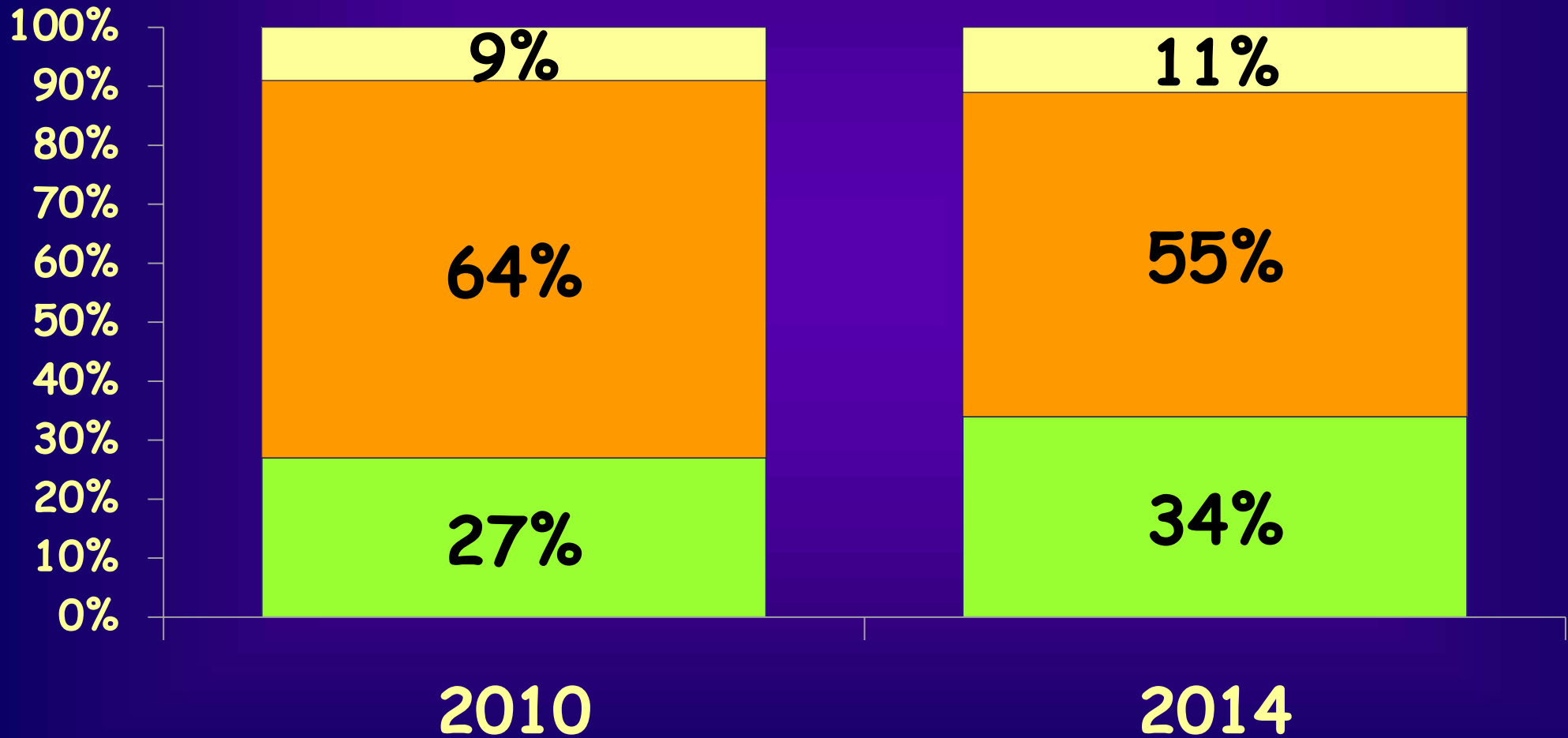
- Value-added produce (VAP) is marketed like CPGs – consistent weekly volumes, shelf-space, pricing and quality.
- Salads brought more emphasis on branding, marketing & promo support. Dedicated shelf-space.
- ROI on investments in consumer marketing for commodity produce is more challenging due to supply side fragmentation, inconsistent weekly distribution.
- Under-investment in consumer marketing; promotion typically trade-oriented (commercial buyers).

Historical role of branding and consumer marketing in fresh produce

- Growth in social media making it less costly to reach target consumers with marketing messages.
- Larger suppliers investing in their labels in attempt to convert to consumer brands. Size matters.
- Cuties, Halos, Driscoll's berries are examples of commodity branding and promotion achieving consumer loyalty. Successful differentiation.
- Mandated generic marketing programs benefit all the producers of a commodity, eliminate free riders & have high ROI's. Programs that include imports (hass avocados, blueberries) are highly successful.

Share of Branded vs Unbranded Fresh Produce Sales in US Retailers, 2010 vs. 2014

■ Branded ■ Unbranded ■ Private Label



Source: Fresh Facts on Retail Q3 2015, United Fresh and Nielsen

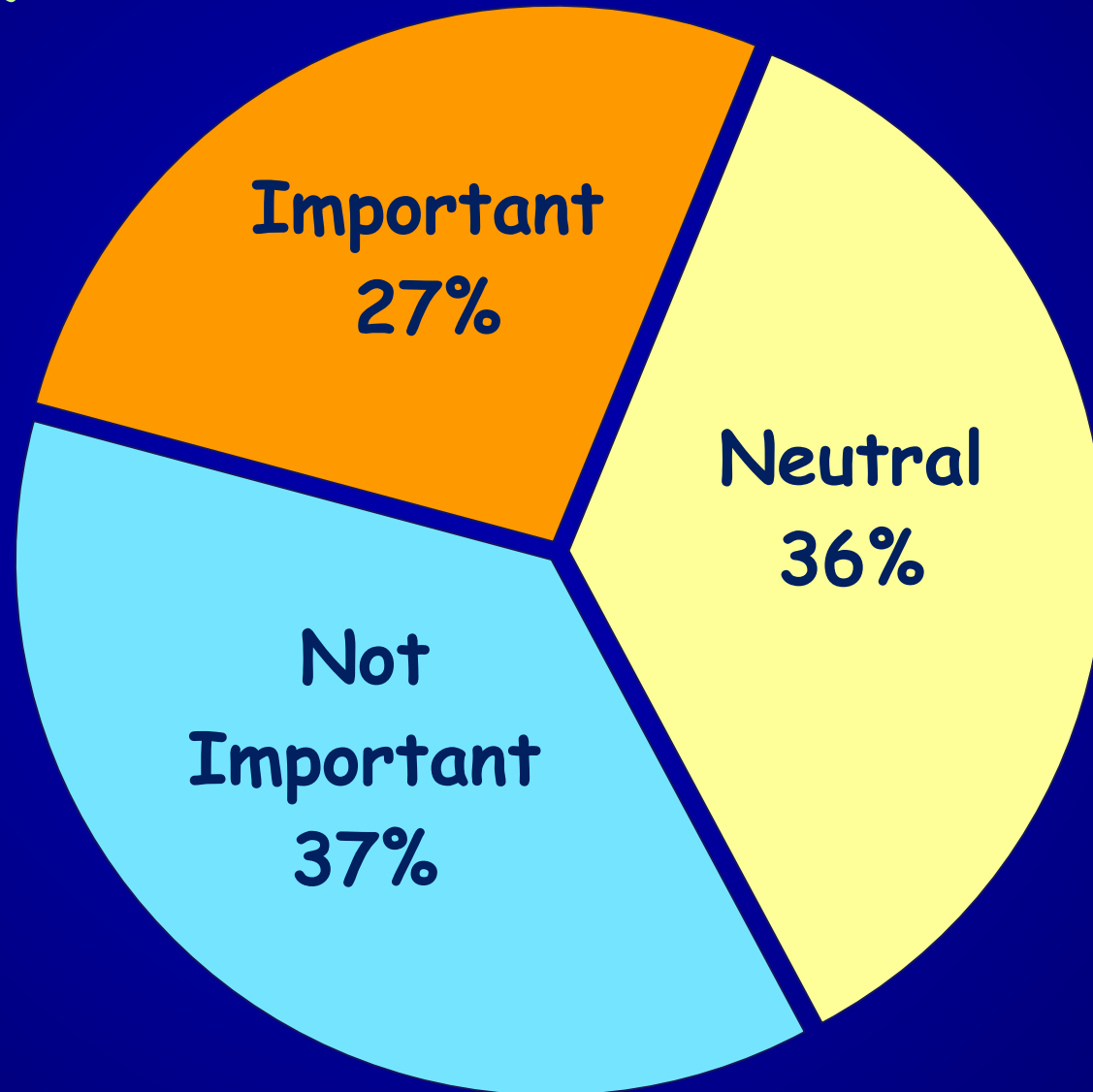
Fresh Produce Realities

- Since most fresh produce items are sold without UPC bar codes there has been less-intensive use of data. Growth in packaging and scannable bar codes (even on bulk items) is changing this.
- With PLU codes there is no identification of the individual supplier. The Produce Traceability Initiative (PTI) and the adoption of GTINs is changing this.
- GTINs & bar codes enable retailers to compare the shelf-life and quality of suppliers' products - to measure sales and shrink.

Fresh Produce Realities

- Without supplier identification it is harder to convince retailers to pay more for supplier investments in quality. Incentives not aligned!
- Retailer focus on gross vs net profit is a barrier to improving quality as it doesn't take into account shrink.
- Higher quality can increase sales and more shelf-life can reduce shrink and increase net retail profit per item even when the retailer pays a higher price to the supplier (higher COGS).

Importance of Produce Brands to US Consumers, (both value-added and bulk 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

■ Brand Is Important

■ Brand Is Not Important



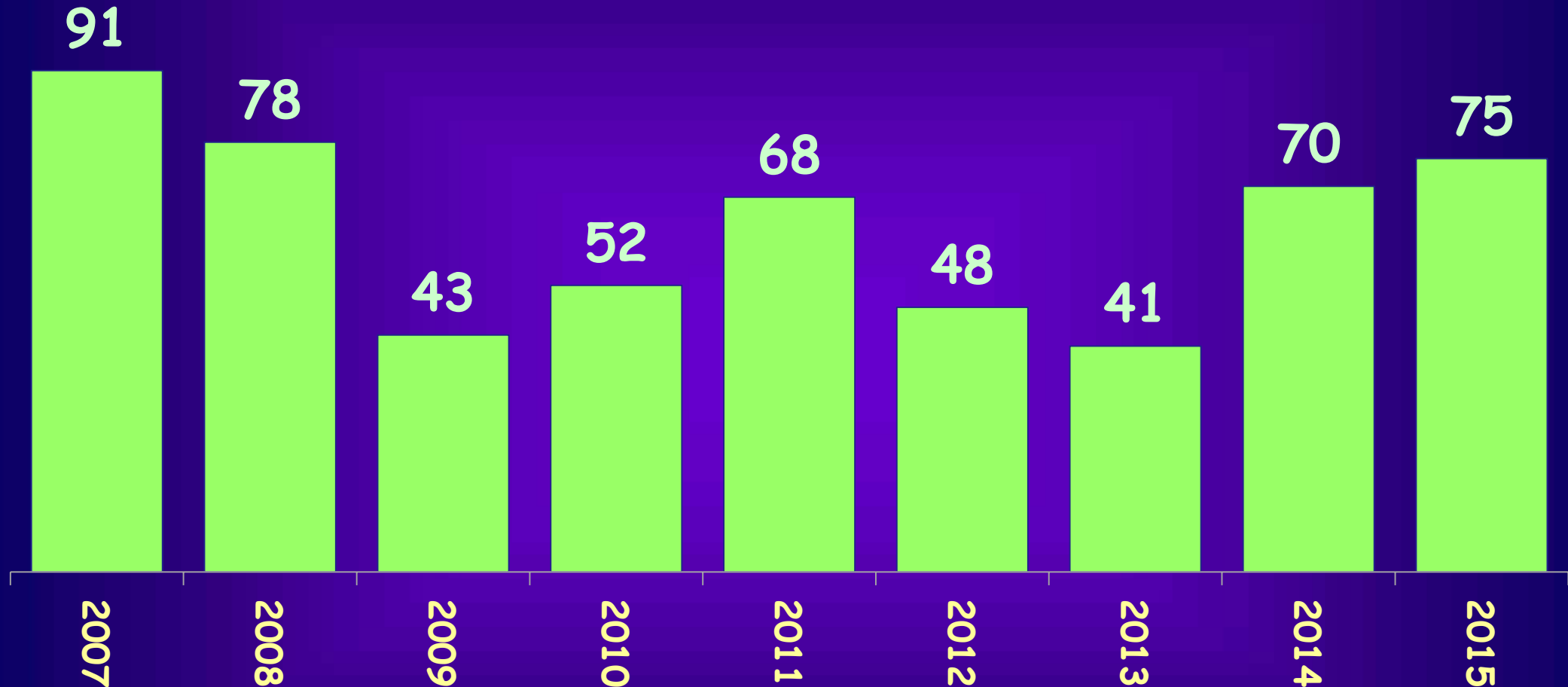
Source: Identifying Consumer Trends in the Produce Category, PMA/Hartman, 2011.

Select Food Industry Trends

The economic downturn accelerated the pace of change in the food marketing system

- Channel blurring still unfolding; retail competition!
- Retailers must have clear value propositions.
- Shift to “shopper-centrism.”
- Channel blurring increasing in foodservice too.
- Growing food safety, traceability, sustainability, social welfare expectations all increase costs.
- Margin pressure at all levels of the food system!
- Need for major investments in IT systems.
- Mergers and consolidation continue, scale is key.

US Food Retailer Mergers & Acquisitions 2007-2015^P: Even Fewer, Larger Buyers!

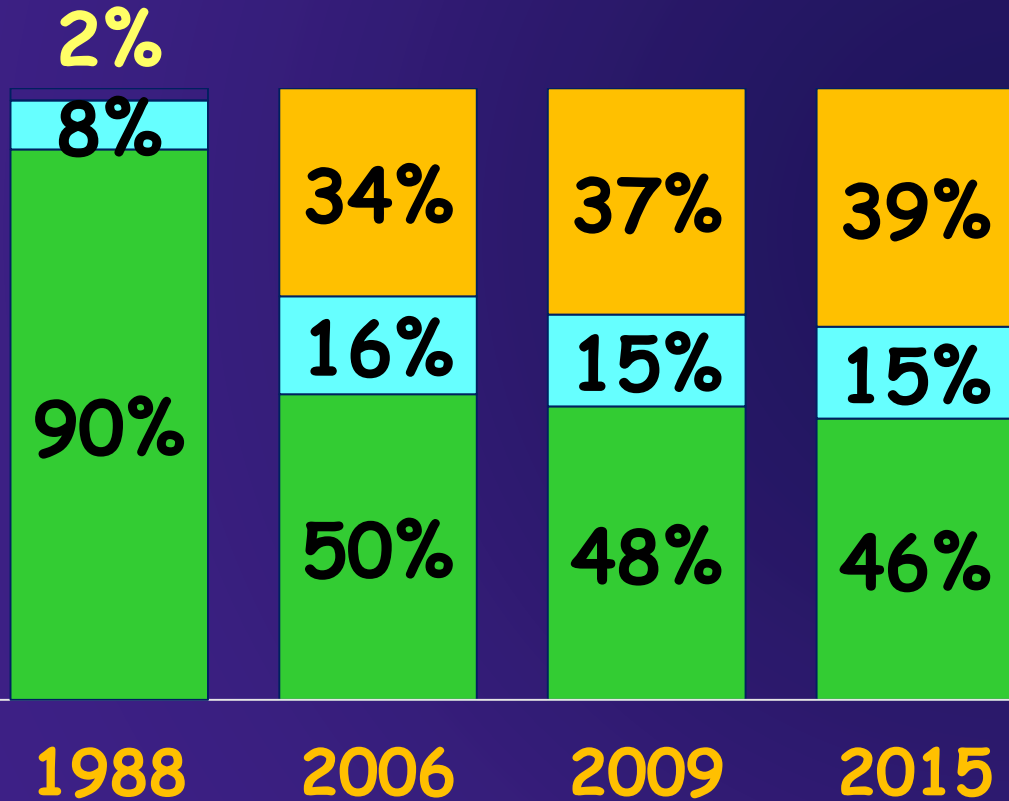


Sources: The Food Institute Report, 1-6-14 and 12-28-15; Food Industry Review 2014 and 2015, The Food Institute; and The Food Institute Webinar *Who's Buying Whom and What to Expect in the Future*, March 3, 2015. Preliminary for 2015.

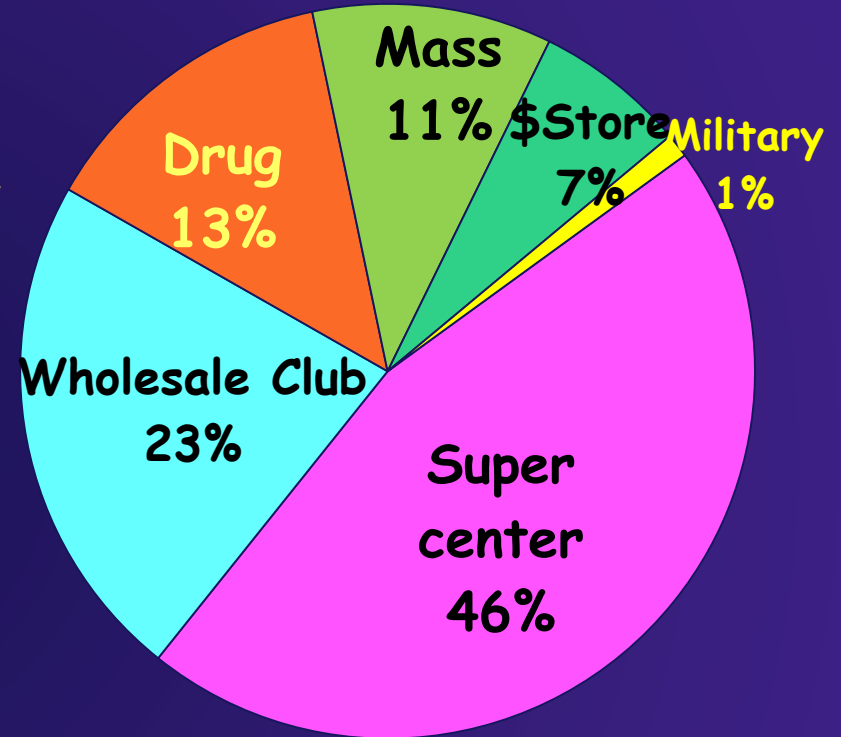
Shifting Grocery Formats: Growth in nontraditional channels has transformed the US grocery industry

Dollar Share by Channel

■ Traditional ■ Convenience ■ Nontrad.



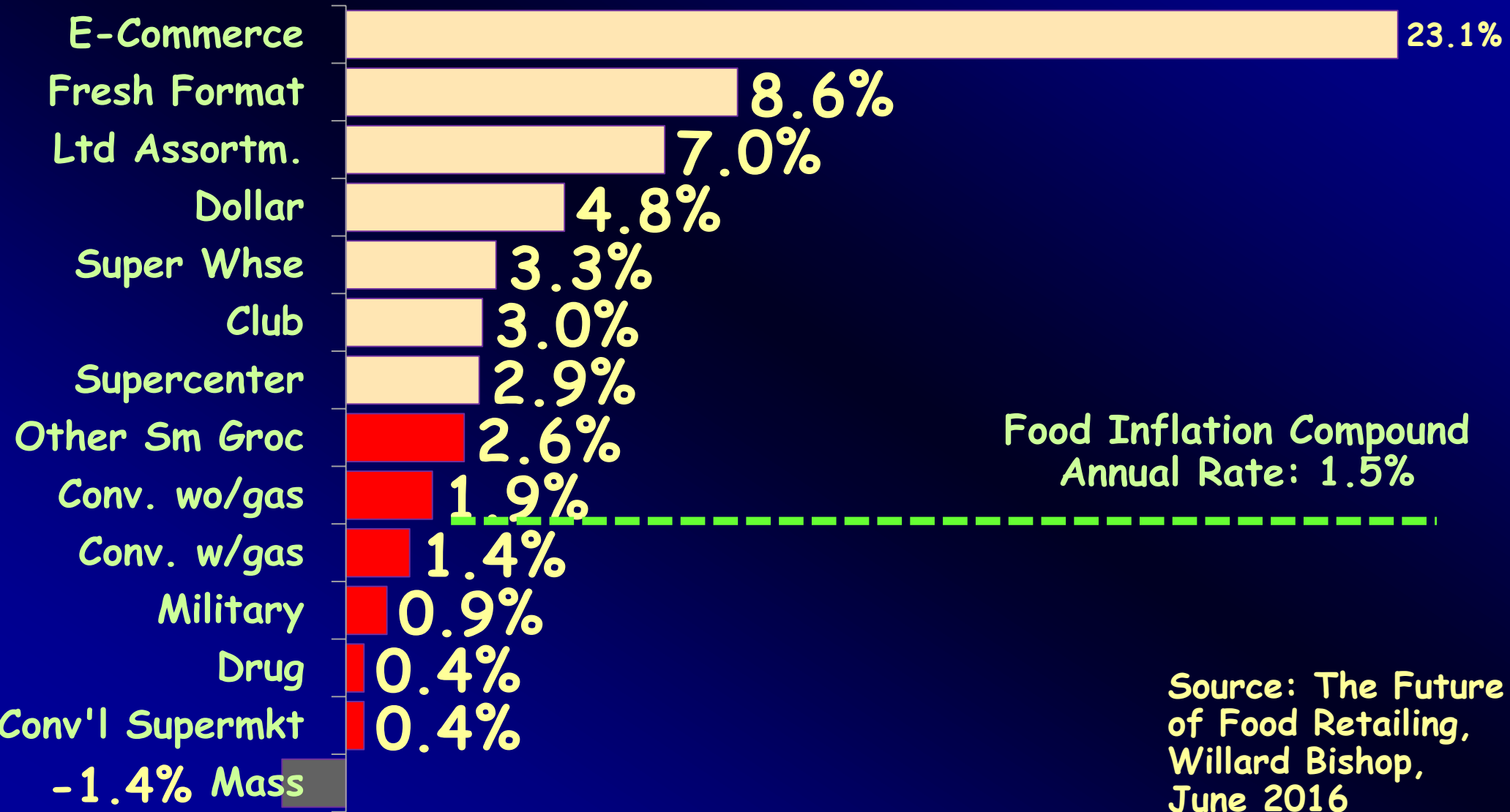
Traditional=conventional supermarket, fresh format, ltd assortment, super warehouse, other



Dollar Share of Food Sales in Nontraditional Formats

Sources: Willard Bishop, various The Future of Food Retailing reports

Forecast of Compound Annual Sales Growth Rate vs. Inflation for US Grocery Formats, 2016-2020



Total US Grocery Sales,* Store Numbers, and Market Share by Channel, 2015

	Sales \$Million	No. of Stores	% of Sales
Traditional	\$556,365	40,768	45.8
Nontraditional	\$469,822	61,339	38.7
Total C-Stores**	\$188,029	160,698	15.5
GRAND TOTAL	\$1,214,216	262,806	100.0

*Grocery sales only (food and nonfood); excludes electronics, prescription drugs, toys, jewelry, sporting goods, gas, clothing, footwear, knickknacks, and hardlines. **Sales exclude gas.

Source: The Future of Food Retailing, Willard Bishop, June 2016

US Grocery Sales, Store Numbers and Market Share of Total Grocery Sales, by Store Format, 2015, and Projected Share, 2020
Traditional Grocery Channel

	2015 Sales \$Million	2015 No. of Stores	2015 % of Sales	2020 % of Sales
Total Traditional	\$556,365	40,768	45.8%	44.7%
Conven. Supermkt	\$467,766	26,223	38.5%	35.5%
Fresh Format	\$17,477	1,293	1.4%	2.1%
Ltd Assortment	\$35,244	3,938	2.9%	3.9%
Super Warehouse	\$22,463	593	1.8%	2.0%
Other (small groc.)	\$13,415	8,722	1.1%	1.2%

Source: The Future of Food Retailing, Willard Bishop, June 2016

US Grocery Sales,* Store Numbers & Market Share of Total Grocery Sales, by Store Format, 2015, & Projected Share, 2020

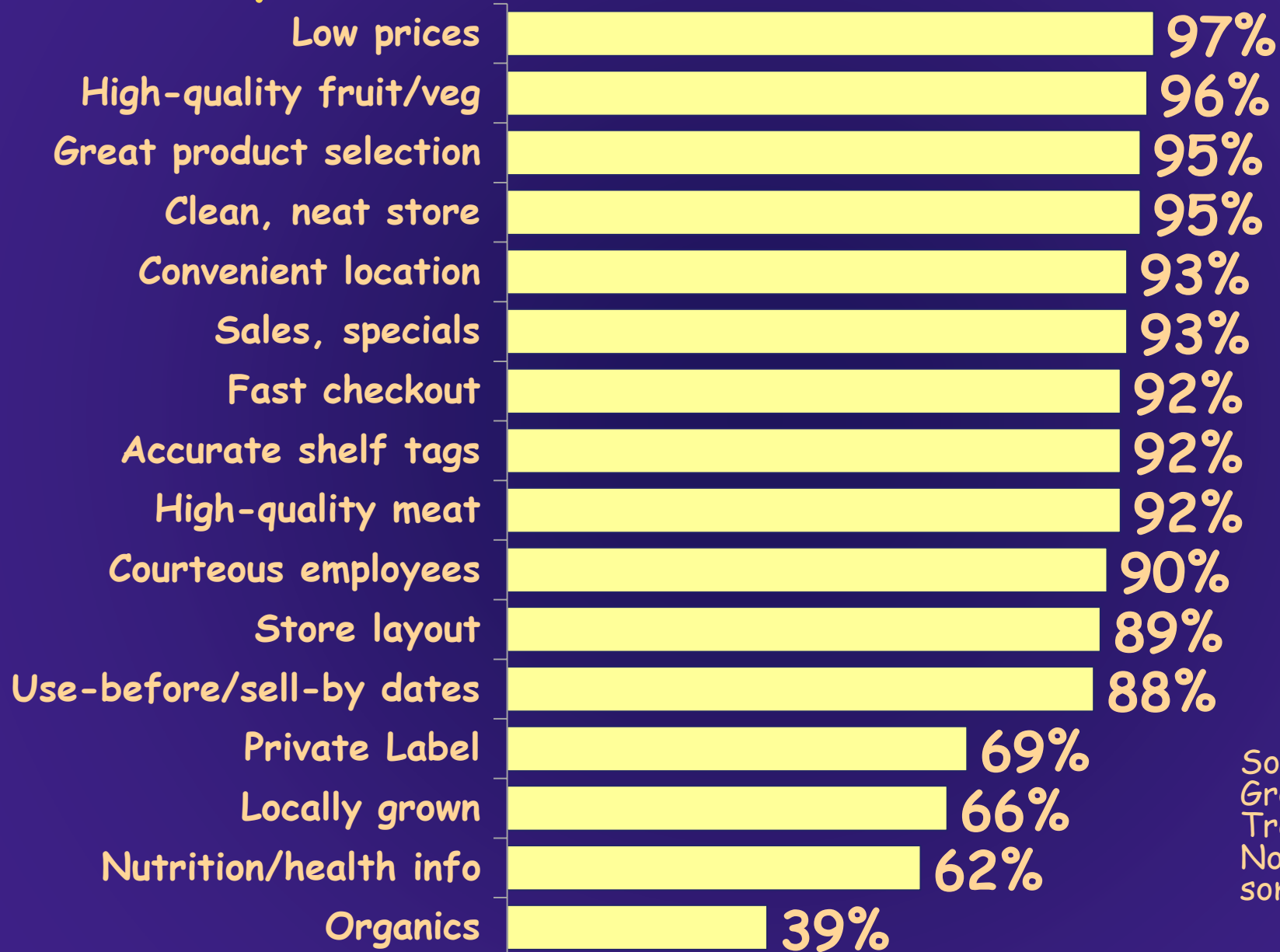
Nontraditional Grocery Channel

	2015 Sales \$Million	2015 No. of Stores	2015 % of Sales	2020 % of Sales
Total Nontrad'l	\$469,822	61,339	38.7%	39.8
Wholesale Club	\$106,825	1,446	8.8%	9.4
Supercenter	\$216,283	4,020	17.8%	18.9
Dollar Store	\$32,401	29,189	2.7%	3.1
Drug	\$61,080	23,490	5.0%	4.6
Mass	\$48,587	3,013	4.0%	3.5
Military	\$4,647	181	0.4%	0.4

*Grocery sales only (includes food and non-food); excludes electronics, prescription drugs, toys, jewelry, sporting goods, gas, clothing, footwear, knickknacks, and hardlines.

Source: The Future of Food Retailing, Willard Bishop, June 2016

Most Important Factors in Store Selection for US Consumers, 2015: Produce is a Star!



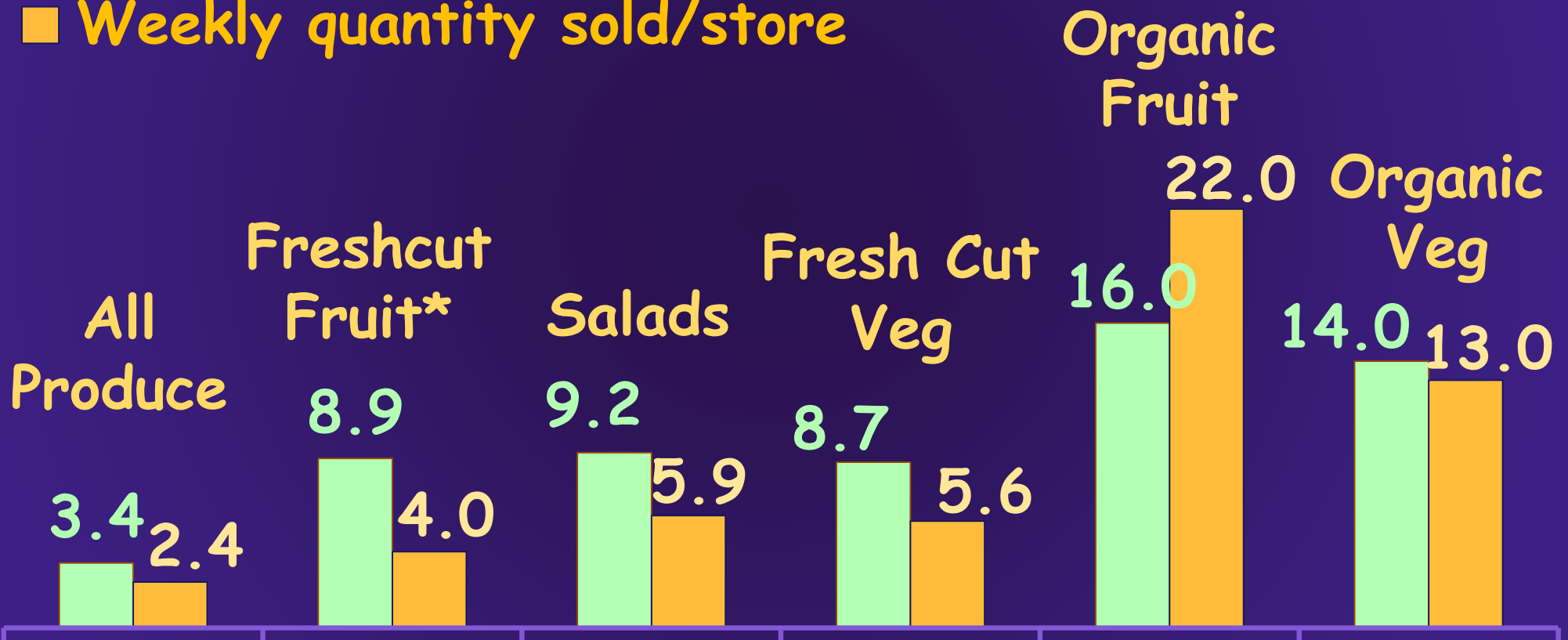
Source: FMI U.S. Grocery Shopper Trends 2015, p. 110.
Note: list excludes some items.

Fresh Produce Value Chain

Freshcut, Organic and Total Fresh Fruit/Veg Sales in Key US Food Retailers, % Change 2015 vs 2014

■ Weekly \$ sales/store

■ Weekly quantity sold/store



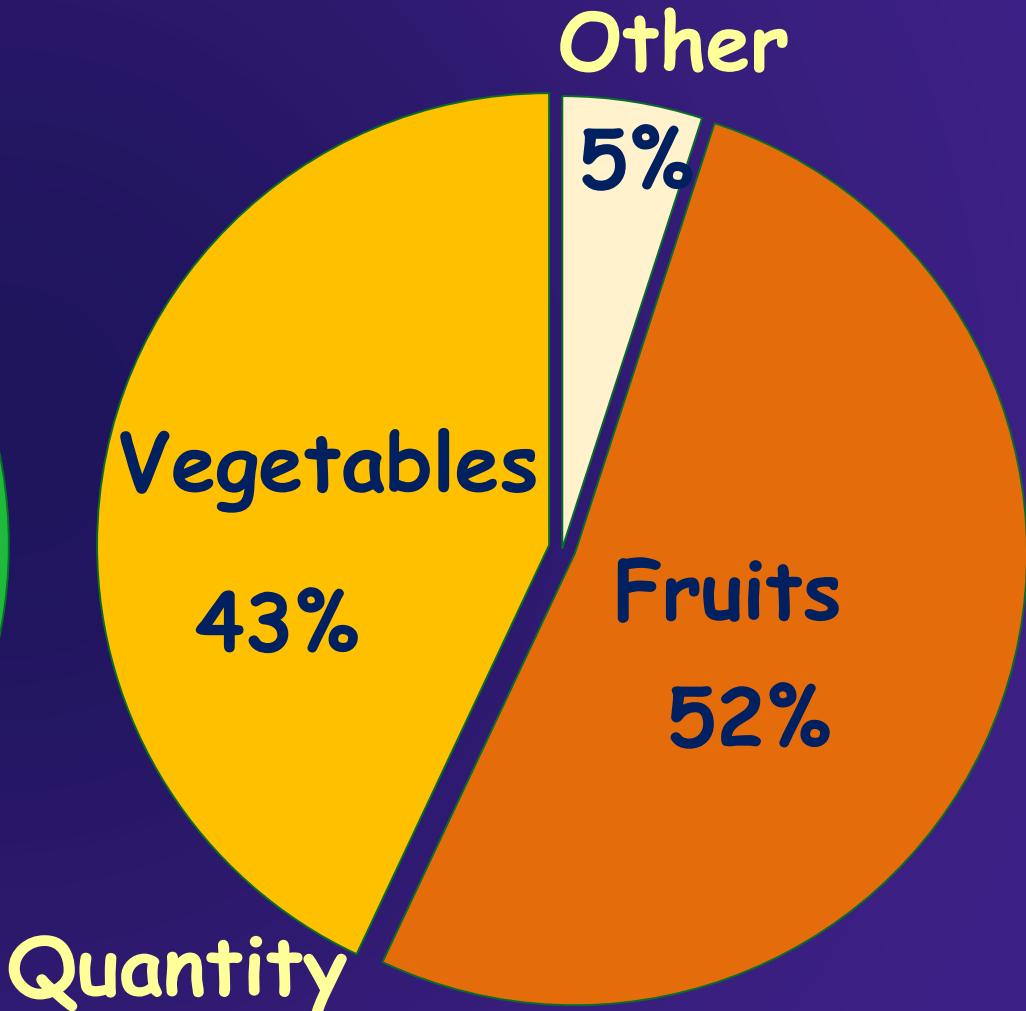
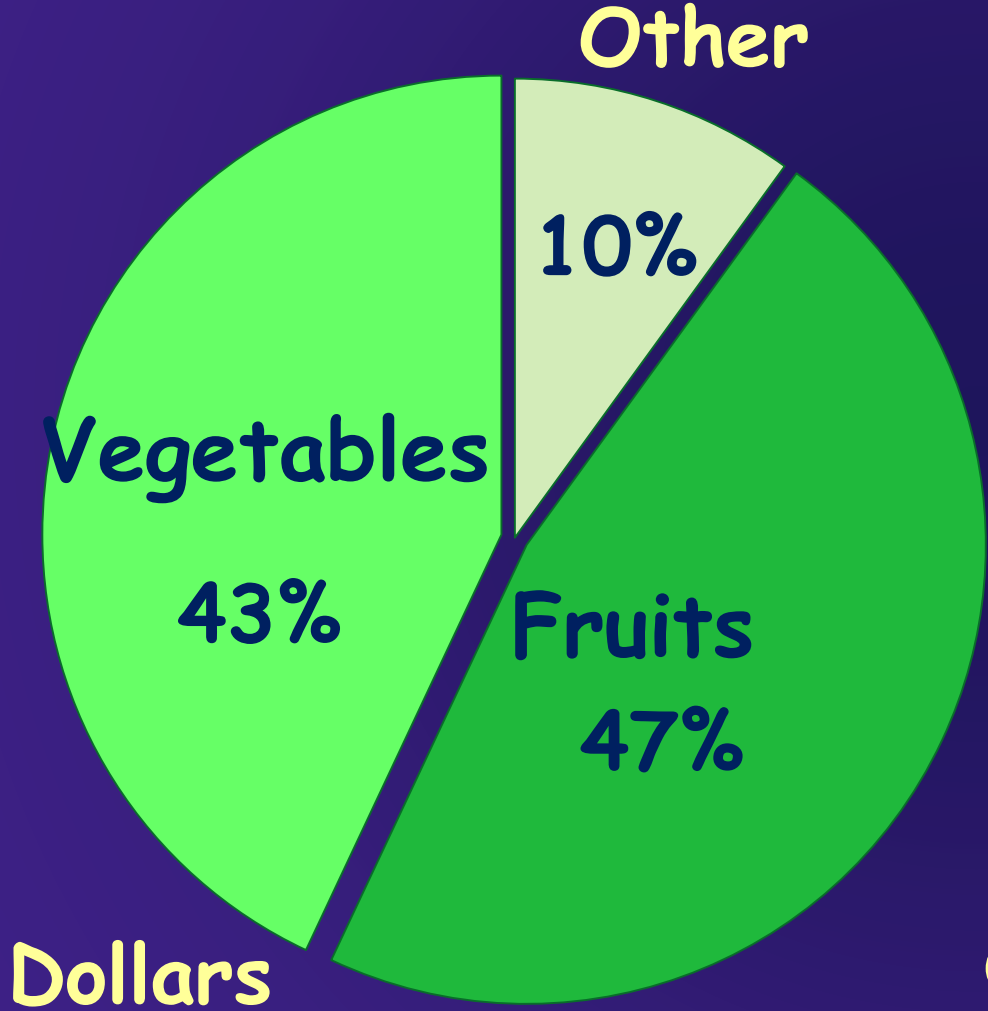
*Excludes overwrap.

Source: FreshFacts® on Retail, Whole and Fresh Cut Produce Trends: 2015, United Fresh Produce Association and Nielsen, March 2016. Fresh Coverage Area (FCA) including key retailers from food, mass/supercenter and club chains, or more than 18,000 stores. It includes UPC, random weight and retailer assigned codes.

Select Food Retail Trends: Fresh Is Well-Positioned, 2015

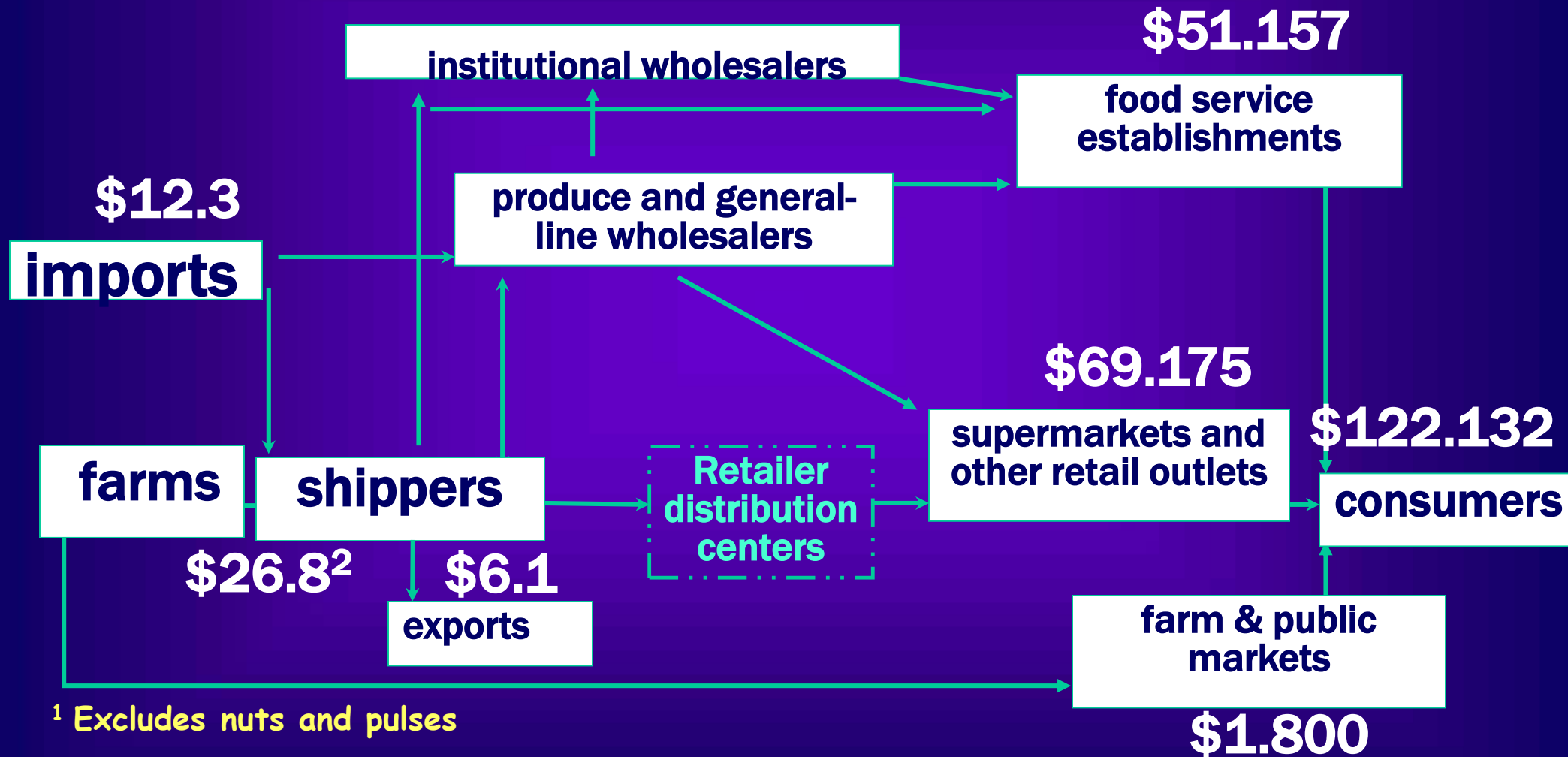
- Perimeter share of grocery store sales=37%.
- Produce=11.4% of total grocery store sales.
- Total # of household trips to purchase all groceries has been trending down for some time; down by 1.3% in 2015.
- Whereas the total # of household trips to purchase *fresh* (not only produce) has been trending upward; increased by 1% in 2015.
- Recent growth in fresh produce sales due to gains in household penetration and trip frequency.

Contribution to Retail Produce Department Sales by Key Type of Produce, 2015



Source: FreshFacts® on Retail, Whole and Fresh Cut Produce Trends: 2015, United Fresh Produce Association and Nielsen, March 2016.

U.S. Fresh Fruit and Vegetable¹ Value Chain, Estimated Dollar Sales, Billions, 2010



Sources: Compilations by Kristen Park, Roberta Cook, and Edward McLaughlin based on U.S. Retail Census, ERS/USDA, NASS/USDA, U.S. Department of Commerce, and other data.

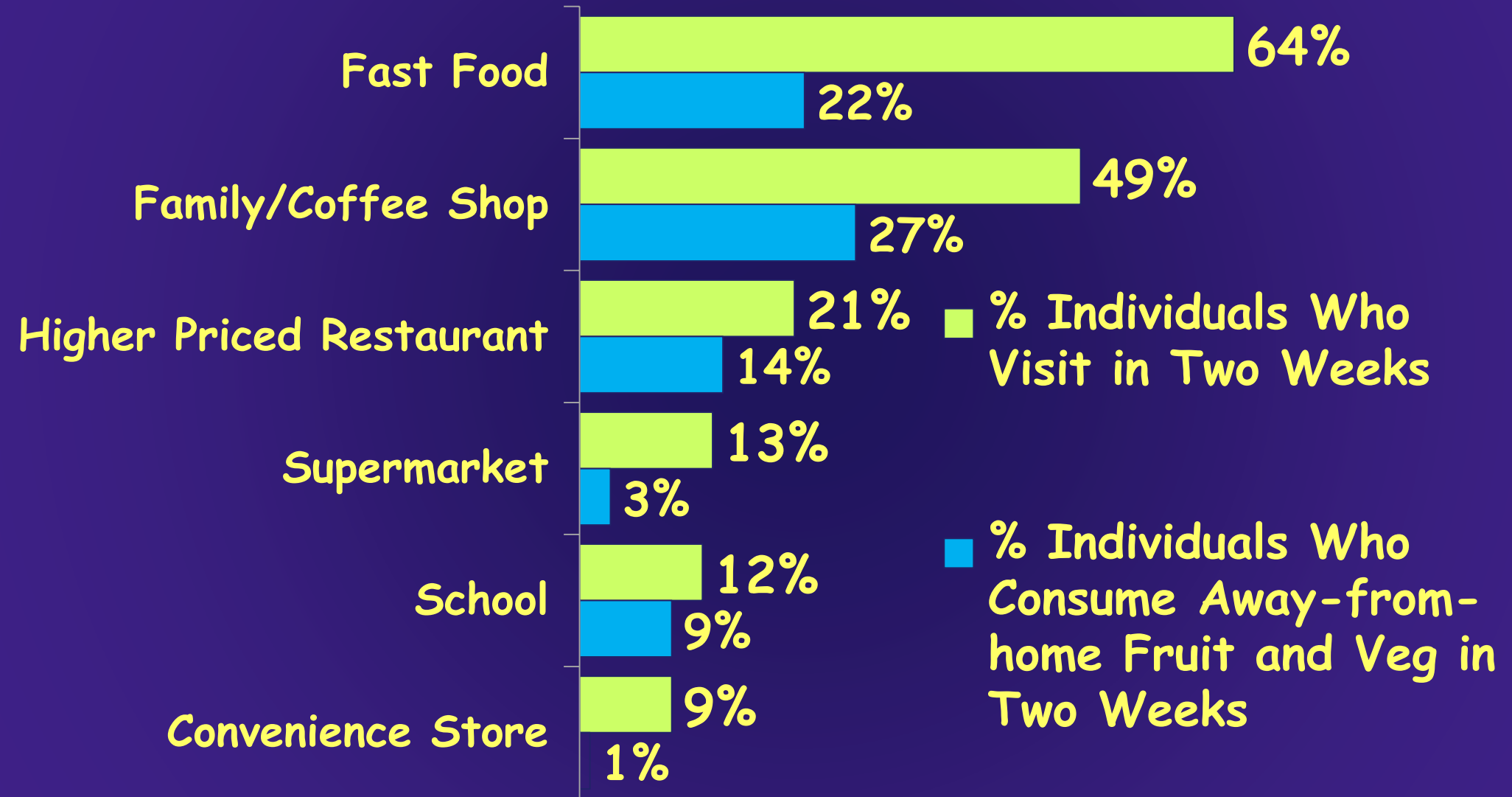
Foodservice no longer expanding at past rates but fresh produce usage is growing

- All segments trying to add produce to menus, “chasing deliciousness.”
- Changing shares within foodservice by segment.
- Fast-casual segment growing; emphasizes fresh.
- In 2015, the fast-casual chain restaurant count rose by 5% to 19,043 total units; whereas total foodservice units were down 6% to 629,488 units.
- In 2015, fast-casual customer visits were up 6% whereas total foodservice traffic up by only 1%.
- QSR's add produce, incl McDonald's: Cuties, dark green salad blends, apples, Happy Meal defaults.

Obstacles to Fresh Produce in Foodservice

- Cost
- Seasonality
- Perishability
- Price volatility
- Seasonal shoulders especially risky
- Labor for prep; VAP helps but costs more
- Even the largest fresh produce suppliers are small relative to food manufacturers
- Sourcing often not as direct as for retail
- Variations in quality, flavor

Away-From-Home Sources of Fruit and Vegetables of US Consumers, 2014



Source: Produce for Better Health Foundation, State of the Plate - 2015 Study on America's Consumption of Fruits and Vegetables.

Estimated Ranges of Losses in the U.S. Fresh Produce Distribution System

<u>Distribution Activity</u>	<u>Percent Losses</u>
• Transportation	2.80 - 5.00
• Wholesaling	2.50 - 5.03
• Retailing	2.74 - 6.58
• System losses	7.04 - 16.61

Update: 2010
Guestimate by
Roberta Cook,
Preliminary:
9-12% or \$11-15
billion.

Source: Pierson, Thomas R., Allen, John R. and McLaughlin, Edward W., "Produce Losses in the U.S. Food Distribution System," *MSU Agricultural Economics Report*, 1983.

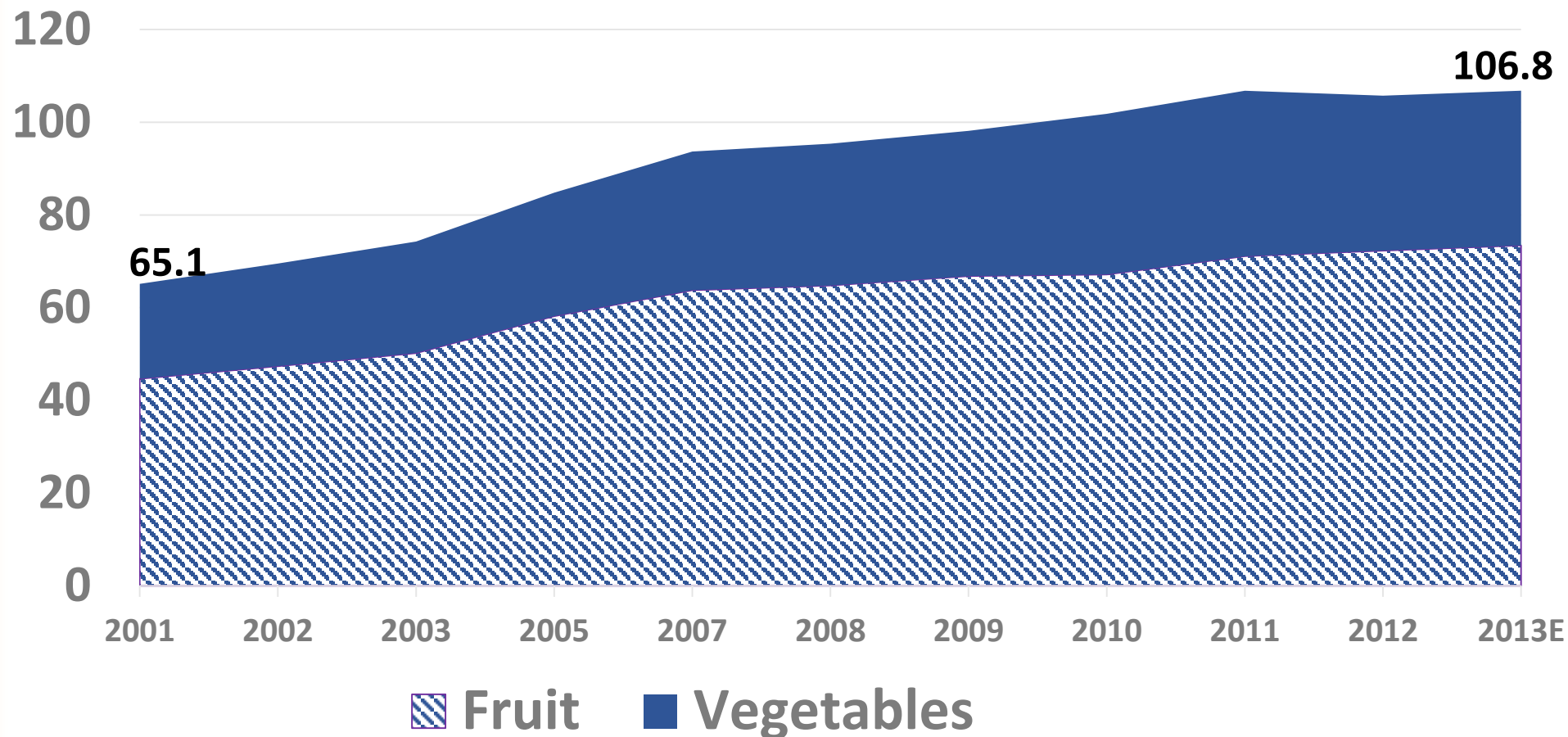
Percentage losses are based on dollar values of losses in each phase of distribution as a % of the wholesale value of products entering the distribution system.

The Produce Industry Challenge

- Getting the right product to the right consumer at the right place and price, with reasonable remaining days of shelf-life.
- Requires collaboration between suppliers and retailers, including sharing loyalty card data, and promotional efficiency analysis.
- Most shippers not assisting with individual store shelf-set recommendations, great opportunity.
- We can increase efficiency and reduce shrink through better coordination of supply and demand. This will make produce more affordable to more consumers, expand demand.

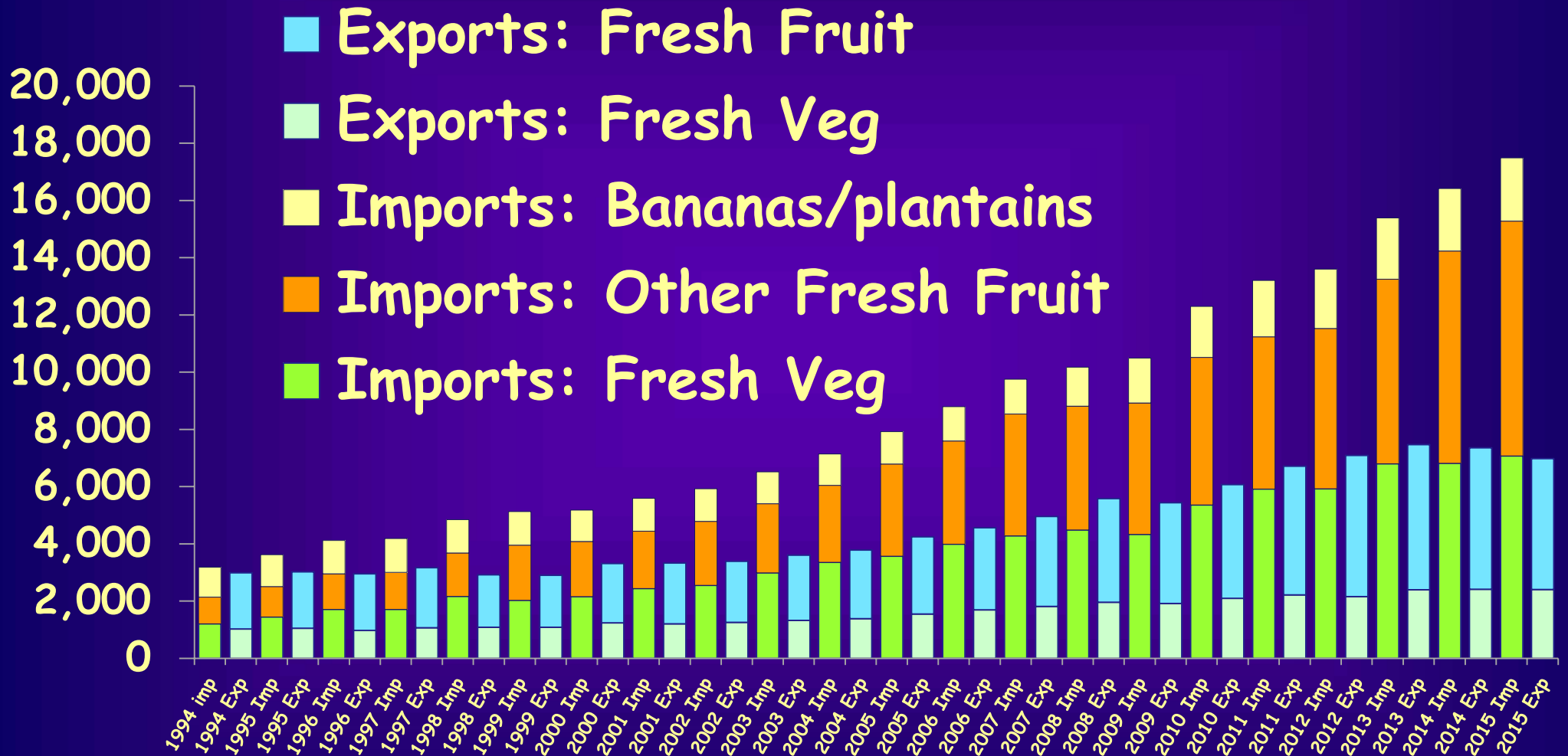
International Trade in Fresh Produce

Global Exports of Fresh Fruits and Vegetables, Million Metric Tons, 2001-2013^E (excludes potatoes)



Source: Compiled by Jan Kees Boon of Fruit & Vegetable Facts utilizing data from Eurostat and UN Comtrade (HS codes fruit: 0803-0810; vegetables: 0702-0709)

US Fresh Produce International Trade: Imports and Exports, by Key Category, Million US\$, 1994-2015



Source: US GATS online queries, BICO-10, February 8, 2016.

Fresh fruit and vegetable imports as a share of US fresh utilization/consumption, 2014/15* (despite rising imports most of US consumption is still produced here)

Item	%
Vegetables, excl. melons and potatoes	29
Melons	33
Potatoes	8
Fruit, all	50
Excluding Bananas	34

*Vegetable shares are for 2015 and fruit for 2014 (most recent data).

Source: Economic Research Service, USDA.

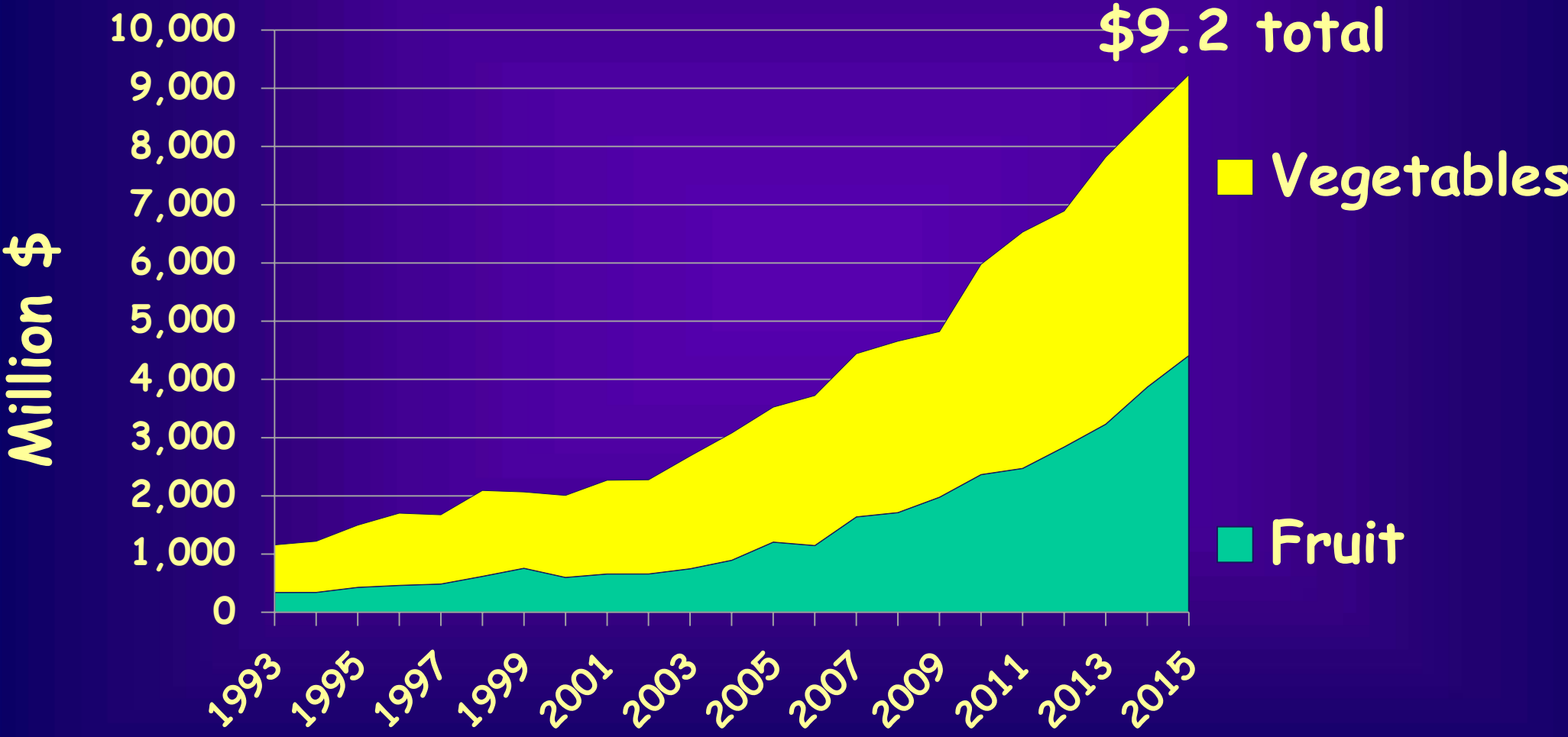
US Fresh Produce Industry Relative Competitiveness

- The relatively strong competitiveness of the US industry is because more than being labor-intensive, fruit/veg are knowledge, technology, capital, and marketing-intensive. LOCATION!
- However, protected culture (greenhouses, shadehouses), which is technology and capital-intensive is emerging at least as rapidly elsewhere.
- US growers face an ever more complex regulatory environment.
- Labor availability is increasingly problematic, everywhere.

NAFTA Fresh Produce Trade, 2015

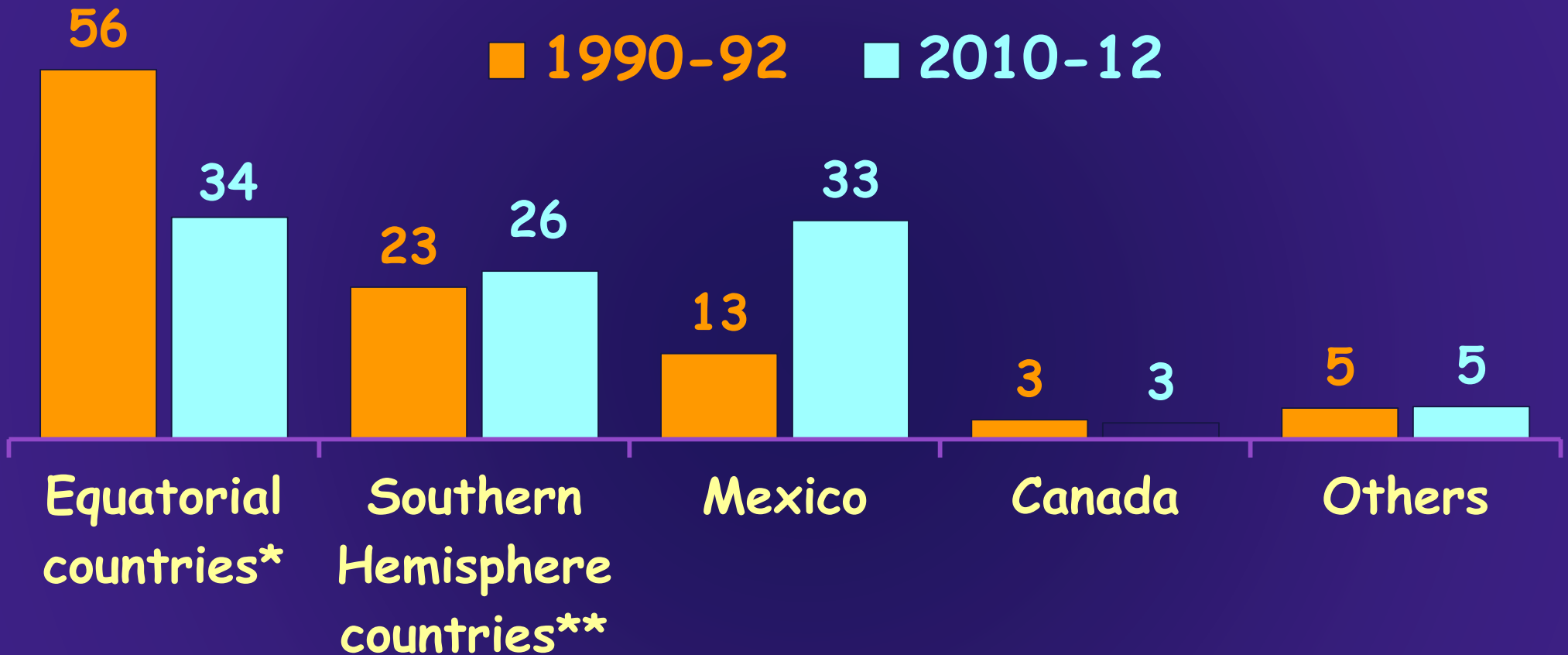
- N. American fresh veg trade mainly intra-NAFTA!
- 78% of US fresh vegetable exports go to Canada; 5% to Mexico; 4% to Japan.
- 68% of US fresh veg imports come from Mexico; 17% from Canada; Peru 1%.
- The US is Mexico's predominant export market for both fresh fruit and veg.
- US fresh fruit trade is diverse - beyond NAFTA.
- Mexico's role in fresh fruit trade is growing.

US Imports of Fresh Fruit and Vegetables from Mexico, 1993-2015 (excludes canned, frozen, juice and dried)



Source: USDA/FAS GATS online query February 8, 2016.

Value Shares of Total U.S. Fresh Fruit Imports, by Region: Mexico Wins!



* Equatorial countries include Costa Rica, Guatemala, Ecuador, Colombia, and Honduras

** Southern Hemisphere countries include Chile, Argentina, Peru, New Zealand, Brazil, South Africa, and Australia

Conclusions

- Competitive pressure on retailers and foodservice operators means on-going margin pressure for suppliers as well.
- Firms at all levels of the fresh produce supply chain must take management practices to a higher level to improve efficiency and survive on lower margins.
- Information technology will play a growing role.
- Shopper-centrism and targeted marketing to specific segments will grow; social media will help.
- Strategic alignment between suppliers and commercial buyers.
- Fresh produce demand improving along with the economy.