

# Cost of Production & Profitable Pricing



Organic  
Yellow  
Peach

4/20 through 4/26

**2<sup>49</sup>** /lb.

From: MEXC10  
94037

SAVE \$1.00

**WEEKLY SPECIAL**

DAVIS FOOD  
CO-OP

04/19/2016

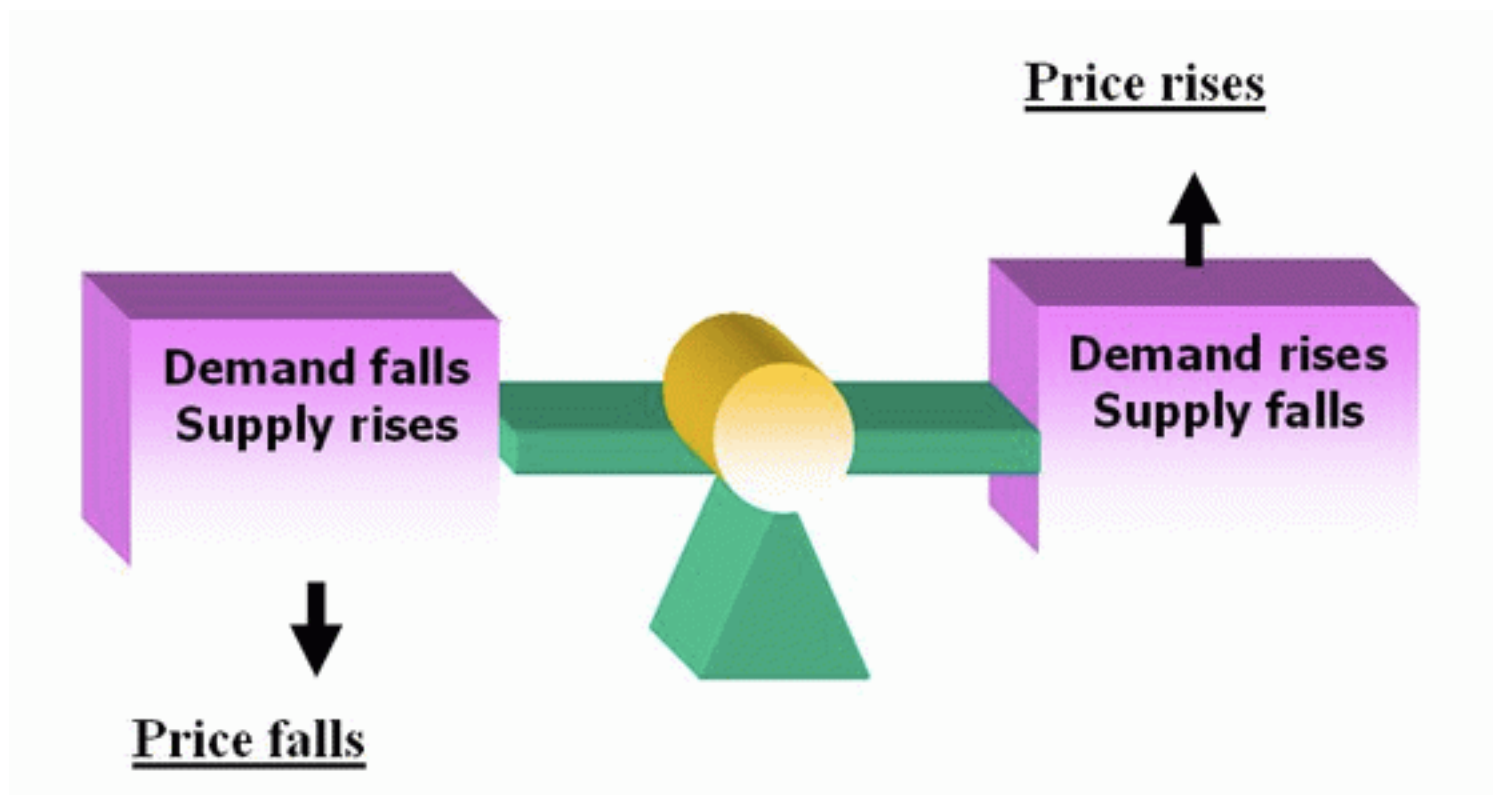
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**EcoFarm 2017**

# What determines market price?



# What determines market price?

*In a capitalist society the prices of goods, services and labor are determined by **supply** and **demand***



# Vegetables and Pulses Outlook/VGS-356/April 29, 2016

## Economic Research Service, USDA

US production of vegetables decreased from 2014 to 2015, as 3% of area harvested declined.

In 2015, about **22 percent** of vegetables consumed domestically were imported while 13 percent was exported to foreign destinations. Import share of domestic use of vegetables has nearly tripled in the last two decades from 8 percent in 1995 to 22 percent in 2015



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Future trend: USA will be importing more from Mexico and other countries, to fill the demand for lower prices.

- Labor (minimum wage)
- Cost of production
- Trade agreements

# What about Demand?



Demand for Fresh Vegetables in the United States: 1970–2010  
[Cephas Naanwaab](#)<sup>1,2</sup> and [Osei Yeboah](#) Economics Research International  
 Volume 2012 (2012)

**Table 1:** Per capita annual consumption of fresh vegetables in the USA (pounds).

Commodity	Period						
	1970s	1980s	1990s	2000	2005	2010	
Cabbage	8.6	8.6	8.5	8.9	7.8	7.5	—
Carrots	6.2	6.8	10.4	9.2	8.7	7.6	—
Celery	7.2	7.1	6.9	6.3	5.9	6.2	—
Cucumbers	3.1	4.5	5.6	6.4	6.2	6.8	+
Lettuce	23.8	25.0	24.4	23.5	20.9	16.1	—
Onions	10.8	13.0	17.3	18.9	20.9	19.9	+
Peppers	2.6	3.7	7.2	8.2	9.2	9.9	+
Tomatoes	12.2	14.6	16.8	19.0	20.2	20.8	+
Subtotal of 8 veggies	74.4	83.2	97.1	100.2	99.7	94.8	
All fresh veggies	90.5	103.1	128.2	146.8	148.1	143.6	

Consumption of these 8 vegetables increased each decade from 1970 – 2000. Increased prices may have contributed to decrease in the last decade. Consumption of all veggies increased each decade, may be a reflection of health consciousness on the part of consumers.



# Demand



● ● ● A Report from the Economic Research Service

[www.ers.usda.gov](http://www.ers.usda.gov)

## Younger Consumers Exhibit Less Demand for Fresh Vegetables

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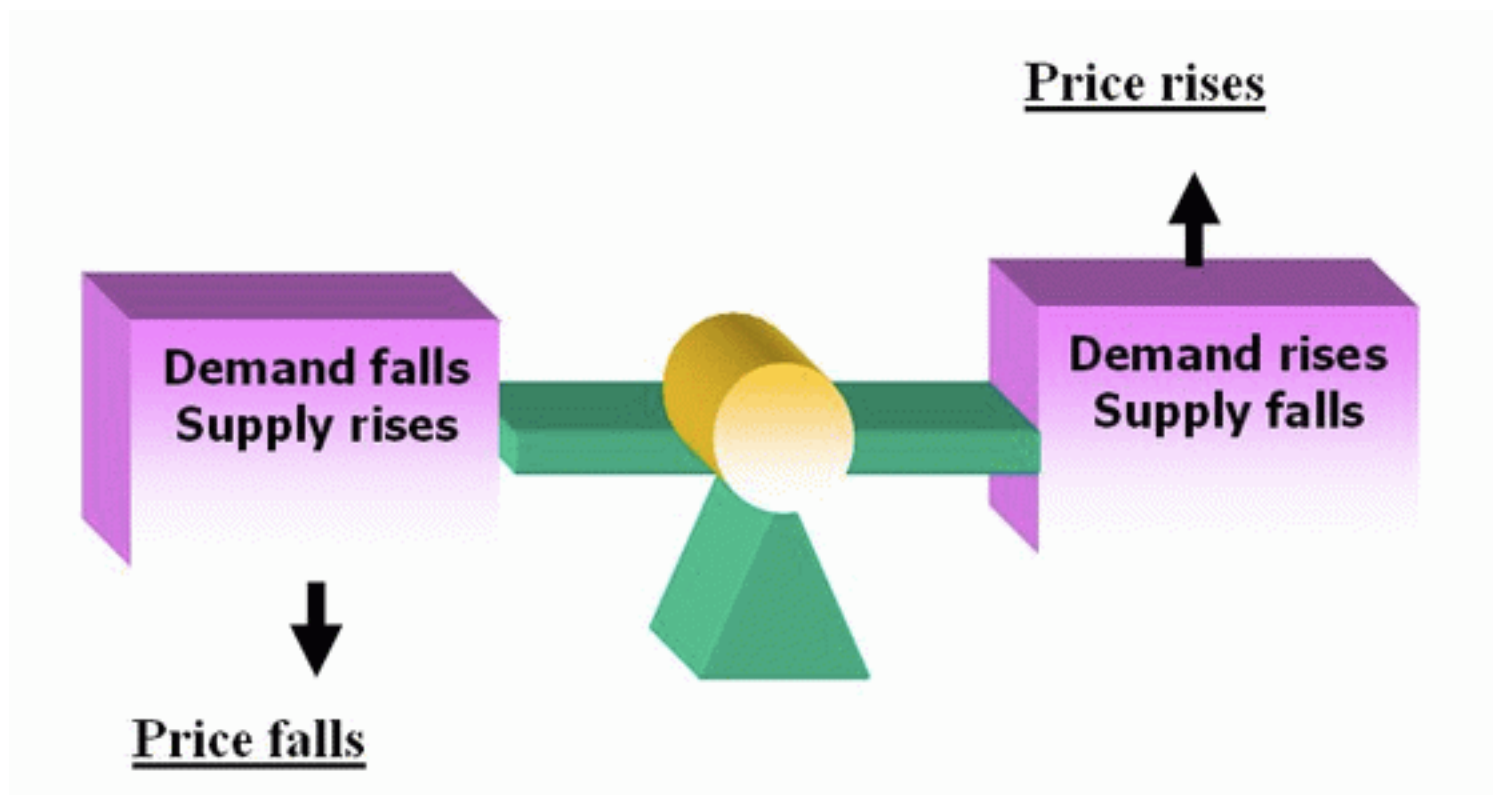
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### Abstract

Growth over time in the demand for fresh vegetables for at-home consumption may slow because of differences in the behavior of younger and older birth cohorts. A birth cohort includes people born in the same year and is similar in concept to a generation. People born around the same point in history may share common behaviors that they carry throughout their lives independent of age. Using data from the Consumer Expenditure Survey, collected between 1982 and 2003, this study explores how at-home demand for fresh vegetables varies among members of younger and older

# What determines market price?

*In a capitalist society the prices of goods, services and labor are determined by **supply** and **demand***



# How do YOU determine your price?



A chalkboard sign titled "PRICES" listing various vegetables and herbs with their prices. The sign is written in white chalk on a dark, textured surface. The items and prices are as follows:

Item	Price
ARUGULA	2
RED SPINACH	1.50
KALE	2
MESCLUN Mix	3
GREEN ONIONS	1.50
BOK CHOY	1.50
BROCCOLI	1.50
NEW POTATOES	1/lb
BASIL, CILANTRO, OREGANO, MINT	1
DRIED CATNIP	1
CATNIP TOYS	1.50

NCAAT

- Cost of production
- Current market prices
  - Conditions

# Calculating Your Cost of Production

- Pre-planting Costs
  - (same for all crops)
  - Primary tillage, bedding, pre-irrigation
- Pre-Harvest Costs
  - Transplanting
  - Weeding
  - Irrigating
  - Planting
  - Fertilizing
  - Spraying
- Harvest/Wash/Pack Costs
  - How long did it take you to pick x amt, wash, and pack?



# Calculating Your Cost of Production

- Delivery
  - Labor (Driver)
  - Gas costs for route
- Overhead
  - Rent
  - Insurance
  - Admin/planning
  - Electricity
  - Dumpster
  - Porta potties
  - Internet



# Pre-Plant Costs

Cost of Production Analysis - EXAMPLE				
Per Crop, Per Acre				
Pre-Plant Costs				
Pre-Plant Costs /per instance /per Acre	Labor Hr (\$15)	Tractor Hr (\$50)	Pump Hr/Ac (\$11)	Total Costs/ per Acre
1st Disking		1.5		75
Plowing		1.5		75
2nd Disking		1.5		75
Bedding/Furrow		2		100
Pre-Irrigate	2		1	41
Liliston		1		50
<b>Total</b>				<b>\$416</b>
Depends on size of beds, width of beds, size of tractor, size of discs				

# Pre-Harvest Costs

<b>Pre-Harvest Costs /per instance /per Acre</b>	<b>Labor Hr (\$15)</b>	<b>Tractor Hr (\$50)</b>	<b>Pump Hr/Ac (\$11)</b>	<b>Total Costs/ per Acre</b>
Transplanting	8	2		\$220
Direct seeding	1	1		\$65
Potato planting	20			\$300
Irrigation	2		1	\$41
Backpack spray	2.5			\$38
Tractor spray		0.75		\$38
Slow-release fertilizer		1.5		\$75
Fish emulsion	2.5		1	\$49
Tractor cultivation		2		\$100
Hand weeding-direct seed	20			\$300
Hand weeding-transplants	10			\$150

# Harvest/Wash/Pack Costs

<b>Harvest/Wash/Pack Costs</b>	<b>#Units/Hr</b>	<b>Labor\$/hr</b>	<b>Labor Costs/Unit</b>	<b>Nr Units/Acres</b>	<b>Harvest Cost/Ac</b>
Beets	4	15	\$3.75	1,500	\$5,625.00
Broccoli	4	15	\$3.75	800	\$3,000.00
Chard	4	15	\$3.75	2,500	\$9,375.00
Cilantro	3	15	\$5.00	900	\$4,500.00
Fennel	5	15	\$3.00	1600	\$4,800.00
Kale	2.5	15	\$6.00	3000	\$18,000.00
Leeks	3	15	\$5.00	2300	\$11,500.00
Parsley	3	15	\$5.00	1200	\$6,000.00
Peas	4	15	\$3.75	190	\$712.50
Potatoes	3	15	\$5.00	500	\$2,500.00
Winter Squash	6	15	\$2.50	450	\$1,125.00



# Cost of Production Analysis

	Pre-plant Costs	Transplanting	Direct seeding	Potato planting	Irrigation	Backpack spray	Tractor spray	Slow-release fertilizer	Fish emulsion	Tractor cultivation	Hand weeding-direct seed	Hand weeding-transplants	Pre-Harvest Costs	Harvest/Wash/Pack Costs	Delivery Costs	Overhead Costs/Acre	Total Costs/Acre
Beets	\$416		1		5				1	2			\$970	\$5,625	3.45	\$18	\$7,032
Broccoli	\$416	1			5		2	1	2	3		2	\$1,274	\$3,000	3.45	\$22	\$4,715
Chard	\$416	1					4	1	3	3		2	\$1,194	\$9,375	3.45	\$25	\$11,013
Cilantro	\$416		1		5	0			5		3		\$1,415	\$4,500	3.45	\$11	\$6,345
Fennel	\$416	1			5	2		1		3			\$876	\$4,800	3.45	\$14	\$6,109
Kale	\$416	1			5		3						\$539	\$7,500	3.45	\$18	\$8,476
Leeks	\$416	1			5			1		3		2	\$1,100	\$11,500	3.45	\$17	\$13,036
Parsley	\$416		1		5			1	2	2	1		\$943	\$6,000	3.45	\$13	\$7,375
Peas	\$416		1		5	1			2	1	1		\$806	\$1,140	3.45	\$16	\$2,381
Potatoes	\$416			1	5		3	1	3	3			\$1,141	\$2,500	3.45	\$26	\$4,086
Winter Squash	\$416		1		5		3	1		2	1		\$959	\$1,125	3.45	\$35	\$2,538

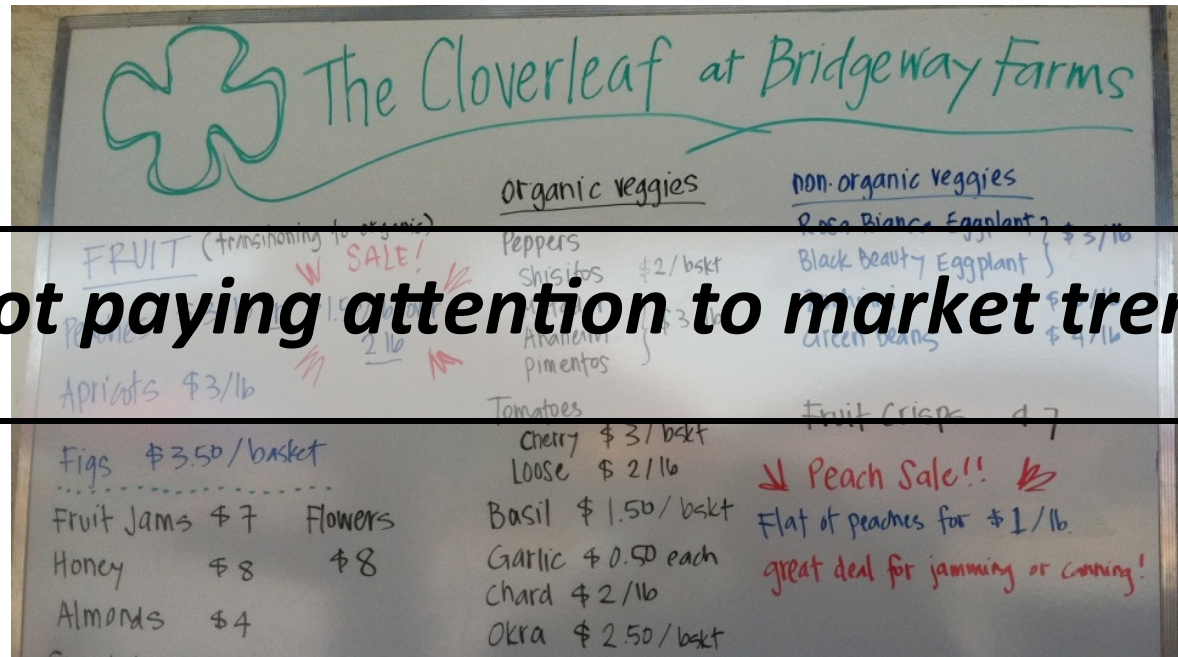
This is just an example of how you can put it into a spreadsheet.

# Cost of Production Analysis

Crop	Price per Unit	Total Cost per Acre	# Units per Acre	Total Cost per Unit	Net Profit/Unit
Beets	23.21	7032.45	1500	\$4.69	\$18.52
Broccoli	34.12	4715.45	800	\$5.89	\$28.23
Chard	23.31	11013.45	2500	\$4.41	\$18.90
Cilantro	16.52	6345.45	900	\$7.05	\$9.47
Fennel	29.32	6109.45	1600	\$3.82	\$25.50
Kale	23.44	8476.45	3000	\$2.83	\$20.61
Leeks	16.5	13036.45	2300	\$5.67	\$10.83
Parsley	22.72	7375.45	1200	\$6.15	\$16.57
Peas	19.56	2381.45	190	\$12.53	\$7.03
Potatoes	30.31	4086.45	500	\$8.17	\$22.14
Winter Squash	23.04	2538.45	450	\$5.64	\$17.40

# Common pricing mistakes

**Not paying attention to market trends.**



- Attempting to compete on price alone
- Pricing too high – not in line with customers' values
- Failing to test different price levels across distribution channels
- Failing to adjust prices for market trends and seasonal fluctuations

# Pricing Too Low = Undervaluing Your Products

- Negative reflection of your work and the quality of your food.
- Customers value what you value
- Not only lose money, you also set the market price lower for everyone.
- Undercutting
- Talk to your neighbors and get your prices in line
- Fair market value for everyone

# Pricing with Confidence

- Customers pay for more than what's in the box
  - Consistency:
    - Communication
    - High quality product
    - Reliability
    - Labeling
    - Administrative accuracies/  
professionalism



# Pricing with Pride



- Put your Proud Farmer on
- Pride reflects in your product and your pack
- Easier to ask for the price that you need
- Value yourself and your work.
- Who wouldn't be proud to be a farmer? 😊

- Hi all, I threw in a couple of extra slides that I didn't show, but that might be useful for growers struggling with this issue – learn to determine your profit margin and how to calculate a retail markup, and farm gate price.

# Farmer's Market Math

**Be careful when selling at Farmers Markets! It can be misleading you fail to distinguish between your Gross Sales and your Net Profit.**

- If your profit margin is 10%, and you are selling \$2000 each week, then your take home profit is \$200 (your expenses would be \$1800 with a 10% profit margin).
- Let's say you have ONE bad market one month -- it's rainy and people don't come, and you sell \$500.
- Then that's  $\$500 - \$1800 = -\$1300$  net profit (loss). That wipes out all the profit you made over the last 4.5 weeks.
- $\$200 \times 3$  good weeks = \$600 ..... +  $-\$1300 = -\$700$ . Net profit for the month is: - \$700.
- So one crappy market wipes out your entire profit for one month of good markets, and actually costs you money.
- Learn to calculate your profit margin so that you can understand when you are making money and when you are losing it.



# Calculating Profit Margin

- Profit Margin = Net Profit / Gross Sales
- Calculate your net profit first, by determining how much it costs you to sell something.
- Then use that net profit divided by your gross sales to determine your profit margin. It will be a percentage.

# Calculating Retail Markups

What is this store paying farmers for this produce?


- Retail price: \$2.50
- $2.50 / (1 + 40\%)$
- $2.50 / (1 + 0.40)$
- $2.50 / (1.40) = \$1.78$
- = what the farmer is getting paid for this item

How much is this store marking up from wholesale price?

- \$2.43 is the wholesale price
- Selling at store for \$3.50
- $3.50 / 2.43 =$
- 44% markup

**Avg retail markup btw 40-45%**

# Thank You



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