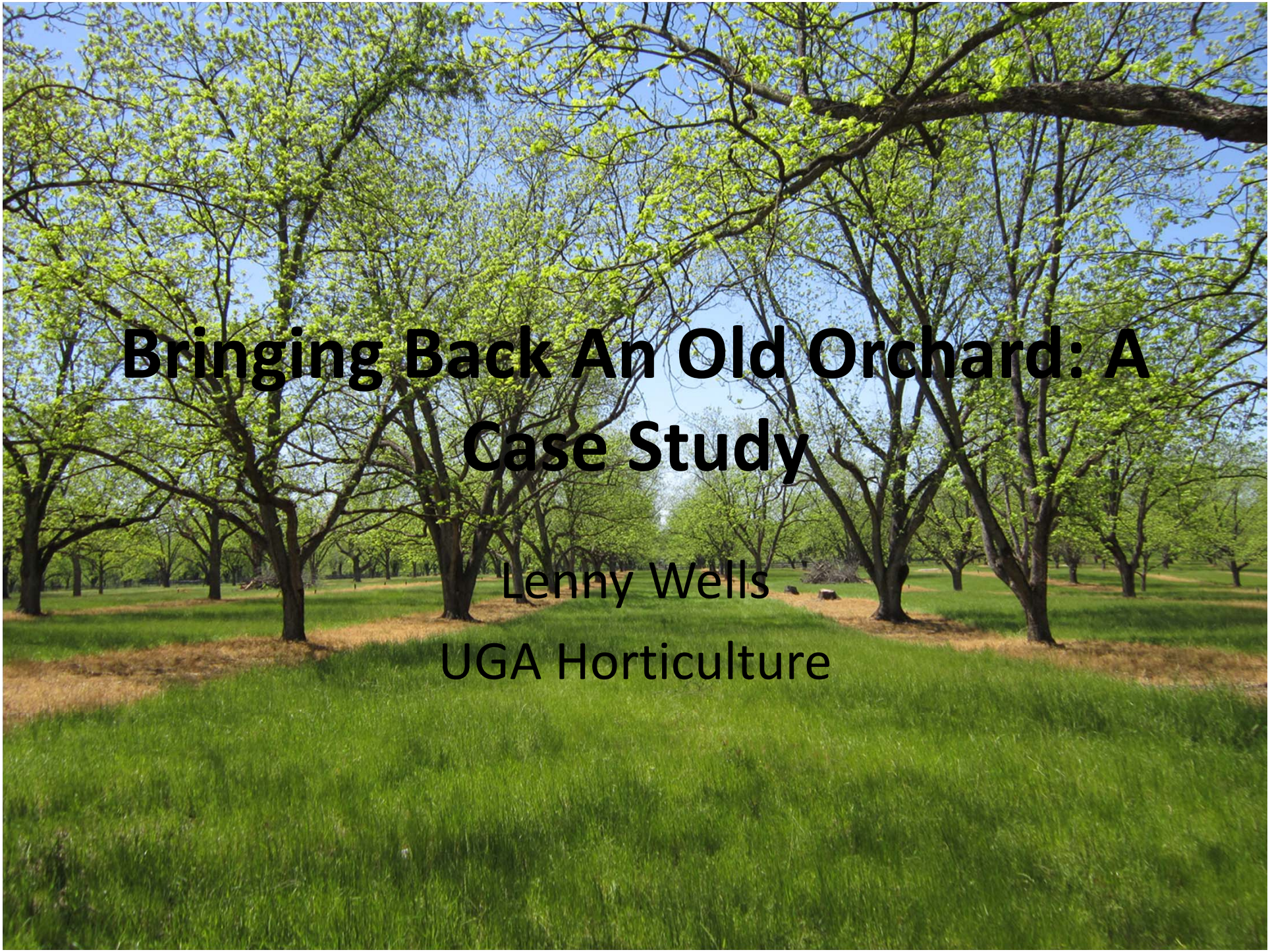
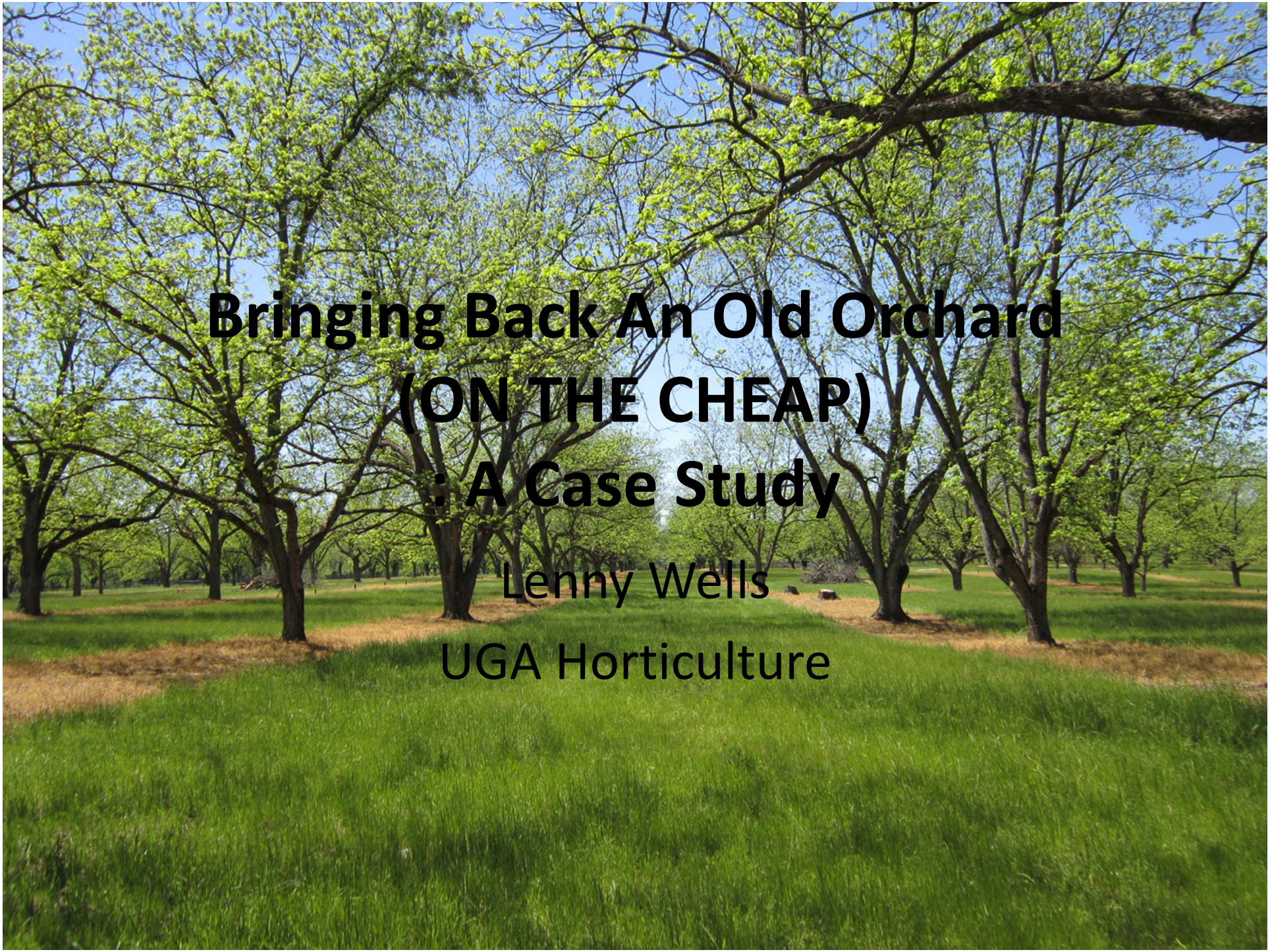


Bringing Back An Old Orchard: A Case Study

Lenny Wells

UGA Horticulture



Bringing Back An Old Orchard (ON THE CHEAP) : A Case Study

Lenny Wells

UGA Horticulture

Keys to Bringing Back An Old Orchard

1. Water
2. Sunlight
3. Adequate Spray Program
4. Fertility
5. Location
6. Goal: Don't just make pecans, make pecans make MONEY

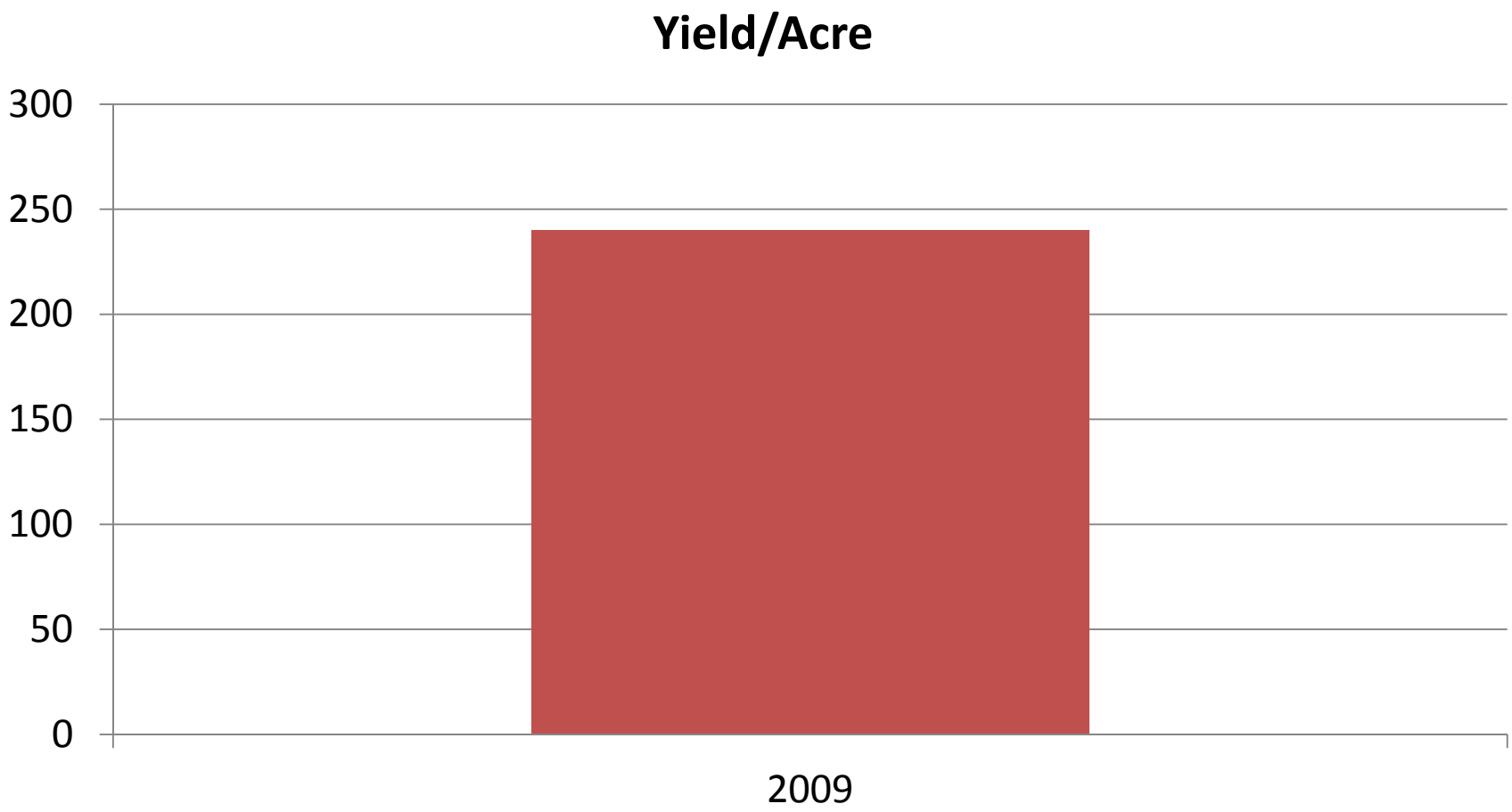
Don't expect too much early on


Traffic, Bicycling, Directions
Ferry Landing Rd
Ferry Landing Rd
Scenic Route

Bringing Back An Old Orchard

- Orchard previously used primarily as a cow pasture
- 46 total acres but only 30 acres worth of trees
- Best yield prior to management 10,000 lbs
- Primarily Stuart, Schley w/ a few Desirable, Pabst, Frotscher, Seedlings, etc.
- Spacing 50 X 50
- Soil Type:

Yields



Irrigation Added February 2010

- Two 4” Wells
  - ~$16,000
- In-Line Drip
  - ~$600/acre

- Total Cost = $34,000 or $1133/acre

Herbicide Program

- March or April: Paraquat + Prowl =$46.72/treated acre
- June: Glyphosate = $2.88/treated acre
- Mid-August:Glyphosate +Alion= $63.36/treated acre

- Only Treating 24% of orchard (12 ft herbicide strip)
  - $27.11/acre


8/24/2012

Irrigation Schedule

	% Max	Gal/day	Monthly Cost
January	0	0	$20.11
February	0	0	$20.15
March	0	0	$20.11
April	17%	**(60 gal/day)**	$25.91
May	26%	**(93 gal/day)**	$102.02
June	33%	**(120 gal/day)**	$218.51
July	40%	**(145 gal/day)**	$221.03
August	100%	**(360 gal/day)**	$380.86
September	100%	**(360 gal/day)**	$343.25
October	26%	**(93 gal/day)**	$102.02
November	0	0	$18.21
December	0	0	$18.46
Total Cost			$1490.64

Irrigation turned off for 3 consecutive days following a rain event of 1” or more

Leaf & Soil Sample Results

	pH		P	K	Zn		
2009	6.1		41	75	35		

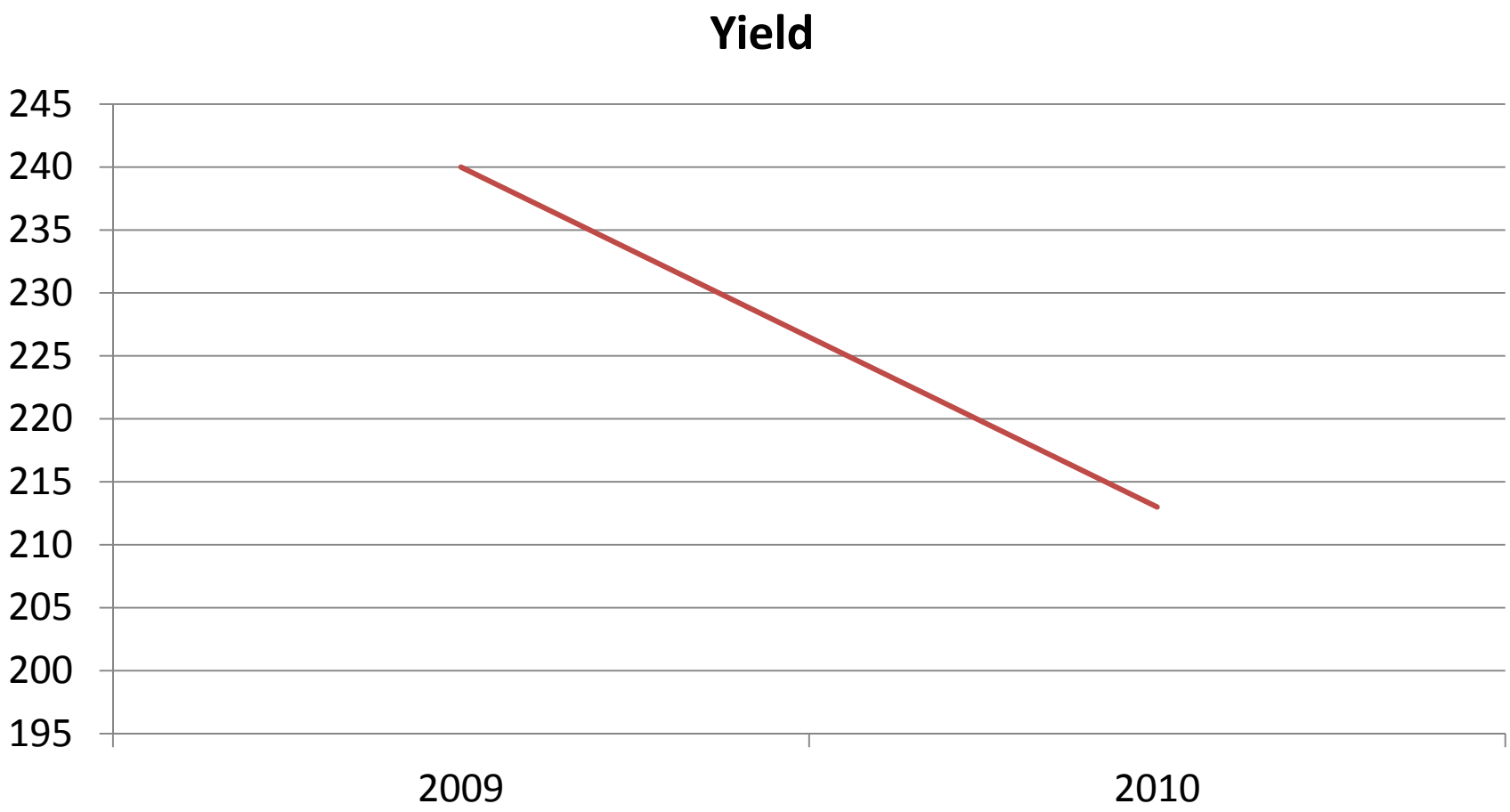
Applied 50 lbs N as Urea broadcast toward herbicide strip in April
Fertilizer covered 11 acres (including overlap) or 37% of orchard
Today's Cost: $269.50 or $8.98/acre

	N	P	K	Mg	Ca	S	B	Zn	Mn	Fe	Cu
2010	2.28	0.14	1.52	0.52	1.96	0.21	52	96	893	73	11

2010 Spray Program

Spray	Date	Fungicide	Insecticide	Zn	B	Sulfur	Nickel	Cost/A
1	April 30	Teb/Tin		ZnNO3	TopSide		Nickel +	$20.23
2	May 31	Teb/Tin		ZnNO3	Top Side			$12.73
3	June 14	Stratego	Imid+ Chlorpyrifos					$18.45
4	June 28	Teb/Tin						$9.23
5	July 12	Tin	Acramite					$23.40
6	July 26	Tin	Imidacloprid	ZnNO3				$11.60
7	Aug. 4	Teb/Tin	Imid/ Chlorpyrifos			Flowable Sulfur		$24.38
8	Sept. 1		Cypermethrin					$1.50
TOTAL								$121.52

Yields



2010 Gross Income: $427/acre

Leaf & Soil Sample Results

	pH		P	K	Zn		
2009	6.1		41	75	35		
2010							

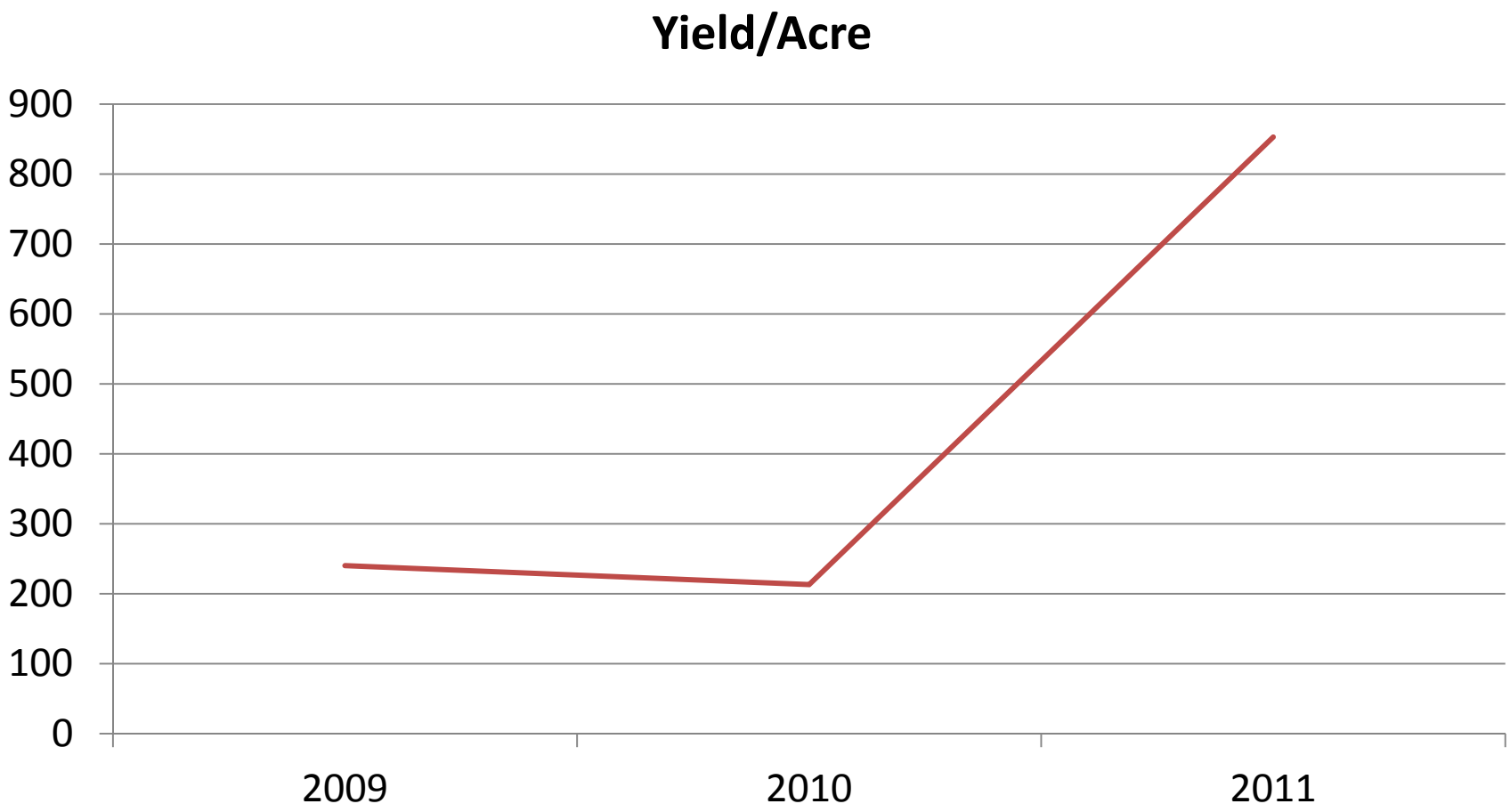
Applied 100 lbs N/Acre on April 14
Urea broadcast toward herbicide strip
Fertilizer covered 11 acres
Today's Cost: $539 or $17.97/acre

	N	P	K	Mg	Ca	S	B	Zn	Mn	Fe	Cu
2010	2.28	0.14	1.52	0.52	1.96	0.21	52	96	893	73	11
2011	2.89	0.13	1.26	0.43	1.87	0.22	42	82	848	95	12

2011 Spray Program

Spray	Date	Fungicide	Insecticide	Zn	B	Sulfur	Nickel	Cost/A
1	April 19	Absolute Phosphite		ZnNO3	TopSide			$19.80
2	May 10	Teb/Tin	Dimilin	ZnNO3	Top Side			$24.73
3	June 15	Teb/Tin	Imid/ Chlorpyrifos					$16.88
4	June 28	Absolute						$10.80
5	July 12	Absolute				Flowable S		$18.30
6	July 27	Elast/Tin	Imid/ Chlorpyrifos					$23.29
7	Aug. 10	Tin	Imid/ Dimilin			Flowable Sulfur		$29.10
8	Sept. 1		Imid/ Cypermethrin					$3.90
9	Sept. 21		Cypermethrin					$1.50
TOTAL								$148.30

Yields



2011 Gross Income: $2045/acre

Leaf & Soil Sample Results

	pH		P	K	Zn		
2009	6.1		41	75	35		
2010							
2011							

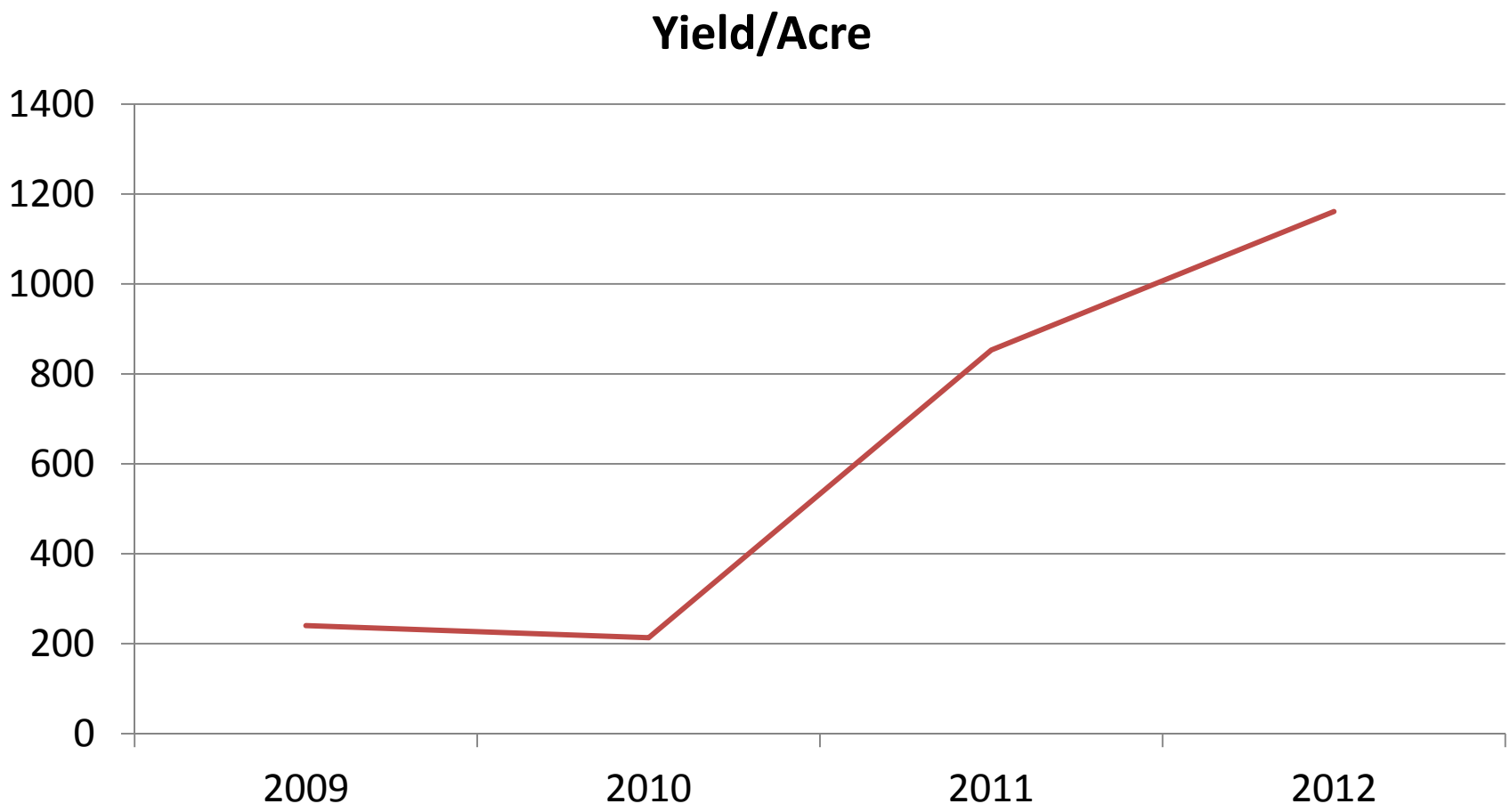
Applied 100 lbs N April 10
Urea broadcast toward herbicide strip
Fertilizer covered 11 acres
Today's Cost: $539 or $17.97/acre

	N	P	K	Mg	Ca	S	B	Zn	Mn	Fe	Cu
2010	2.28	0.14	1.52	0.52	1.96	0.21	52	96	893	73	11
2011	2.89	0.13	1.26	0.43	1.87	0.22	42	82	848	95	12
2012	2.83	0.14	1.15	0.43	1.84	0.23	36	92	755	75	9

2012 Spray Program

Spray	Date	Fungicide	Insecticide	Zn	B	Sulfur	Nickel	Cost/A
1	April 10	Absolute		ZnNO3	TopSide			$14.30
2	May 31	Teb/Tin	Intrepid	ZnNO3	Top Side			$12.73
3	June 6	Absolute		ZnNO3		Flowable S		$20.30
4	June 19	Elast/Tin	Intrepid					$21.82
5	July 7	Elast/Teb	Fulfill					$29.47
6	July 17	Tin						$7.20
7	July 23		Fulfill					$19.00
8	July 31	Tin	Fulfill/Dimilin /			Flowable S		$45.70
9	Aug. 13		Cypermethrin /Imidacloprid /Portal					$27.90
10	Aug. 18		Imidacloprid/ Chlorpyrifos/					$7.65
TOTAL								$206.07

Yields



2012 Gross Income: $1794.74/acre

Leaf & Soil Sample Results

	pH		P	K	Zn		
2009	6.1		41	75	35		
2010							
2011							
2012	6.6		64	198	69.8		

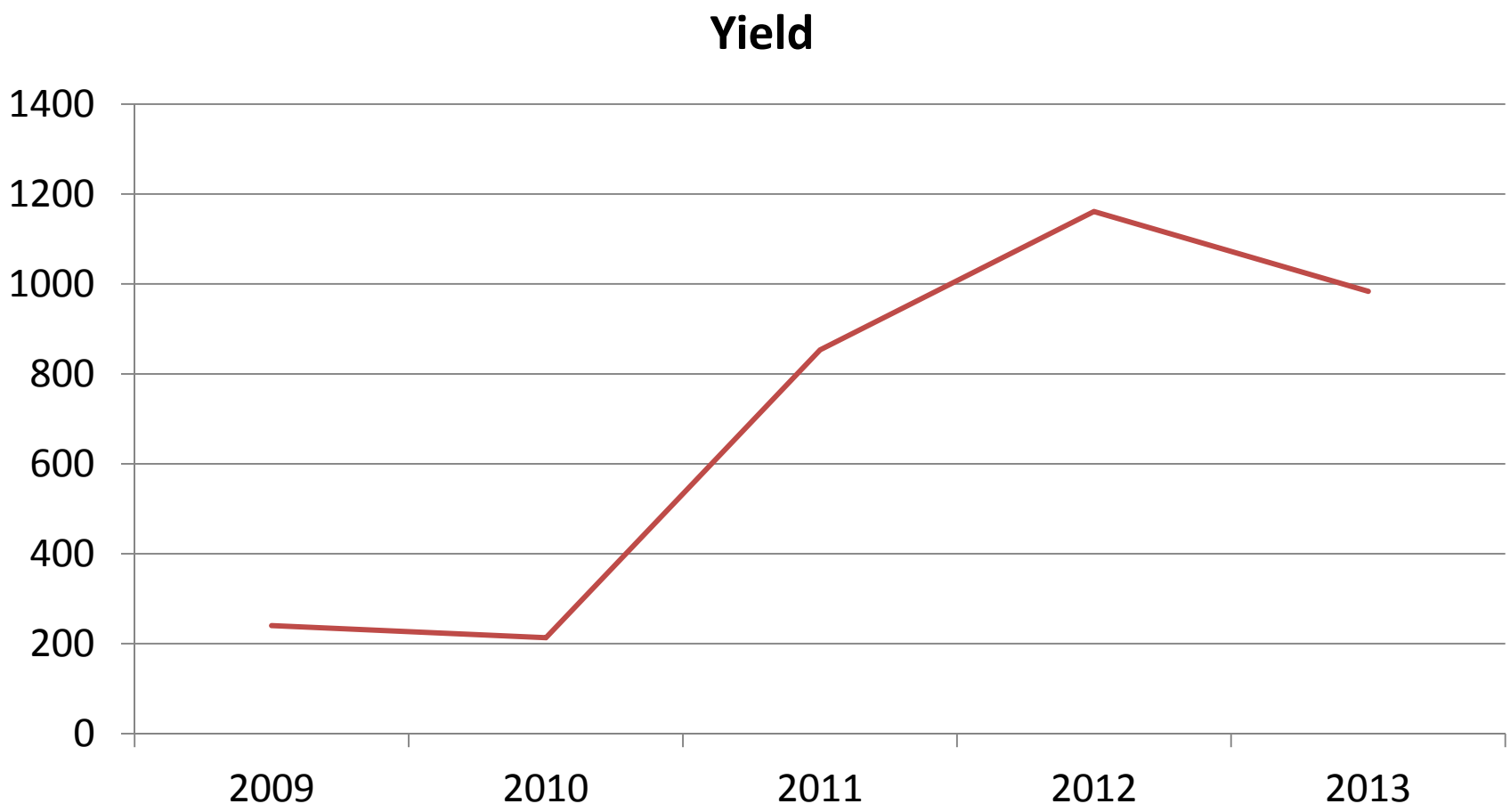
Applied 125 lbs N/acre May 6, 2013
Urea broadcast toward herbicide strip
Fertilizer covered 11 acres
Today's Cost: $673.75 or $22.46/acre

	N	P	K	Mg	Ca	S	B	Zn	Mn	Fe	Cu
2010	2.28	0.14	1.52	0.52	1.96	0.21	52	96	893	73	11
2011	2.89	0.13	1.26	0.43	1.87	0.22	42	82	848	95	12
2012	2.83	0.14	1.15	0.43	1.84	0.23	36	92	755	75	9
2013	3.13	0.14	1.03	0.37	1.41	0.22	25	94	711	72	13

2013 Spray Program

Spray	Date	Fungicide	Insecticide	Zn	B	Sulfur	Nickel	Cost/A
1	April 24	Absolute		ZnNO3	TopSide		Nickel +	$21.80
2	May 14	Teb/Tin	Intrepid	ZnNO3	Top Side			$18.88
3	June 4	Absolute				Flowable S		$18.30
4	June 18	Elast/Tin						$15.64
5	July 2	Elast/Tin						$15.64
6	July 15	Teb/Tin	Imidacloprid/ Chlorpyrifos					$16.88
7	July 25	Teb/Tin				Flowable S		$16.73
8	Aug. 5	Teb/Tin				Flowable S		$16.73
9	Aug. 12	Teb/Tin	Fulfill/Portal					$52.23
10	Aug.26	Tin	Cypermethrin /Imidacloprid					$11.10
11	Sept. 5		Fulfill					$19.00
12	Sept. 13		Chlorpyrifos					$5.25
TOTAL								$228.18

Yields



2013 Gross Income: $1708.83/acre

Leaf & Soil Sample Results

	pH		P	K	Zn		
2009	6.1		41	75	35		
2010							
2011							
2012	6.6		64	198	69.8		
2013	6.3		92	155	76.5		

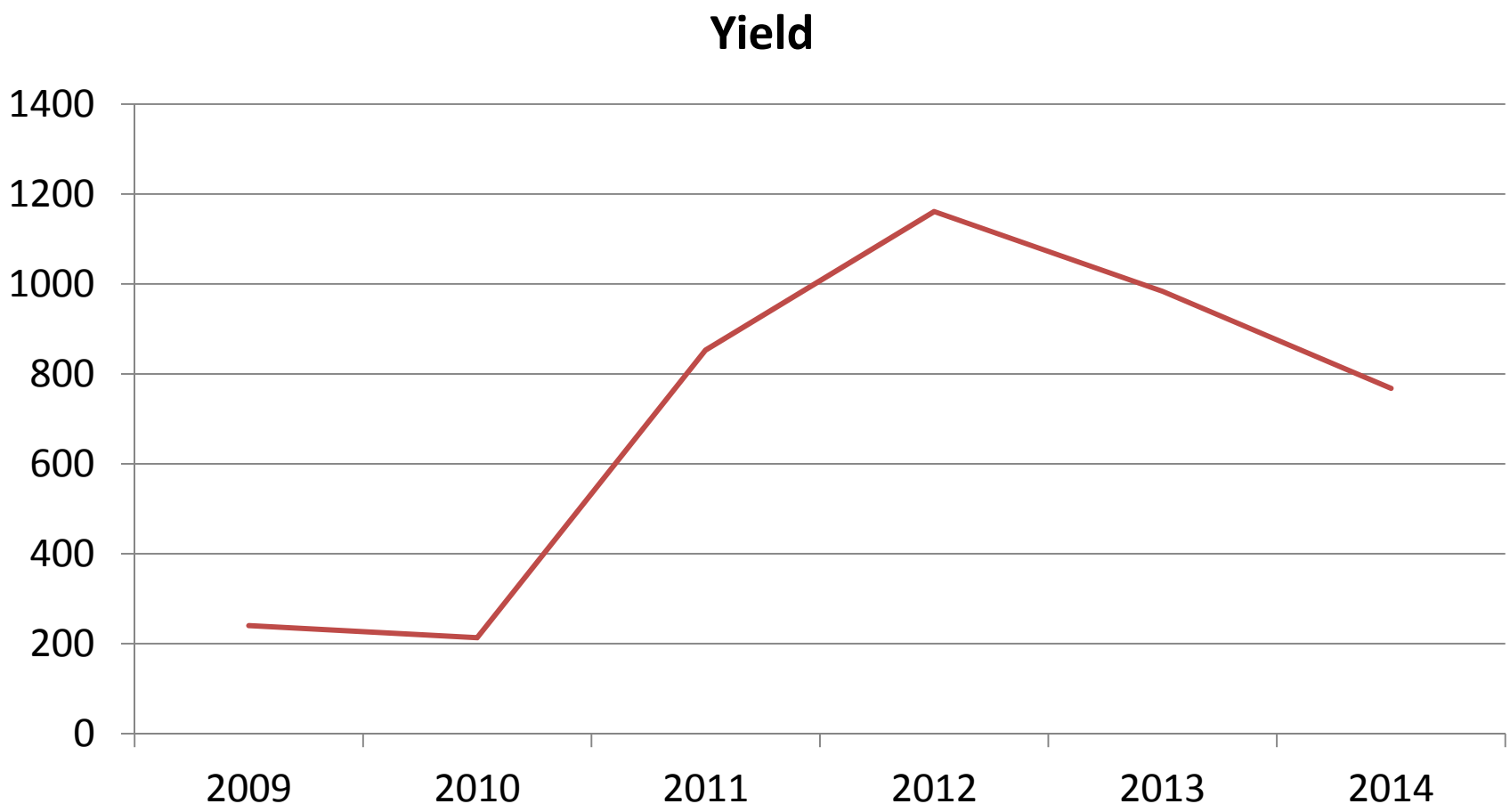
Applied 75 lbs N/acre April 11, 2014
Urea broadcast toward herbicide strip
Fertilizer covered 11 acres
Today's Cost: $404.25 or $13.48/acre

	N	P	K	Mg	Ca	S	B	Zn	Mn	Fe	Cu
2010	2.28	0.14	1.52	0.52	1.96	0.21	52	96	893	73	11
2011	2.89	0.13	1.26	0.43	1.87	0.22	42	82	848	95	12
2012	2.83	0.14	1.15	0.43	1.84	0.23	36	92	755	75	9
2013	3.13	0.14	1.03	0.37	1.41	0.22	25	94	711	72	13
2014	2.97	0.13	1.15	0.37	1.59	0.24	39	63	812	64	9

2014 Spray Program

Spray	Date	Fungicide	Insecticide	Zn	B	Sulfur	Nickel	Cost/A
1	April 22	Absolute		ZnNO3	TopSide		Nickel +	$21.80
2	May 6	Absolute		ZnNO3				$12.80
3	May 20	Teb/Tin						$9.23
4	June 4	Topsin/Tin				Flowable S		$22.20
5	June 17	Elast/Tin						$15.64
6	July 1	Absolute Phosphite	Beleaf					$35.30
7	July 15	Tin	Intrepid					$13.38
8	July 30	Teb/Tin	Imidacloprid			Flowable S		$19.13
9	Aug. 5		Nexter					$25.00
10	Aug.22		Closer					$15.00
TOTALS								$189.48

Yields



2014 Gross Income: $1617.77/acre

Bringing Back An Old Orchard ---5 years on

- Avg. Gross Income = $1518.67/acre*

- Labor = $136/acre
- Irrigation power bill= $49.69/acre
- Fung/Insect/Foliar Nutrients = $178.71/acre
- Herbicide = $27.11/acre
- Fertilization = $16.17/acre
- Fuel = $116/acre
- Total= $523.68

- 1518.67-523.68 = 994.99

- Well & Irrigation = $1133/acre
  $1133/5 years = $226.60/acre

*Includes 1st year at yield of 240 lbs/acre

Equipment, repairs and harvest cost not included