

Cost of Production 2012 Tobacco Budgets

S. Gary Bullen

North Carolina State University



Key Factors for Success

- Know your costs
 - Labor costs
 - Machinery costs
 - Chemical costs
- Buyout Payments



Crude Oil Futures

**NYMEX Crude Oil Futures
Close (Front Month)**

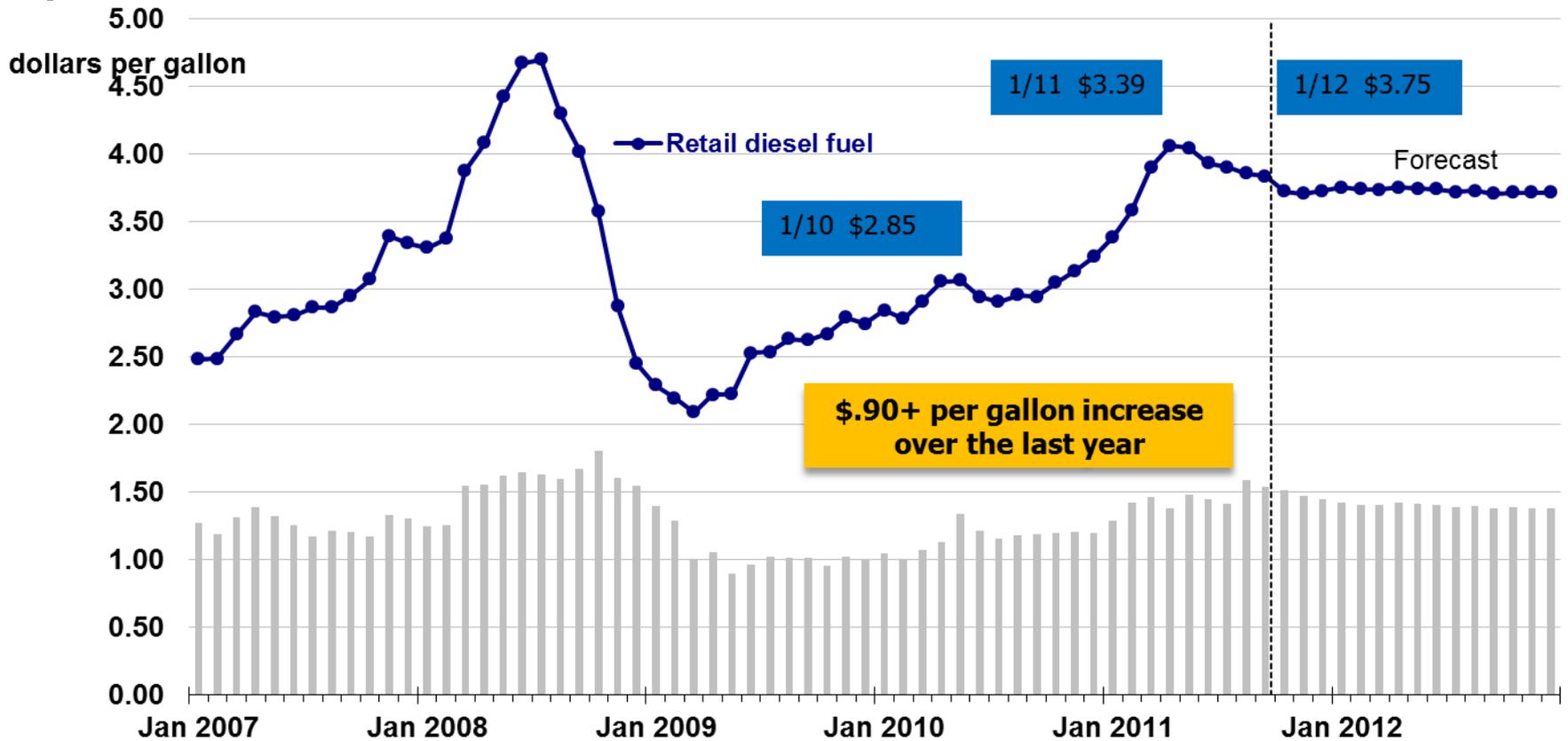


Oct 1, 2010 - Nov 7, 2011

— Close

WTRG Economics ©2011
www.wtrg.com
(479) 293-4081

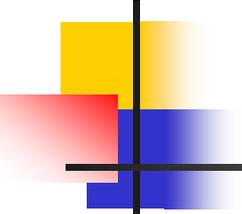
U.S. Diesel Prices



Crude oil price is refiner average acquisition cost. Retail prices include State and Federal taxes.

Fertilizer Prices

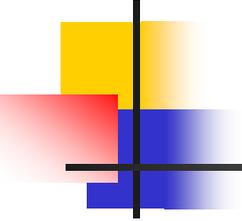
US \$/ton



USDA Survey Data	2007	2008	2009	2010	2011
30% N	277	401	320	283	351
Ammonia Nitrate	382	509	438	398	479
Phosphate 44%	418	800	639	507	633
DAP	442	850	638	508	703
60% Pot	280	561	853	511	601

Fertilizer Price Index





Cost of Production

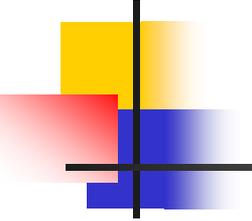
In theory, there is no difference between theory and practice

BUT IN PRACTICE THERE IS

Yogi Berra

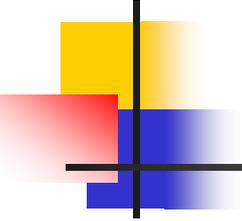
Tobacco Budget Analysis





Crop Budgets

- *How is profit defined?*
 - Typically return to unpaid labor, management and capital
 - Can mean other things
 - Return to assets
 - Return to labor and management

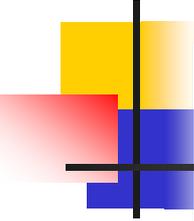


Crop Budget

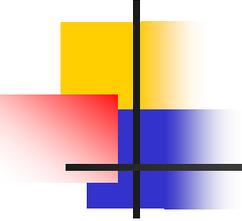
- Most budgets include a revenue section
 - Revenue: price X quantity
 - What yields and prices will be used



Tobacco Yields in Three Counties



YR	Wilson, NC	Robeson, NC	Granville, NC
2003	2670	2395	2345
2004	2595	2385	2250
2005	2265	2165	1865
2006	2195	2290	2045
2007	2640	1925	1565
2008	2520	2260	2370
2009	2410	2645	2190
2010	2020	2210	2140
Average	2414	2285	2096



Total Revenue

Per Acre

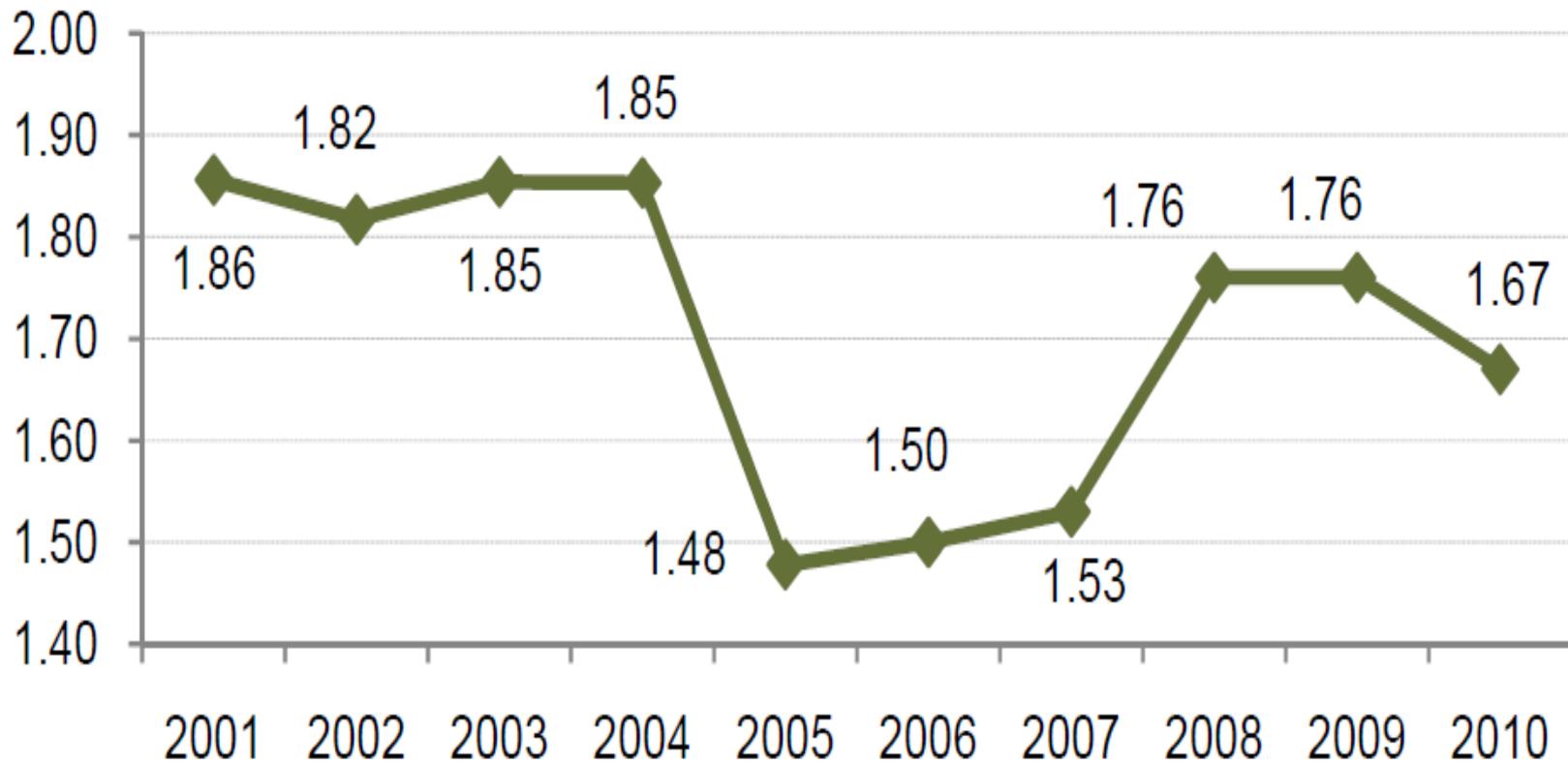
Per Pound

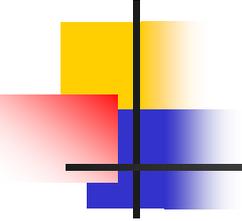
Tobacco 2400 * ?



Flue Cure Tobacco Prices

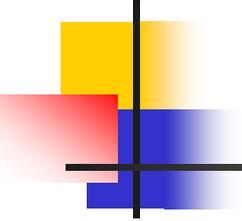
Prices Received – (Dollars per Pound)





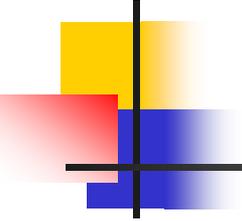
Operating Costs

	Per Acre	Per Pound
Insecticide	55	0.02
Herbicides	51	0.02
Sucker Control	186	0.07
Fumigation	180	0.07
Chemical cost	472	0.18



Other Operating Costs

	Per Acre	Per Pound
Fertilizer	191	0.07
Seed	214	0.085
Curing Fuel & Elect.	695	0.278
Miscellaneous	107	0.04
Total Costs	\$1207	\$0.48

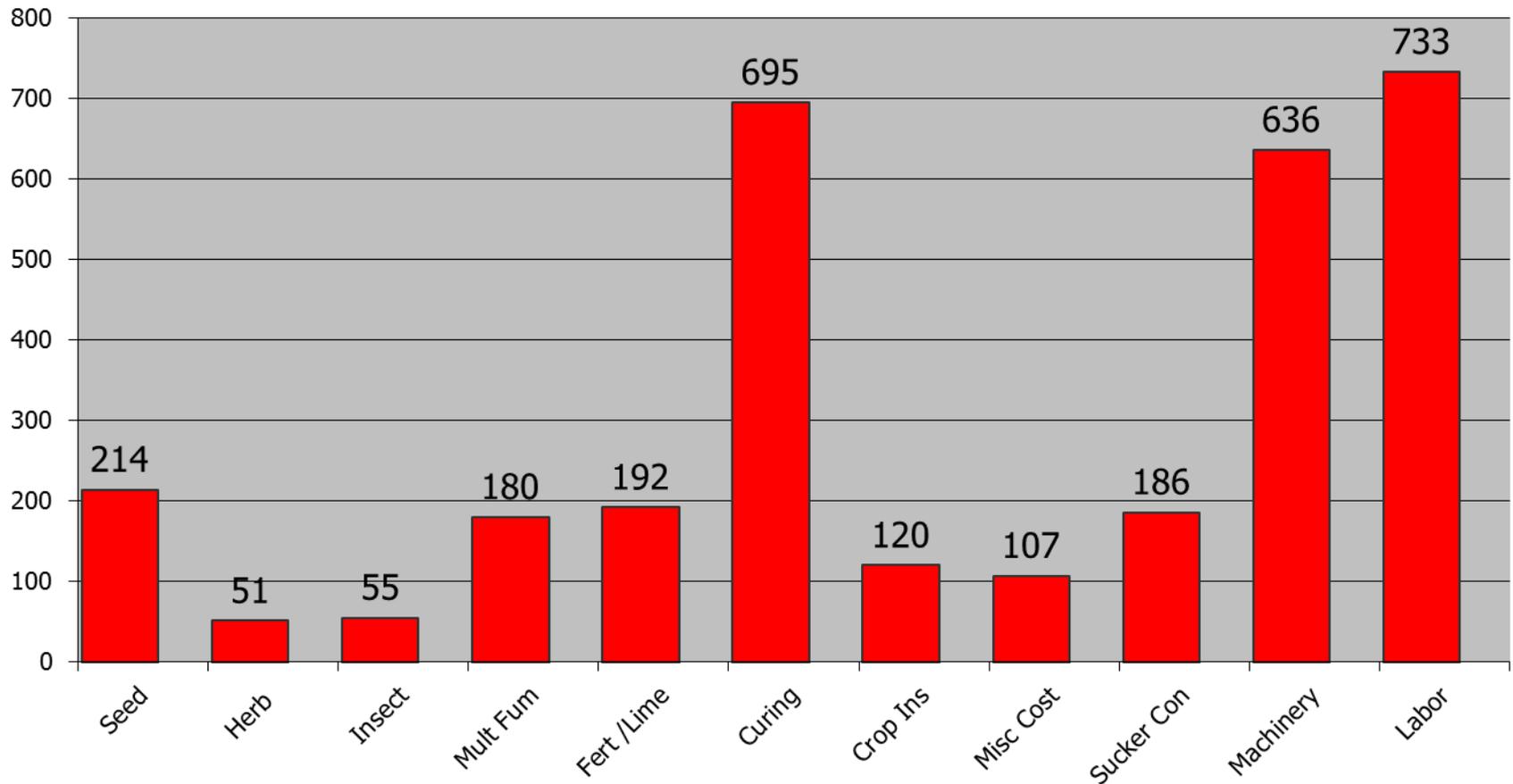


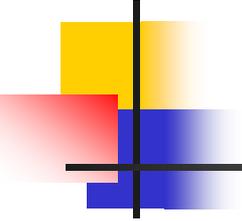
Total Operating Costs

	Acre	Pound
Equipment		
Variable	234	0.09
Operating Capital	28	0.01
Crop insurance	120	0.056
Labor	733	0.29
	1115	0.446

Total Variable Costs

Tobacco Cost Of Production





Total Costs

Per Acre

Per Pound

Operating Costs

2,810

1.17

Machinery Costs

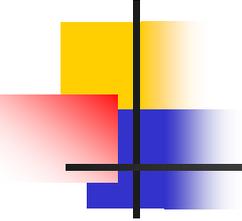
403

0.17

Total Costs

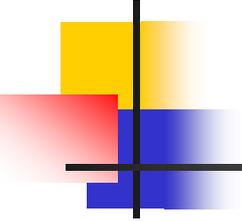
3,213

\$1.34



Breakeven Analysis

- Variable cost \$2,810
 - \$2,810/yields of 2,400 LBS
 - Price needed to cover variable costs = \$1.17
 - Total costs: $\$2,810 + \$403 = \$3,212/\text{acre}$
- **Price needed to cover total costs = \$1.34/LBS**



Breakeven Analysis

- Variable cost \$2,810
 - \$2,810/yields of 2,000 LBS
 - Price needed to cover variable costs = \$1.40
 - Total costs: $\$2,810 + \$403 = \$3,213/\text{acre}$
- **Price needed to cover total costs = \$1.60/LBS**



Total Costs

Per Acre

Per Pound

Operating Costs	2810	1.17
-----------------	------	------

Machinery Costs	403	0.17
-----------------	-----	------

Total Costs	\$3,213	\$1.34
--------------------	----------------	---------------

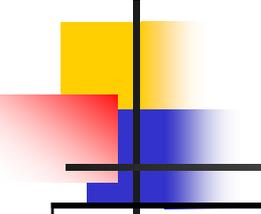
Additional Costs....



Total Piedmont Hand Harvest Costs

	Per Acre	Per Pound
Operating Costs	3373	1.34
Machinery Costs	305	0.12
Total Costs	\$3,679	\$1.46

Tobacco Enterprise Returns to Risk and Management



1.20	1.30	1.40	1.50	1.60	1.70	1.80
1800	-1053	-873	-693	-513	-333	-153
2000	-813	-613	-413	-213	-13	187
2200	-573	-353	-133	87	307	527
2400	-333	-93	147	387	627	867
2600	-93	167	427	687	947	1207
2800	147	427	707	987	1267	1547



Selected Tobacco Costs Comparison

Piedmont

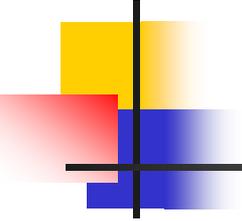
- Fertilizer \$244
- Mach \$305
- Labor \$1041
- Curing \$569

Total costs \$2159

East Tobacco

- Fertilizer \$191
- Mach \$403
- Labor \$733
- Curing \$569

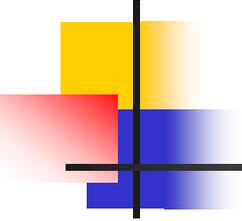
Total costs \$1,896



Control Chemical Costs

	Per Acre	Per Pound
Insecticide	55	0.02
Herbicide	51	0.02
Fumigation	180	0.07
Sucker control	186	0.07
Chemicals	* 472	0.18

- Chemical costs are 15% of total costs



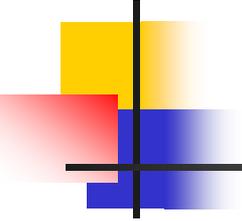
Machinery Cost

- Machinery costs are usually third largest cost item.
- Machinery must be sized to match size of farm.
- 2002 tobacco study found, machinery cost ranging \$552 per acre to \$982 on 400 acre farms
- IL study found, machinery was one of the main variable between high cost and low cost farms, cost varied by as much as \$100 per acre.



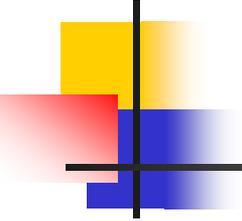
Labor: H2A Using NC Growers Association

- Adverse Economic Wage Rate: \$9.30
- Workers Com. Insurance: \$0.268
- Acquisition cost using NCGA \$1.50
- Housing \$0.47
- Transportation \$0.068
- **Additional Cost / Hour \$2.30**
- Total hourly wage rate **\$11.60**



Buyout and Gov. Payments

- For our model tobacco farm owning 38,400 LBS and leasing 89,448 LBS would receive \$53,714 per year
- **What will happen after the buyout in 2014?**



Key Recommendations

- **University budgets are only estimates**
- **Should only be used as guide**
- **Know your cost of producing tobacco**
- **Control machinery and labor costs**
- **Evaluate chemicals and use only when needed**
- **Plan how you will use buy out payments**