



Increasing Feed Grain Production in North Carolina: A Role for Sorghum?

Nick Piggott

Dept of Agricultural & Resource Economics

North Carolina State University

Presentation:

**2018 Cochran Training Program with Peru, Ecuador, and Venezuela on
U.S. Sorghum Exposure and Utilization**

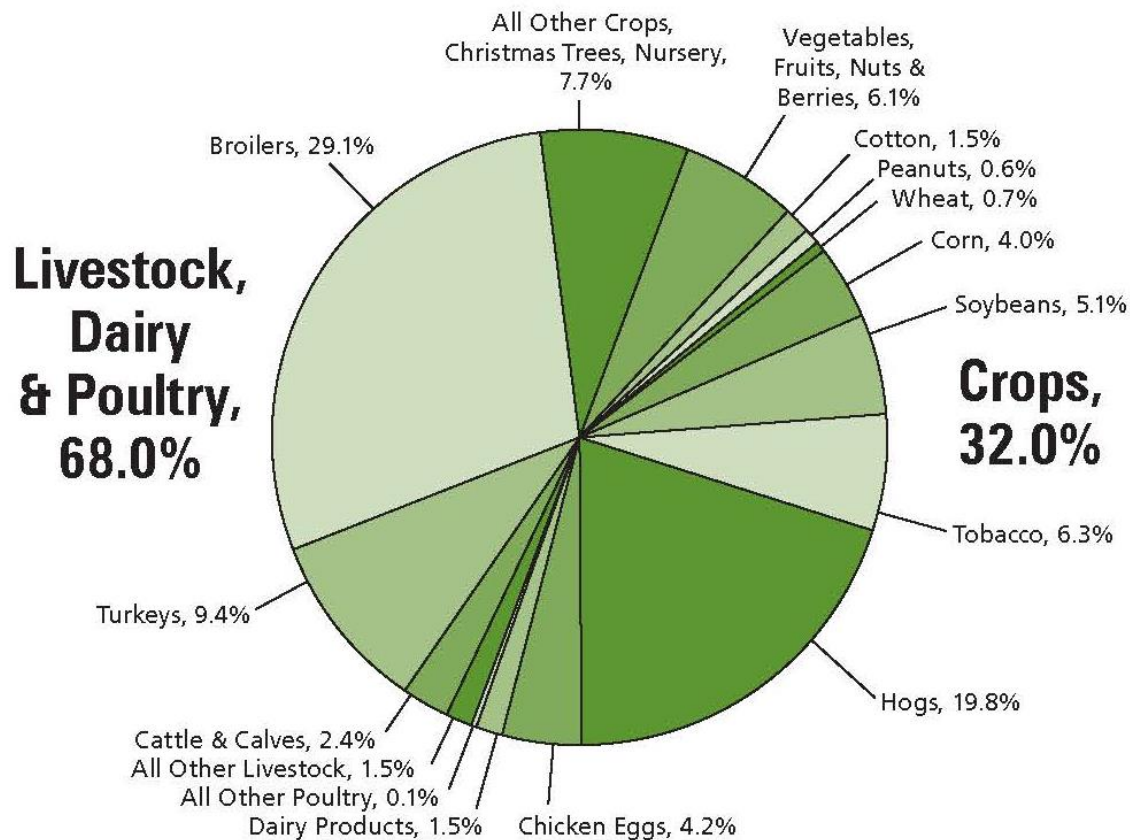
October 8, 2018

121 Kilgore Hall, NCSU



Background: Cash Receipts

SOURCE OF FARM CASH RECEIPTS, NORTH CAROLINA, 2016
\$10,609,202,000



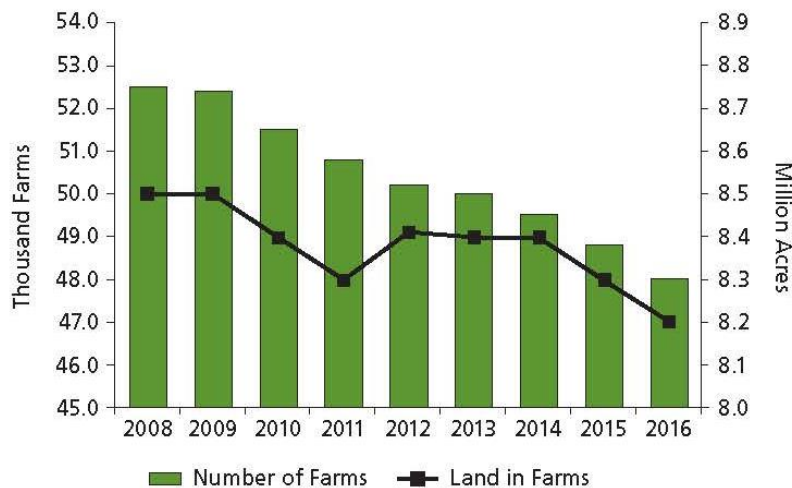


Background: Farm Value and Numbers

FARM REAL ESTATE VALUES

Year	Farm Real Estate Values per Acre January 1	Cropland		Pasture	
		Value per Acre	Cash Rent per Acre	Value per Acre	Cash Rent per Acre
<i>Dollars</i>					
2012	4,330	3,850	70.50	4,330	26.00
2013	4,340	4,050	77.50	4,530	26.00
2014	4,510	4,200	84.50	4,760	26.00
2015	4,500	4,100	88.50	4,700	27.00
2016	4,450	3,970	83.50	4,700	27.00
2017	4,450	3,970	88.50	4,700	26.00

NUMBER OF FARMS AND LAND IN FARMS





Background: How NC Ranks

NORTH CAROLINA'S RANK IN U.S. AGRICULTURE, 2016

Rank	Item	Production		N.C. % of U.S.	Top 3 States		
					1	2	3
1	All Poultry & Egg Cash Receipts	4,541.6	(Mil \$)	11.7	NC	GA	AR
	All Tobacco	332	(Mil Lbs)	52.8	NC	KY	VA
	Flue-cured Tobacco	330.0	(Mil Lbs)	76.5	NC	VA	GA
	Sweet Potatoes	17,100	(000 Cwt)	54.2	NC	CA	MS
2	Annual Pig Crop Dec 15 - Nov 16	19.1	(Mil Hd)	15.2	IA	NC	MN
	Hogs & Pigs (12-1-16)	9.3	(Mil Hd)	13.0	IA	NC	MN
	Trout Sold (foodsize)	4.4	(Mil Lbs)	7.4	ID	NC	PA
	Turkeys	33.5	(Mil Hd)	13.7	MN	NC	AR
10	Upland Cotton ¹	343	(000 Bales)	2.1	TX	GA	MS
11	Grapes	4,900	(Tons)	0.1	CA	WA	NY
	Sorghum	2,035	(000 Bu)	0.4	KS	TX	CO
14	Peaches	3,600	(Tons)	0.5	CA	SC	GA
15	Snap Beans	193	(000 Cwt)	1.0	WI	NY	MI
16	Potatoes	2,992	(000 Cwt)	0.7	ID	WA	WI
17	Crop Cash Receipts	3,395.7	(Mil \$)	1.8	CA	IA	IL
	Soybeans	58	(Mil Bu)	1.3	IL	IA	MN
19	Corn for Grain	121	(Mil Bu)	0.8	IA	IL	NE
20	Winter Wheat	15	(Mil Bu)	0.9	KS	OK	WA



Feed Grain Deficit Around 50%

Feed Grain/Livestock	Acres (5 yr. aver. 2012-16)	Yield	Lbs per Bushel	Production (5yr average 2012-2016)
		<i>Bushel/Acre</i>		<i>Million Bushels</i>
Corn	886,000	126.6	56	112.2
Wheat (80% fed)	740,000	53.2	60	39.4
Sorghum	52,142	55.0	56	2.9
Total				154.4
	GCAU FACTOR	2017 Annual Head	2017 GCAU	Feed Demand in Bushels
Hogs	0.2285	9,000,000	2,056,500	171.6
Broilers	0.0020	125,953,846	251,908	21.0
Layers	0.0217	15,143,000	328,603	27.4
Turkeys	0.0155	10,307,692	159,769	13.3
Cattle	1.1055	830,000	917,533	76.6
Total			3,714,313	310.0
Feed Grain Deficit				155.6

Note: 1 GCAU=2.12 Metric tonnes (or 4,673.8 lbs) in 2017 (dry-weight quantity of feed consumed by an average milk cow); 1 bushel is 56 pounds



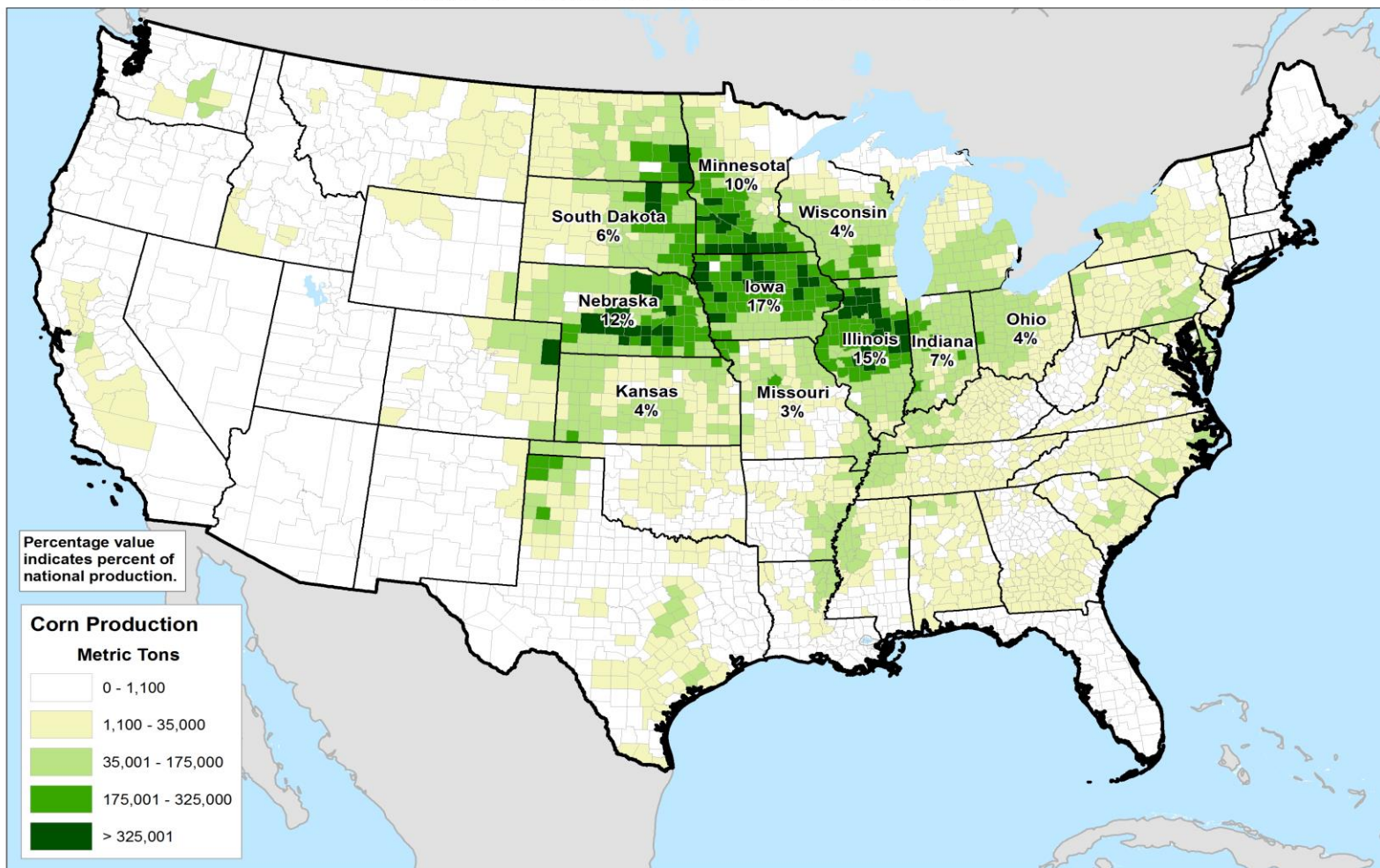
Feeding the “Tails and Feathers”

- There are three primary sources of procuring feed grains to feed the “tails and feathers:
 1. Midwestern feed grains via rail was the traditional source and mode
 2. Local feed grain production primarily corn, some winter wheat (about 80% is fed), and small amounts of sorghum via truck to various feed mills
 3. Internationally, primarily South American and sometimes European feed grains via the Port of Wilmington
 - In July 2002, Wilmington Bulk LLC opened an import-export grain terminal in Wilmington, NC



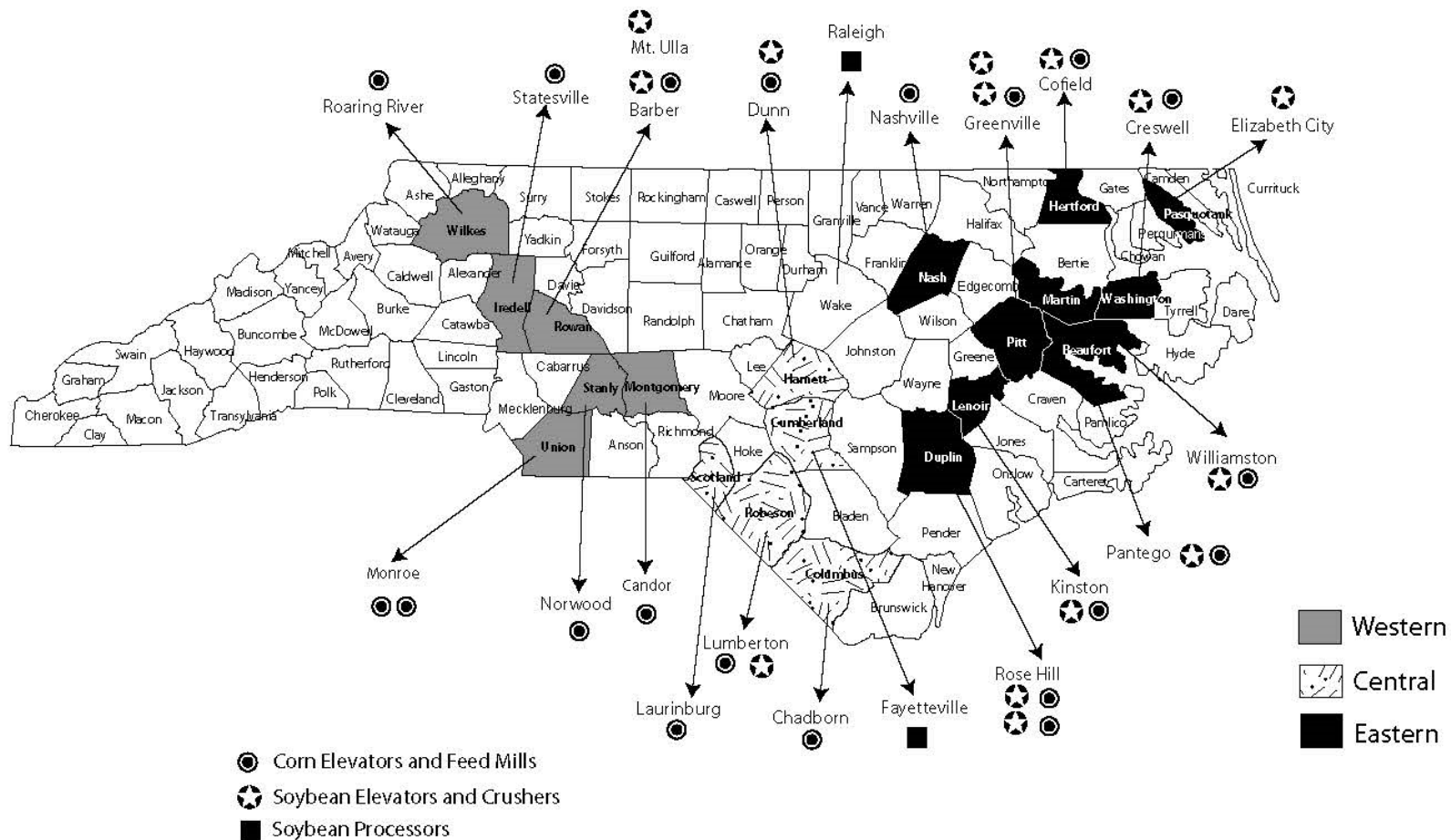
Corn Production in US

United States: Corn Production





North Carolina Feed Grain Markets





Overview: Increasing Feed Grain Production in North Carolina 2012-16

□ What?

- The goal of the project

□ Why?

- The problem addressed

□ Who?

- The sponsors and the team

□ When and How?

- The timeframe

□ How Much?

- The increased production and economic impact



WHAT?

THE GOAL OF THE PROJECT WAS TO INCREASE FEED GRAIN PRODUCTION IN NORTH CAROLINA

- ❑ Enhance the production practices and management systems to capture **higher yields** from existing acres and **increase acres** of **feed grain crops**: corn, wheat, grain sorghum
- ❑ Increased feed grain acres involved capturing acres not already in grain production or by increasing the number of acres **double-cropped**: wheat-sorghum or wheat-corn
- ❑ Using existing research base launched a significant outreach and **education package** targeted to growers and advisors that work with growers to increase yields and feed grain acres



One Viable Self-Help Policy Strategy

- ❑ Increase feed grain production profitably in NC and encourage more production
 - Increase feed grain acres?
 - Evaluate different crop mixes
 - grain sorghum, rotations for weed resistance?
 - Evaluate the economics of different production practices – irrigation?
 - Harvesting water in fall and winter for use in the spring and summer. The EPA and federal regulations have become prohibitive in some cases, impeding the freedom to farm

- ❑ Increase investment in grain storage, specifically on-farm, so that an increase in supply at harvest just does not erode basis and can also smooth out feed grain supply through out the year
 - NC on-farm grain storage currently at only 85-100 million bushels
 - Feed grain production is mostly an annual one-shot deal (there is some double-cropping in Southeast) whereas the “tails & feathers” is a daily deal and must be fed everyday



Activities of the Economics Group: Production and Budgets.....

- Constructed a questionnaire with which to gather the appropriate information
- Made personal visits to farms in the Fall 2012 to elicit information
- Grain sorghum budgets were completed before the end of January, 2013
- These budgets combined with updated basis estimates and current market conditions will form the content of ARE-NCSU 2013 Winter extension meetings to encourage more informed decisions (MOST ECONOMICALLY PROFITABLE) to be made.



Sorghum Enterprise Budget

NC STATE UNIVERSITY

Sorghum- No Till - 2018

NC STATE UNIVERSITY

ESTIMATED COSTS AND RETURNS PER ACRE, 2018
70 BUSHEL YIELD

	UNIT	QUANTITY	PRICE OR COST/UNIT	TOTAL PER ACRE	YOUR FARM
1. GROSS RECEIPTS					
SORGHUM	BU.	70.00	\$4.19	\$293.27	_____
TOTAL RECEIPTS:				\$293.27	_____
2. VARIABLE COSTS					
SEED	THOU.	110.00	\$0.150	\$16.50	_____
FERTILIZER					
NITROGEN 30%	LBS	275.00	\$0.12	\$33.00	_____
PHOSPHATE (0-46-0)	LBS	90.00	\$0.32	\$28.80	_____
POTASH (0-0-60)	LBS	50.00	\$0.20	\$10.00	_____
LIME (PRORATED)	TON	0.33	\$46.00	\$15.18	_____
HERBICIDES	ACRE	1.00	\$32.50	\$32.50	_____
INSECTICIDES	ACRE	1.00	\$5.17	\$5.17	_____
DRYING (3 POINTS)	BU.	70.00	\$0.30	\$21.00	_____
HAULING	BU.	70.00	\$0.26	\$18.20	_____
TRACTOR/MACHINERY	ACRE	1.00	\$19.95	\$19.95	_____
LABOR	HRS	1.22	\$11.27	\$13.75	_____
INTEREST ON OP. CAP.	DOL.	\$77.97	5.0%	\$3.90	_____
TOTAL VARIABLE COSTS:				\$217.95	_____
3. INCOME ABOVE VARIABLE COSTS:				\$75.32	_____
4. FIXED COSTS					
TRACTOR/MACHINERY	ACRE	1.00	\$32.25	\$32.25	_____
TOTAL FIXED COSTS:				\$32.25	_____
5. OTHER COSTS					
GENERAL OVERHEAD	DOL.	\$217.95	7.0%	\$15.26	_____
TOTAL OTHER COSTS:				\$15.26	_____
6. TOTAL COSTS:				\$265.46	_____
7. NET RETURNS TO LAND, RISK, AND MANAGEMENT:				\$27.81	_____

BREAK-EVEN YIELD

VARIABLE COSTS
TOTAL COSTS

49 BU.
63 BU.

BREAK-EVEN PRICE

VARIABLE COSTS
TOTAL COSTS

\$3.11
\$3.79

* PLEASE NOTE: THIS BUDGET IS FOR PLANNING PURPOSES ONLY AND DOES NOT FACTOR IN THE COST OF LAND RENT



Planting Decision Tool

Budget Comparison 2018 Crop Year of Crop Choices Given Current Market Conditions and Expected Yields					
Enter Average Land Rent Value Here	80				
	Corn	Soybean	Wheat	Sorghum	Cotton
Yield (bu/acre) ¹	135	40	50	55	
Yield (lbs./acre)--Cotton	--	--	--	--	775
Yield (lbs./acre)--Cotton Seed	--	--	--	--	1,294
Price (New Crop Futures Price from CME & NYBOT 3/7/2018)	\$4.06	\$10.43	\$4.04	\$3.86	\$0.78
Cotton Seed	--	--	--	--	\$0.08
Current New Crop Basis	\$0.50	(\$0.29)	\$0.80	\$0.27	(\$0.02)
EXPECTED NET PRICE (New Crop Futures + Basis)²	\$4.56	\$10.15	\$4.84	\$4.13	\$0.76
Gross Revenue	\$615.60	\$405.80	\$242.00	\$226.99	\$692.54
VARIABLE EXPENSES¹					
SEED	\$90.30	\$44.00	\$45.00	\$15.00	\$88.62
FERTILIZER					
LIME (PRORATED)	\$15.18	\$15.18	\$15.18	\$15.18	\$15.18
HERBICIDES	\$34.00	\$31.59	\$11.41	\$19.43	\$63.52
FUNGICIDES	\$25.05	\$17.65	\$7.06	\$0.00	\$0.00
INSECTICIDES	\$0.00	\$3.73	\$3.73	\$5.17	\$17.13
GROWTH REG. & DEFOLIANTS	\$0.00	\$0.00	\$0.00	\$0.00	\$21.30
SURFACTANT	\$2.95	\$2.65	\$0.00	\$0.00	\$5.10
AERIAL APPLICATION	\$0.00	\$0.00	\$9.00	\$0.00	\$0.00
DRYING (3 POINTS)	\$29.60	\$0.00	\$0.00	\$24.00	\$0.00
HAULING	\$38.48	\$10.40	\$12.50	\$20.80	\$0.00
TRACTOR/MACHINERY	\$47.70	\$47.70	\$28.15	\$46.98	\$73.58
LABOR	\$16.45	\$16.45	\$10.71	\$16.45	\$38.77
SCOUT	\$12.00	\$12.00	\$0.00	\$0.00	\$16.00
LAND RENT	\$80.00	\$80.00	\$80.00	\$80.00	\$80.00
GINNING	\$0.00	\$0.00	\$0.00	\$0.00	\$103.54
CROP INSURANCE	\$15.00	\$15.00	\$10.00	\$9.00	\$12.00
INTEREST ON OP. CAP.	\$11.74	\$8.62	\$4.20	\$4.03	\$29.61
Total Variable Costs	\$516.32	\$346.97	\$285.58	\$296.43	\$702.68
Return above Variable Costs	\$99.28	\$58.83	-\$43.58	-\$69.44	-\$10.14
FIXED EXPENSES					
*TRACTOR/MACHINERY	\$82.63	\$82.63	\$39.65	\$76.18	\$87.47
**OVERHEAD	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total Fixed Costs	\$82.63	\$82.63	\$39.65	\$76.18	\$87.47
Total Cost	\$598.95	\$429.60	\$325.23	\$372.61	\$790.15
NET RETURNS TO FARMER AND RISK:	\$16.65	(\$23.80)	(\$83.23)	(\$145.62)	(\$97.61)



IN-DEPTH ANALYSIS FROM THE FIELD

- Followed a smaller group of farmers to see what's going right and what problems they're having with grain sorghum production

The BAD

- Started behind at the onset. Not sure about varieties, plant populations, row and plant spaces.
- Some varieties were not checked for disease resistance and also some seed treatments were not correct resulting in poor emergence or having to totally replant.
- Some producers planted later than others, appears to be less issues with pests and disease with later plantings but may affect yields
- Corn ear worms and anthracnose were a problem which can lead to head blight. Stressed GS can develop Head Blight more easily.
- Gramoxone as a defoliate was an issue but was corrected, but in the VA Tech Field day it was still being recommended but we informed them it was not labeled as dessicant.
- Possible nitrogen depletion?

The GOOD

- Had a good crop year in spite of the beginning concerning the weather
- Had some very high test weights high 50 some even to 60's
- Had good yields even though the plant populations were down 60,000 target was to be 100,000 but the verdict is still out on that?
- Soy-soap was utilized on some acreages and it appears to have had a positive effect so far. Test weights and yields appear to be better.
- The growers we spoke with are pleased with the outcome and most plan to produce GS again next year. I think that the positive word of mouth will influence more growers to produce GS in the coming year



WHY?

NORTH CAROLINA HAS A SUBSTANTIAL FEED GRAIN DEFICIT OF AROUND 200 MILLION BUSHELLS ANNUALLY, WHICH WAS ENDURING RAIL RATES OF 7-8% INCREASES ANNUALLY

❑ Some Back of the Envelope Economics

- “Guesstimated” annual grain use for feed in NC= **300 million bushels**
- Net NC feed grains available for feed = **+/- 100 million bushels**
- Annual deficit => **200 mil bu.** (+/- due to uncertainty of NC crops)
- In 2012 rail-rates were approx. \$1.40/bu and increasing at 7-8% per year:
 - **\$280 mil.** spent on transportation costs to NC livestock industry.
 - Deadweight loss to NC agricultural economy.

❑ Rail was the traditional mode of procurement of the feed grain from the Midwest with limited alternatives for sourcing agricultural products using other modes making the livestock industry captive to the railways.



LOCATION

□ LOCATION-LOCATION-LOCATION

- NC agriculture has two substantial advantages over most other agricultural producing states:
 1. NC is less than a day's drive to most of the densely populated areas of the US—North East corridor which demands a lot of food with limited ability to produce
 2. NC has a coast and therefore a direct window to the now hungry and increasing demand for food in the international economy via the Atlantic Ocean but our ports are largely under utilized for agriculture



WHO?

THE PROJECT WAS SPONSORED BY MURPHY-BROWN LLC AND INVOLVED MULTIPLE LAND GRANT INSTITUTIONS, GOVERNMENT AGENCIES, AG CONSULTANTS, AND COMMODITY ORGANIZATIONS— PHASE 1=\$461,105 AND PHASE 2=\$398,415 (45% OF THIS TOTAL ALLOCATED TO COLLABORATORS VIRGINIA TECH) OVER 3 YEARS

- ❑ *Terry Coffey* (Murphy-Brown LLC) provided significant visionary leadership on all facets of the project. *Roger Crickenberger* (NCSU) provided leadership and coordination of the teams ensuring the project remained on task.
- ❑ NCSU faculty from Ag & Resource Economics (ARE) and Crop Science (CS)
 - ARE team : *Nick Piggott, Michele Marra, Kelly Zering, Mitchell Buck* (consultant)
 - CS team: *Wes Everman, Ron Heiniger, Randy Weisz, Chris Reberg-Horton*
 - Extension Field Faculty: *Gaylon Ambrose, Lewis Smith, Mac Gibbs, Mitch Smith, Ray Harris, Richard Rhodes*
- ❑ Other non-CALS-NCSU participation and support from Virginia Tech, Clemson University, NCDA&CS, NC Small Grain Growers Association, NC Biotech Center, NC Pork Council, staff and consultants from Murphy-Brown LLC



WHEN AND HOW?

THE PROJECT BEGAN IN 2012 FOR A DURATION OF 3 YEARS. IT INVOLVED EXISTING AND CONTINUING RESEARCH WORK ON THE PRODUCTION AND AGRICULTURAL ECONOMICS OF FEED GRAINS TO BE PACKAGED INTO AN OUTREACH AND EDUCATION PACKAGE

□ Existing and continued research by CS and ARE teams involved:

CS team: Important advances in grain sorghum production from this project.

1. Newer hybrids with good yield potential in NC were identified;
2. Developed a sorghum production system with more consistent yield potential;
3. Found methods for growing sorghum as a double-crop after wheat;
4. New weed control methods and herbicide choices were developed that improved sorghum production;
5. Were able to determine the impact of alleopathic compounds in sorghum on weeds and subsequent crops.

The result is that now farmers in NC have increased their diversity in crop choices with a crop (sorghum) which has been valuable in helping improve crop rotations, control herbicide resistance, reduce nematode infestations, and improving soil health.



WHEN AND HOW?...

ARE team: Important advances in grain sorghum economics from this project.

1. Development of budgets for grain sorghum;
2. Development risk management strategies including modification to current crop insurance for grain sorghum in NC were implemented;
3. Marketing strategies including forward and basis contracting, and options for on-farm storage were analyzed;
4. Comparative analysis of alternative crop selection and expected returns given market situation and outlook.

The result is that now farmers in NC have increased their diversity in crop choices that can economically profitable with grain sorghum. In particular, grain sorghum requires less input costs than corn and can be a more economically profitable choice for some producers on sandy soils compared with other crop choices such as corn.

- Outreach effort adopted multi-pronged approach to dissemination
 - **Producer meetings:** targeted to concentrated areas of feed grain production
 - **Publications:** Production Handbooks, budgets, and marketing white papers
 - **Media:** Timely radio broadcasts with SFN on planting and marketing opportunities
 - **Technical assistance:** to growers and retail suppliers, agronomists
 - **Multi-state Expert Network:** to support sorghum and other feed grain agriculture and marketing in the mid-Atlantic region.



HOW MUCH?

A SIGNIFICANT INCREASE OF NC ACRES PLANTED TO FEED GRAINS, LEADING TO MORE FEED GRAIN TOTAL PRODUCTION—REDUCING THE GRAIN DEFICIT. CONCURRENTLY, THERE WAS ALSO AN INCREASE IN FEED GRAIN BASIS. MORE BUSHELS PURCHASED AT HIGHER BASIS LEVELS ADDED AN ESTIMATED \$67 MILLION INCREASE BEING PAID TO NC GRAIN PRODUCERS

- ❑ In 2013 when there was significant grain sorghum momentum of 79,000 acres planted and the corn and soybean prices were more typical approximately 2 million acres planted to field grains—300,000 to 500,000 more than 2008-2011.
- ❑ Using five-average yields these additional feed grain acres amounted to annual feed grain production of 167 million bushels annually. This reduces the previous feed grain deficit of 200 million bushels to around 130 million bushels or a 30% decline.
- ❑ Corn basis at Rosehill had increased \$0.40 per bushel in the period 2011-2015 compared to previous years
- ❑ 2015 showed a some promising recovery in grain sorghum acres after the weather in 2014 led to a loss in momentum. Further increases are expected in 2016 grain sorghum plantings given current market situation.



NC Planted Acres 2007-2017

Crop	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
CORN^a	1,090,000	900,000	870,000	910,000	870,000	870,000	930,000	840,000	790,000	1,000,000	890,000
WHEAT^a	630,000	850,000	660,000	430,000	670,000	810,000	990,000	830,000	650,000	420,000	450,000
SORGHUM^b	12,000	16,000	16,159	13,262	14,936	70,366	79,187	26,640	39,516	45,000	20,000
COTTON^a	500,000	430,000	375,000	550,000	805,000	585,000	465,000	465,000	385,000	280,000	375,000
SOYBEANS^a	1,440,000	1,690,000	1,800,000	1,580,000	1,380,000	1,590,000	1,480,000	1,750,000	1,820,000	1,690,000	1,700,000
Total	3,672,000	3,886,000	3,721,159	3,483,262	3,739,936	3,925,366	3,944,187	3,911,640	3,684,516	3,435,000	3,435,000
Feed Grains	1,732,000	1,766,000	1,546,159	1,353,262	1,554,936	1,750,366	1,999,187	1,696,640	1,479,516	1,465,000	1,360,000
% Feed Grains	47.2%	45.4%	41.6%	38.9%	41.6%	44.6%	50.7%	43.4%	40.2%	42.6%	39.6%

Source: a=NASS,USDA, b=FSA,USDA

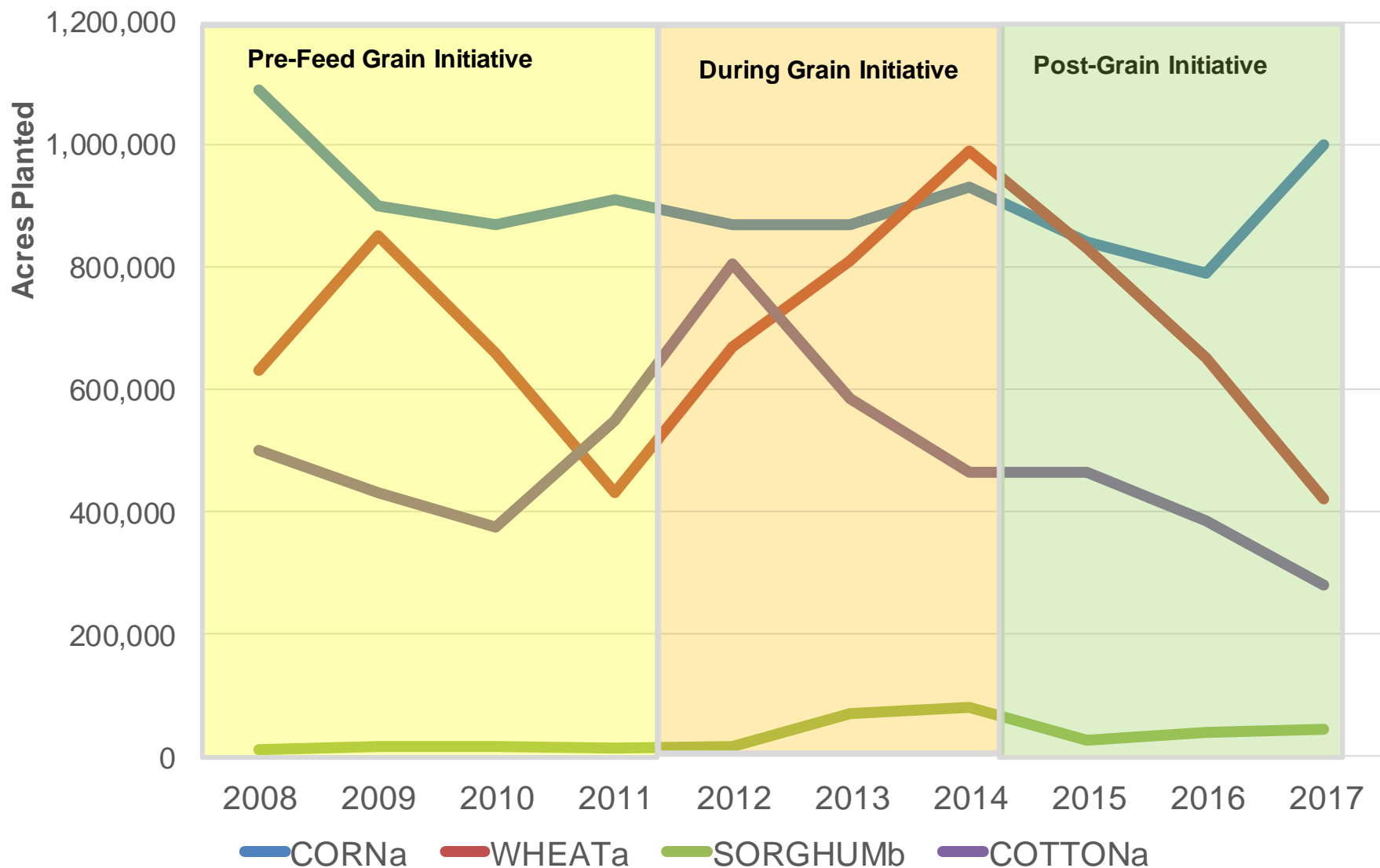
Pre-Feed Grain Initiative

During Feed Grain Initiative

Post Feed Grain Initiative

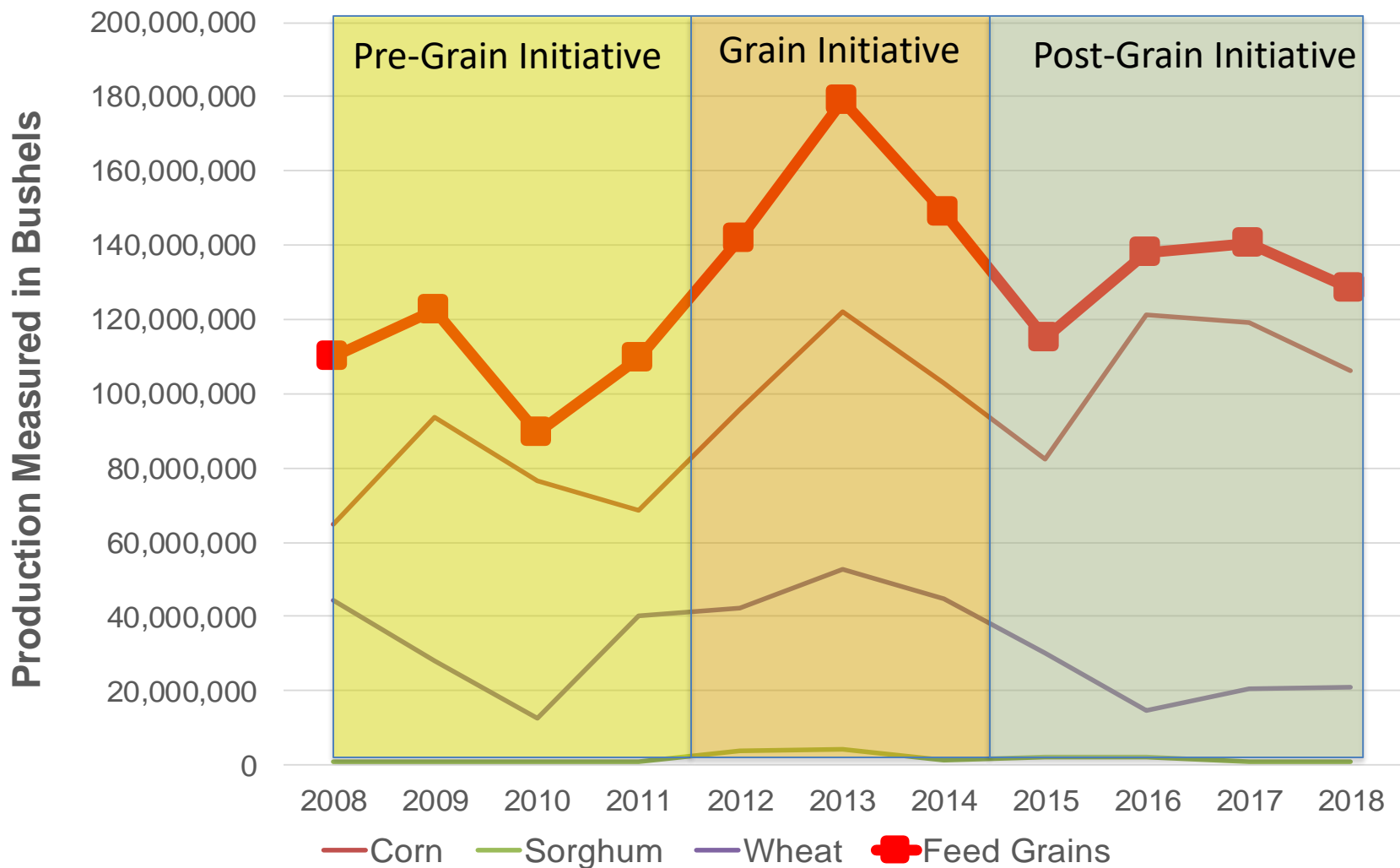


NC Major Row Crop Acreage 2008-2017





NC Feed Grain Crop Production 2008-2017



**North Carolina Feed Grain Production Averages 2008-2011, 2012-2014, and 2015-2018**

	Pre-Grain Initiative	Pre-Grain Initiative	Post-Grain Initiative
Crop	Average 2008-2011	Average 2012-2014	Average 2015-2018
	<i>Bushels</i>		
CORN	75,810,000	107,006,667	107,292,500
WHEAT	31,308,750	46,521,667	21,620,000
SORGHUM	777,123	3,151,897	1,496,422
Total Feed Grains	107,895,873	156,680,230	130,408,922



Sources for NC Feed Grains

- ❑ Historically, the NC livestock industry has sourced corn imports from regions that have excess supplies of corn, such as the Corn Belt located in the Midwest and transporting this corn by rail.
- ❑ However, because NC is a coastal state, accessing corn from international destinations like Brazil or Argentina is also possible, which can be transported via ship into the Port of Wilmington.
- ❑ These alternatives for sourcing corn from alternative destinations, using different modes of transportation, gives end-users in NC important alternatives and an insurance of sorts. The profitability of the NC livestock industry hinges on having an adequate, reliable, and low-cost supply of out-of-state corn to feed all the “tails and feathers” several times daily year round.
- ❑ With the possibility of alternative domestic and international sources comes some assurance that the NC livestock industry should be able to import the lowest cost corn plus transportation costs at any given point in time.
- ❑ With alternative source destinations utilizing differing modes of transportation, a multitude of factors are in play, which ultimately impact the price of corn in North Carolina.



NC Feed Grain Prices

- ❑ Weather and crop production in source locations, changes in costs of transportations rates (rail, ocean, and trucks), and exchange rate movements all factor into the price of corn in North Carolina. At any given time this multitude of factors, combined, determine where end-users will source corn for future imports. Thus, for the North Carolina corn farmer, this means the prices they can expect to receive for their corn can potentially be impacted by numerous external factors.
- ❑ Basis can be defined generally as the difference between cash prices and futures prices for commodities at a given point in time. “Nearby basis” is the difference between cash prices and the futures contract price closest to delivery on a given day. Many factors affect basis levels within a given region, including supply and demand within the market area; availability of storage, handling, and processing facilities; the volume of imports; and the cost of transportation to the area.
- ❑ Examining temporal changes in local basis over extended periods of time allows for a determination of whether there have been changes in the cost of transportation over time. If changes in transportation costs are found, this has important implications with respect to prices North Carolina corn producers receive and the costs the producers of the “tails and feathers” must pay.

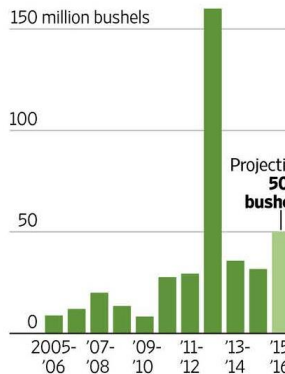


Increased Foreign Imports to Southeast

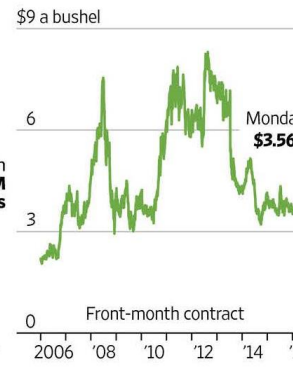
Flowing In

U.S. corn imports are surging despite bumper domestic harvests and depressed prices, as meat producers seek cheap foreign-grown grain.

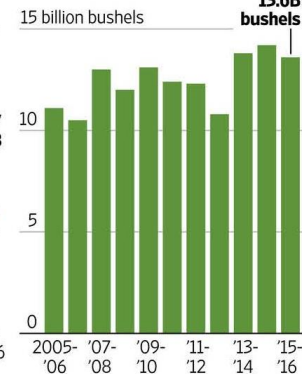
U.S. corn imports



Corn futures



U.S. corn production



Note: U.S. corn imports spiked during the 2012-13 season, as a withering drought in the U.S. Midwest curbed domestic production of the grain. Sources: U.S. Dept. of Agriculture (imports, production); CQG (futures) THE WALL STREET JOURNAL.

4/19/2018

Corn Imports Surge in U.S., Despite Record Harvests at Home - WSJ

DOW JONES, A NEWS CORP COMPANY

Nikkei 22129.46 -0.28% ▼ Hang Seng 30708.44 1.40% ▲ U.S. 10 Yr -1/32 Yield 2.917% ▼ Crude Oil 68.20 -0.13% ▼

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<http://www.wsj.com/articles/corn-imports-surge-in-u-s-despite-record-harvests-at-home-1460485875>

COMMODITIES

Corn Imports Surge in U.S., Despite Record Harvests at Home

Moves in currencies, shipping fees and railroad rates mean bringing in animal feed can be cheaper than getting it from the Midwest



A corn warehouse in Brazil. The country is the second-largest corn exporter behind the U.S. and is on track this season to harvest its second-largest corn crop on record. PHOTO: PAULO FRIDMAN/CORBIS



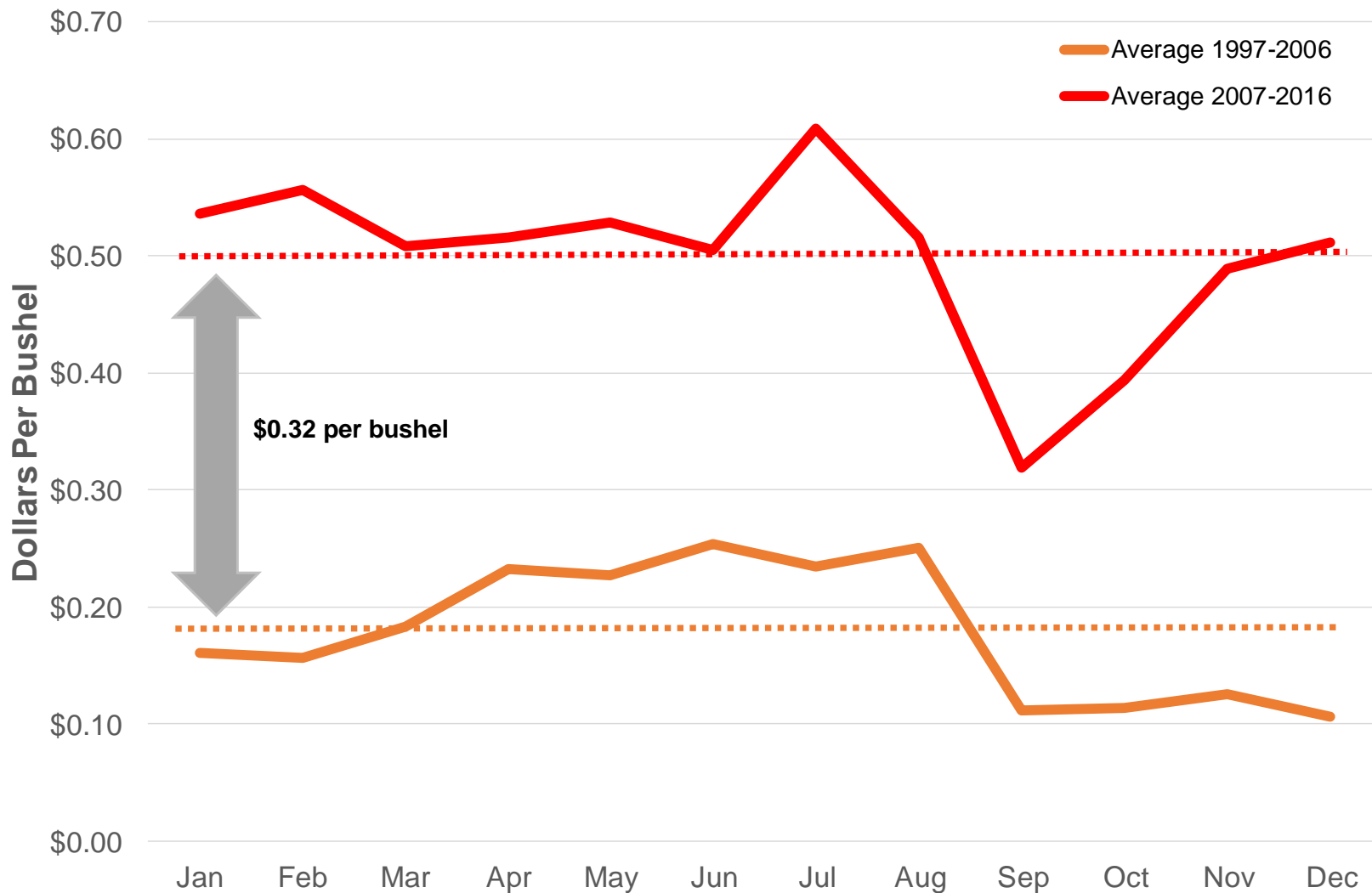
Increased Corn Basis for NC

Table 1: Monthly Average Nearby Basis at Rose Hill, North Carolina (\$/bu)

	Average 1997-2006	Average 2007-2016	Difference
	[a]	[b]	[b] - [a]
Jan	\$0.16	\$0.54	\$0.38
Feb	\$0.16	\$0.56	\$0.40
Mar	\$0.18	\$0.51	\$0.33
Apr	\$0.23	\$0.52	\$0.28
May	\$0.23	\$0.53	\$0.30
Jun	\$0.25	\$0.51	\$0.25
Jul	\$0.23	\$0.61	\$0.37
Aug	\$0.25	\$0.52	\$0.26
Sep	\$0.11	\$0.32	\$0.21
Oct	\$0.11	\$0.39	\$0.28
Nov	\$0.13	\$0.49	\$0.36
Dec	\$0.11	\$0.51	\$0.41
Annual	\$0.18	\$0.50	\$0.32

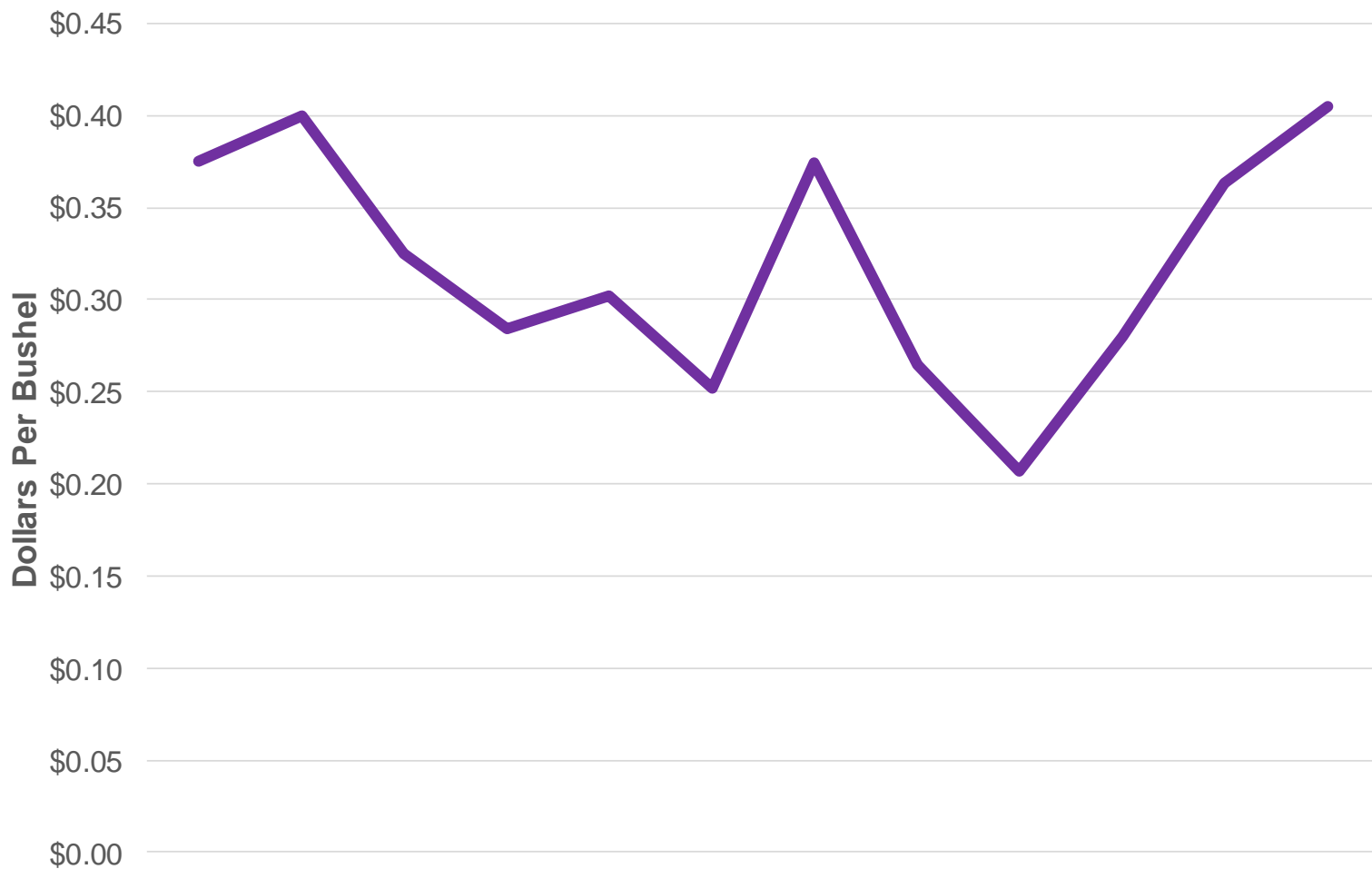


Figure 1: Difference in Monthly Average Nearby Basis at Rose Hill, North Carolina for the Periods 1997-2006 and 2007-2016





Difference in Monthly Average Nearby Basis at Rosehill, North Carolina for the Periods 2002-2006 and 2012-2016





Investment in NC Logistics Infrastructure

- ❑ Looking forward, if the costs of transporting corn from out-of-state sources continues to rise, it will only further increase the costs of one of the most important inputs to the livestock industry.
- ❑ To preserve the vitality of NC's largest agricultural industry and the NC agricultural economy, it would be prudent to consider further investments into the logistical infrastructure that will address current inefficiencies and potentially lower the costs of importing corn from out-of-state.
- ❑ Investing in improved railways and ports will not only be beneficial to the NC livestock industry but, as there will be significant positive spillovers to other industries that are dependent on transportation into and out of NC, it should help to improve the overall economy in NC.
- ❑ In the interim we can expect continued strong and further strengthening in corn basis which will benefit NC feed grain producers. Continued or even higher corn basis may in turn encourage greater corn production in NC which in turn could temper future corn deficiencies. In sum, the more things change, the more things stay the same; it is complex.



Questions and Discussion

