

Ag Equipment Intelligence

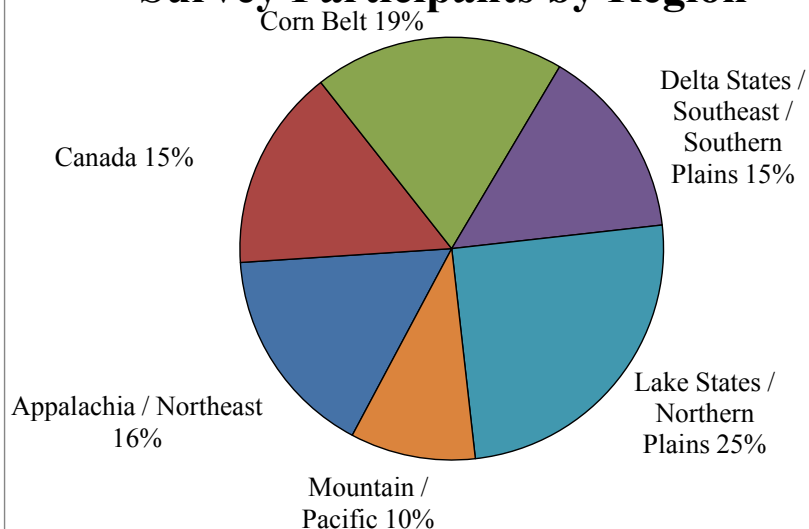
August 2016 Dealer Sentiments &
Business Conditions Update

Monthly Ag Equipment Intelligence North American Dealer Survey

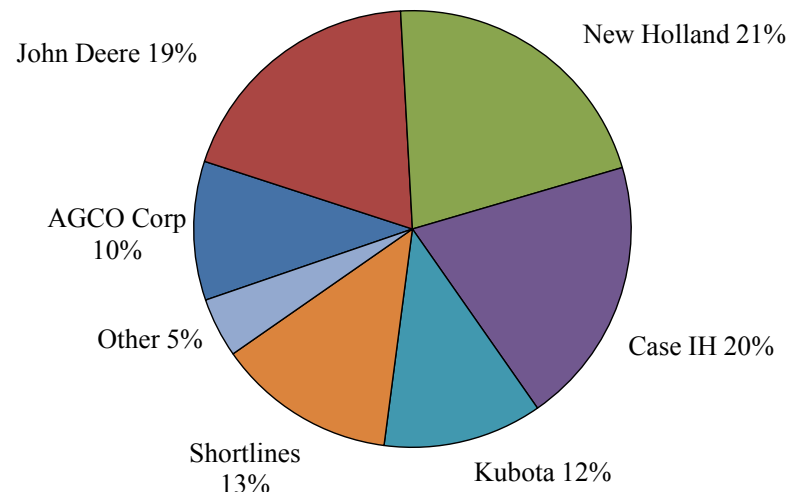
Background:

- We are pleased to announce the results of the July Ag Equipment Intelligence survey conducted in partnership with Cleveland Research Company. We hope this monthly survey will provide valuable and timely insight into industry trends and fundamentals.
- The July survey had ~140 respondents representing combined annual revenues of roughly \$6 billion. Participants representing a broad cross section of geographies and brands are summarized in the charts below.

Survey Participants by Region



Participants by Brand



Appalachia / Northeast – CT, DE, KY, MA, MD, ME, NC, NH, NY, NJ, PA, RI, TI, TN, VA, VT, WV, **Corn Belt** – IL, IN, IA, MO, OH, **Delta States / Southeast / Southern Plains** – AL, AR, FL, GA, LA, MS, OK, SC, TX, **Lake States / Northern Plains** – KS, MI, MN, NE, ND, SD, WI, **Mountain / Pacific** – AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY. Note AGCO represents Massey Ferguson and Challenger brands. *Note regions have been condensed.

Highlights / Summary Thoughts

- **Sales** – Average dealer sales were reported down 8% in July vs. the 9% decline reported in June. A net 28% of dealers missed their sales budget in July, making for over 2 years of consecutive monthly budget shortfalls. A net 39% of dealers reported a sales decline in the month vs. a net 23% citing a decline in June. Commercial and consumer lawn equipment sales continue to show strength, while large equipment demand remains very weak.
- **Outlook** – The full year 2016 dealer average sales growth forecast was reported at down 12%, down from the 10% decline forecast in June. A net 36% of dealers are forecasting a sales decline for the year vs. a net 37% forecasting a decline last month. The initial sales growth forecast for 2017 was reported at down 8% on average.
- **Inventory** – A net 42% of dealers reported new equipment inventories as “too high” vs. 44% in June. Used inventory levels were reported lower than June, as a net 34% of dealers reported inventory as “too high” vs. 46% last month.
- **Pricing** – Dealers reported relatively flat new equipment pricing following a slight uptick in 4Q (~0.5-1.0%) as Tier 4 sales and OEM price increase have been offset by greater discounting at the dealer level. Used tractors were reported down 7% y/y on average, slightly worse than the 6% reported in June. Used combine pricing was down 10% y/y, flat to June’s 10% decline.

Monthly Sales Growth

- Average dealer sales were reported down 8% y/y in July vs. the 9% reported in June. A net 28% of dealers missed their sales budgets in July, worse than the 17% miss in June.
- A net 24% of dealers report they are less optimistic about overall business conditions vs. 19% in June. Optimism has remained negative for 2+ consecutive years.

N. American Farm Equipment Dealer Survey - Average Dealer Sales Growth																	
% Change y/y	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16
AGCO	-8%	-1%	4%	-12%	-24%	-13%	-14%	-22%	-27%	-9%	-13%	-7%	-18%	-4%	-1%	-19%	-7%
John Deere	-8%	-11%	-15%	-14%	-19%	-14%	-15%	-16%	-12%	-16%	-11%	-11%	-13%	-11%	-6%	-8%	-16%
New Holland	-3%	-2%	-7%	-5%	-17%	-12%	-23%	-14%	-13%	-15%	-11%	-10%	-15%	-16%	2%	-3%	-8%
Case IH	-13%	-16%	-19%	-19%	-17%	-19%	-20%	-19%	-22%	-18%	-18%	-20%	-15%	-9%	-19%	-8%	-5%
Kubota	-4%	-1%	0%	0%	0%	-3%	-2%	2%	-5%	-13%	-8%	0%	8%	2%	6%	2%	8%
Shortlines/Other	-18%	-8%	-6%	-16%	-7%	-38%	-7%	-9%	-8%	-8%	-9%	-1%	-4%	-6%	-7%	-4%	8%
Total	-8%	-10%	-13%	-13%	-18%	-15%	-16%	-16%	-16%	-15%	-13%	-12%	-13%	-10%	-6%	-9%	-8%

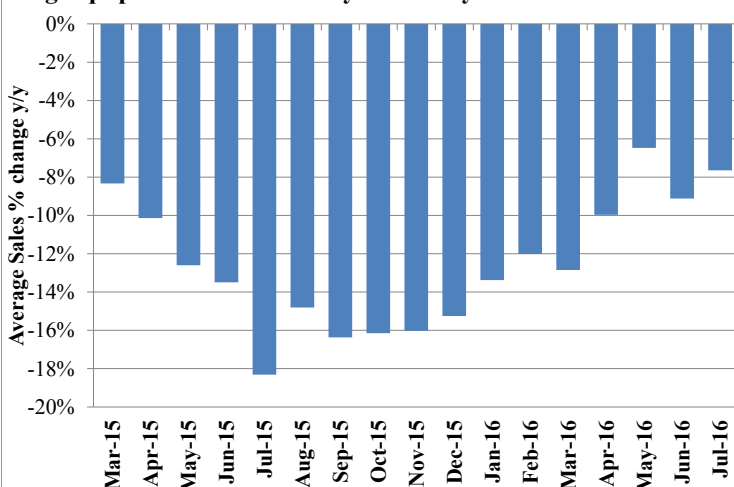
Source: Cleveland Research, AEI

N. American Farm Equipment Dealer Survey - Sales Versus Expectations																	
% of Dealers Reporting	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16
Better than expected	20%	27%	23%	21%	18%	16%	19%	15%	12%	19%	12%	15%	20%	24%	21%	22%	15%
In line with expectations	50%	44%	39%	48%	45%	56%	53%	43%	51%	47%	52%	47%	52%	48%	46%	40%	43%
Worse than expected	28%	29%	36%	31%	36%	28%	28%	41%	37%	34%	35%	38%	28%	29%	34%	38%	42%
Net % (Better - Worse)	-8%	-2%	-13%	-10%	-18%	-12%	-9%	-26%	-25%	-15%	-23%	-22%	-8%	-5%	-13%	-17%	-28%

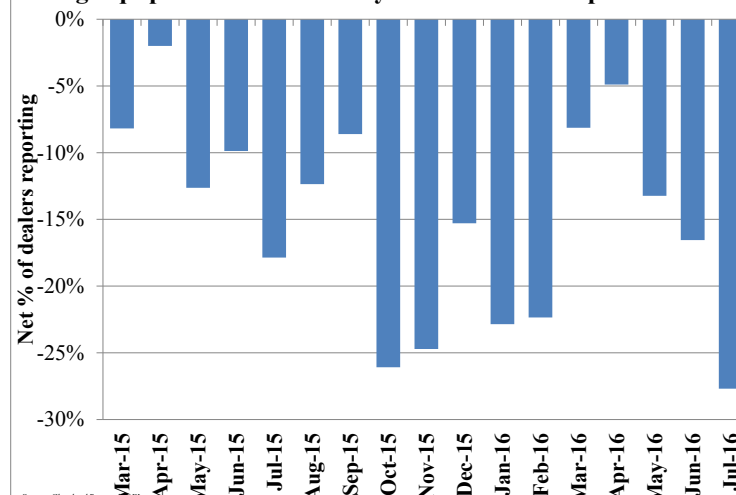
Source: Cleveland Research, AEI.

Monthly Sales Growth Continued

Ag Equipment Dealer Survey - Monthly Sales Growth Trends



Ag Equipment Dealer Survey - Sales Versus Expectations



N. American Farm Equipment Dealer Survey - Average Dealer Revenue Growth Trends

% of Dealers Reporting	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16
Positive Sales Growth	20%	27%	29%	26%	20%	19%	24%	20%	16%	18%	14%	20%	23%	27%	29%	27%	20%
Flat Sales	50%	11%	17%	11%	16%	16%	16%	15%	17%	10%	22%	20%	17%	23%	16%	23%	21%
Negative Sales Growth	28%	62%	54%	63%	64%	65%	60%	65%	67%	72%	64%	60%	60%	50%	55%	50%	59%
Net % Reporting Growth	-8%	-35%	-25%	-37%	-43%	-46%	-35%	-46%	-52%	-54%	-50%	-40%	-37%	-23%	-26%	-23%	-39%
Average % Change y/y	-8%	-10%	-13%	-13%	-18%	-15%	-16%	-16%	-16%	-15%	-13%	-12%	-13%	-10%	-6%	-9%	-8%

Source: Cleveland Research

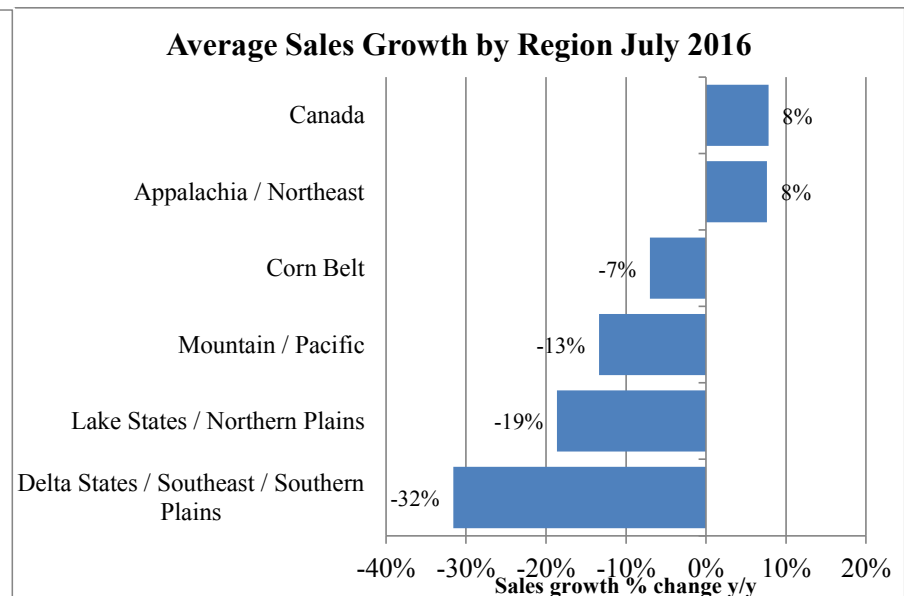
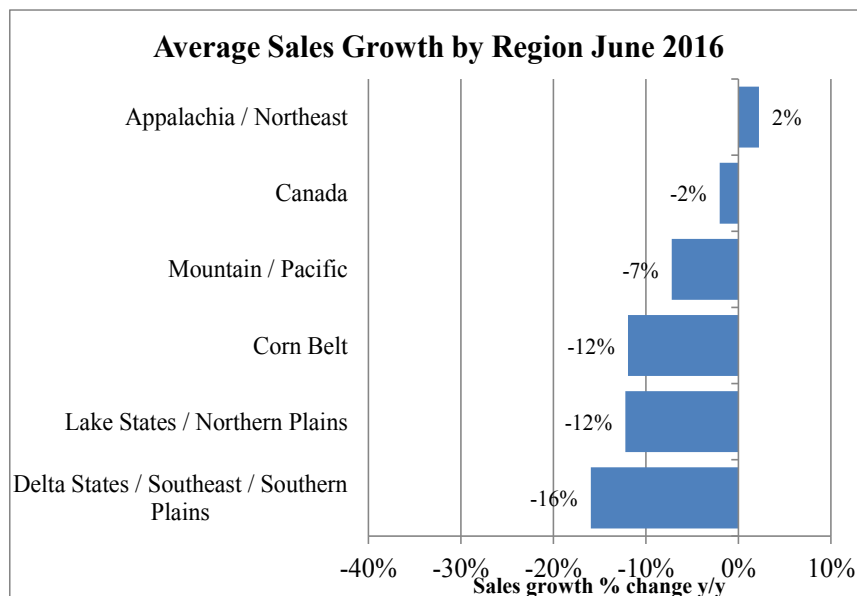
Optimism/Sentiment vs. Last Month

% of Dealers Reporting	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16
More Optimistic	14%	14%	12%	13%	14%	11%	12%	8%	10%	8%	11%	13%	17%	15%	22%	11%	16%
Same	42%	47%	48%	58%	52%	45%	51%	60%	52%	48%	46%	51%	55%	59%	51%	60%	44%
Less Optimistic	43%	40%	40%	30%	35%	43%	37%	33%	38%	44%	43%	36%	28%	26%	27%	30%	40%
Net % Dealer Optimism	-29%	-26%	-26%	-18%	-21%	-32%	-26%	-25%	-28%	-35%	-31%	-24%	-11%	-11%	-4%	-19%	-24%

Source: Cleveland Research

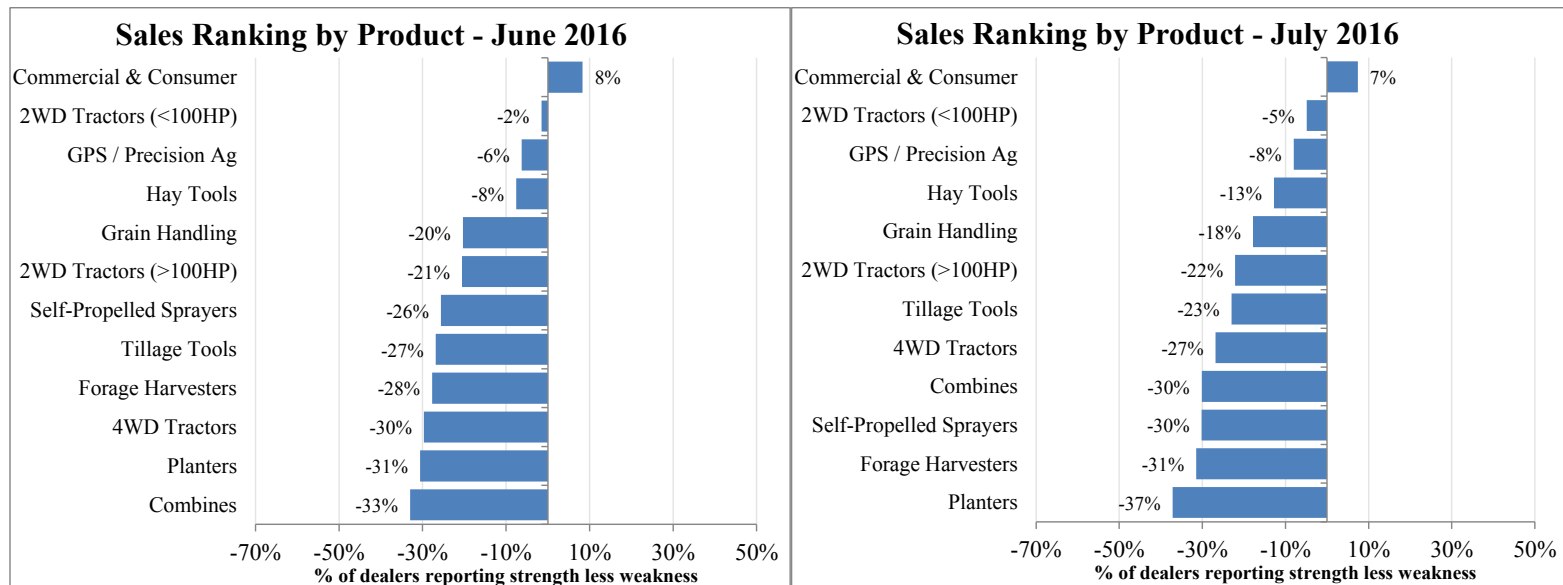
Monthly Sales Growth by Region

- Sales trends were mixed by region in the month, with Delta States/Southeast/Southern Plains showing the largest sequential declines. There was notable improvement in the month in the Corn Belt, Canada and Appalachia/Northeast regions.

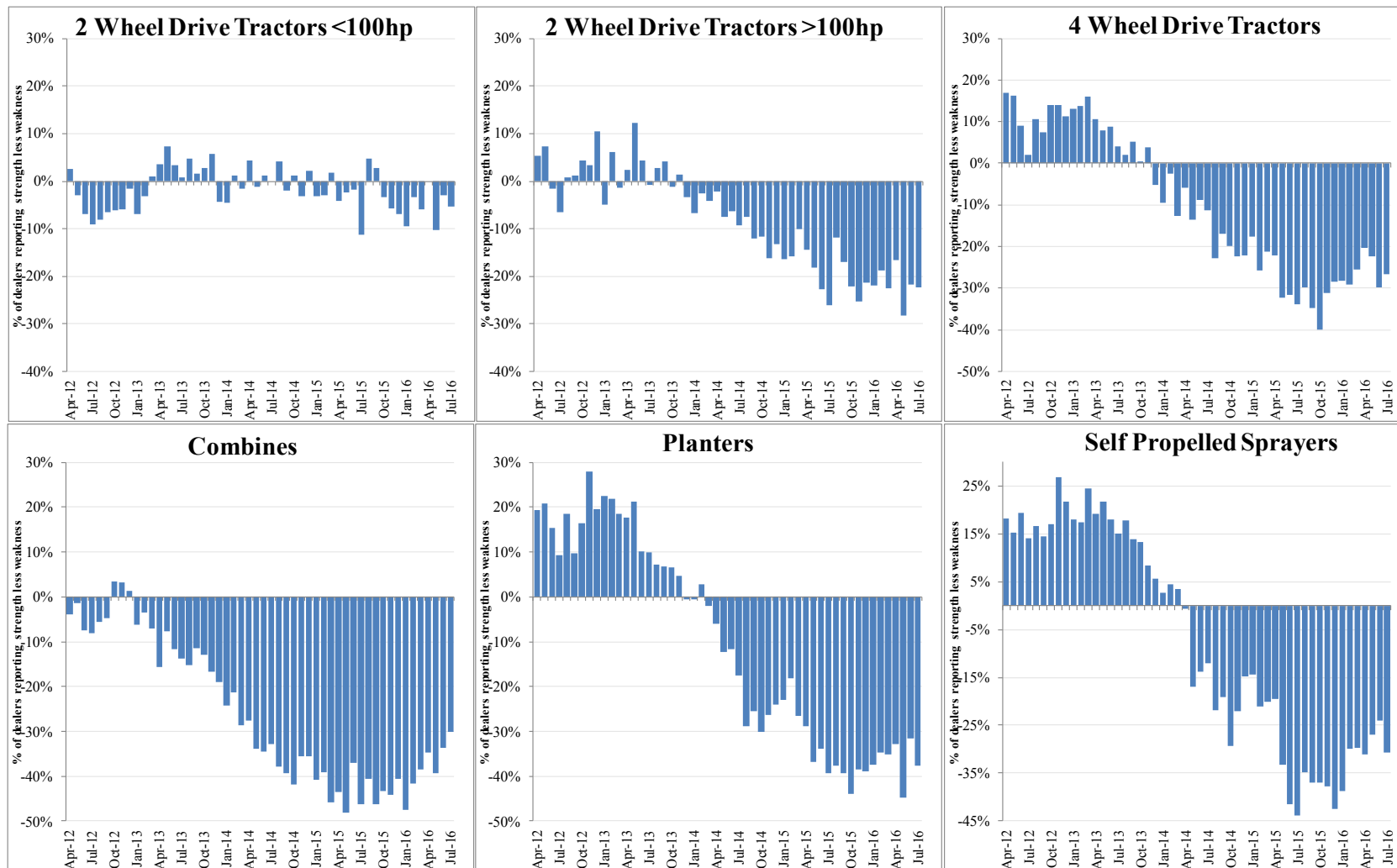


Equipment Category Sales Trends

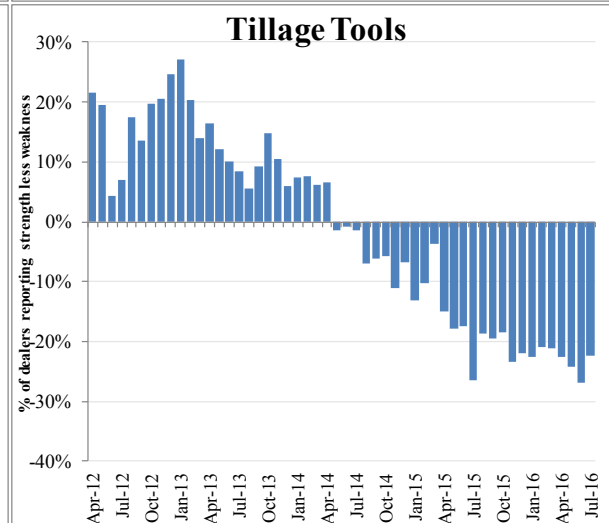
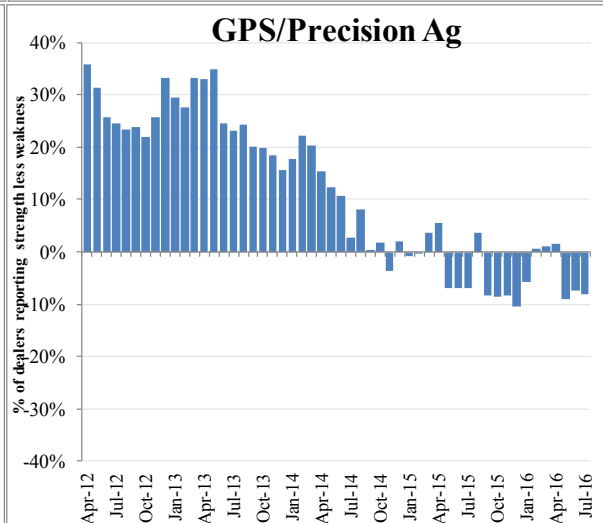
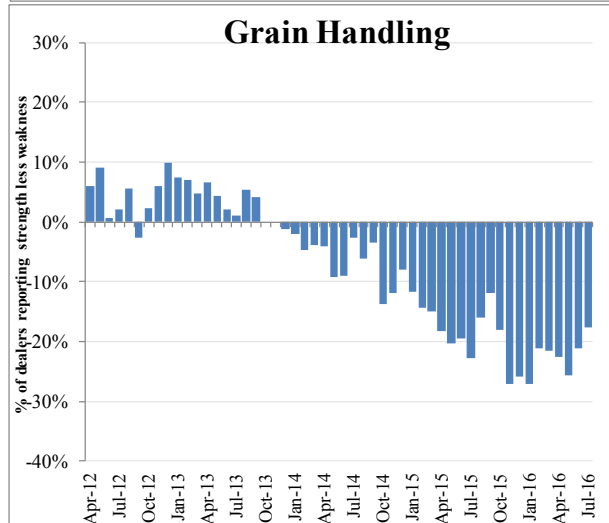
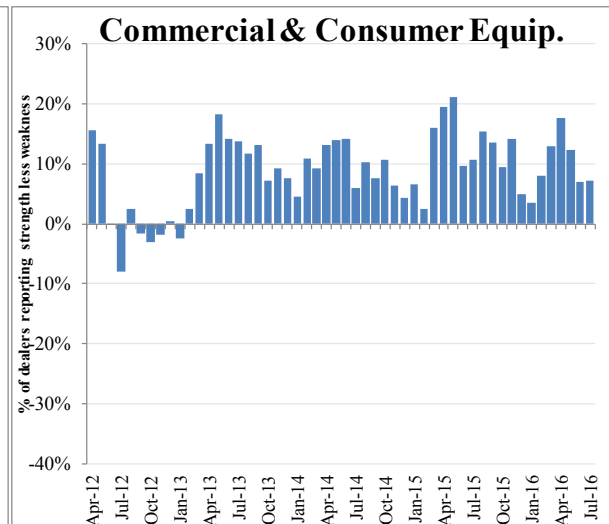
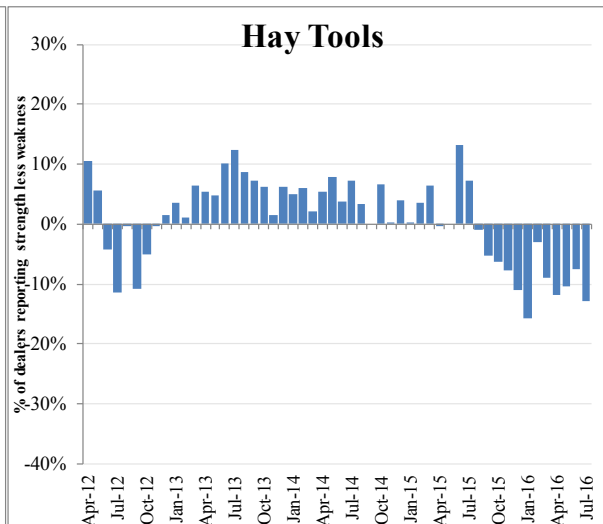
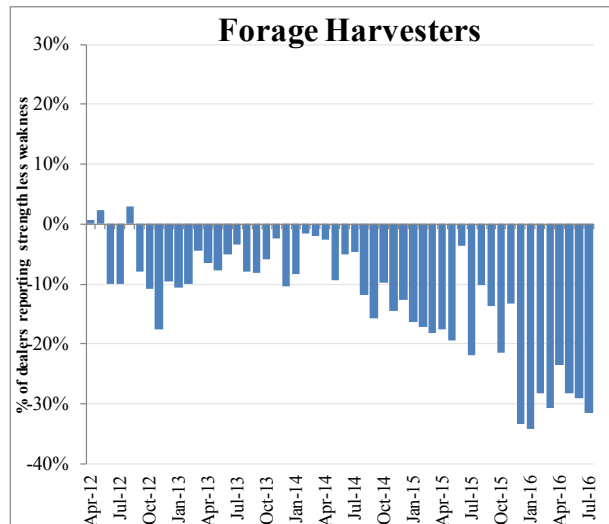
- Commercial & consumer lawn equipment continues to show strength in contrast to declines in other categories (combines, planters and sprayers in particular). While GPS / Precision AG equipment had seen strength in the 1H16, trends have deteriorated over the past few months. We continue to see significant headwinds to large equipment sales.



Equipment Category Sales Trends



Equipment Category Sales Trends (Continued)



Most Interesting Commentary - Monthly Sales and Outlook

- *We have cleared out our used combine inventory and are left with only one new combine.*
- *Tractors and hay equipment really softened for us in July.*
- *The unfavorable currency, lack of moisture, and weak commodity pricing are driving sales declines.*
- *Several farmers mentioned that their banker now has a policy prohibiting new purchases approved for any farmer.*
- *Presidential election years tend to have an adverse effect on farm equipment sales and this year has been worse than past election years due to the volatile political climate.*
- *Manufacturers are hungry to keep some sort of normalcy in production- therefore, they are coming to the table with better terms on whole goods in an effort to entice dealers to order stock units.*
- *There still seems to be too much iron in the marketplace on the used side. Auction values haven't taken a foothold in most categories and until a balance is found, dealers will continue to be very conservative when taking trades. Customers seem to know this as well and many are looking to auctions for a deal.*
- *It appears that crop volume will be high, assuming we get finishing rains for the soybean crop, hopefully leading to sales after harvest.*
- *Our swing upward can be attributed to pre-sold machines. Looking at industry dollars, prime machines are still way off. It doesn't appear as though there's any end in sight.*
- *Aging equipment (especially HHP used late model tractors) values are being readjusted to move the equipment faster.*
- *I would like to buy some used equipment to sell, but am reluctant to buy too much because I am concerned that we haven't reached a bottom in the market. The big guys have a lot of iron to get rid of in the next 6 months.*
- *The "shelf life" gets shorter and shorter every year.*
- *There is an overall lack of interest in hay equipment, we are starting to lose deals to Kubota. We are taking a back seat to Kubota tractors and now hay equipment over pricing and financing options.*
- *There is a lack of interest in new tractors at any price.*
- *The bankers are getting ultra conservative.*
- *The amount of overall quoting activity our salesforce had was surprising, specifically in Nebraska. This is typically a month spent looking for any rock to turn over due to most of our customers irrigating.*
- *I expected sales to be off more than they were as compared to last year. We have also seen a large decrease in service and parts sales in the last 60 days that has been surprising.*
- *The year is uneventful and there is no excitement from the producers.*

Average Dealer Sales Outlook

- Dealers forecast 2016 sales down 12% y/y, below June's forecast of down 10%. A net 36% of dealers are forecasting a sales decline (26% increase, 11% about the same, 62% decline). The initial sales growth forecast for 2017 was reported at down 8% on average.
- The second table below details the 2016 industry outlooks from Deere, CNHI and AGCO. N. American forecasts estimates have not changed through AGCO and CNH's August earnings release.

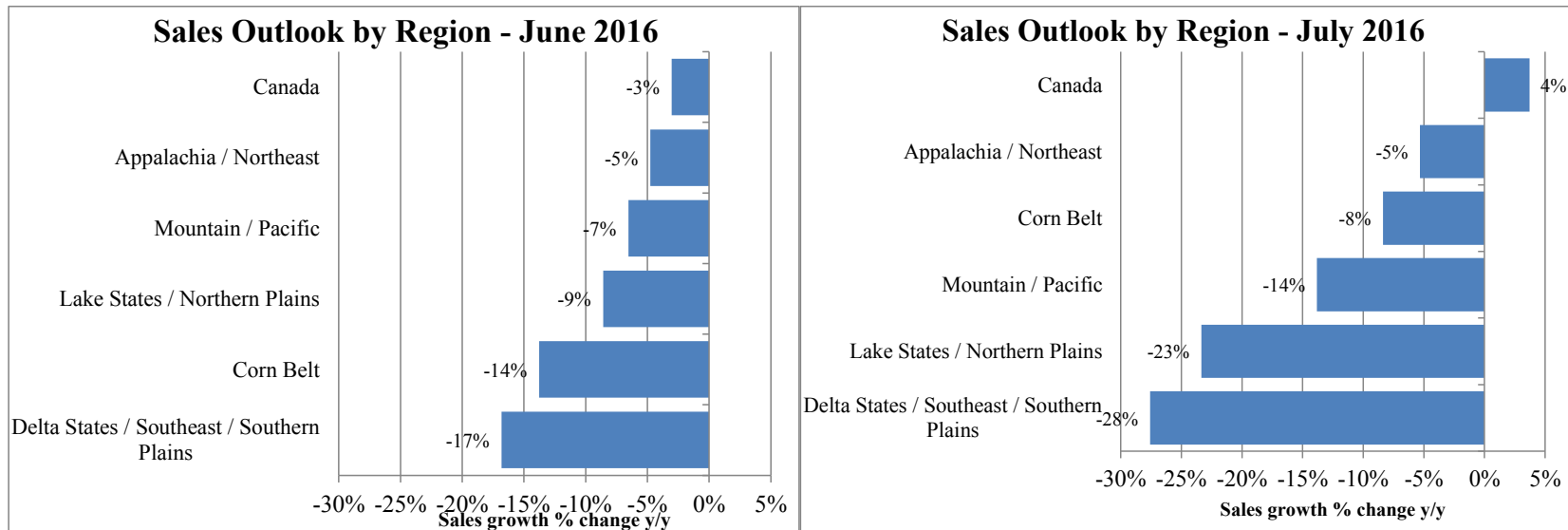
N. American Farm Equipment Dealer Survey - Full Year Sales Forecast											
% change y/y	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16
AGCO	-9%	-8%	-7%	-9%	-10%	-6%	-15%	-6%	-7%	-8%	-14%
John Deere	-6%	-10%	-9%	-8%	-12%	-10%	-12%	-10%	-6%	-11%	-15%
New Holland	-5%	-12%	-9%	-13%	-6%	-11%	-12%	-8%	-2%	-11%	-14%
Case IH	-7%	-8%	-10%	-10%	-12%	-15%	-11%	-15%	-23%	-11%	-15%
Kubota	3%	3%	4%	2%	-7%	5%	9%	2%	0%	1%	7%
Shortlines/Other	-9%	-15%	-8%	-6%	-12%	0%	-14%	-24%	-6%	-4%	11%
Overall	-6%	-9%	-9%	-9%	-11%	-10%	-11%	-11%	-9%	-10%	-12%

Source: Cleveland Research, AEI

2016 Ag Equipment Industry Sales Outlook (units)			
Geography	Deere	CNH Industrial	AGCO Corp.
N. America	Down 15-20%	Tractors (5%); Combines (15-20%)	Down 10-15%
Western Europe	Flat to Down 5%	Tractors (0-5%), Combines (5-10%)	Flat to Down 5%
Latin America	Down 15-20%	Tractors (15-20%), Combines (5-10%)	Down 15-20%
CIS or ROW	na	na	na
Asia	Flat to Down Slightly	Tractors 0-5%, Combines 5-10%	na
Source: Company reports, CRC estimates			

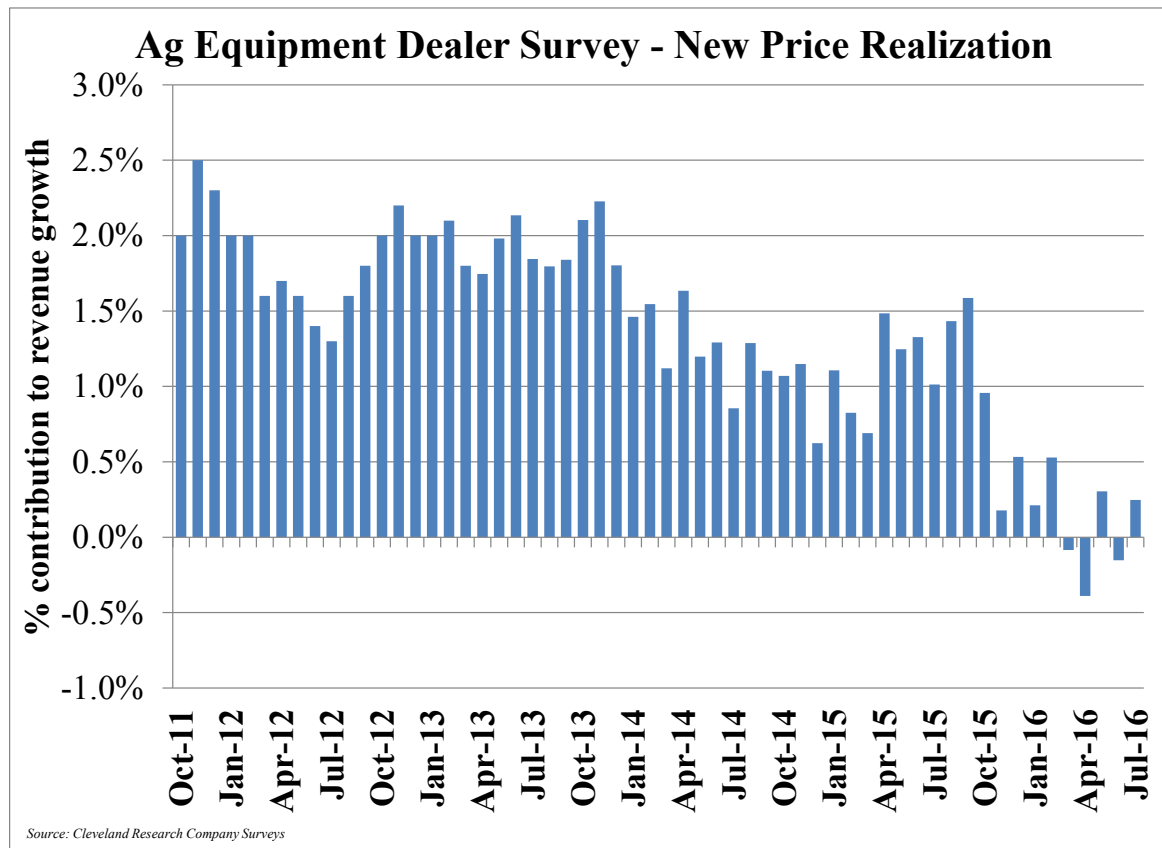
2016 Sales Outlook

- Trends were mixed by region in the month with Lake States/Northern Plains now expecting sales down 23% in the year, after forecasts of down 9% in June. All other regions are forecasting negative sales in 2016 with the Delta States/Southeast/Southern Plains having the weakest forecast at down 28% for the year.



Pricing Trends

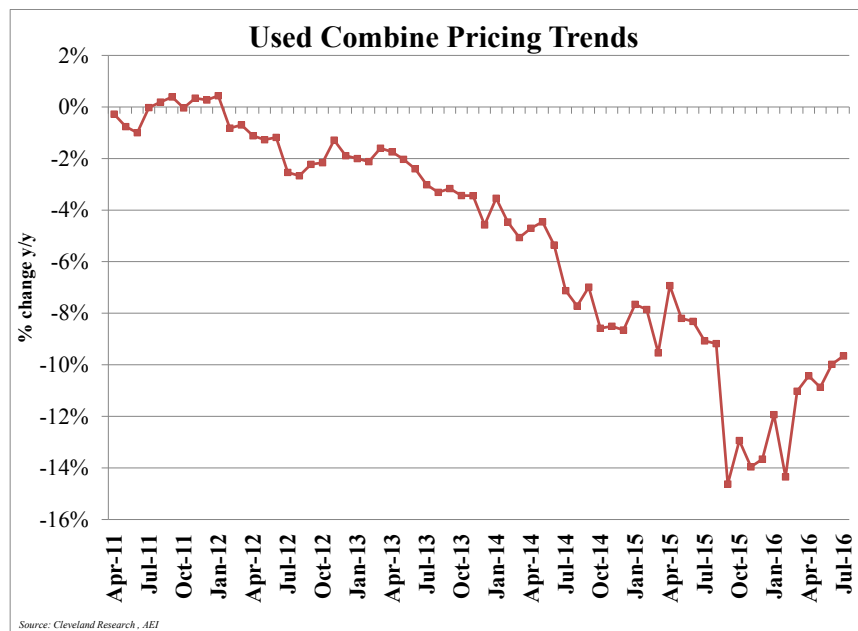
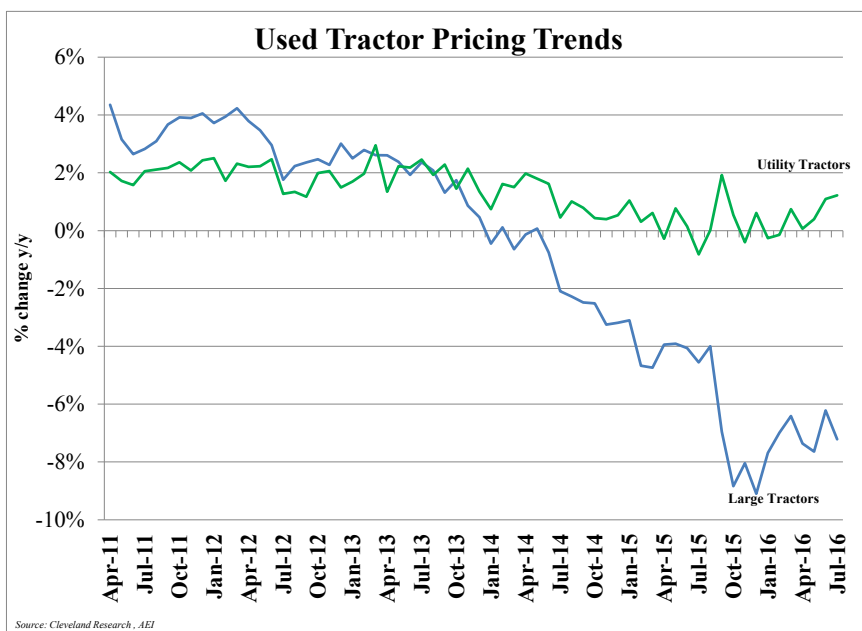
- Dealers reported relatively flat pricing over the last few months as incentives programs have more than offset list price increases back in 4Q15. The effect of the strong U.S. dollar on Canadian exchange rate has also played a part in pricing inflation within North America.



Used Equipment Pricing

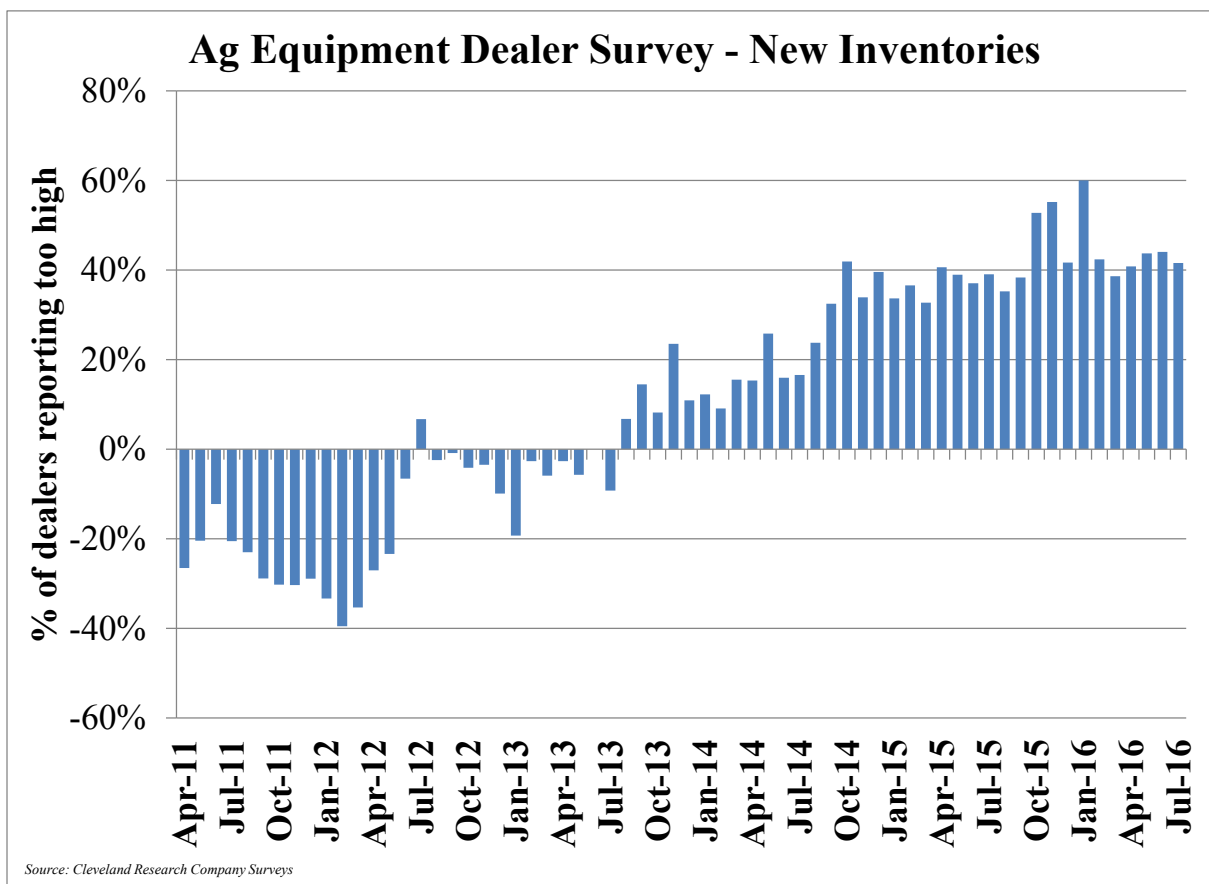
- July saw a slight improvement in pricing for small tractors, inline with the past few months. Used tractors were reported down ~7% y/y on average, slightly below the 6% reported in June. Used combine pricing was down 10% y/y, flat to June's 10% decline.

Used Tractor and Combine Values (Y/Y)											
	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16
Compact (<40HP)	2%	1%	(1%)	0%	(1%)	0%	1%	0%	1%	2%	2%
Utility (40-100HP)	2%	0%	(0%)	1%	0%	(1%)	0%	0%	0%	1%	1%
Row Crop (100HP+)	(4%)	(6%)	(7%)	(7%)	(6%)	(5%)	(5%)	(6%)	(7%)	(5%)	(6%)
4WD Tractors	(9%)	(11%)	(9%)	(11%)	(10%)	(9%)	(8%)	(8%)	(9%)	(8%)	(8%)
Combines	(15%)	(13%)	(14%)	(14%)	(12%)	(14%)	(11%)	(10%)	(11%)	(10%)	(10%)



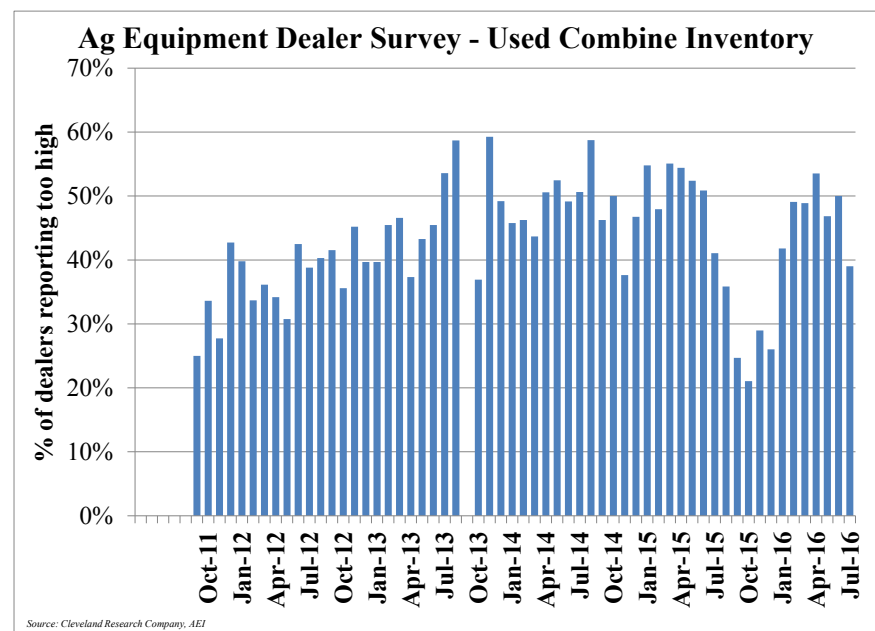
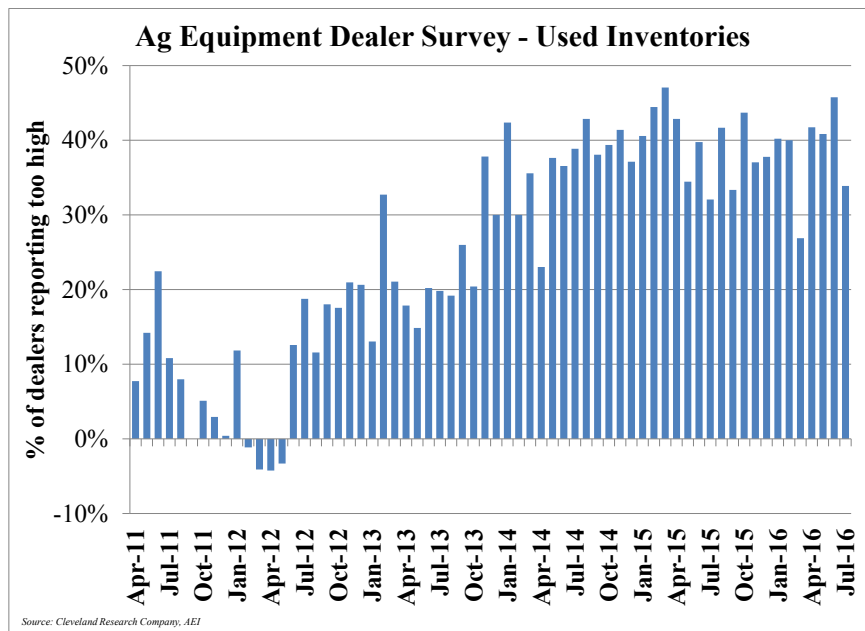
New Equipment Inventory Levels

- A net 41% of dealers reported new equipment inventories are too high (48% too high, 45% about right, 7% too low), vs 44% (51% too high, 42% about right, 7% too low) in June . This marks 22 months of new inventory levels reported as too high by more than a net 30% of dealers.



Used Equipment Inventory Levels

- A net 34% of dealers reported used equipment inventory as too high (44% too high, 47% about right, 10% too low), an improvement from the 46% reporting heightened inventory in June (55% too high, 36% about right, 9% too low). Used combine inventory levels were reported as too high by a net 39% of dealers in July, compared to June's reading of 50% and May's 47%.



North American Farm Equipment Industry Retail Sales

NORTH AMERICAN FARM EQUIPMENT RETAIL SALES														
	Units							% change year-over-year						
	< 40 HP	Utility	Row Crop	4-Wheel	Total Tractor	Row Crop & 4WD	Combines	< 40 HP	Utility	Row Crop	4-Wheel	Total Tractor	Row Crop & 4WD	Combines
Jan-14	4,755	4,152	3,303	631	12,841	3,934	824	1%	2%	12%	-7%	3%	8%	33%
Feb-14	5,308	3,745	2,423	575	12,051	2,998	526	4%	1%	-6%	-14%	0%	-8%	-15%
Mar-14	10,108	5,110	3,155	655	19,028	3,810	899	22%	3%	-9%	-7%	9%	-9%	-25%
Apr-14	14,191	6,010	3,752	745	24,698	4,497	996	2%	7%	-13%	-12%	0%	-13%	-13%
May-14	16,828	6,586	2,928	474	26,816	3,402	669	-2%	6%	-16%	-14%	-2%	-16%	-24%
Jun-14	15,245	6,488	2,733	408	24,874	3,141	837	13%	2%	-16%	-25%	5%	-18%	-25%
Jul-14	11,245	5,934	3,206	389	20,774	3,595	1,034	5%	7%	1%	-21%	4%	-2%	-30%
Aug-14	9,691	5,444	2,575	371	18,081	2,946	946	4%	9%	-9%	-37%	2%	-14%	-24%
Sep-14	11,333	6,193	3,276	492	21,294	3,768	1,142	32%	28%	-2%	-14%	23%	-4%	-11%
Oct-14	10,950	7,085	4,920	733	23,688	5,653	983	14%	6%	-17%	-40%	1%	-21%	-41%
Nov-14	5,857	4,177	1,891	354	12,279	2,245	450	4%	8%	-29%	-45%	-4%	-32%	-50%
Dec-14	8,089	7,473	3,730	512	19,804	4,242	920	6%	8%	-24%	-47%	-3%	-28%	-40%
Jan-15	5,382	4,506	3,124	220	13,232	3,344	384	13%	9%	-5%	-65%	3%	-15%	-53%
Feb-15	5,305	3,250	1,955	348	10,858	2,303	399	0%	-13%	-19%	-39%	-10%	-23%	-24%
Mar-15	9,702	4,799	2,539	499	17,539	3,038	470	-4%	-6%	-20%	-24%	-8%	-20%	-48%
Apr-15	16,624	6,461	3,131	430	26,646	3,561	664	17%	8%	-17%	-42%	8%	-21%	-33%
May-15	16,028	5,643	1,994	260	23,925	2,254	549	-5%	-14%	-32%	-45%	-11%	-34%	-18%
Jun-15	15,679	6,526	2,409	300	24,914	2,709	502	3%	1%	-12%	-26%	0%	-14%	-40%
Jul-15	14,372	7,039	2,469	268	24,148	2,737	806	28%	19%	-23%	-31%	16%	-24%	-22%
Aug-15	9,688	5,120	1,771	167	16,746	1,938	679	0%	-6%	-31%	-55%	-7%	-34%	-28%
Sep-15	10,787	5,394	1,941	250	18,372	2,191	848	-5%	-13%	-41%	-49%	-14%	-42%	-26%
Oct-15	12,876	6,855	3,263	515	23,509	3,778	799	18%	-3%	-34%	-30%	-1%	-33%	-19%
Nov-15	5,940	3,697	1,164	221	11,022	1,385	344	1%	-11%	-38%	-38%	-10%	-38%	-24%
Dec-15	8,693	6,350	2,559	515	18,117	3,074	886	7%	-15%	-31%	1%	-9%	-28%	-4%
Jan-16	5,647	4,261	1,981	242	12,131	2,223	457	5%	-5%	-37%	10%	-8%	-34%	19%
Feb-16	6,404	3,386	1,186	222	11,198	1,408	241	21%	4%	-39%	-36%	3%	-39%	-40%
Mar-16	12,453	5,136	1,909	259	19,757	2,168	350	28%	7%	-25%	-48%	13%	-29%	-26%
Apr-16	17,713	5,586	2,548	337	26,184	2,885	465	7%	-14%	-19%	-22%	-2%	-19%	-30%
May-16	17,201	5,634	1,976	234	25,045	2,210	333	7%	0%	-1%	-10%	5%	-2%	-39%
Jun-16	15,794	6,594	1,974	223	24,585	2,197	567	1%	1%	-18%	-26%	-1%	-19%	13%
Jul-16	13,344	5,418	1,833	152	20,747	1,985	619	-7%	-23%	-26%	-43%	-14%	-27%	-23%

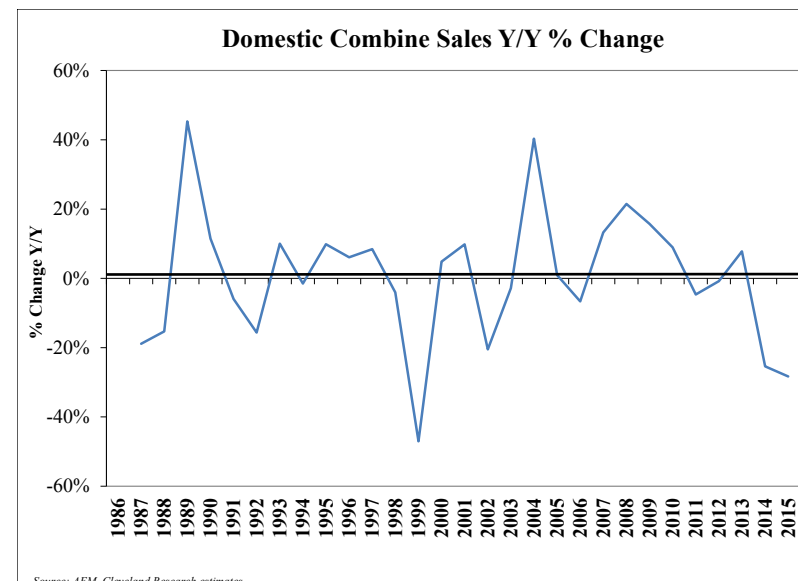
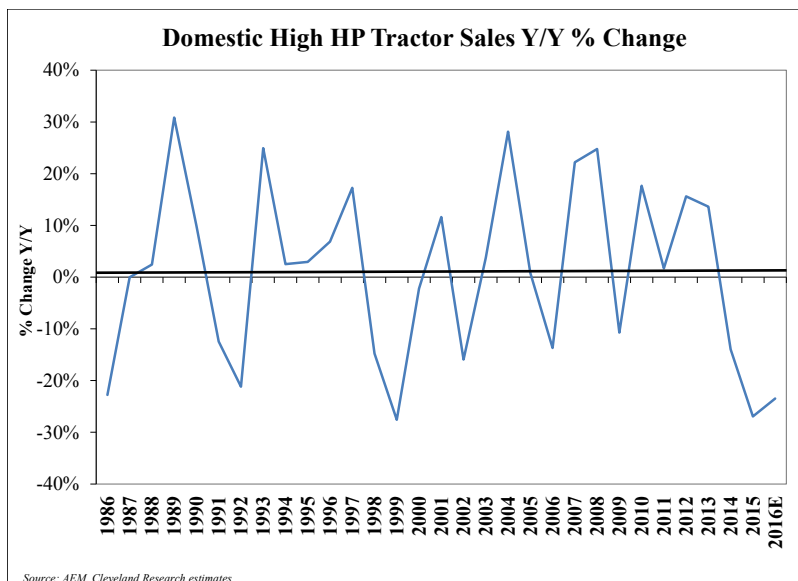
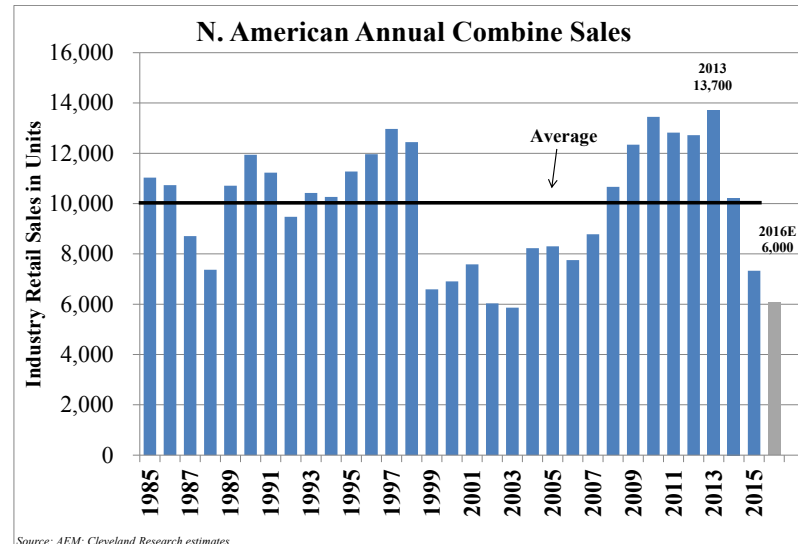
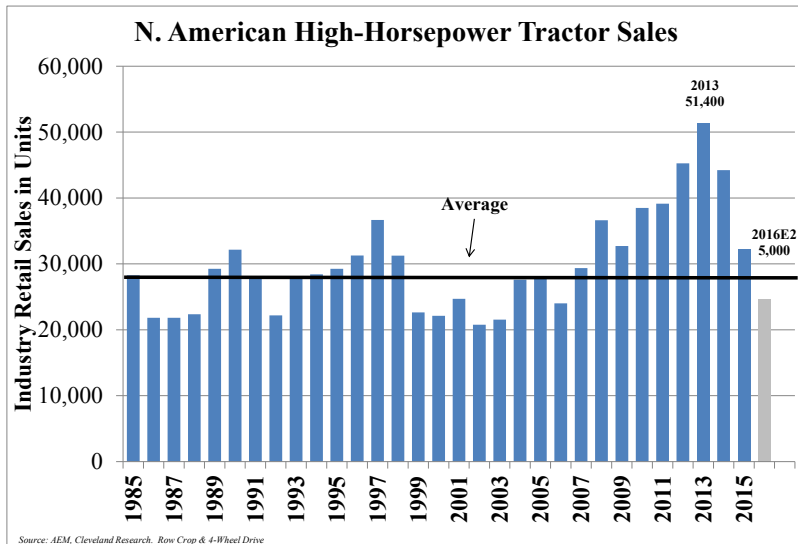
Source: AEM; Cleveland Research Company estimates. High hp tractors are row crop & 4-wheel drive.

North American Farm Equipment Industry Inventory

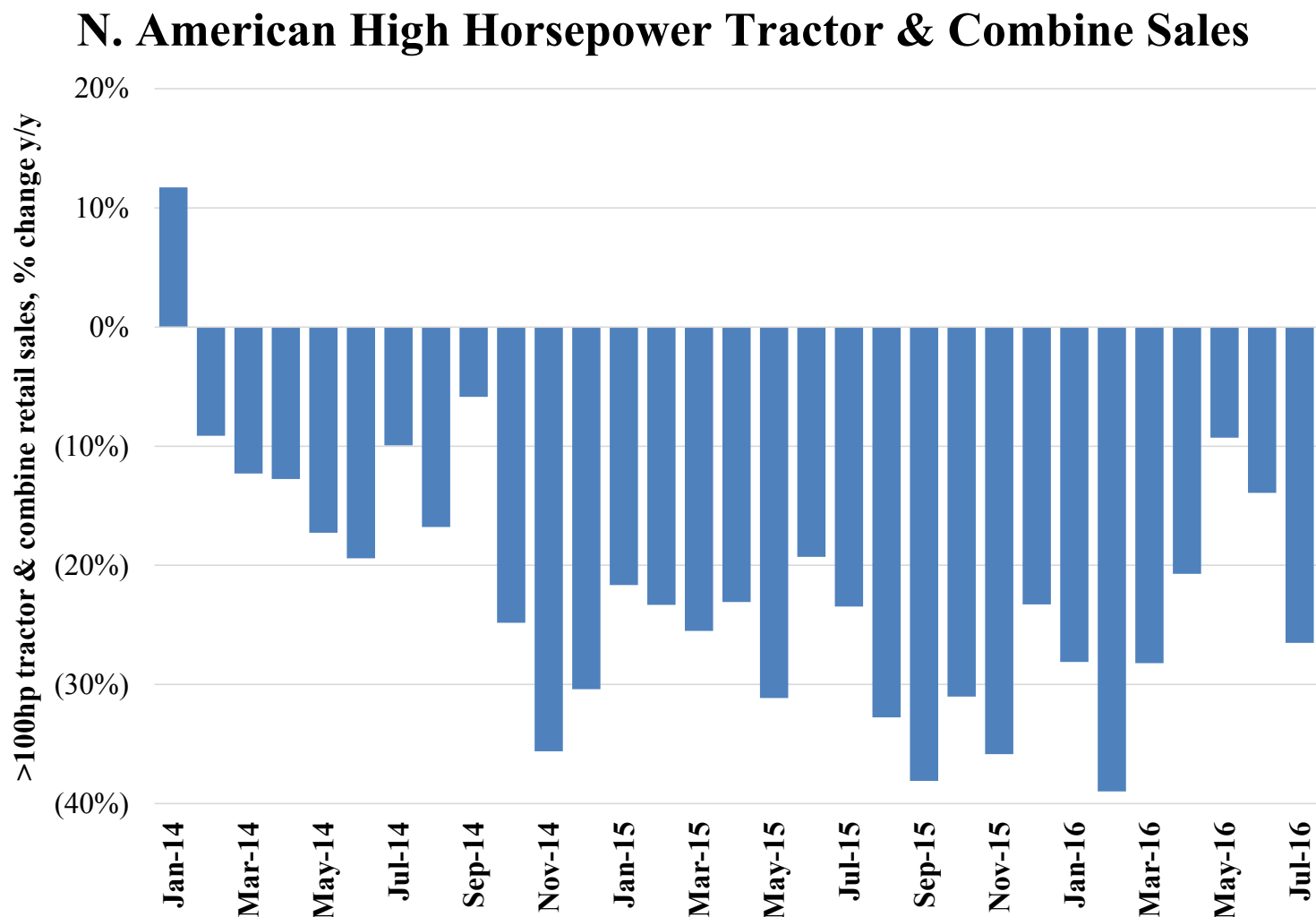
NORTH AMERICAN FARM EQUIPMENT INVENTORY														
	Inventory (Units)							Inventory to 12-mo. Sales						
	< 40 HP	Utility	Row Crop	4-Wheel	Total Tractor	Row Crop & 4WD	Combines	<40HP	Util	RC	4-WD	Total Tractor	Row Crop & 4WD	Comb
Dec-13	67,863	32,028	13,318	2,049	115,258	15,367	2,083	59%	50%	31%	24%	50%	30%	15%
Jan-14	69,111	33,240	12,620	2,028	116,999	14,648	1,681	60%	52%	29%	24%	51%	28%	12%
Feb-14	71,514	34,326	13,267	2,046	121,153	15,313	2,063	62%	54%	31%	25%	53%	30%	15%
Mar-14	71,249	35,256	14,058	2,218	122,781	16,276	2,456	61%	55%	33%	27%	53%	32%	18%
Apr-14	69,986	35,615	13,298	2,117	121,016	15,415	2,467	60%	55%	31%	26%	52%	31%	18%
May-14	66,364	34,755	13,505	2,255	116,879	15,760	2,734	57%	54%	32%	28%	51%	32%	21%
Jun-14	62,025	34,004	14,531	2,294	112,854	16,825	3,101	53%	52%	35%	29%	49%	34%	24%
Jul-14	61,829	34,393	14,836	2,159	113,217	16,995	3,144	52%	53%	36%	27%	49%	35%	25%
Aug-14	62,466	35,692	15,060	2,193	115,411	17,253	3,360	53%	54%	37%	29%	49%	36%	28%
Sep-14	61,811	35,926	16,185	2,399	116,321	18,584	2,891	51%	54%	40%	32%	49%	38%	24%
Oct-14	63,713	35,965	14,640	1,802	116,120	16,442	2,187	52%	53%	37%	25%	49%	35%	19%
Nov-14	67,691	37,110	14,840	1,652	121,293	16,492	2,046	55%	55%	38%	24%	51%	36%	19%
Dec-14	69,876	35,550	14,638	1,426	121,490	16,064	1,674	57%	52%	39%	22%	51%	36%	16%
Jan-15	73,716	35,405	13,934	1,439	124,494	15,373	1,713	59%	51%	37%	24%	53%	35%	18%
Feb-15	78,177	36,676	13,981	1,436	130,270	15,417	1,820	63%	54%	38%	25%	55%	36%	19%
Mar-15	81,662	37,881	14,179	1,346	135,068	15,525	2,040	66%	56%	39%	24%	58%	37%	22%
Apr-15	80,348	37,047	13,193	1,353	131,941	14,546	2,116	64%	54%	37%	26%	56%	35%	24%
May-15	78,880	37,037	13,177	1,400	130,494	14,577	2,058	63%	55%	38%	28%	56%	36%	23%
Jun-15	76,286	36,584	13,006	1,416	127,292	14,422	2,276	61%	54%	37%	29%	55%	36%	27%
Jul-15	72,876	35,232	12,507	1,354	121,969	13,861	2,218	56%	51%	37%	28%	52%	36%	27%
Aug-15	74,247	36,442	12,555	1,343	124,587	13,898	2,232	58%	53%	38%	29%	53%	37%	28%
Sep-15	65,844	37,545	12,551	1,374	117,314	13,925	2,001	51%	56%	39%	32%	51%	38%	26%
Oct-15	75,042	37,885	11,906	1,266	126,099	13,172	1,504	58%	56%	39%	31%	54%	38%	20%
Nov-15	79,228	39,911	12,983	1,317	133,439	14,300	1,492	61%	60%	44%	33%	58%	43%	20%
Dec-15	82,737	41,363	13,140	1,189	138,429	14,329	1,277	63%	63%	46%	30%	60%	44%	17%
Jan-16	86,618	42,352	12,727	1,129	142,826	13,856	1,169	66%	65%	47%	28%	63%	44%	16%
Feb-16	92,071	44,704	13,298	1,097	151,170	14,395	1,281	70%	68%	50%	28%	66%	48%	18%
Mar-16	93,703	45,127	13,327	1,131	153,288	14,458	1,281	69%	69%	52%	31%	67%	49%	18%
Apr-16	90,381	44,499	13,136	1,115	149,131	14,251	1,312	66%	68%	52%	31%	65%	50%	19%
May-16	86,451	43,931	13,015	1,152	144,549	14,167	1,492	63%	68%	52%	33%	63%	49%	22%
Jun-16	82,264	42,688	12,928	1,005	138,885	13,933	1,593	60%	66%	52%	29%	60%	49%	24%

Source: AEM; Cleveland Research Company estimates

Annual Agricultural Equipment Industry Sales (1985 - 2015)



North America Large Ag Equipment Sales

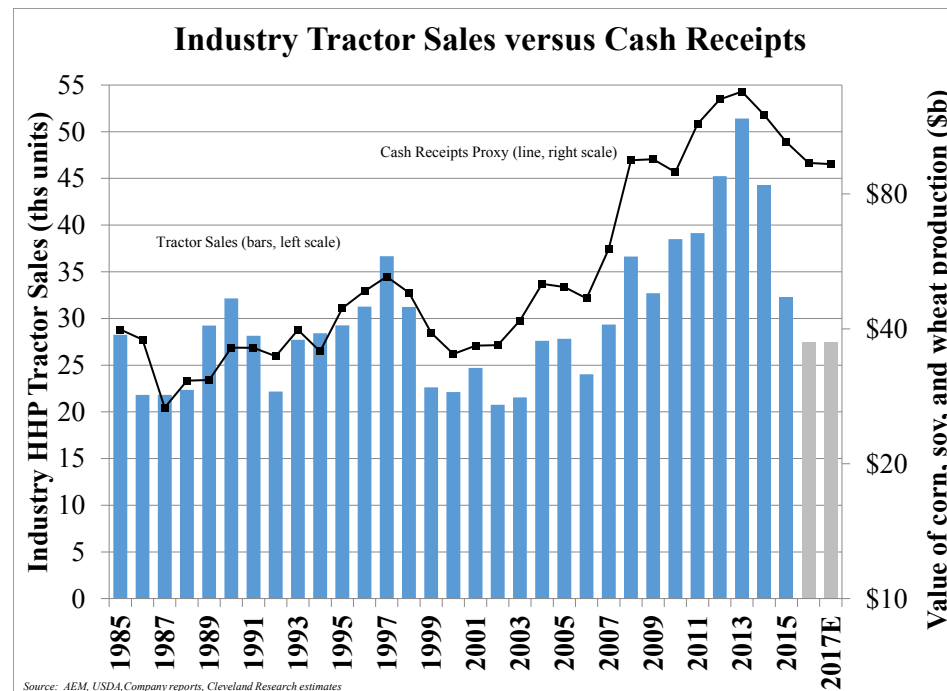


Source: AEM, CRC estimates

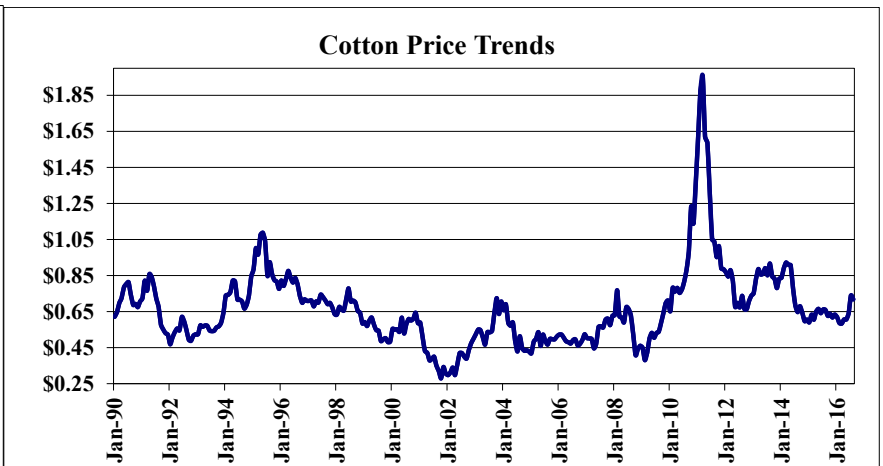
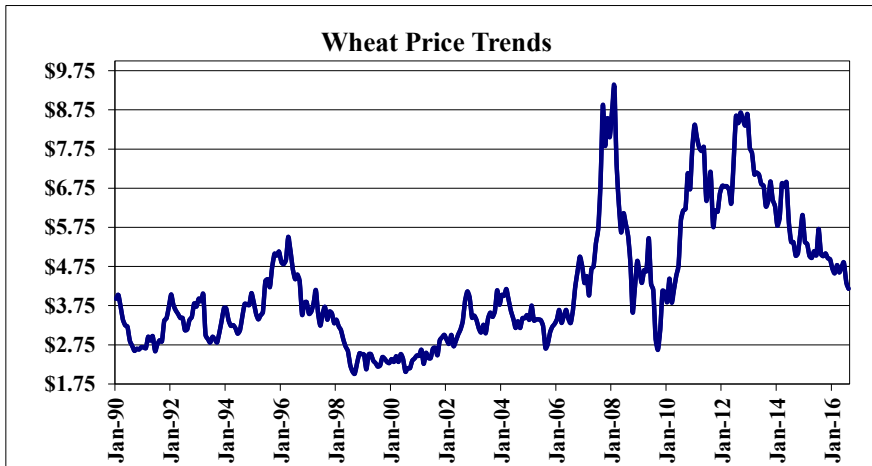
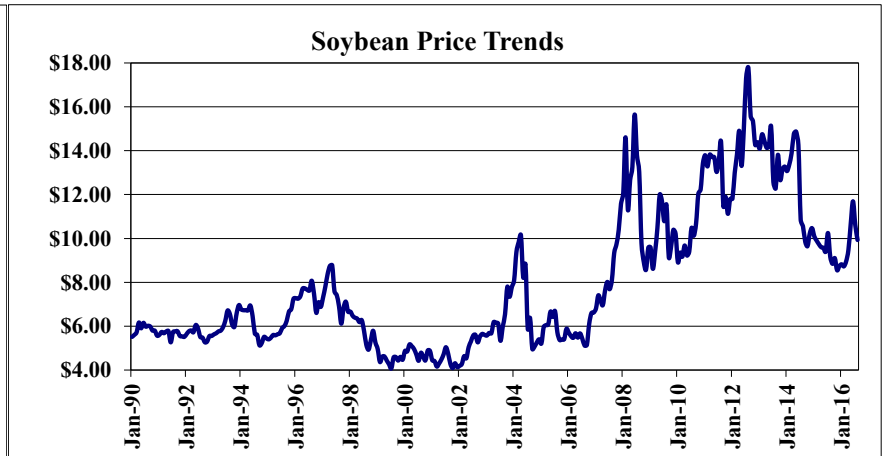
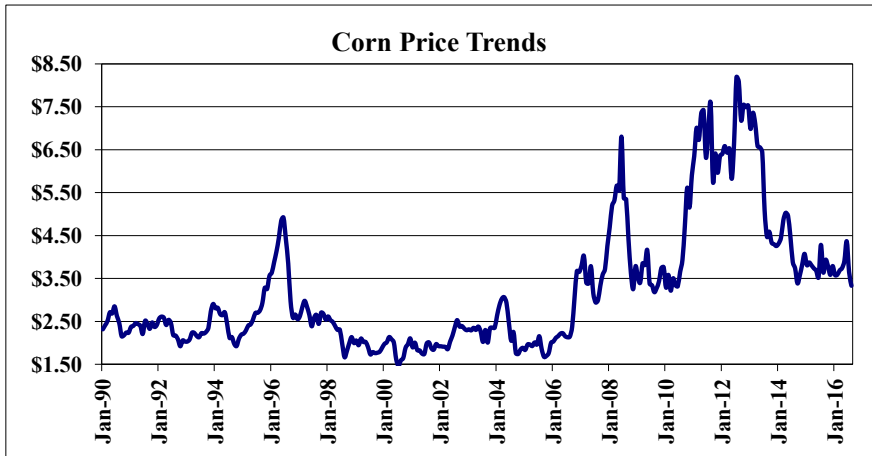
Commodity Prices – Cash Receipts vs. Next Year Equipment Sales

USDA's August WASDE Update Highlights – The following chart illustrates the historical relationship between the value of production of corn, soybeans, and wheat in the U.S. compared to annual industry sales of high horsepower tractors.

USDA's highly anticipated August crop report was much worse than July, with cash receipts proxy forecast down 1% y/y in 2016/2017 vs. prior estimate of up 2%. Yields on corn were raised from 168 to 175 bu/acre. Expectations for corn pricing fell 7% while soybean pricing fell 4% and anticipated beginning stock levels declined for soybeans while staying relatively flat for corn.



Long Term Commodity Price Trends



Commodity Trends – Long Run Supply and Demand Projections

US Corn, Soy, and Wheat Supply and Demand - Long Term Annual Forecast 2016													
US Corn Balance Sheet - USDA Long Term Forecast (Feb 2016)													
Millions of bushels	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
Planted	95	91	88	94	90	90	90	90	90	89	89	88	88
Harvested	88	83	81	87	83	83	83	82	82	81	81	80	80
Yield (bu/acre)	158	171	168	175	170	172	174	176	178	180	182	184	186
Beginning Stocks (MM bu)	821	1,232	1,731	1,706	1,755	1,730	1,740	1,755	1,775	1,785	1,790	1,785	1,735
Production (MM bu)	13,829	14,216	13,601	15,153	14,035	14,200	14,355	14,465	14,535	14,610	14,680	14,740	14,900
Imports (MM bu)	36	32	55	50	30	30	30	30	30	30	30	30	30
Total Supply (MM bu)	14,686	15,480	15,387	16,909	15,820	15,960	16,125	16,250	16,340	16,425	16,500	16,555	16,665
Feed & Residual (MM Bu)	5,036	5,315	5,250	5,675	5,550	5,650	5,750	5,850	5,925	6,000	6,075	6,150	6,225
Food, Seed, & Industrial Total	6,501	6,568	6,610	6,650	6,615	6,595	6,595	6,550	6,530	6,485	6,465	6,445	6,425
Ethanol & By-Products	5,134	5,209	5,250	5,275	5,225	5,200	5,200	5,150	5,125	5,075	5,050	5,025	5,000
Domestic Use	11,537	11,883	11,860	12,325	12,165	12,245	12,345	12,400	12,455	12,485	12,540	12,595	12,650
Exports	1,917	1,864	1,725	2,175	1,925	1,975	2,025	2,075	2,100	2,150	2,175	2,225	2,275
Total Use	13,454	13,747	13,585	14,500	14,090	14,220	14,370	14,475	14,555	14,635	14,715	14,820	14,925
Ending Stocks	1,232	1,731	1,803	2,409	1,730	1,740	1,755	1,775	1,785	1,790	1,785	1,735	1,740
Ending Stocks/Use	9.2%	12.6%	13.3%	16.6%	12.3%	12.2%	12.2%	12.3%	12.3%	12.2%	12.1%	11.7%	11.7%
Weeks Carryover	4.8	6.5	6.9	8.6	6.4	6.4	6.4	6.4	6.4	6.4	6.3	6.1	6.1
Average Farm Price (\$/bu)	\$4.46	\$3.70	\$3.60	\$3.15	\$3.65	\$3.70	\$3.70	\$3.70	\$3.70	\$3.70	\$3.70	\$3.75	\$3.75
Value of Production	\$61,677	\$52,599	\$48,964	\$47,732	\$51,228	\$52,540	\$53,114	\$53,521	\$53,780	\$54,057	\$54,316	\$55,275	\$55,875
% change y/y	-17%	-15%	-7%	-3%	7%	3%	1%	1%	0%	1%	0%	2%	1%
U.S. Soybean Balance Sheet - USDA Long Term Forecast (Feb 2016)													
Millions of bushels	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
Planted	77	83	83	84	82	82	82	82	81	81	81	81	81
Harvested	76	83	82	83	81	81	81	81	80	80	80	80	80
Yield Per Harvested Acre (Bushels)	44	48	48	49	47	48	48	49	49	50	50	51	51
Beginning Stocks	141	92	191	255	421	382	348	323	299	275	270	270	265
Production	3,358	3,927	3,929	4,060	3,810	3,850	3,890	3,920	3,940	3,980	4,020	4,035	4,065
Imports	72	33	30	30	30	30	30	30	30	30	30	30	30
Total Supplies	3,571	4,052	4,150	4,346	4,261	4,262	4,268	4,273	4,269	4,285	4,320	4,335	4,360
Crush	1,734	1,873	1,880	1,940	1,920	1,940	1,960	1,980	1,995	2,005	2,020	2,030	2,045
Exports	1,647	1,843	1,740	1,950	1,835	1,850	1,860	1,870	1,875	1,885	1,905	1,915	1,925
Seed & Residual	98	145	34	31	124	124	125	124	124	125	125	125	124
Total Use	3,479	3,861	3,654	4,016	3,879	3,914	3,945	3,974	3,994	4,015	4,050	4,070	4,094
Ending Stocks	92	191	400	330	382	348	323	299	275	270	270	265	266
Stocks/Use	2.7%	4.9%	10.9%	8.2%	9.8%	8.9%	8.2%	7.5%	6.9%	6.7%	6.7%	6.5%	6.5%
Average Price (\$/bu)	\$13.00	\$10.10	\$8.85	\$9.10	\$8.80	\$8.95	\$9.00	\$9.10	\$9.20	\$9.20	\$9.20	\$9.30	\$9.35
Value of Production	\$43,654	\$39,663	\$34,772	\$36,946	\$33,528	\$34,458	\$35,010	\$35,672	\$36,248	\$36,616	\$36,984	\$37,526	\$38,008
% change y/y	0%	-9%	-12%	6%	-9%	3%	2%	2%	2%	1%	1%	1%	1%

Commodity Trends – Long Run Supply and Demand Projections (Cont.)

US Corn, Soy, and Wheat Supply and Demand - Long Term Annual Forecast 2016 (continued)

U.S. Wheat Balance Sheet - USDA Long Term Forecast (Feb 2016)

Millions of bushels	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
Planted	56	57	55	51	51	52	52	52	52	52	52	52	52
Harvested	45	46	47	44	43	44	44	44	44	44	44	44	44
Yield Per Harvested Acre (Bushels)	47	44	44	53	46	47	47	47	48	48	48	49	49
Beginning Stocks	718	590	752	981	928	842	784	739	707	688	677	669	669
Production	2,134	2,026	2,052	2,321	2,000	2,035	2,050	2,065	2,080	2,095	2,110	2,130	2,140
Imports	169	144	120	115	130	135	140	145	150	155	160	165	170
Total Supplies	3,021	2,760	2,924	3,417	3,058	3,012	2,974	2,949	2,937	2,938	2,947	2,964	2,979
Food	955	960	960	968	981	988	995	1,002	1,009	1,016	1,023	1,030	1,037
Seed	77	81	66	69	70	70	70	70	70	70	70	70	70
Feed&residual	223	111	140	330	215	210	200	190	180	175	175	175	175
Exports	1,176	855	780	950	950	960	970	980	990	1,000	1,010	1,020	1,030
Total Use	2,431	2,007	1,946	2,317	2,216	2,228	2,235	2,242	2,249	2,261	2,278	2,295	2,312
Ending Stocks	590	753	978	1,100	842	784	739	707	688	677	669	669	667
Stocks/Use	24.3%	37.5%	50.3%	47.5%	38.0%	35.2%	33.1%	31.5%	30.6%	29.9%	29.4%	29.2%	28.8%
Average Price (\$/bu)	\$6.87	\$5.99	\$4.90	\$3.70	\$4.50	\$4.60	\$4.65	\$4.70	\$4.75	\$4.80	\$4.85	\$4.90	\$4.95
Value of Production	\$14,661	\$12,136	\$10,055	\$8,588	\$9,000	\$9,361	\$9,533	\$9,706	\$9,880	\$10,056	\$10,234	\$10,437	\$10,593
% change y/y	-16%	-17%	-17%	-15%	5%	4%	2%	2%	2%	2%	2%	2%	1%

Total Acreage and Value of U.S. Corn, Soy and Wheat Production - USDA February 2016 Projection

Total Corn, Soy, Wheat	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
Planted (mm acres)	228	231	225	229	223	223	223	223	222	222	221	220	220
Harvested (mm acres)	209	212	210	214	206	207	207	207	206	205	205	204	204
Yield (bu/acre)	92	95	93	101	96	97	98	99	100	101	102	103	104
Production	19,321	20,169	19,582	21,534	19,845	20,085	20,295	20,450	20,555	20,685	20,810	20,905	21,105
Average Price (\$/bu)	\$6.21	\$5.18	\$4.79	\$4.33	\$4.72	\$4.80	\$4.81	\$4.84	\$4.86	\$4.87	\$4.88	\$4.94	\$4.95
Value of Production	\$119,992	\$104,398	\$93,790	\$93,266	\$93,756	\$96,359	\$97,656	\$98,898	\$99,908	\$100,729	\$101,534	\$103,238	\$104,476
% change y/y	-11%	-13%	-10%	-1%	1%	3%	1%	1%	1%	1%	1%	2%	1%

Source: USDA, Cleveland Research estimates

U.S. Acreage Planted Per Crop Year

