

Ag Equipment Intelligence

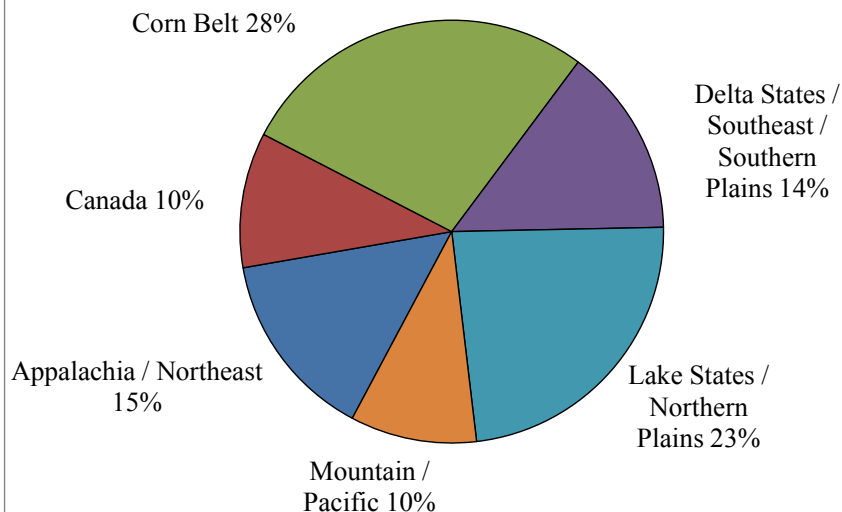
November 2017 Dealer Sentiments &
Business Conditions Update

Monthly Ag Equipment Intelligence North American Dealer Survey

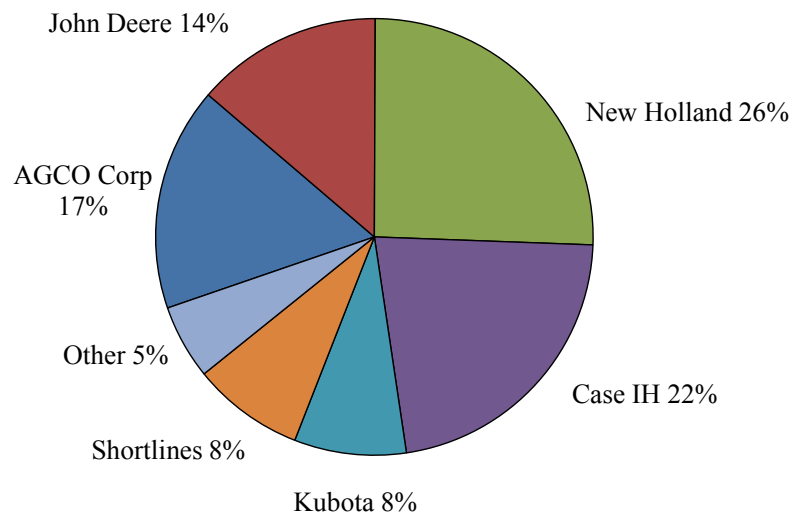
Background:

- We are pleased to announce the results of the October 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 October survey had ~150 respondents representing combined annual revenues of roughly \$5 billion. Participants represent 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.

Highlights / Summary Thoughts

- **Sales** – Average dealer sales were reported flat y/y in October, an improvement from the down 1% September. A net 8% of dealers missed their sales budgets in October vs the 11% that missed last month. Commercial and consumer lawn equipment sales showed strength, while large equipment demand remains weak.
- **Outlook** – The 2017 sales growth forecast was reported down 2%, better than the 3% declines expected in September. A net 1% of dealers reported they are more optimistic, a slight improvement from the 4% reporting less optimism last month. The 2018 forecast is for flat growth with a net 32% of contacts that expect growth in 2018 vs the net 5% that expect declines in 2017.
- **Inventory** – A net 18% of dealers reported new equipment inventories as too high, a slight improvement from the 21% in September. Used equipment inventories remained elevated as a net 22% of dealers reported used inventory as too high, slightly higher than the 19% last month. Overall, inventories have come down from 2016 levels.
- **Pricing** – Dealers reported ~flat new equipment pricing as OEM price increases have been offset by discounting at the dealer level. Used pricing fell slightly in the month with contacts reporting large tractors down 5% y/y vs down 3% in September. Combine pricing was unchanged from September at down 7% y/y.

Monthly Sales Growth

- Average dealer sales were reported flat y/y in October, better than the 1% declines reported in September. A net 8% of dealers missed their sales budgets in October, better than the 11% that missed last month.
- A net 1% of dealers reported they are more optimistic vs the net 4% of dealers that were less optimistic in September. Optimism and sales versus expectations have shown sequential improvement over the past four months.

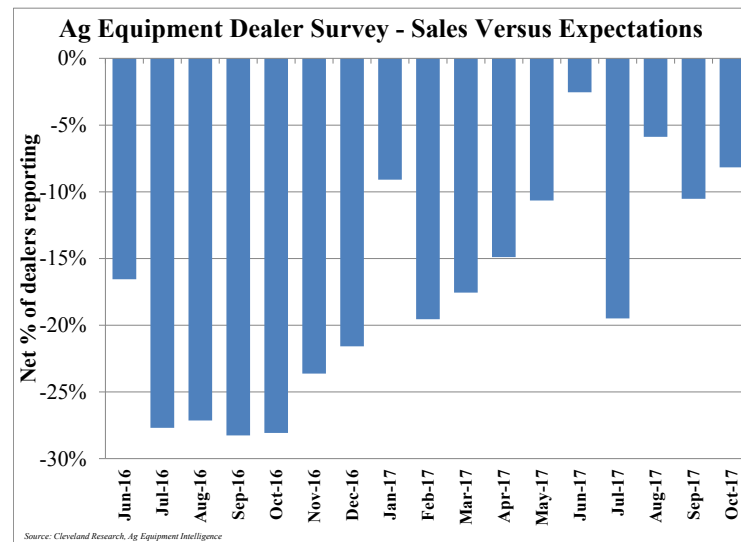
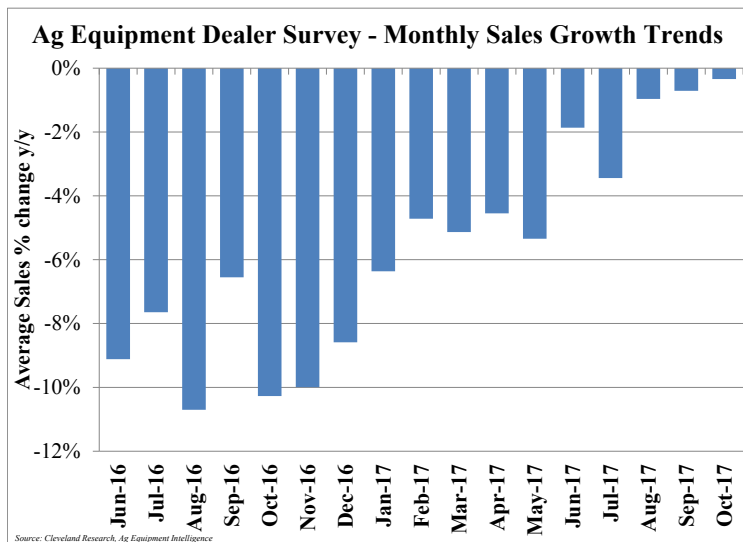
N. American Farm Equipment Dealer Survey - Average Dealer Sales Growth																	
% Change y/y	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17
AGCO	-19%	-7%	-22%	-12%	-12%	-12%	-5%	-13%	-4%	-11%	-2%	-13%	-1%	-3%	0%	-5%	2%
John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

Source: Cleveland Research, Ag Equipment Intelligence

N. American Farm Equipment Dealer Survey - Sales Versus Expectations																	
% of Dealers Reporting	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17
Better than expected	22%	15%	14%	14%	16%	8%	11%	16%	11%	12%	16%	19%	16%	16%	21%	21%	18%
In line with expectations	40%	43%	44%	44%	40%	61%	57%	59%	58%	58%	54%	52%	65%	48%	52%	47%	55%
Worse than expected	38%	42%	41%	42%	44%	31%	32%	25%	31%	30%	30%	30%	19%	36%	27%	32%	27%
Net % (Better - Worse)	-17%	-28%	-27%	-28%	-28%	-24%	-22%	-9%	-20%	-18%	-15%	-11%	-3%	-19%	-6%	-11%	-8%

Source: Cleveland Research, Ag Equipment Intelligence

Monthly Sales Growth Continued



N. American Farm Equipment Dealer Survey - Average Dealer Revenue Growth Trends																	
% of Dealers Reporting	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17
Positive Sales Growth	27%	20%	19%	22%	18%	20%	26%	27%	25%	32%	34%	39%	37%	33%	41%	43%	41%
Flat Sales	23%	21%	19%	22%	15%	23%	17%	22%	31%	23%	19%	18%	32%	19%	21%	22%	20%
Negative Sales Growth	50%	59%	62%	56%	67%	58%	58%	52%	45%	45%	47%	43%	32%	48%	38%	35%	38%
Net % Reporting Growth	-23%	-39%	-43%	-33%	-48%	-38%	-32%	-25%	-20%	-13%	-13%	-4%	5%	-15%	4%	7%	3%
Average % Change y/y	-9%	-8%	-11%	-7%	-10%	-10%	-9%	-6%	-5%	-5%	-5%	-5%	-2%	-3%	-1%	-1%	0%

Source: Cleveland Research

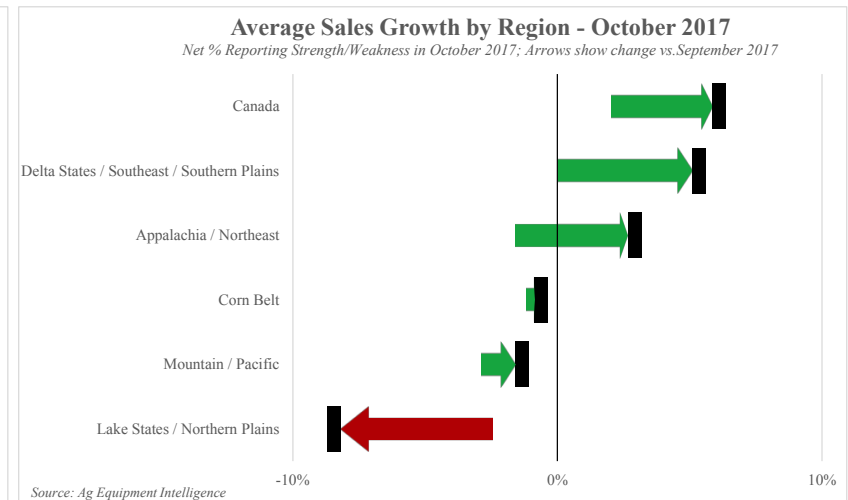
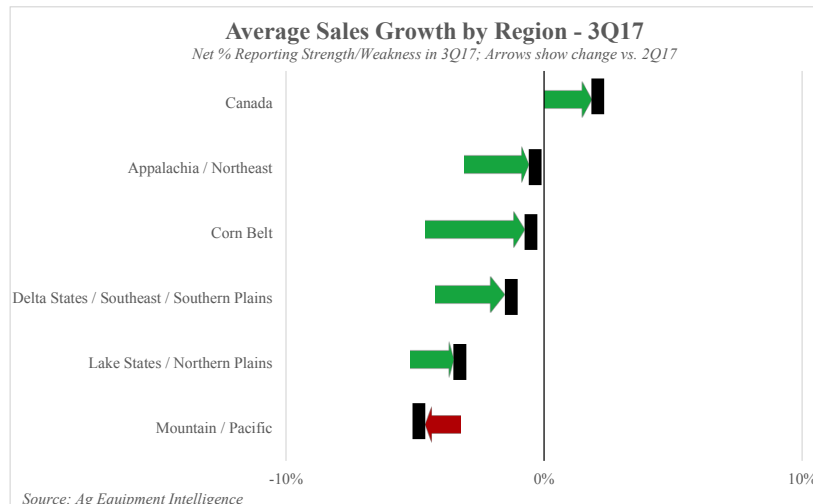
Source: Cleveland Research

Optimism/Sentiment vs. Last Month																	
% of Dealers Reporting	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17
More Optimistic	11%	16%	11%	14%	13%	15%	17%	31%	21%	26%	17%	19%	23%	21%	23%	23%	22%
Same	60%	44%	52%	49%	53%	60%	58%	48%	60%	47%	53%	61%	58%	47%	52%	51%	56%
Less Optimistic	30%	40%	36%	38%	34%	25%	26%	20%	19%	27%	30%	20%	19%	32%	26%	26%	22%
Net % Dealer Optimism	-19%	-24%	-25%	-24%	-21%	-10%	-9%	11%	1%	-1%	-13%	-2%	4%	-11%	-3%	-4%	1%

Source: Cleveland Research

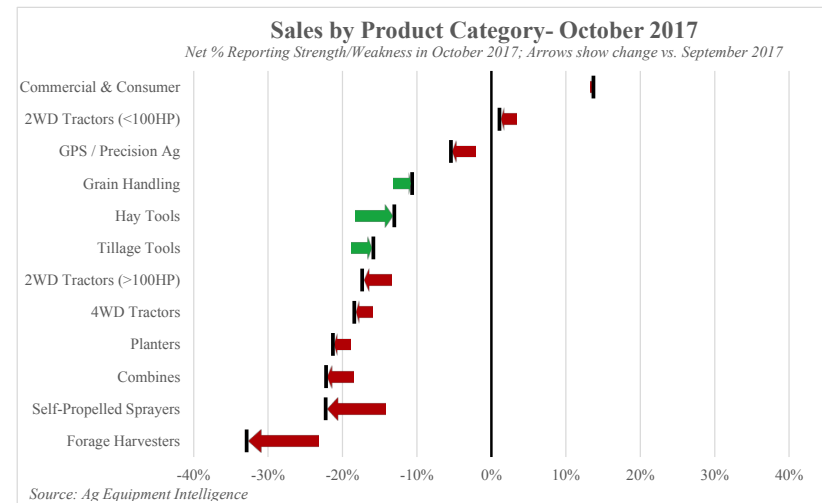
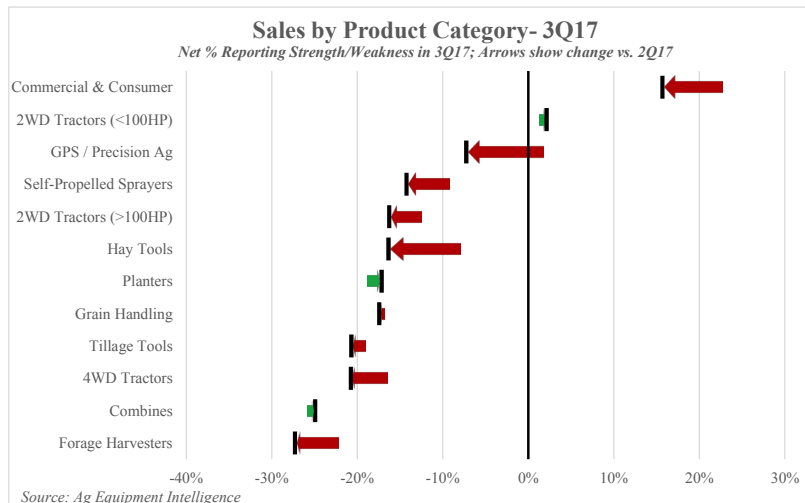
Monthly Sales Growth by Region

- Sales trends by region remained solid in October and improved in 5 of the 6 regions, similar to 3Q. Canada was the strongest region in the month, inline with 3Q, while the Corn Belt continues to see flat y/y growth trends. Trends in the Lake States / Northern Plains region saw the greatest decline from September.

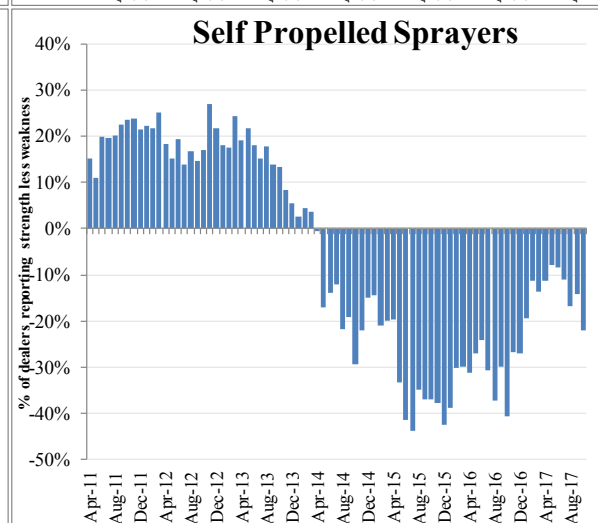
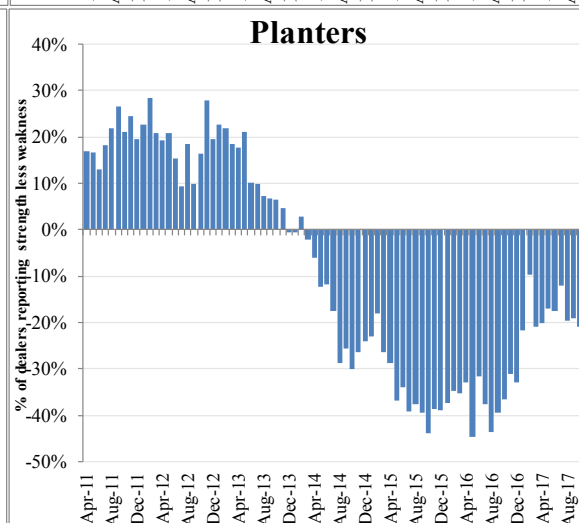
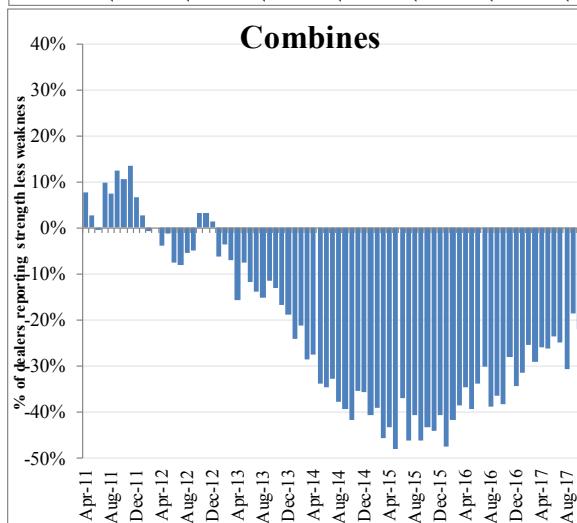
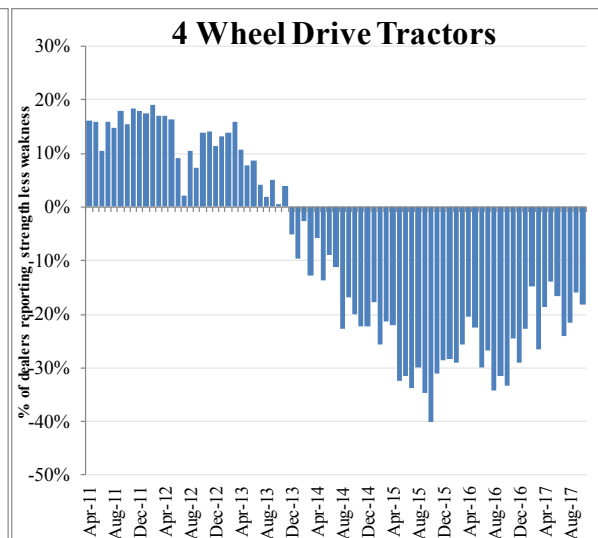
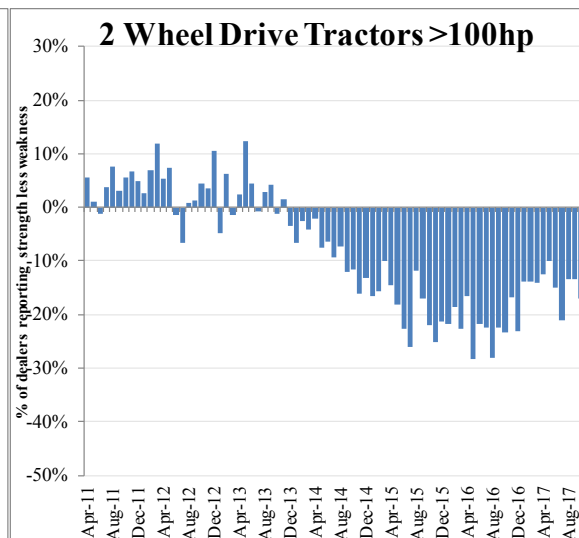
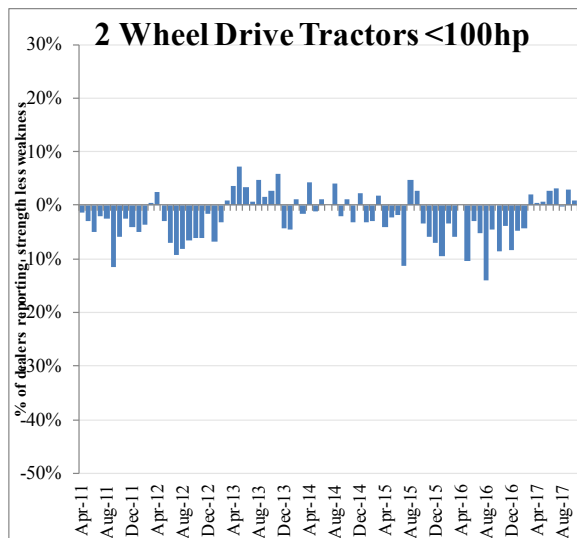


Equipment Category Sales Trends

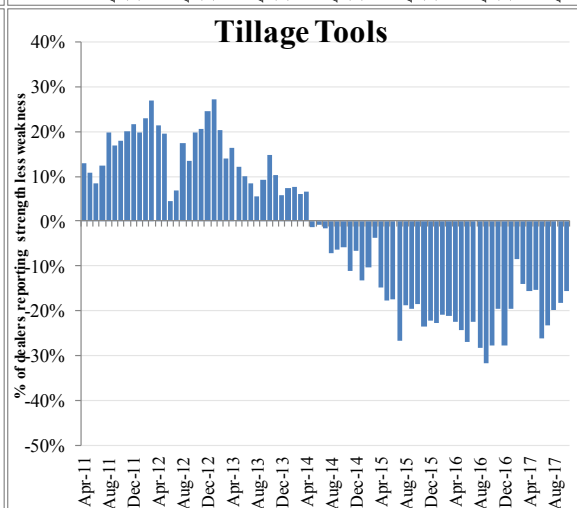
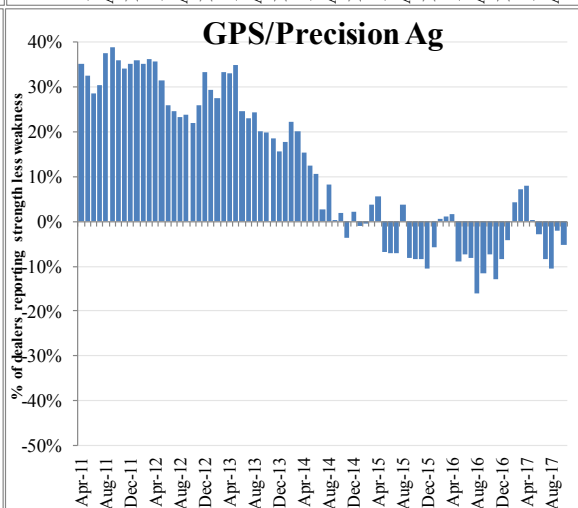
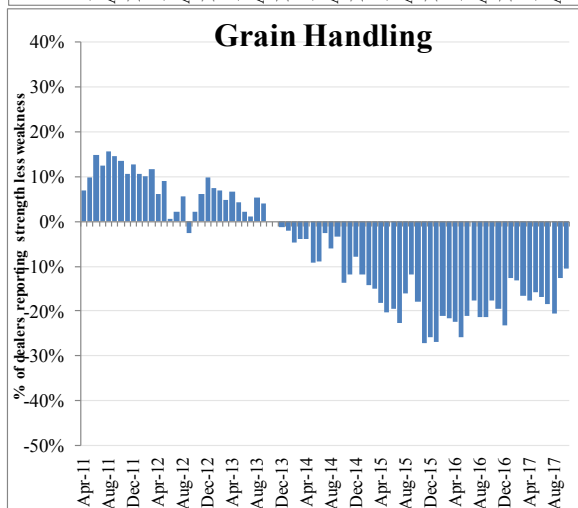
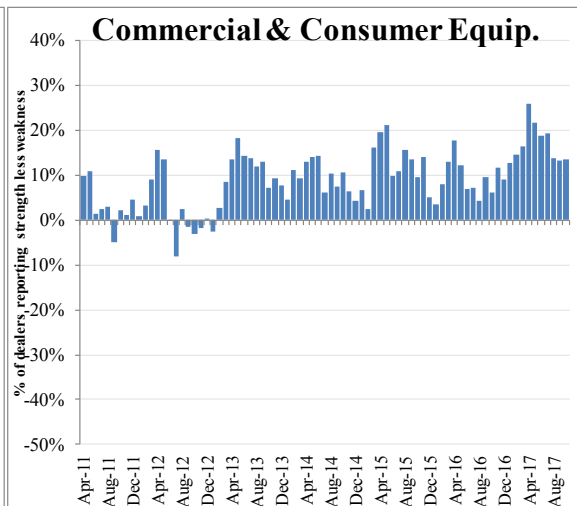
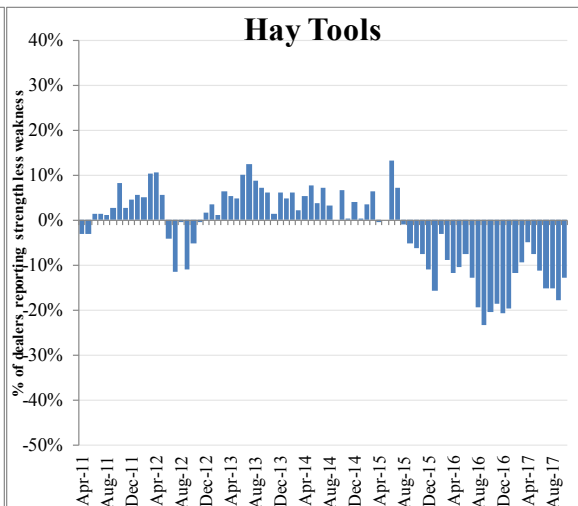
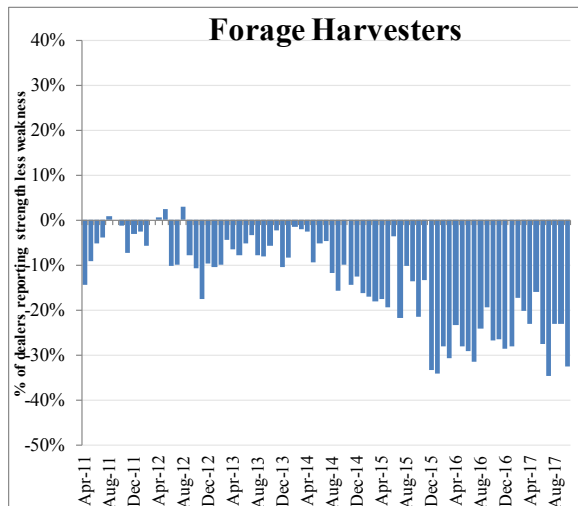
- Commercial and consumer lawn equipment and 2WD tractor sales showed strength, while large equipment demand remains weak. Sequentially, the majority of equipment category sales fell slightly from September, but remain similar to 3Q trends.
- Commentary suggests large equipment sales remain sluggish, while small tractor demand remains strong.



Equipment Category Sales Trends



Equipment Category Sales Trends (Continued)



Average Dealer Sales Outlook

- The 2017 sales growth forecast was reported down 2%, inline with the YTD reading.
- The 2018 forecast is for flat y/y growth, with a net 32% of contacts expecting growth, up from the 28% of contacts expecting growth in September. Dealers are more optimistic on 2018 as EOP trends have been positive, but remain cautious as commodity prices continue to pressure farmer income.
- The bottom table details the 2017 industry outlooks from Deere, CNHI, and AGCO. N. America industry forecasts are down 5-10% on average.

N. American Farm Equipment Dealer Survey - 2017 Sales Forecast																
% change y/y	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17
AGCO	-1%	-2%	-20%	-10%	-8%	-2%	-1%	2%	-5%	-3%	-6%	-4%	-6%	-8%	-7%	-7%
John Deere	-11%	-4%	-15%	-1%	-6%	-5%	-3%	-3%	-3%	0%	0%	3%	-4%	3%	1%	0%
New Holland	-4%	-3%	-21%	-3%	-5%	-4%	-6%	-3%	-5%	-11%	-4%	0%	-2%	-4%	-8%	-14%
Case IH	-14%	-6%	-20%	-12%	2%	-13%	-7%	-3%	-6%	-4%	-3%	-6%	-6%	-3%	-8%	-1%
Kubota	6%	-24%	4%	-3%	-6%	-2%	-8%	3%	4%	1%	1%	3%	11%	3%	-3%	-1%
Shortlines/Other	-3%	-5%	-19%	-2%	0%	-10%	1%	-2%	-6%	-10%	2%	0%	-3%	-1%	2%	-1%
Overall	-8%	-7%	-8%	-5%	-4%	-4%	-4%	-2%	-4%	-4%	-2%	0%	-3%	-1%	-3%	-2%

Source: Cleveland Research, Ag Equipment Intelligence

2017 Ag Equipment Industry Sales Outlook (units)			
Geography	Deere	CNH Industrial	AGCO Corp.
N. America	Down 5%	Tractors (5-10%), Combines 10-15%	Down 5-10%
Western Europe	Flat to Down 5%	Tractors Flat, Combines Flat	Flat
Latin America	Up 20%	Tractors 15%-20%, Combines 10-15%	Up 10-15%
CIS or ROW	na	na	na
Asia	Flat to up Slightly	Tractors 0-5%, Combines 0-5%	na

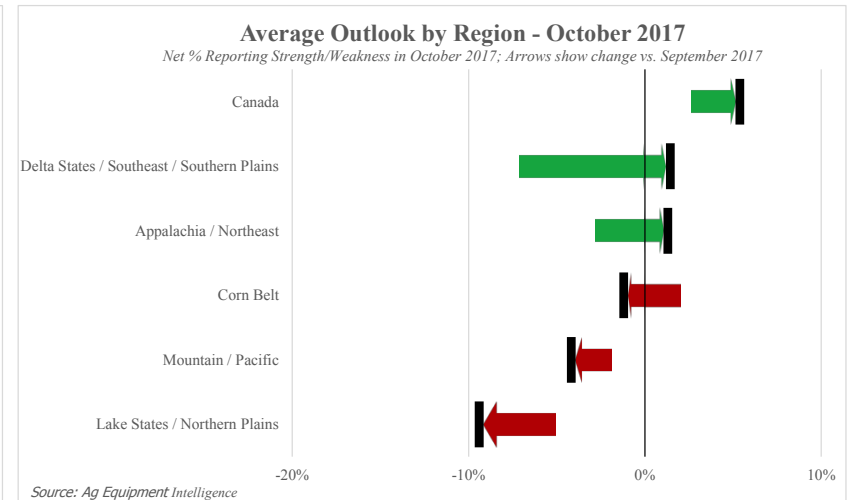
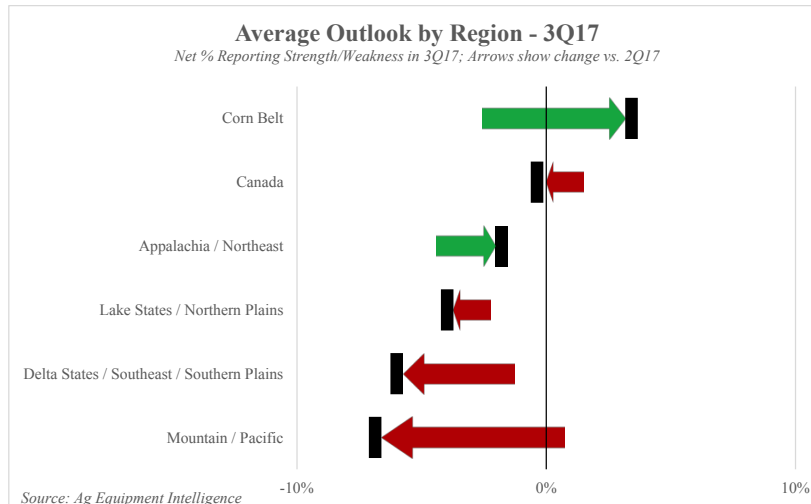
Source: Company reports, CRC estimates

Most Interesting Commentary - Monthly Sales and Outlook

- Sales were up substantially from October last year. We attribute this to weather in our region. We were running behind on tractors this year until August when it stopped raining and things picked up.
- October slowed from September and was the worst October on record for large tractors. On the other hand, there was continued demand for 30-60hp tractors in the month.
- New equipment demand is still strong which we believe is driven by a pull forward of replacement demand.
- October was a real surprise. Our excavators and compact tractors were up and it is normally a slow time for us.
- Traffic was slower in the month vs September but the y/y comparison was easier for us so we saw good growth.
- We are more optimistic on 2017 as we have seen more positive customer sentiment and commitments to buy in December.
- Industry wide discounting on utility tractors has created pricing pressure in this segment.
- Customers are getting to the point where they need to replace some equipment and are coming in with a plan to pay for it.
- We have moved a lot of used inventory over the past two quarters, but our over 100hp is too high and under 100hp is too low.
- OEMs are raising standard rates. They claim that they need to see new inventory levels at a lower level before they lower prices.
- Used inventory is low by historical standards but high compared to current demand. It is hard to move combines and HHP tractors.
- Used inventory values remain choppy. We have some strong months and others that are soft.
- Combine inventory has come down to very manageable levels. This month, the manufacturer incentives helped, too.
- With interest free incentives and conservative trade values, customers were incentivized to purchase which helped with inventory reduction and cash generation.
- We are optimistic on 2018 due to our healthy inventory levels. We have a reasonable level of new whole goods and lower level of used equipment.
- Our main concern on 2018 is the farmer's ability to purchase equipment as lending has slowed and commodity prices are weak.

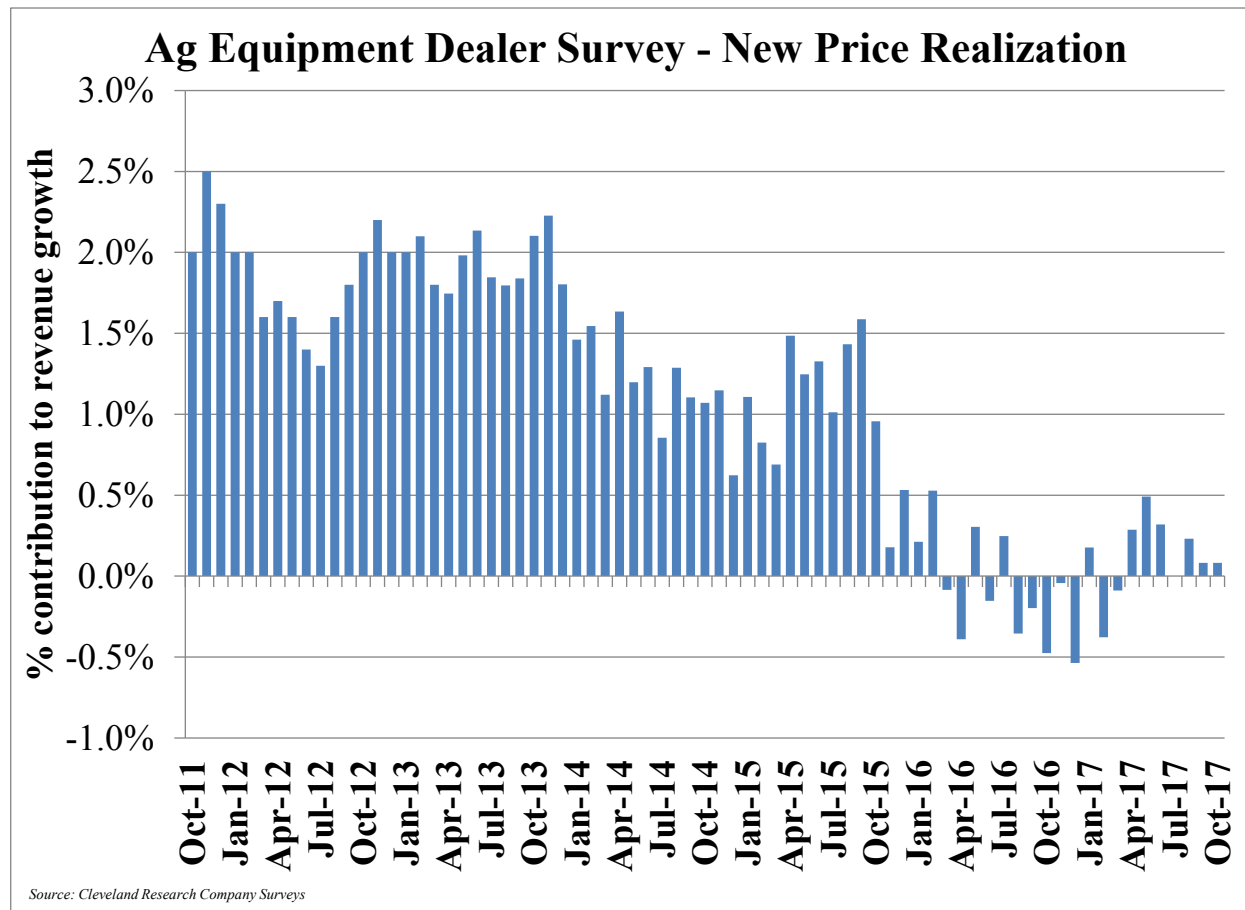
2017 Sales Outlook

- The 2017 outlook in October was mixed with sequential improvement in 3 of the 6 regions. Canada posted the highest outlook in the month and the Delta States/ Southeast / Southern Plains region saw the greatest sequential improvement from September.
- The sales outlook in 3Q was similar to 2Q with an average forecast of down 2%. The 2018 outlook is for flat growth, with a net 32% of contacts forecasting growth vs the net 28% in September. Dealers are optimistic about 2018 following the better than expected September and October sales performances.



Pricing Trends

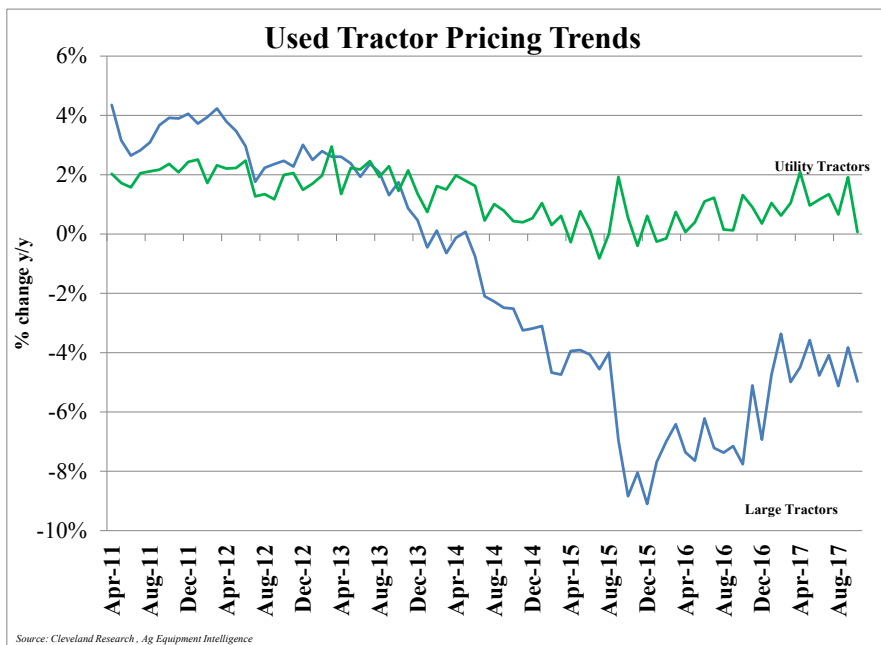
- Dealers reported relatively flat pricing over the last year as incentive programs have more than offset list price increases. Commentary was mixed in the month as dealers reported both increases in incentives and increases in manufacturer list prices.



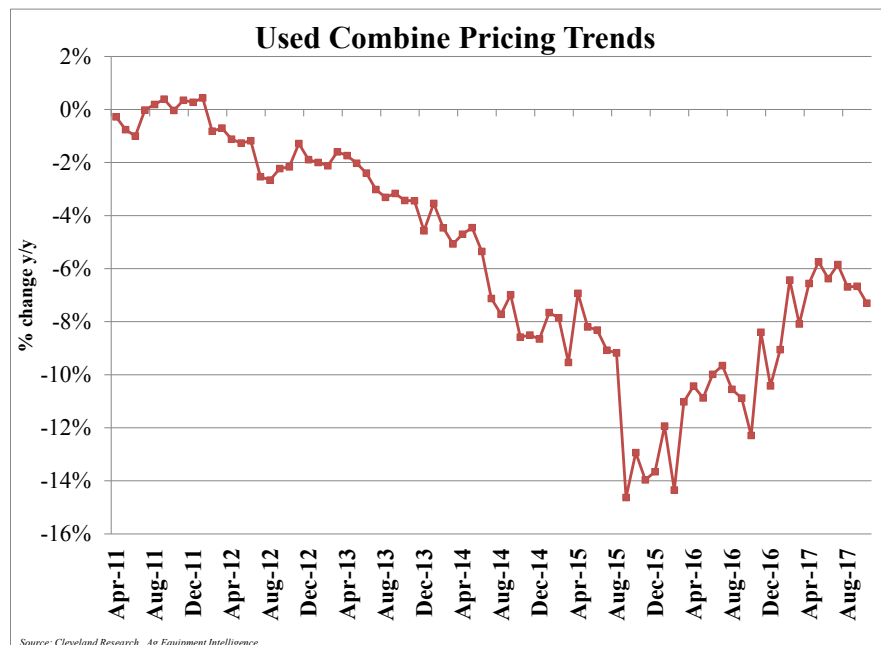
Used Equipment Pricing

- Pricing trends fell in the month. Large tractors were reported down 5% y/y, below the 3% declines in September. Combine pricing was inline with September at down 7% y/y.

Used Tractor and Combine Values (Y/Y)																		
	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17
Compact (<40HP)	1%	2%	2%	1%	1%	2%	2%	1%	1%	1%	1%	2%	2%	2%	1%	1%	2%	0%
Utility (40-100HP)	0%	1%	1%	(0%)	(0%)	1%	0%	0%	1%	0%	1%	2%	0%	0%	1%	0%	1%	0%
Row Crop (100HP+)	(7%)	(5%)	(6%)	(6%)	(6%)	(6%)	(4%)	(5%)	(3%)	(2%)	(3%)	(4%)	(3%)	(4%)	(3%)	(4%)	(2%)	(4%)
4WD Tractors	(9%)	(8%)	(8%)	(9%)	(8%)	(10%)	(7%)	(9%)	(6%)	(4%)	(7%)	(5%)	(4%)	(6%)	(5%)	(6%)	(5%)	(6%)
Combines	(11%)	(10%)	(10%)	(11%)	(11%)	(12%)	(8%)	(10%)	(9%)	(6%)	(8%)	(7%)	(6%)	(6%)	(6%)	(7%)	(7%)	(7%)



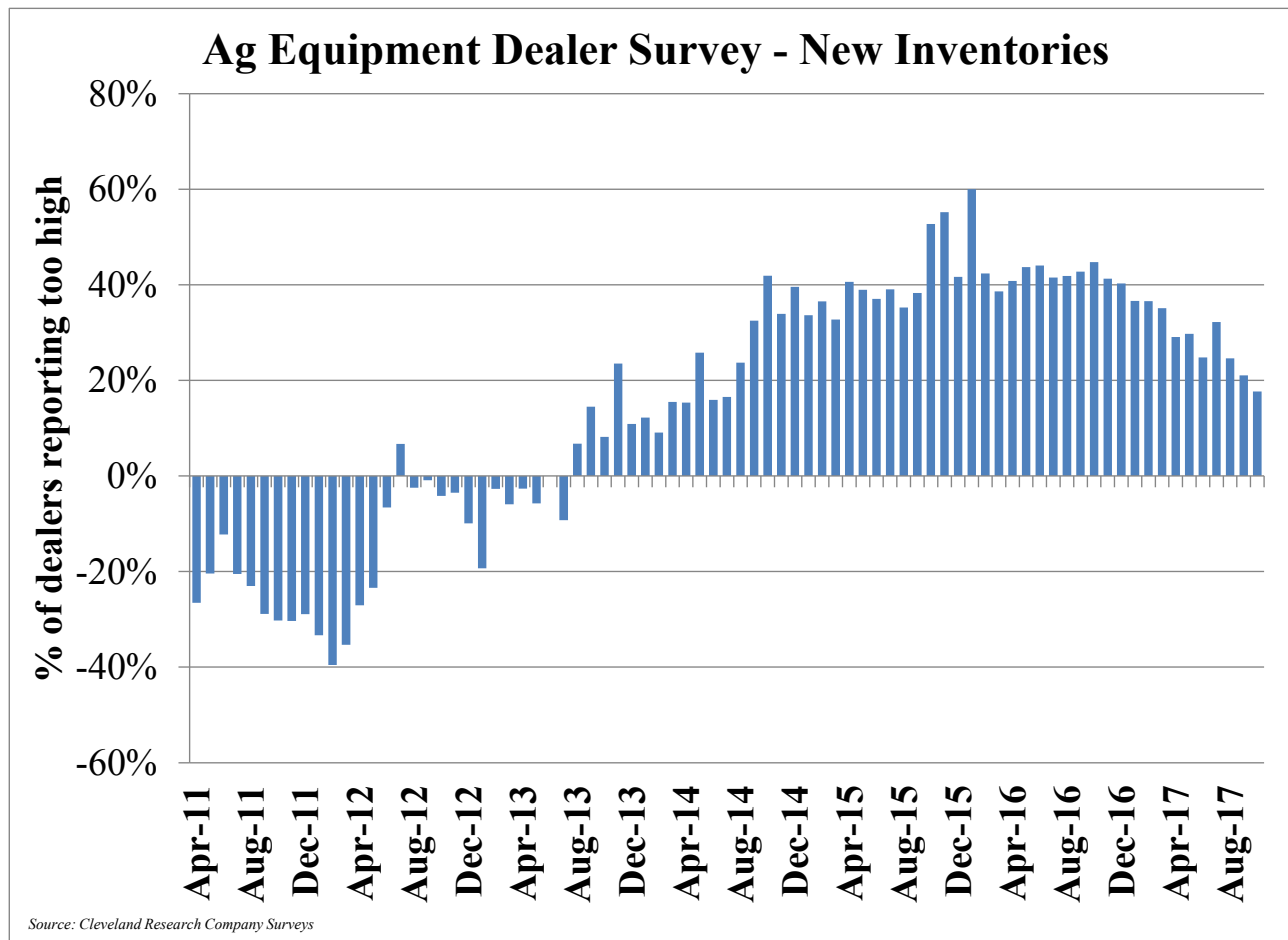
Source: Cleveland Research, Ag Equipment Intelligence



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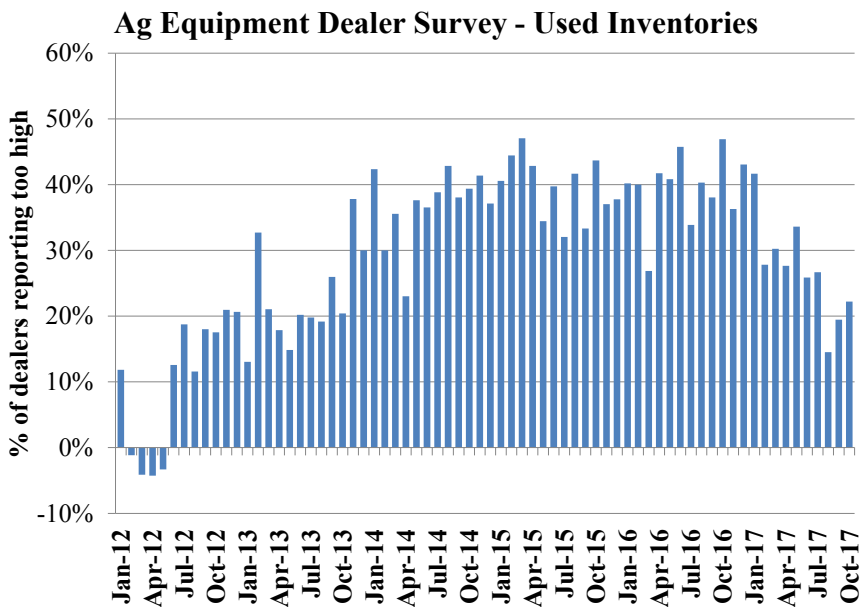
New Equipment Inventory Levels

- A net 18% of dealers reported new equipment inventories too high (30% too high, 58% about right, 12% too low), better than the 21% in September. New inventory levels have been elevated for over 3 years, but have come down over the past year.

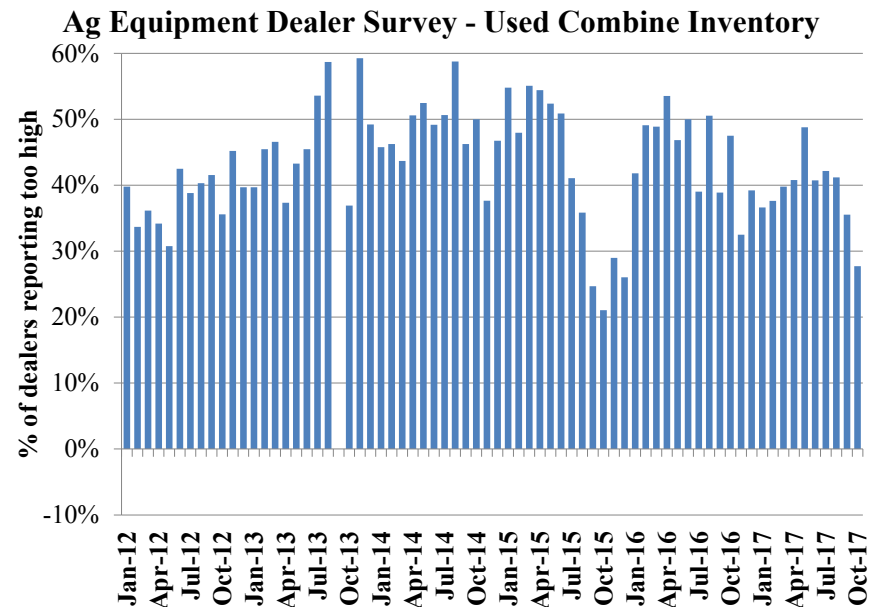


Used Equipment Inventory Levels

- A net 22% of dealers reported used equipment inventory as too high (35% too high, 53% about right, 13% too low), similar to the 19% reporting heightened inventory in September and better than the 27% average YTD. Used combine inventory levels were reported as too high by a net 28% of dealers in October, better than the 36% in September.



Source: Cleveland Research Company, Ag Equipment Intelligence



Source: Cleveland Research Company, Ag Equipment Intelligence

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
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	9,800	5,087	1,768	167	16,822	1,935	679	1%	-7%	-31%	-55%	-7%	-34%	-28%
Sep-15	10,917	5,348	1,934	249	18,448	2,183	845	-4%	-14%	-41%	-49%	-13%	-42%	-26%
Oct-15	12,897	6,792	3,266	515	23,470	3,781	796	18%	-4%	-34%	-30%	-1%	-33%	-19%
Nov-15	6,112	3,728	1,159	222	11,221	1,381	343	4%	-11%	-39%	-37%	-9%	-38%	-24%
Dec-15	8,755	6,376	2,567	516	18,214	3,083	883	8%	-15%	-31%	1%	-8%	-27%	-4%
Jan-16	5,946	4,250	1,981	243	12,420	2,224	455	10%	-6%	-37%	10%	-6%	-33%	18%
Feb-16	6,429	3,372	1,185	222	11,208	1,407	241	21%	4%	-39%	-36%	3%	-39%	-40%
Mar-16	12,453	5,110	1,905	258	19,726	2,163	346	28%	6%	-25%	-48%	12%	-29%	-26%
Apr-16	17,726	5,578	2,539	336	26,179	2,875	464	7%	-14%	-19%	-22%	-2%	-19%	-30%
May-16	17,191	5,617	1,969	234	25,011	2,203	332	7%	0%	-1%	-10%	5%	-2%	-40%
Jun-16	16,094	6,273	1,966	247	24,580	2,213	565	3%	-4%	-18%	-18%	-1%	-18%	13%
Jul-16	13,342	5,494	1,875	152	20,863	2,027	619	-7%	-22%	-24%	-43%	-14%	-26%	-23%
Aug-16	11,600	5,049	1,314	102	18,065	1,416	562	18%	-1%	-26%	-39%	7%	-27%	-17%
Sep-16	12,664	5,449	1,759	200	20,072	1,959	620	16%	2%	-9%	-20%	9%	-10%	-27%
Oct-16	13,816	6,799	2,716	610	23,941	3,326	579	7%	0%	-17%	18%	2%	-12%	-27%
Nov-16	7,382	3,656	907	205	12,150	1,112	294	21%	-2%	-22%	-8%	8%	-19%	-14%
Dec-16	10,343	6,326	2,071	328	19,068	2,399	687	18%	-1%	-19%	-36%	5%	-22%	-22%
Jan-17	6,821	3,854	1,396	147	12,218	1,543	289	15%	-9%	-30%	-40%	-2%	-31%	-36%
Feb-17	7,868	3,319	1,335	199	12,721	1,534	276	22%	-2%	13%	-10%	13%	9%	15%
Mar-17	13,950	5,328	1,790	338	21,406	2,128	457	12%	4%	-6%	31%	9%	-2%	32%
Apr-17	19,473	5,595	2,425	441	27,934	2,866	504	10%	0%	-4%	31%	7%	0%	9%
May-17	19,588	5,825	1,606	254	27,273	1,860	372	14%	4%	-18%	9%	9%	-16%	12%
Jun-17	18,107	6,313	1,590	191	26,201	1,781	595	13%	1%	-19%	-23%	7%	-20%	5%
Jul-17	13,806	5,583	1,443	136	20,968	1,579	656	3%	2%	-23%	-11%	1%	-22%	6%
Aug-17	11,985	5,229	1,222	170	18,606	1,392	679	3%	4%	-7%	67%	3%	-2%	21%
Sep-17	11,613	5,082	1,409	266	18,370	1,675	643	-8%	-7%	-20%	33%	-8%	-14%	4%
Oct-17	15,404	6,991	3,748	709	26,852	4,457	845	11%	3%	38%	16%	12%	34%	46%

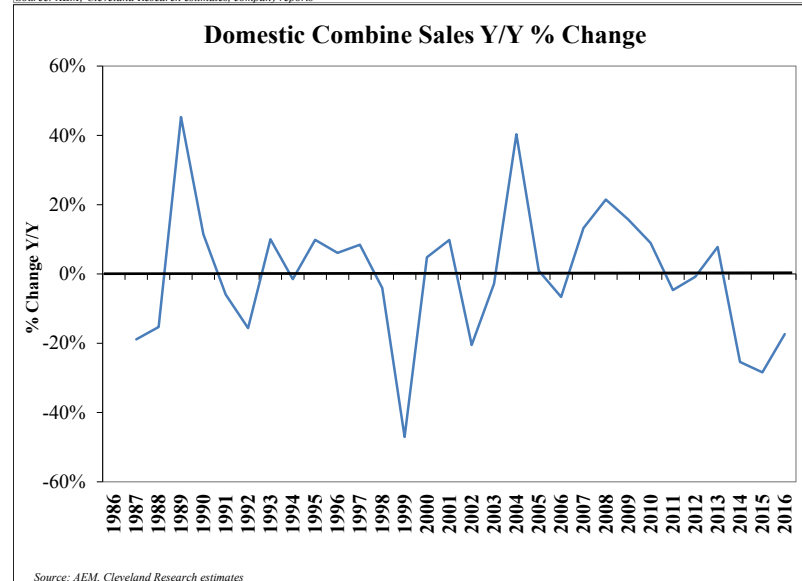
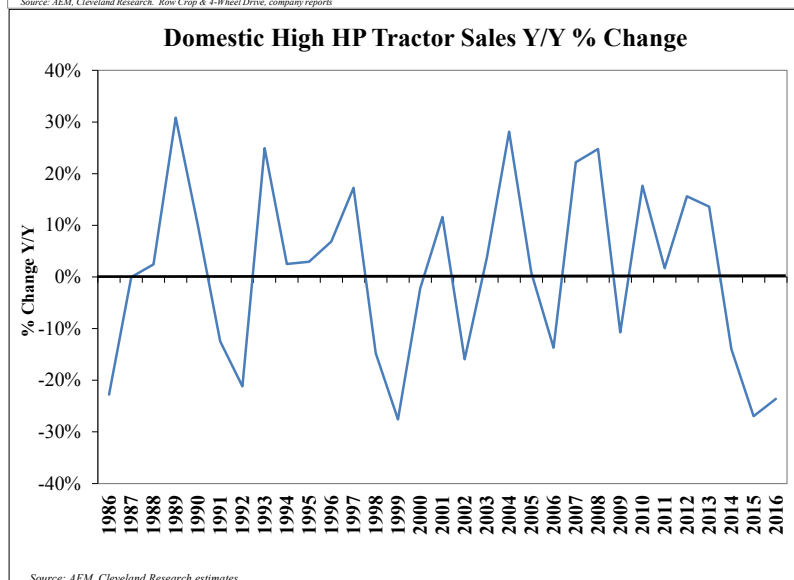
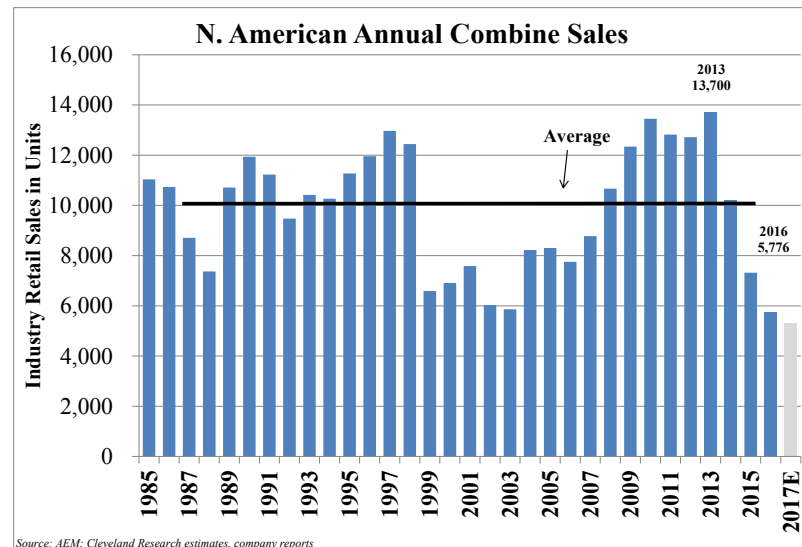
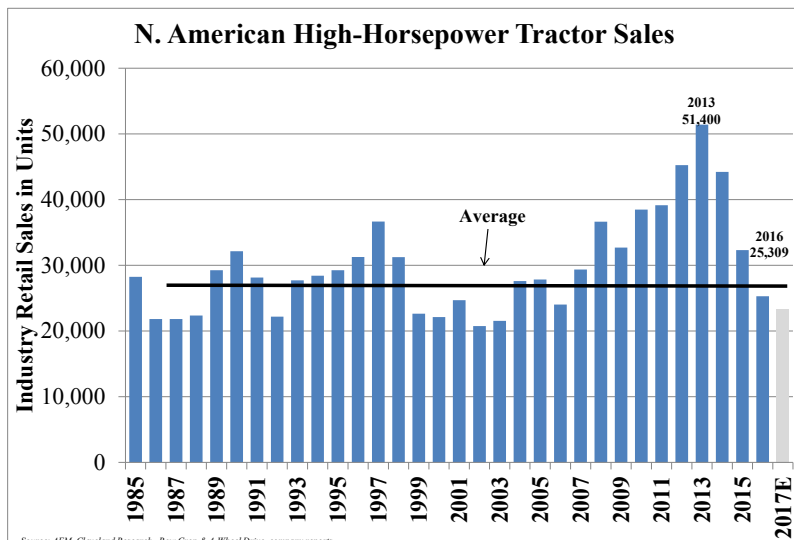
Source: AEM; Cleveland Research Company estimates. High hp tractors are row crop & 4-wheel drive.

North American Farm Equipment Industry Inventory

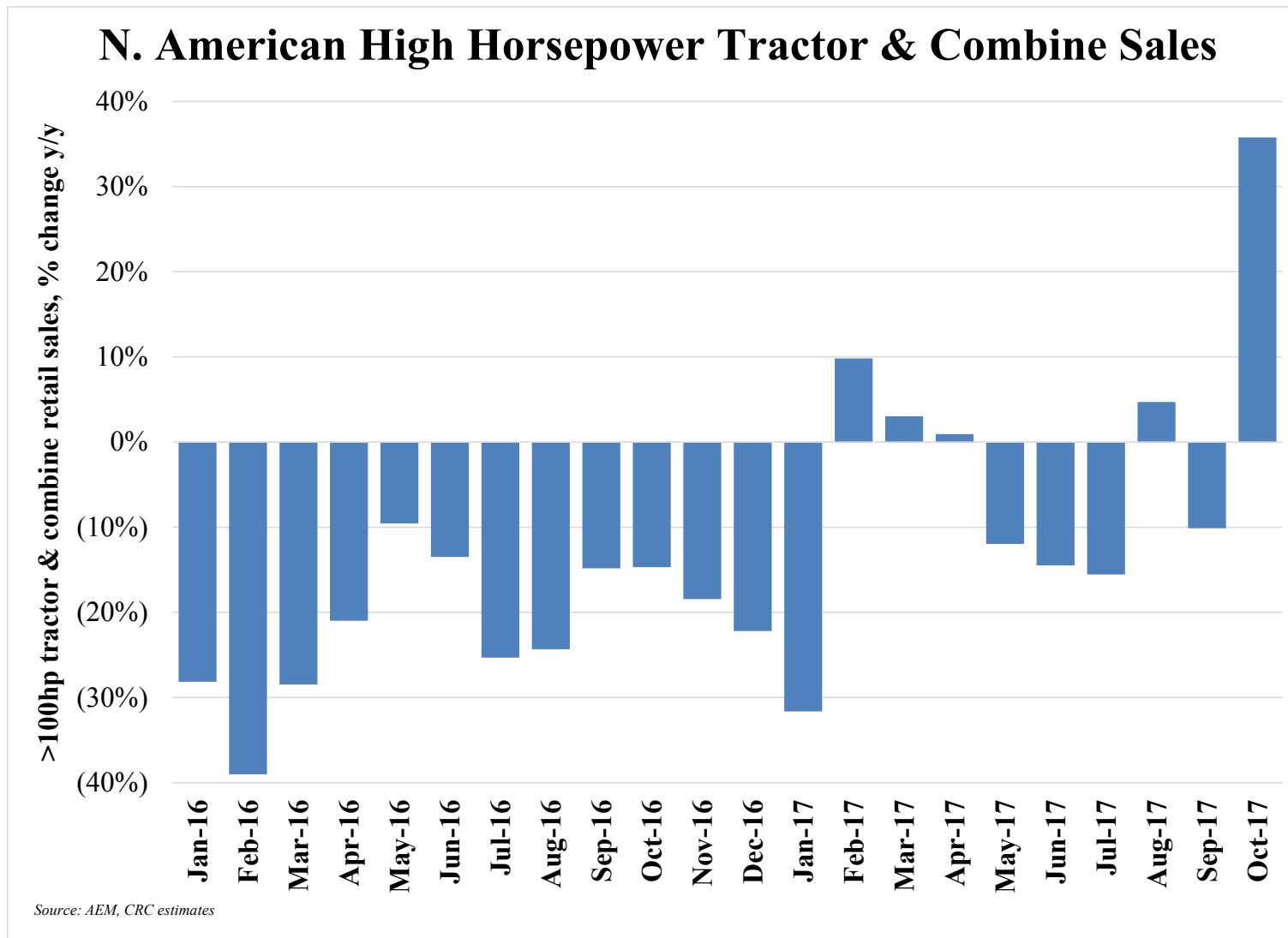
NORTH AMERICAN FARM EQUIPMENT INVENTORY														
	Inventory (Units)							Inventory to 12-mo. Sales						
	< 40 HP	Utility	Row Crop	4-Wheel	Total Tractor	Row Crop & 4WD	Combines	<40HP	Util	RC	4-WD	Total Tractor	Row Crop & 4WD	Comb
Sep-14	61,811	35,926	16,185	2,399	116,321	18,584	2,891	51%	54%	40%	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	57%	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%	62%	44%	16%
Feb-16	92,071	44,704	13,298	1,097	151,170	14,395	1,281	69%	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%	66%	49%	18%
Apr-16	90,381	44,499	13,136	1,115	149,131	14,251	1,312	66%	69%	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%	62%	49%	22%
Jun-16	82,264	42,688	12,928	1,005	138,885	13,933	1,593	59%	66%	52%	29%	60%	49%	24%
Jul-16	81,046	41,621	12,765	920	136,352	13,685	1,580	59%	66%	53%	27%	60%	50%	24%
Aug-16	79,823	41,683	12,962	998	135,466	13,960	1,671	57%	66%	55%	30%	59%	52%	26%
Sep-16	78,438	41,007	12,671	1,103	133,219	13,774	1,428	56%	65%	54%	34%	58%	52%	23%
Oct-16	77,609	39,058	11,417	1,013	129,097	12,430	1,118	55%	62%	50%	30%	56%	47%	19%
Nov-16	80,250	39,972	12,075	1,059	133,356	13,134	1,105	56%	63%	53%	32%	57%	50%	19%
Dec-16	81,456	39,339	11,955	985	133,735	12,940	1,082	56%	62%	54%	31%	57%	51%	19%
Jan-17	83,153	39,248	11,838	1,024	135,263	12,862	1,099	57%	63%	55%	34%	58%	52%	20%
Feb-17	84,464	39,659	11,692	1,105	136,920	12,797	1,345	57%	63%	54%	37%	58%	52%	24%
Mar-17	83,854	41,907	11,428	1,072	138,261	12,500	1,432	56%	67%	53%	35%	59%	51%	25%
Apr-17	80,239	38,000	10,705	980	129,924	11,685	1,427	53%	61%	50%	31%	55%	47%	25%
May-17	79,064	37,377	10,363	985	127,789	11,348	1,604	52%	59%	49%	31%	53%	47%	28%
Jun-17	77,022	36,209	10,372	924	124,527	11,296	1,731	50%	57%	50%	29%	51%	47%	30%
Jul-17	77,490	36,223	10,210	1,001	124,924	11,211	1,604	50%	57%	50%	32%	52%	48%	27%
Aug-17	76,934	36,868	10,541	1,045	125,388	11,586	1,615	49%	58%	52%	32%	52%	49%	27%
Sep-17	75,112	36,376	11,022	1,104	123,614	12,126	1,483	49%	58%	55%	34%	51%	52%	25%

Source: AEM; Cleveland Research Company estimates

Annual Agricultural Equipment Industry Sales (1985 - 2016)



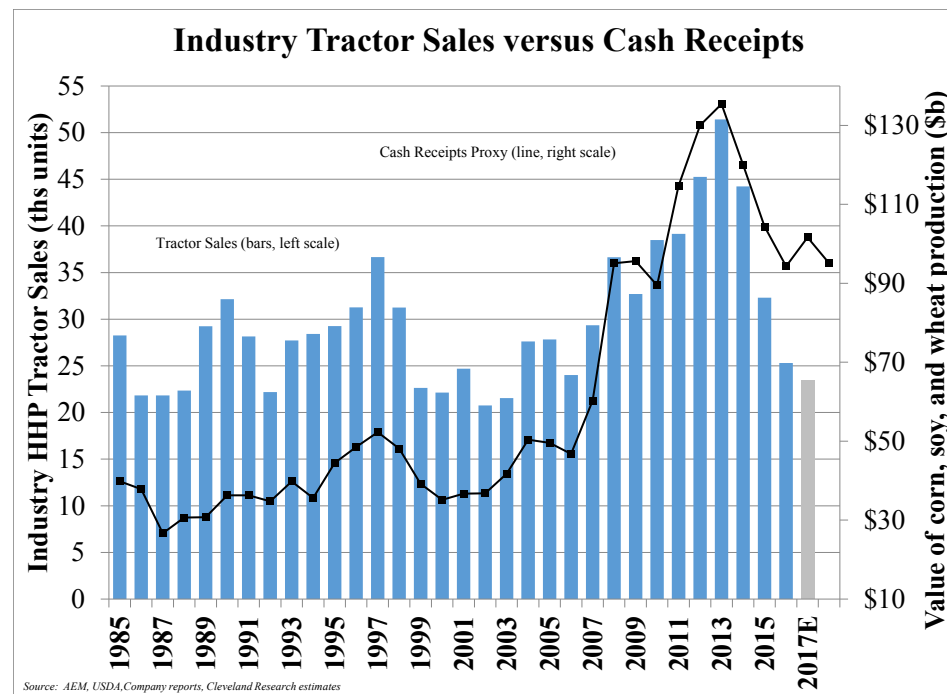
North America Large Ag Equipment Sales



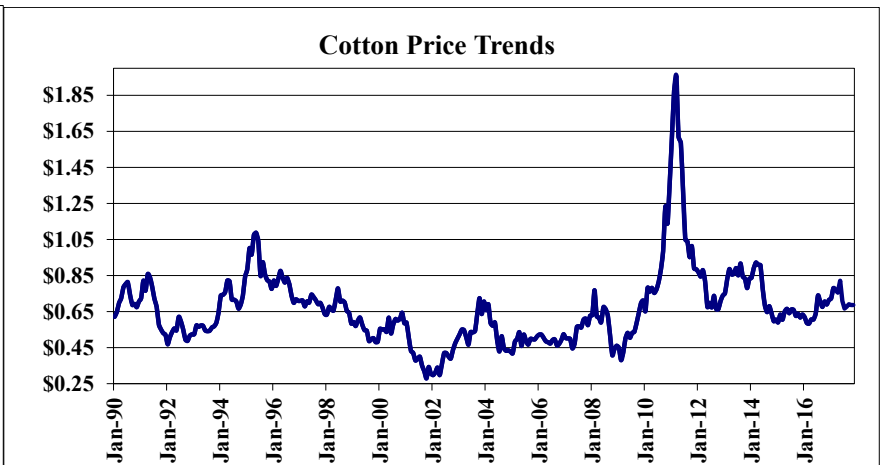
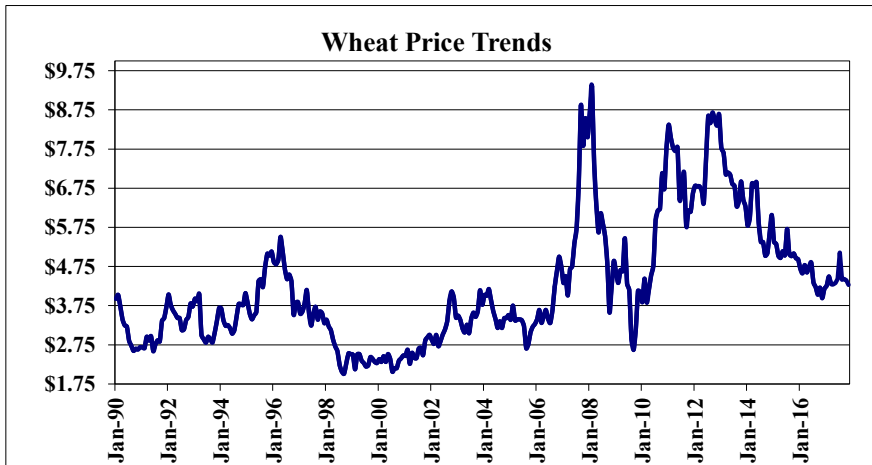
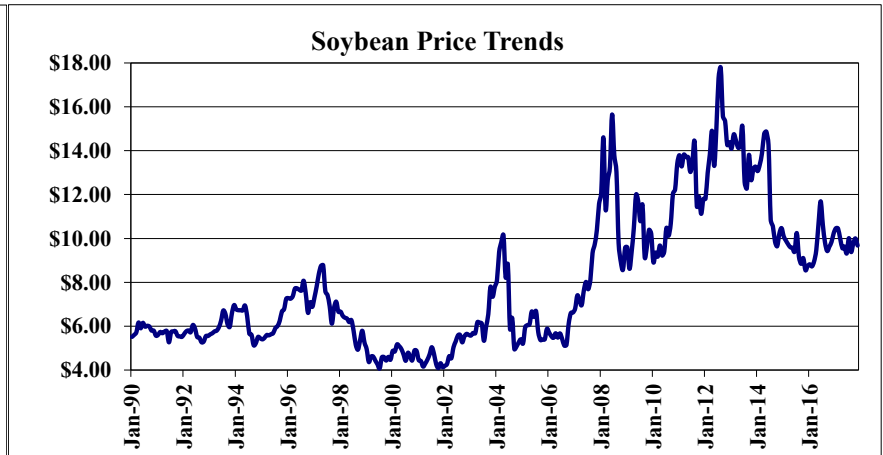
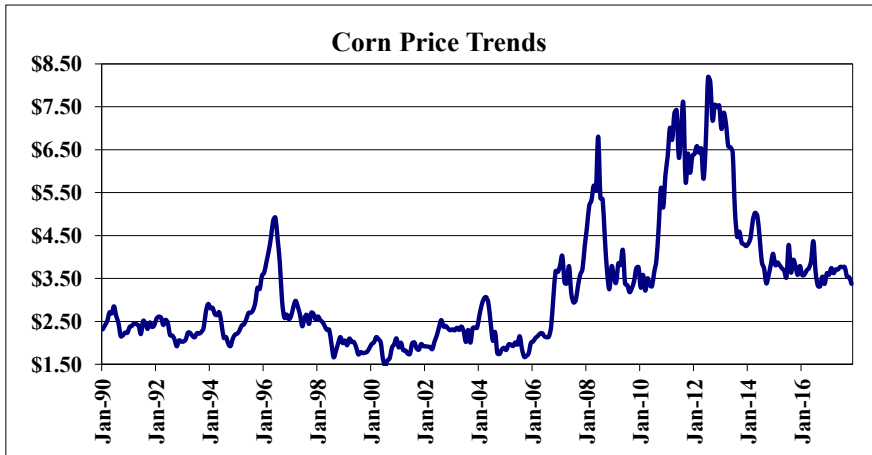
Commodity Prices – Cash Receipts vs. Next Year Equipment Sales

USDA's November 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 November crop report improved from October with cash receipts proxy forecast down 6% y/y in 2017/18 vs the 7% forecast in October. Wheat cash receipts forecasts are unchanged at down 11% y/y, corn forecasts are down 9% y/y vs down 11% previously, and soybean forecasts are flat vs down 1% previously.



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 2017

US Corn Balance Sheet - USDA Long Term Forecast (Feb 2017)														
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	2026/2027
Planted	95	91	88	94	90	90	90	89	88	88	87	87	87	86
Harvested	88	83	81	87	83	82	82	81	80	80	79	79	79	78
Yield (bu/acre)	158	171	168	175	172	173	175	177	179	181	183	185	187	189
Beginning Stocks (MM bu)	821	1,232	1,731	1,737	2,295	2,298	2,213	2,193	2,104	2,033	2,023	1,933	1,923	1,896
Production (MM bu)	13,829	14,216	13,601	15,148	14,578	14,135	14,300	14,285	14,360	14,520	14,495	14,655	14,719	14,784
Imports (MM bu)	36	32	67	55	50	50	50	50	50	50	50	50	50	50
Total Supply (MM bu)	14,686	15,480	15,399	16,940	16,922	16,483	16,563	16,528	16,514	16,603	16,568	16,638	16,692	16,730
Feed & Residual (MM Bu)	5,036	5,315	5,130	5,500	5,575	5,500	5,600	5,625	5,700	5,800	5,850	5,950	6,025	6,075
Food, Seed, & Industrial Total	6,501	6,568	6,635	6,920	6,935	6,795	6,770	6,775	6,730	6,705	6,685	6,640	6,620	6,595
Ethanol & By-Products	5,134	5,209	5,206	5,450	5,475	5,350	5,325	5,325	5,275	5,250	5,225	5,175	5,150	5,125
Domestic Use	11,537	11,883	11,765	12,420	12,510	12,295	12,370	12,400	12,430	12,505	12,535	12,590	12,645	12,670
Exports	1,917	1,864	1,898	2,225	1,925	1,975	2,000	2,025	2,050	2,075	2,100	2,125	2,150	2,175
Total Use	13,454	13,747	13,663	14,645	14,435	14,270	14,370	14,425	14,480	14,580	14,635	14,715	14,795	14,845
Ending Stocks	1,232	1,731	1,738	2,295	2,487	2,213	2,193	2,104	2,033	2,023	1,933	1,923	1,896	1,885
Ending Stocks/Use	9.2%	12.6%	12.7%	15.7%	17.2%	15.5%	15.3%	14.6%	14.0%	13.9%	13.2%	13.1%	12.8%	12.7%
Weeks Carryover	4.8	6.5	6.6	8.1	9.0	8.1	7.9	7.6	7.3	7.2	6.9	6.8	6.7	6.6
Average Farm Price (\$/bu)	\$4.46	\$3.70	\$3.61	\$3.40	\$3.20	\$3.35	\$3.35	\$3.45	\$3.50	\$3.55	\$3.60	\$3.65	\$3.65	\$3.70
Value of Production	\$61,677	\$52,599	\$49,100	\$51,503	\$46,650	\$47,352	\$47,905	\$49,283	\$50,260	\$51,546	\$52,182	\$53,491	\$53,724	\$54,701
% change y/y	-17%	-15%	-7%	5%	-9%	2%	1%	3%	2%	3%	1%	3%	0%	2%

U.S. Soybean Balance Sheet - USDA Long Term Forecast (Feb 2017)														
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	2026/2027
Planted	77	83	83	83	90	85	85	85	85	85	85	85	85	85
Harvested	76	83	82	83	90	84	84	84	84	84	84	84	84	84
Yield Per Harvested Acre (Bushels)	44	48	48	52	50	48	49	49	50	50	51	51	52	52
Beginning Stocks	141	92	191	197	301	396	326	306	291	300	309	317	330	338
Production	3,358	3,927	3,926	4,307	4,425	4,070	4,090	4,130	4,195	4,240	4,280	4,325	4,365	4,405
Imports	72	33	24	25	25	30	30	30	30	30	30	30	30	30
Total Supplies	3,571	4,052	4,141	4,528	4,752	4,496	4,446	4,466	4,516	4,570	4,619	4,672	4,725	4,773
Crush	1,734	1,873	1,886	1,925	1,940	1,955	1,970	1,990	2,015	2,040	2,060	2,085	2,105	2,130
Exports	1,647	1,843	1,936	2,050	2,250	2,085	2,040	2,055	2,070	2,090	2,110	2,125	2,150	2,150
Seed & Residual	98	145	121	128	128	129	130	130	131	131	132	132	132	132
Total Use	3,479	3,861	3,943	4,093	4,326	4,169	4,140	4,175	4,216	4,261	4,302	4,342	4,387	4,412
Ending Stocks	92	191	197	435	425	326	306	291	300	309	317	330	338	361
Stocks/Use	2.7%	4.9%	5.0%	10.6%	9.8%	7.8%	7.4%	7.0%	7.1%	7.2%	7.4%	7.6%	7.7%	8.2%
Average Price (\$/bu)	\$13.00	\$10.10	\$8.95	\$9.55	\$9.30	\$9.40	\$9.40	\$9.45	\$9.45	\$9.50	\$9.55	\$9.55	\$9.55	\$9.55
Value of Production	\$43,654	\$39,663	\$35,138	\$41,132	\$41,153	\$38,258	\$38,446	\$39,029	\$39,643	\$40,280	\$40,874	\$41,304	\$41,686	\$42,068
% change y/y	0%	-9%	-11%	17%	0%	-7%	0%	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 2017 (continued)

U.S. Wheat Balance Sheet - USDA Long Term Forecast (Feb 2017)

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	2026/2027
Planted	56	57	55	50	46	49	50	50	50	50	50	50	50	50
Harvested	45	46	47	44	38	42	42	42	42	42	42	42	42	42
Yield Per Harvested Acre (Bushels)	47	44	44	53	46	48	48	48	49	49	50	50	50	51
Beginning Stocks	718	590	752	976	1,181	993	892	832	784	742	707	679	658	654
Production	2,134	2,026	2,062	2,310	1,741	1,976	2,012	2,029	2,045	2,062	2,079	2,096	2,113	2,129
Imports	169	144	113	115	150	125	125	125	130	135	140	145	150	155
Total Supplies	3,021	2,760	2,927	3,400	3,071	3,094	3,029	2,986	2,959	2,939	2,926	2,920	2,921	2,938
Food	955	960	957	955	950	970	975	980	985	990	995	1,000	1,005	1,010
Seed	77	81	67	61	66	67	67	67	67	67	67	67	67	67
Feed&residual	223	111	152	190	120	190	180	170	170	170	170	170	170	170
Exports	1,176	855	775	1,035	1,000	975	975	985	995	1,005	1,015	1,025	1,025	1,035
Total Use	2,431	2,007	1,952	2,241	2,136	2,202	2,197	2,202	2,217	2,232	2,247	2,262	2,267	2,282
Ending Stocks	590	753	976	1,159	935	892	832	784	742	707	679	658	654	656
Stocks/Use	24.3%	37.5%	50.0%	51.7%	43.8%	40.5%	37.9%	35.6%	33.5%	31.7%	30.2%	29.1%	28.9%	28.8%
Average Price (\$/bu)	\$6.87	\$5.99	\$4.89	\$3.90	\$4.60	\$4.30	\$4.50	\$4.70	\$4.70	\$4.80	\$4.90	\$5.00	\$5.00	\$5.00
Value of Production	\$14,661	\$12,136	\$10,083	\$9,009	\$8,009	\$8,497	\$9,054	\$9,536	\$9,612	\$9,898	\$10,187	\$10,480	\$10,565	\$10,645
% change y/y	-16%	-17%	-17%	-11%	-11%	6%	7%	5%	1%	3%	3%	3%	1%	1%

Total Acreage and Value of U.S. Corn, Soy and Wheat Production - USDA February 2017 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	2026/2027
Planted (mm acres)	228	231	226	228	227	224	224	223	223	223	222	222	221	221
Harvested (mm acres)	209	212	210	213	210	208	207	206	206	206	205	205	205	204
Yield (bu/acre)	92	95	93	102	99	97	98	99	100	101	102	103	103	104
Production	19,321	20,169	19,589	21,765	20,744	20,181	20,402	20,444	20,600	20,822	20,854	21,076	21,197	21,318
Average Price (\$/bu)	\$6.21	\$5.18	\$4.81	\$4.67	\$4.62	\$4.66	\$4.68	\$4.79	\$4.83	\$4.89	\$4.95	\$4.99	\$5.00	\$5.04
Value of Production	\$119,992	\$104,398	\$94,320	\$101,644	\$95,811	\$94,107	\$95,405	\$97,848	\$99,514	\$101,724	\$103,243	\$105,275	\$105,975	\$107,414
% change y/y	-11%	-13%	-10%	8%	-6%	-2%	1%	3%	2%	2%	1%	2%	1%	1%

Source: USDA, Cleveland Research estimates

U.S. Acreage Planted Per Crop Year

