

Ag Equipment Intelligence

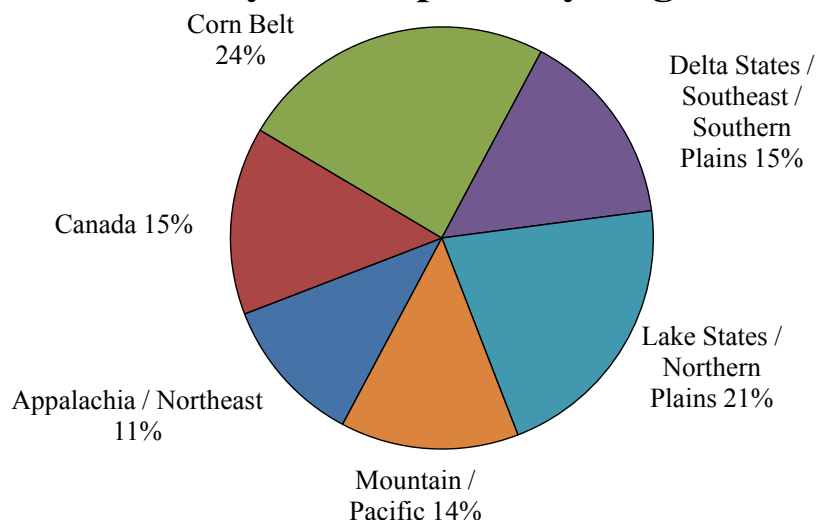
July 2018 Dealer Sentiments & Business
Conditions Update

Monthly Ag Equipment Intelligence North American Dealer Survey

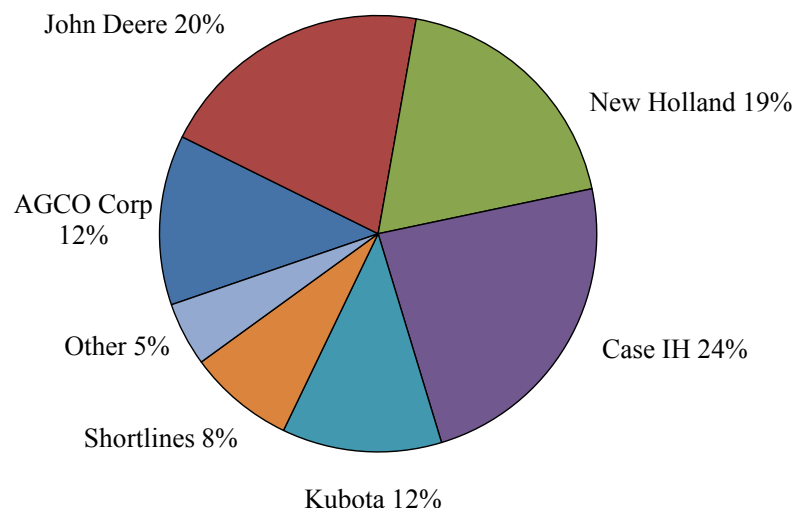
Background:

- | We are pleased to announce the results of the June 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 June survey had ~100 respondents representing combined annual revenues of roughly \$4 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 June, falling from the 2% growth in May. A net 13% of dealers missed their sales budgets in June vs the net 6% in May. Commercial and consumer lawn equipment sales showed strength, while large equipment demand remains weak but has seen improvement over the last year.
- | **Outlook** –The 2018 forecast is for 1% y/y growth, below the 2% in May. A net 21% of contacts reported that they expect growth in 2Q, above the net 19% of contacts expecting growth in 1Q.
- | **Inventory** – New equipment inventory levels were higher in June with a net 14% of dealers reporting inventories too high vs the 5% in May. Used equipment inventory levels were similar to May with a net 25% of dealers reporting used inventory as too high. Overall, inventories have come down from 2016 levels.
- | **Pricing** – Used equipment pricing softened in June after several months of improvement. Large tractor pricing was reported down 3% y/y vs down 2% in May. Combine pricing was reported down 5%, also deteriorating from last month. New equipment price realization showed improvement in 2Q vs 1Q.

Monthly Sales Growth

- Sales in June were reported flat y/y with a net 13% of dealers that missed plan, slightly worse than the net 6% that missed plan in May on 2% sales growth.
- A net 9% of dealers reported less optimism in June versus the 2% of dealers that were less optimistic in May. Optimism has been relatively stable YTD and has shown notable improvement versus last year.

N. American Farm Equipment Dealer Survey - Average Dealer Sales Growth

% Change y/y	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18
AGCO	-13%	-4%	-11%	-2%	-13%	-1%	-3%	0%	-5%	2%	0%	4%	0%	1%	6%	-3%	6%	-8%
John Deere	-1%	-7%	-1%	-4%	-1%	-1%	-2%	3%	5%	2%	-1%	4%	1%	0%	1%	-1%	1%	1%
New Holland	-7%	2%	-12%	-13%	-4%	-1%	-6%	0%	-4%	-11%	3%	0%	0%	-3%	-7%	-6%	3%	-2%
Case IH	-8%	-4%	-5%	-3%	-16%	-2%	-5%	-2%	-8%	-4%	-7%	-3%	-1%	-1%	-3%	-1%	0%	-3%
Kubota	-5%	2%	7%	2%	1%	0%	8%	12%	-4%	14%	10%	10%	5%	3%	3%	12%	6%	6%
Shortlines/Other	-9%	5%	4%	-9%	-1%	-1%	-1%	-1%	3%	0%	-1%	-5%	-5%	-4%	2%	-11%	-1%	0%
Total	-6%	-5%	-5%	-5%	-5%	-2%	-3%	-1%	-1%	0%	0%	1%	0%	0%	0%	0%	2%	0%

Source: Cleveland Research, Ag Equipment Intelligence

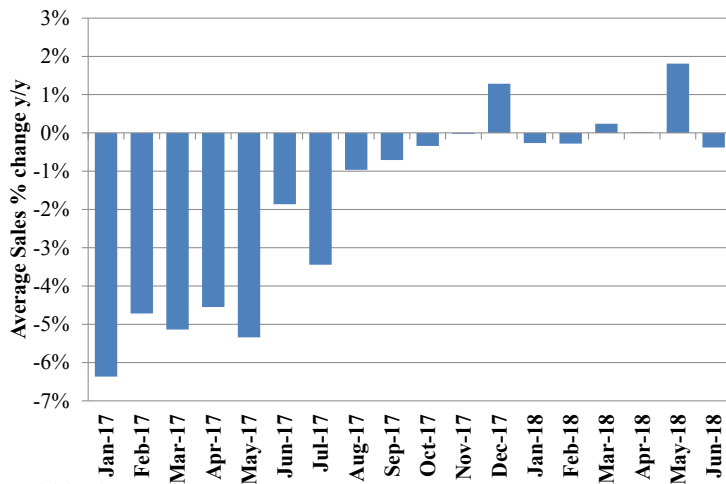
N. American Farm Equipment Dealer Survey - Sales Versus Expectations

% of Dealers Reporting	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18
Better than expected	16%	11%	12%	16%	19%	16%	16%	21%	21%	18%	21%	18%	13%	13%	11%	10%	22%	17%
In line with expectations	59%	58%	58%	54%	52%	65%	48%	52%	47%	55%	60%	62%	65%	61%	60%	61%	50%	53%
Worse than expected	25%	31%	30%	30%	30%	19%	36%	27%	32%	27%	20%	20%	22%	26%	29%	29%	28%	30%
Net % (Better - Worse)	-9%	-20%	-18%	-15%	-11%	-3%	-19%	-6%	-11%	-8%	1%	-1%	-9%	-13%	-18%	-18%	-6%	-13%

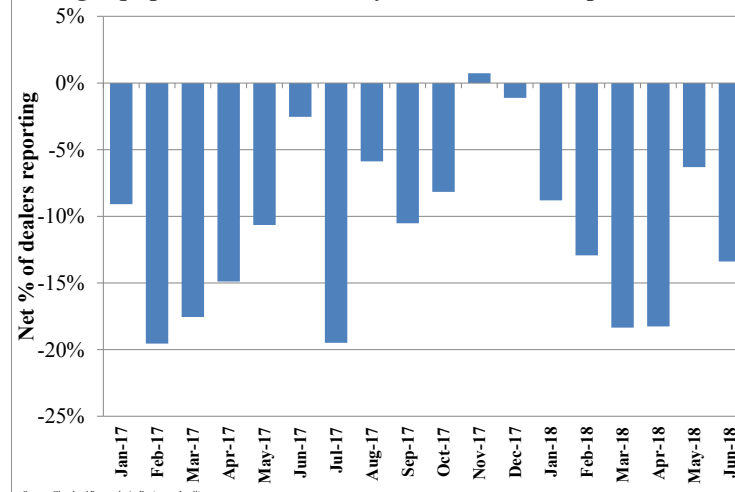
Source: Cleveland Research, Ag Equipment Intelligence

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	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18
Positive Sales Growth	27%	25%	32%	34%	39%	37%	33%	41%	43%	41%	43%	41%	36%	31%	36%	38%	53%	45%
Flat Sales	22%	31%	23%	19%	18%	32%	19%	21%	22%	20%	21%	22%	28%	31%	32%	29%	25%	27%
Negative Sales Growth	52%	45%	45%	47%	43%	32%	48%	38%	35%	38%	36%	37%	36%	38%	32%	33%	23%	29%
Net % Reporting Growth	-25%	-20%	-13%	-13%	-4%	5%	-15%	4%	7%	3%	7%	4%	0%	-7%	4%	5%	30%	16%
Average % Change y/y	-6%	-5%	-5%	-5%	-5%	-2%	-3%	-1%	-1%	0%	0%	1%	0%	0%	0%	0%	2%	0%

Source: Cleveland Research

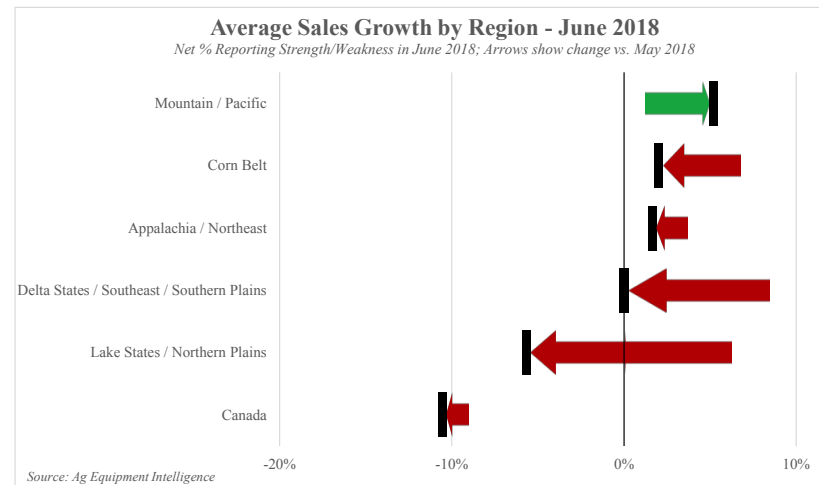
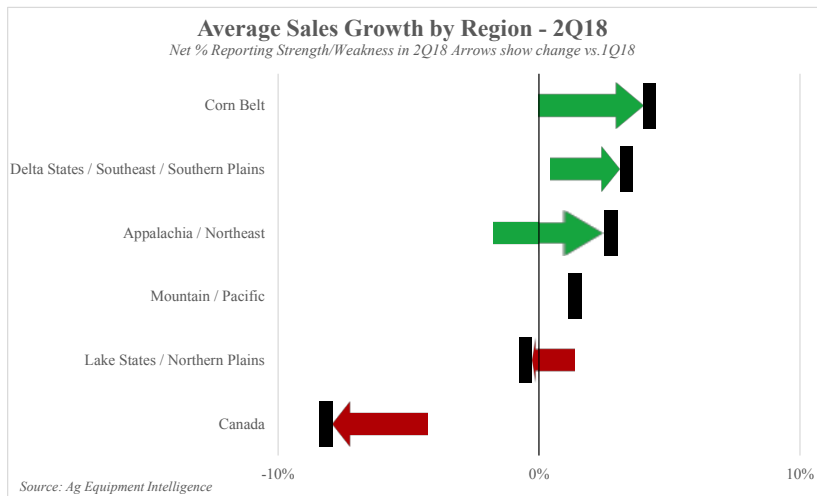
Optimism/Sentiment vs. Last Month

% of Dealers Reporting	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18
More Optimistic	31%	21%	26%	17%	19%	23%	21%	23%	23%	22%	24%	28%	21%	21%	24%	26%	24%	21%
Same	48%	60%	47%	53%	61%	58%	47%	52%	51%	56%	63%	53%	58%	58%	51%	54%	50%	48%
Less Optimistic	20%	19%	27%	30%	20%	19%	32%	26%	26%	22%	14%	19%	21%	21%	25%	20%	26%	30%
Net % Dealer Optimism	11%	1%	-1%	-13%	-2%	4%	-11%	-3%	-4%	1%	10%	9%	1%	0%	-1%	6%	-2%	-9%

Source: Cleveland Research

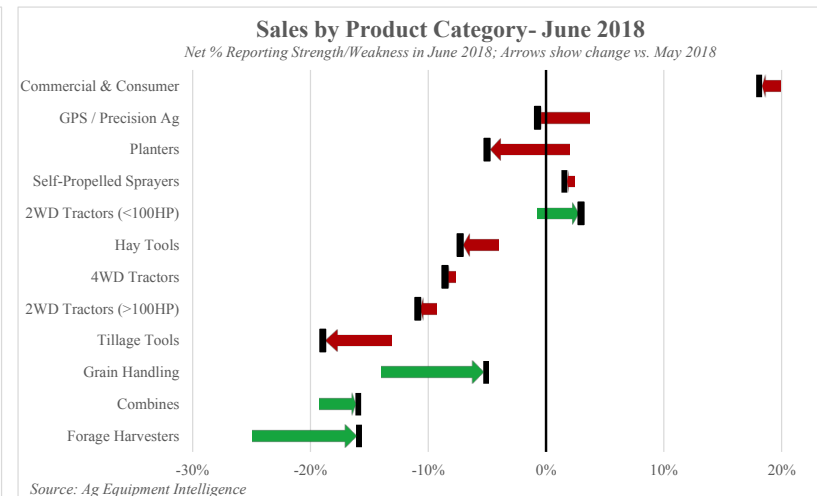
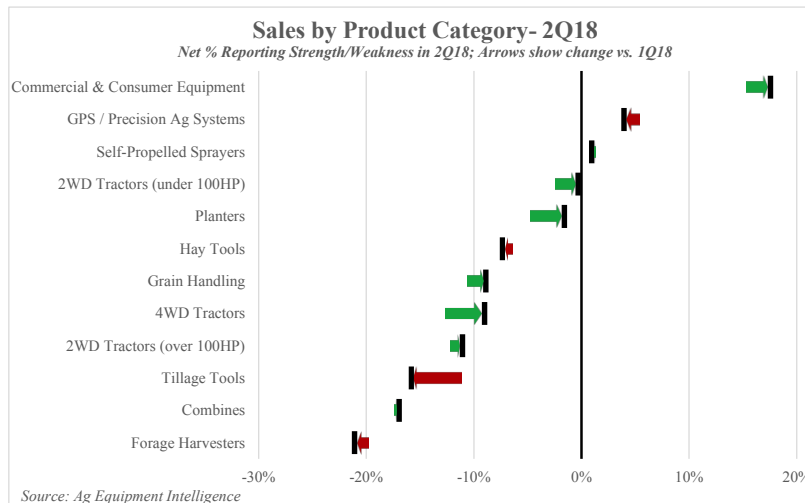
Monthly Sales Growth by Region

- Sales trends by region slowed in 5 of the 6 regions in June vs improvement in half of the regions in 2Q. The Corn Belt was the strongest region in 2Q and showed the greatest improvement from 1Q. Canada was the weakest region in both June and 2Q.

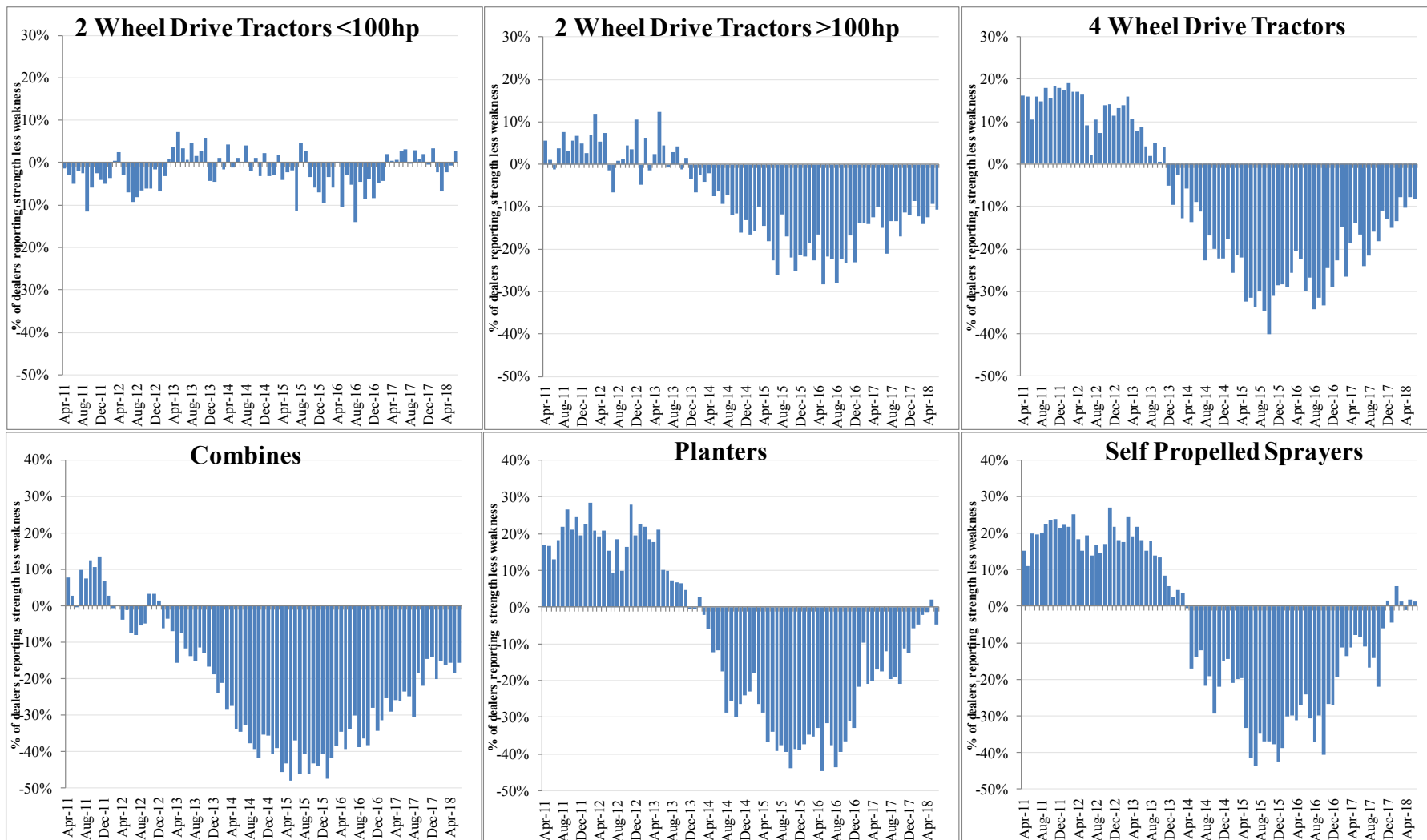


Equipment Category Sales Trends

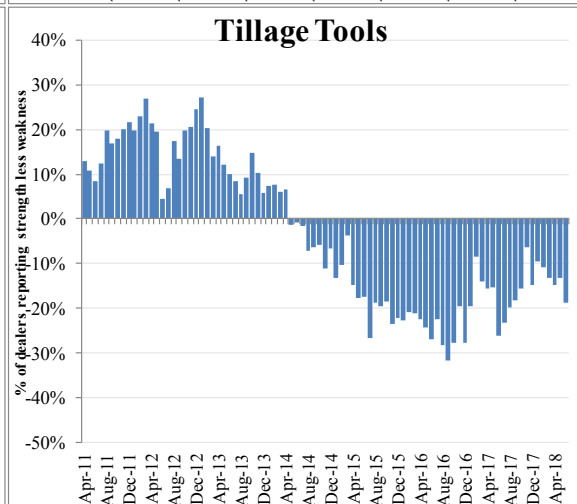
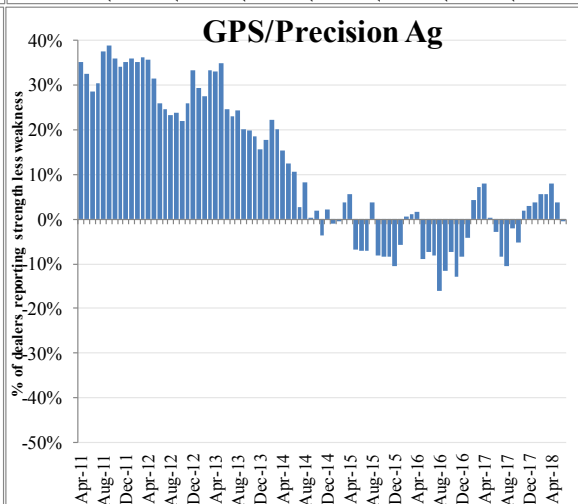
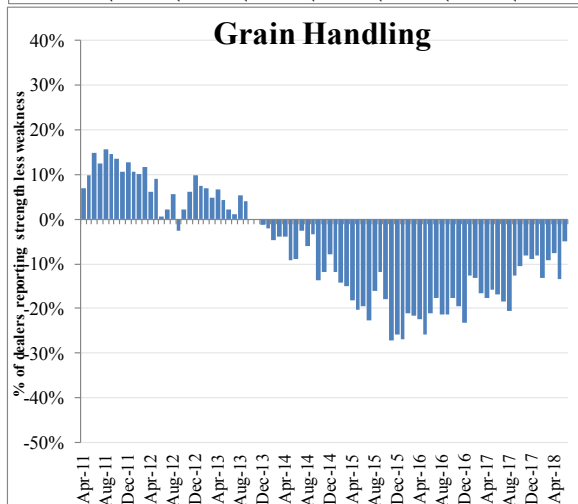
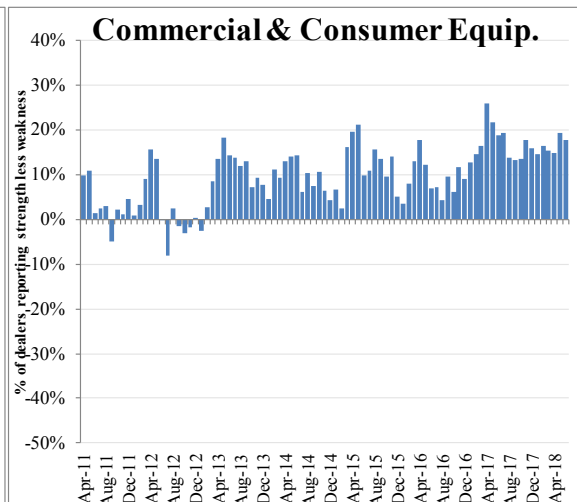
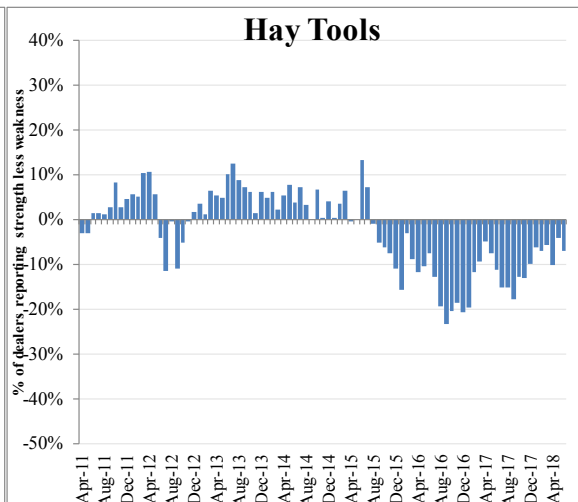
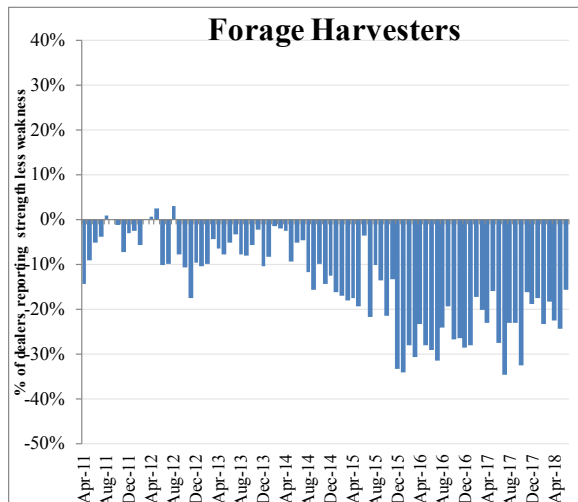
- Sales by product category was mixed in June and 2Q following overall sequential improvement in 1Q. 4WD tractors showed the greatest improvement from 1Q while tillage tools showed the greatest sequential declines.
- More than half of equipment categories declined in June, but large equipment showed the greatest sequential improvement (grain handling, forage harvesters, and combines).



Equipment Category Sales Trends



Equipment Category Sales Trends (Continued)



Average Dealer Sales Outlook

- The 2018 forecast is for 1% y/y growth, down from the 2% forecast in April and May, with a net 32% of contacts expecting growth, an improvement from last month and the 16% of contacts expecting growth in 1Q.
- Public ag equipment manufacturers forecast NAFTA ag equipment sales flat to up 10% in 2018. The bottom table details sales outlook by region for John Deere, CNH Industrial, and AGCO Corp.

N. American Farm Equipment Dealer Survey - 2018 Sales Forecast												
% change y/y	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18
AGCO	0%	2%	1%	0%	3%	-1%	-4%	4%	0%	-2%	5%	1%
John Deere	1%	7%	4%	5%	4%	2%	4%	1%	3%	-5%	-10%	3%
New Holland	2%	-4%	-1%	-3%	2%	-2%	1%	0%	0%	3%	4%	1%
Case IH	0%	1%	1%	4%	3%	4%	0%	-4%	-5%	5%	3%	3%
Kubota	0%	1%	-1%	-2%	1%	2%	1%	-1%	2%	3%	6%	2%
Shortlines/Other	-3%	0%	0%	3%	-5%	4%	1%	-3%	3%	3%	0%	-1%
Overall	-3%	0%	1%	0%	2%	2%	2%	1%	1%	2%	2%	1%

Source: Cleveland Research, Ag Equipment Intelligence

2018 Ag Equipment Industry Sales Outlook (units)			
Geography	Deere	CNH Industrial	AGCO Corp.
N. America	Up 10%	Tractors 0-5%; Combines up 10%	Flat to up 5%
Western Europe	Up 5%	Tractors (0-5%); Combines up 5-10%	Flat
Latin America	Flat to up 5%	Tractors 0-5%; Combines up 5%	Flat
Asia	Flat	Tractors up 5%; Combines up 10%	na

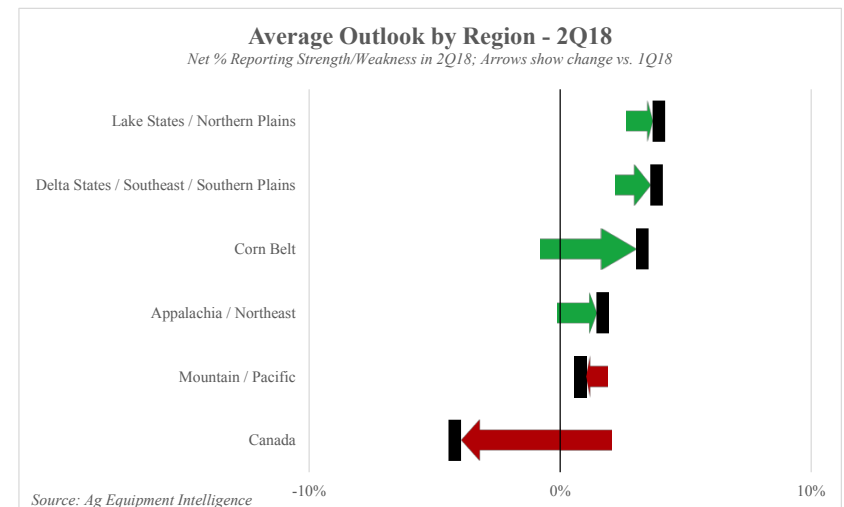
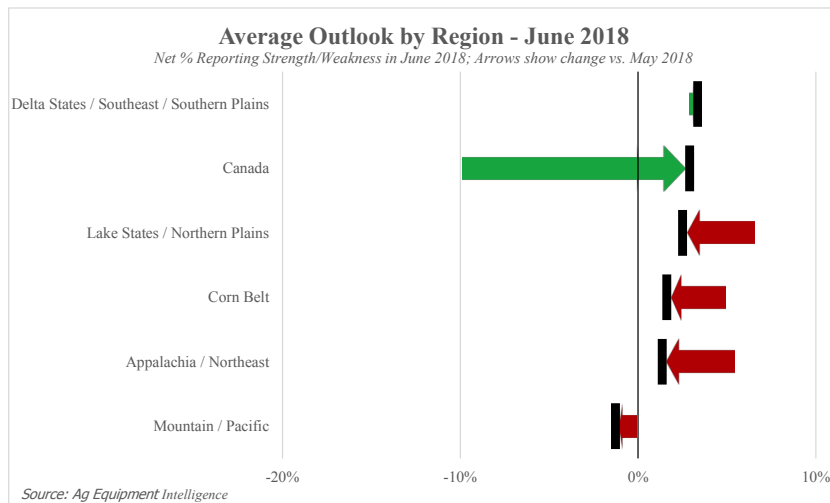
Source: Company reports, CRC estimates

Most Interesting Commentary - Monthly Sales and Outlook

- There is a lot of uncertainty in the ag community right now. From grain prices to government tariffs, it has definitely impacted our customers.
- Crop conditions continue to deteriorate due to dry weather. Lower expectations for commodity pricing have our customers delaying any equipment purchases.
- We are quoting a lot of new equipment right now. Planters are selling but large tractors remain sluggish.
- Our parts and tractor sales are pretty weak, mostly due to the dry weather. We have seen customer inquiries really slow down.
- We believe concerns about tariffs are holding back customer optimism.
- We are scrambling to sell used and lower priced new equipment as manufacturers have issued price increases across the board.
- Interest rates continue to climb- they increased 1% in 1Q and now another 1% in July.
- Large equipment sales were below our expectations in June. We have had more success moving small used tractors.
- Ag equipment manufacturers continue to raise prices while commodity prices fall.
- Our manufacturer raised prices 5% in April and we are expecting another round of increases to drive inflation even further in 2019.
- Weather conditions were very unfavorable in spring, but we did get some rain in our region in June which should help going forward.
- We have had to lower our pricing on our large used equipment like tillage and combines because it just hasn't been moving.
- Tariff concerns seem to be negatively impacting optimism and holding back customer purchases, despite a somewhat better than expected wheat harvest.

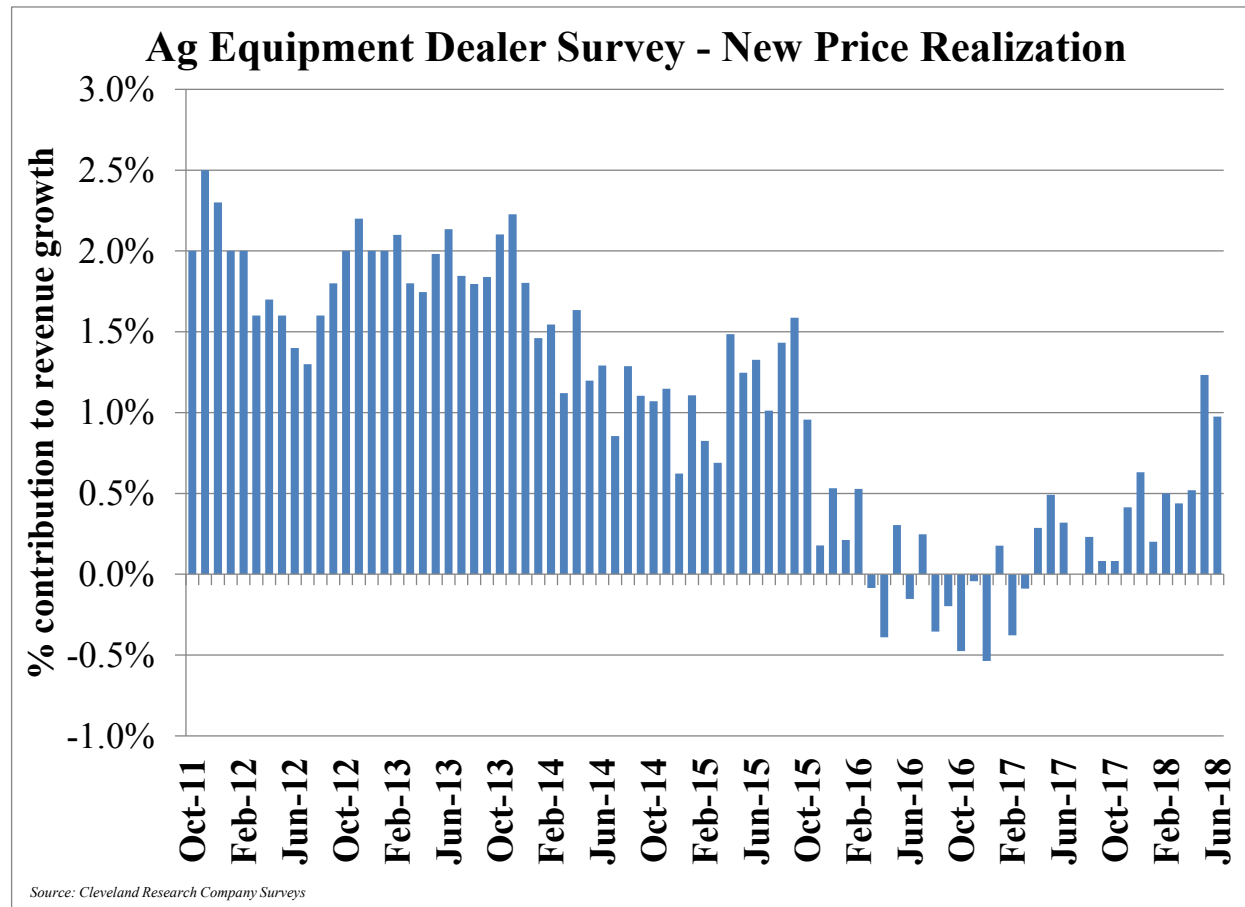
2018 Sales Outlook

- | The 2018 outlook in June saw sequential deterioration in 4 of the 6 regions, while the outlook improved in 4 of the 6 regions in 2Q. Canada saw the greatest improvement from May.
- | The 2018 outlook in June is in line with the average growth forecast collected over the past year. Dealer optimism on 2018 showed improvement in 2Q vs 1Q.



Pricing Trends

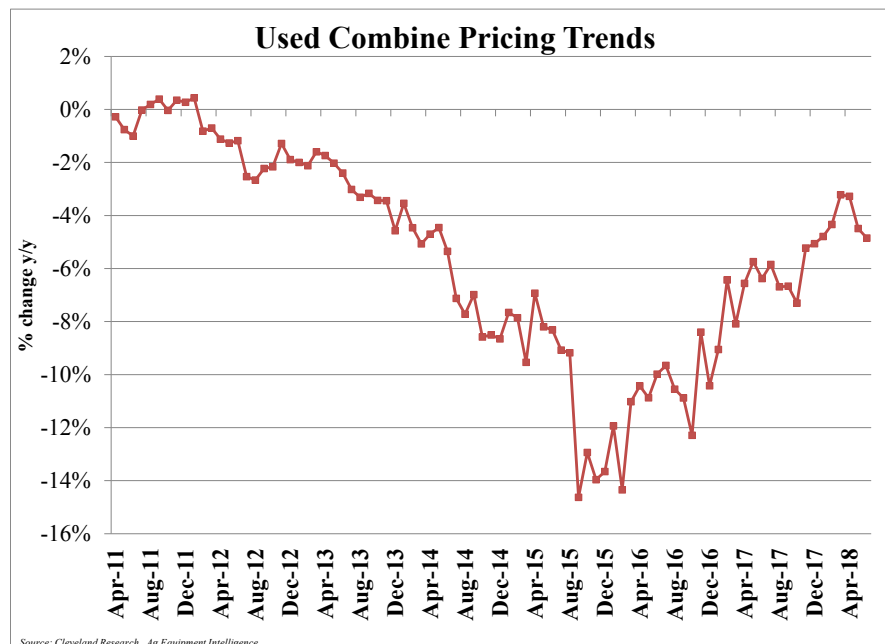
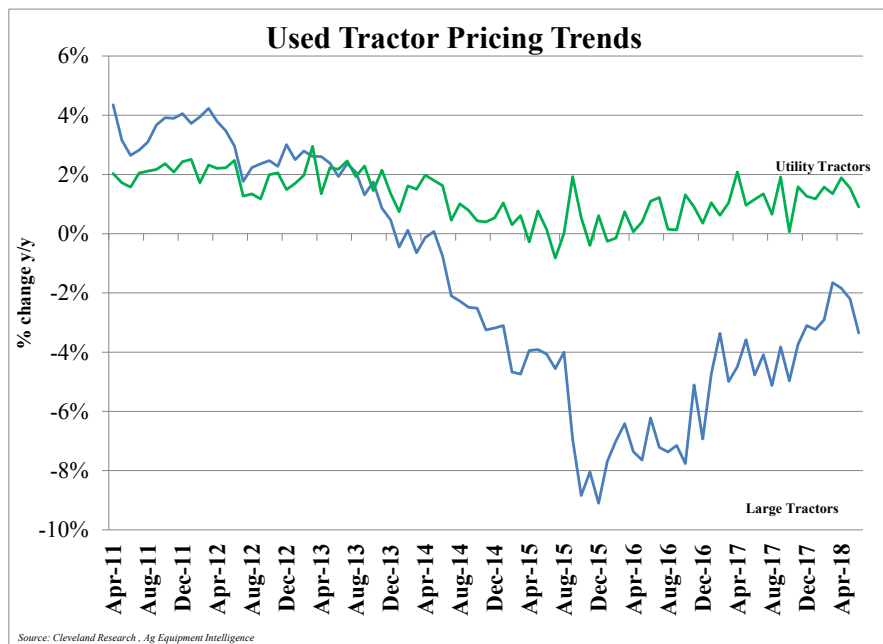
- Price realization has shown improvement over the past few months. Commentary suggests dealers continue to receive price increases from manufacturers in the 2-5% range due to steel surcharges.



Used Equipment Pricing

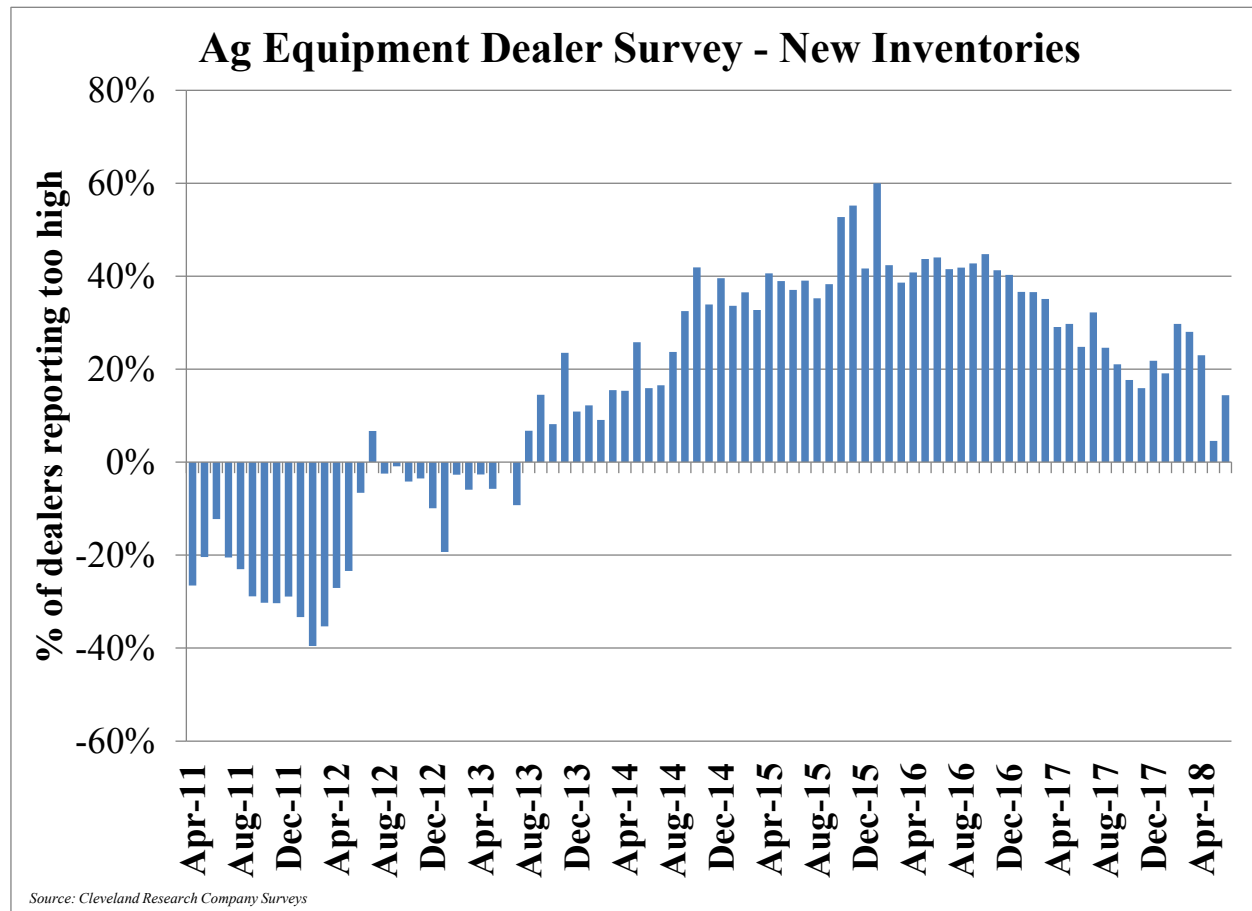
Used equipment pricing softened in June after several months of improvement. Large tractor pricing was reported down 3% y/y vs down 2% in May. Combine pricing was reported down 5%, also deteriorating from last month.

Used Tractor and Combine Values (Y/Y)																		
	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18
Compact (<40HP)	1%	1%	1%	2%	2%	2%	1%	1%	2%	0%	2%	1%	1%	2%	1%	2%	2%	1%
Utility (40-100HP)	1%	0%	1%	2%	0%	0%	1%	0%	1%	0%	1%	1%	1%	1%	1%	1%	1%	1%
Row Crop (100HP+)	(3%)	(2%)	(3%)	(4%)	(3%)	(4%)	(3%)	(4%)	(2%)	(4%)	(3%)	(2%)	(2%)	(2%)	(1%)	(2%)	(1%)	(3%)
4WD Tractors	(6%)	(4%)	(7%)	(5%)	(4%)	(6%)	(5%)	(6%)	(5%)	(6%)	(5%)	(4%)	(4%)	(4%)	(2%)	(2%)	(3%)	(4%)
Combines	(9%)	(6%)	(8%)	(7%)	(6%)	(6%)	(6%)	(7%)	(7%)	(7%)	(5%)	(5%)	(5%)	(4%)	(3%)	(3%)	(4%)	(5%)



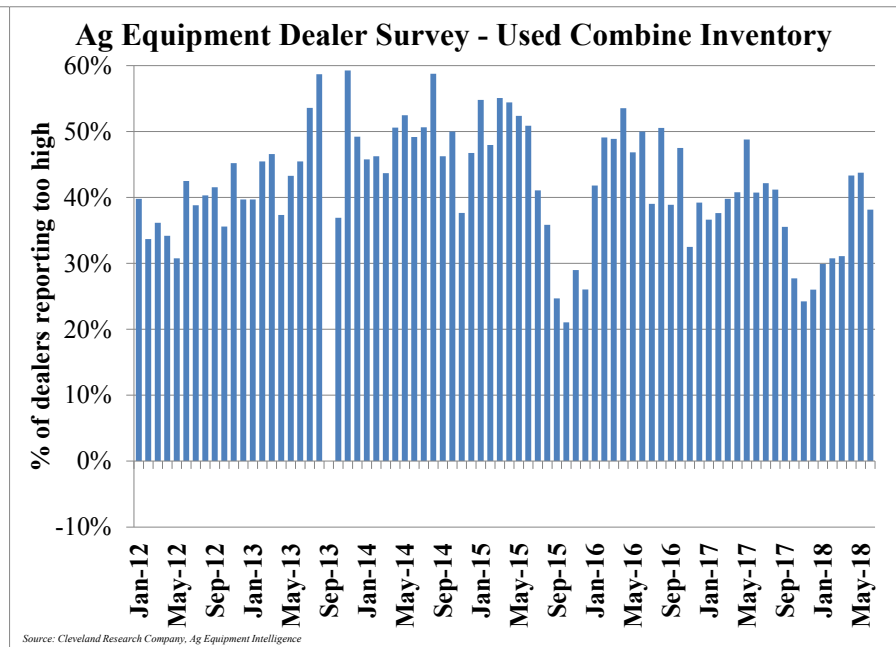
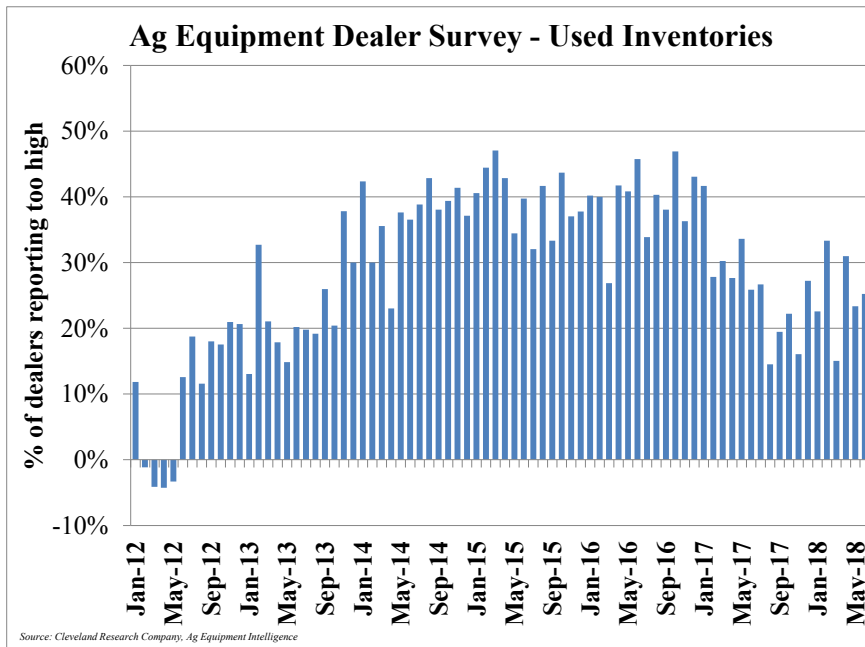
New Equipment Inventory Levels

- 1) New equipment inventory levels were higher in June with a net 14% of dealers reporting inventories too high (30% too high, 55% in line, 16% too low) vs the 5% in May.



Used Equipment Inventory Levels

- A net 25% of dealers reported used equipment inventory as too high, similar to the 23% in May. Used combine inventory remained elevated in the month with a net 38% of dealers reporting inventories as too high in June, a slight improvement from the net 44% of May.



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-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	7,416	3,651	903	205	12,175	1,108	293	21%	-2%	-22%	-8%	9%	-20%	-15%
Dec-16	10,384	6,301	2,064	325	19,074	2,389	688	19%	-1%	-20%	-37%	5%	-23%	-22%
Jan-17	6,836	3,832	1,392	147	12,207	1,539	289	15%	-10%	-30%	-40%	-2%	-31%	-36%
Feb-17	7,959	3,312	1,339	198	12,808	1,537	254	24%	-2%	13%	-11%	14%	9%	5%
Mar-17	13,704	5,361	1,786	338	21,189	2,124	457	10%	5%	-6%	31%	7%	-2%	32%
Apr-17	19,358	5,883	2,416	426	28,083	2,842	504	9%	5%	-5%	27%	7%	-1%	9%
May-17	19,428	5,987	1,595	254	27,264	1,849	372	13%	7%	-19%	9%	9%	-16%	12%
Jun-17	17,918	6,520	1,586	191	26,215	1,777	593	11%	4%	-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%
Nov-17	8,152	4,109	952	187	13,400	1,139	334	10%	13%	5%	-9%	10%	3%	14%
Dec-17	10,964	6,276	1,974	413	19,627	2,387	699	6%	0%	-4%	27%	3%	0%	2%
Jan-18	7,261	3,960	1,423	196	12,840	1,619	275	6%	3%	2%	33%	5%	5%	-5%
Feb-18	7,101	3,313	1,127	221	11,762	1,348	316	-11%	0%	-16%	12%	-8%	-12%	24%
Mar-18	14,407	5,340	1,879	318	21,944	2,197	395	5%	0%	5%	-6%	4%	3%	-14%
Apr-18	19,350	6,257	2,343	386	28,336	2,729	709	0%	6%	-3%	-9%	1%	-4%	41%
May-18	22,932	6,327	1,882	275	31,416	2,157	452	18%	6%	18%	8%	15%	17%	22%
Jun-18	20,538	6,777	1,853	244	29,412	2,097	697	15%	4%	17%	28%	12%	18%	18%

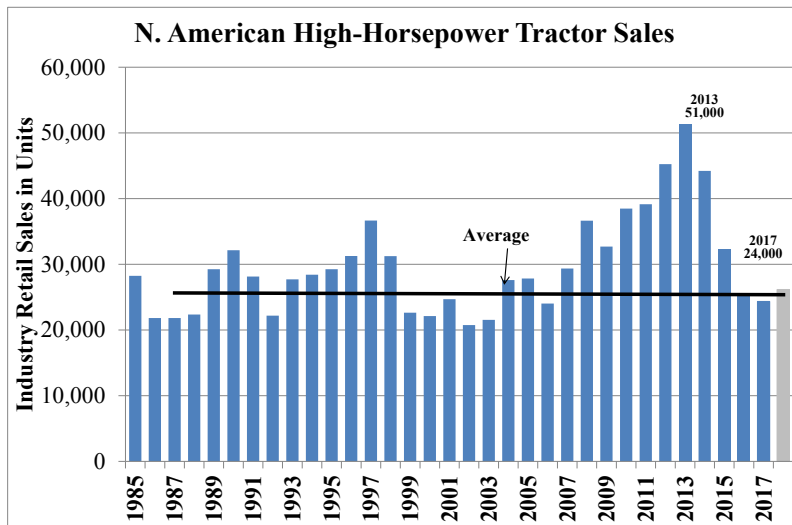
Source: AEM; Cleveland Research Company estimates. High hp tractors are row crop & 4-wheel drive.

North American Farm Equipment Industry Inventory

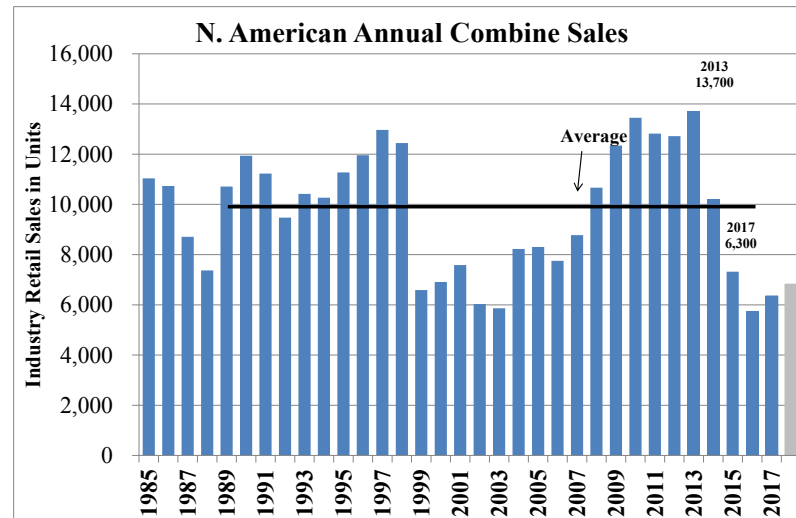
NORTH AMERICAN FARM EQUIPMENT INVENTORY															
	Inventory (Units)							Inventory to 12-mo. Sales							
	< 40 HP	Utility	Row Crop	4-Wheel	Total Tractor	Row Crop & 4WD	Combines	<40HP	Util	RC	4-WD	Total Tractor	Row Crop & 4WD	Comb	
Dec-15	82,737	41,363	13,140	1,189	138,429	14,329	1,277	63%	63%	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%	51%	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%	60%	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	50%	58%	52%	33%	52%	49%	27%	
Sep-17	75,112	36,376	11,022	1,104	123,614	12,126	1,483	49%	57%	55%	34%	51%	52%	25%	
Oct-17	78,973	34,502	9,554	862	123,891	10,416	1,052	51%	54%	46%	26%	51%	43%	17%	
Nov-17	84,909	35,100	10,194	977	131,180	11,171	974	54%	55%	49%	29%	54%	46%	15%	
Dec-17	90,166	35,080	10,191	922	136,359	11,113	959	57%	55%	49%	27%	56%	46%	15%	
Jan-18	95,198	35,476	10,137	905	141,716	11,042	1,128	60%	55%	49%	26%	58%	45%	18%	
Feb-18	101,479	37,637	10,590	935	150,641	11,525	1,333	65%	59%	51%	27%	61%	48%	21%	
Mar-18	103,354	38,556	11,004	963	153,877	11,967	1,548	66%	60%	53%	28%	63%	49%	25%	
Apr-18	102,049	38,808	10,826	933	152,616	11,759	1,527	65%	60%	52%	27%	62%	49%	23%	
May-18	94,678	38,846	10,908	997	145,429	11,905	1,750	59%	60%	52%	29%	58%	49%	27%	

Source: AEM; Cleveland Research Company estimates

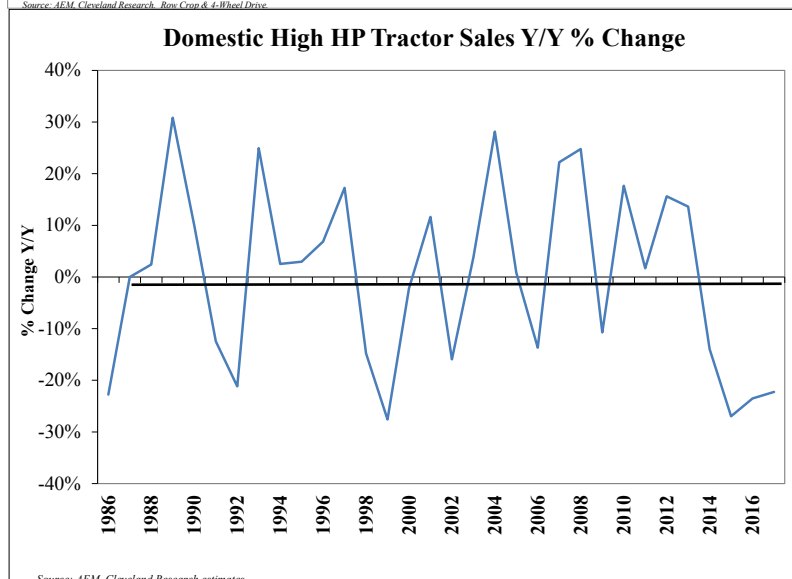
Annual Agricultural Equipment Industry Sales (1985 - 2017)



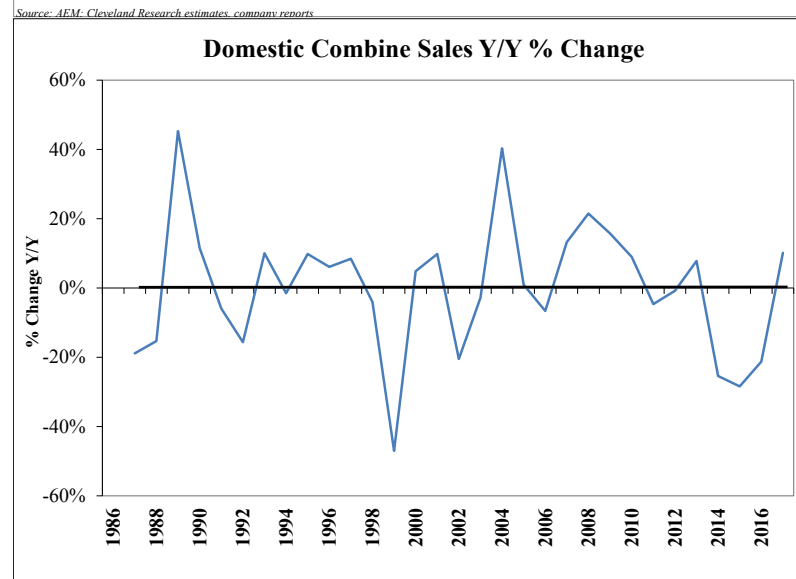
Source: AEM, Cleveland Research, Row Crop & 4-Wheel Drive



Source: AEM, Cleveland Research estimates, company reports

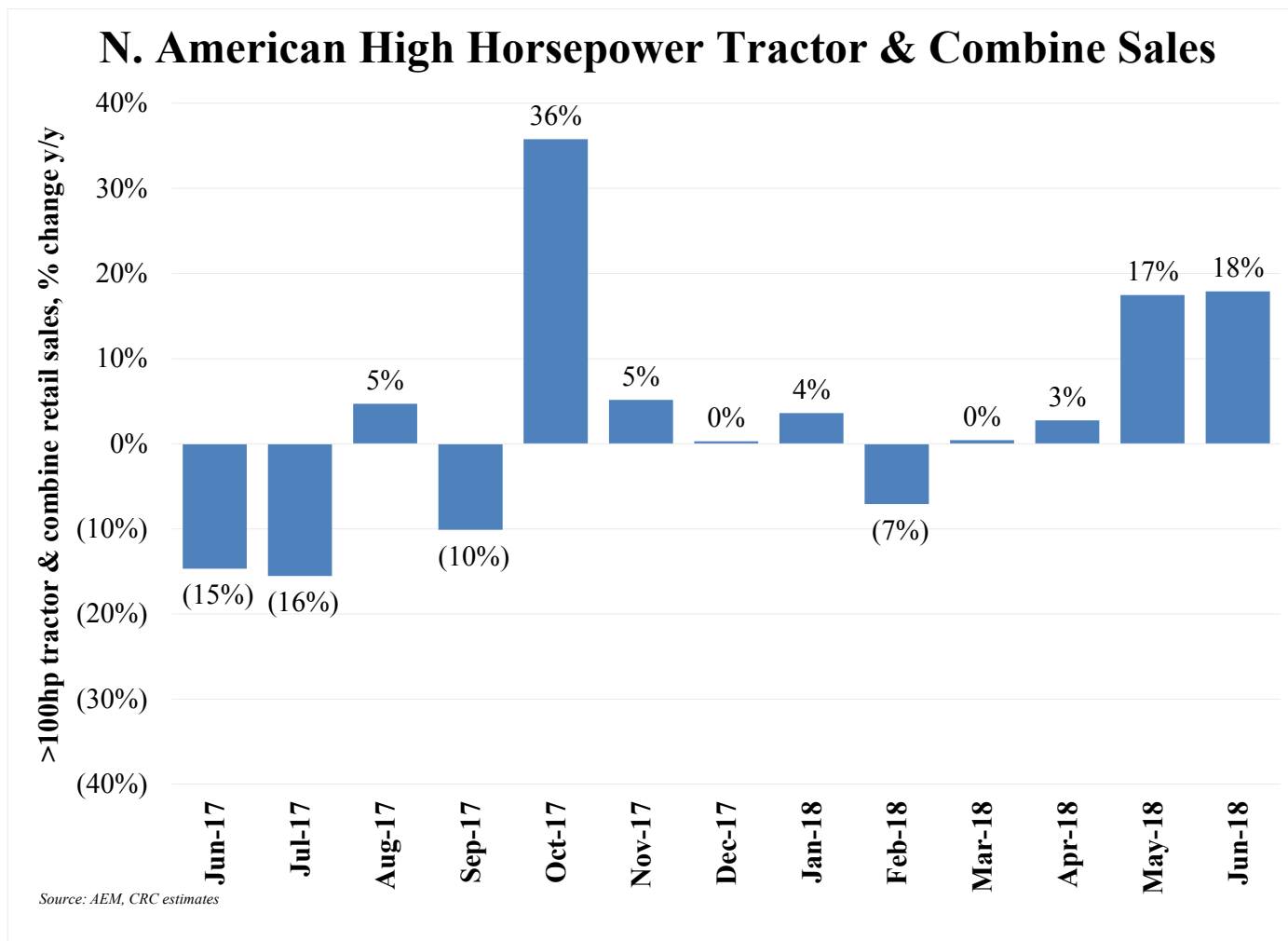


Source: AEM, Cleveland Research estimates



Source: AEM, Cleveland Research estimates

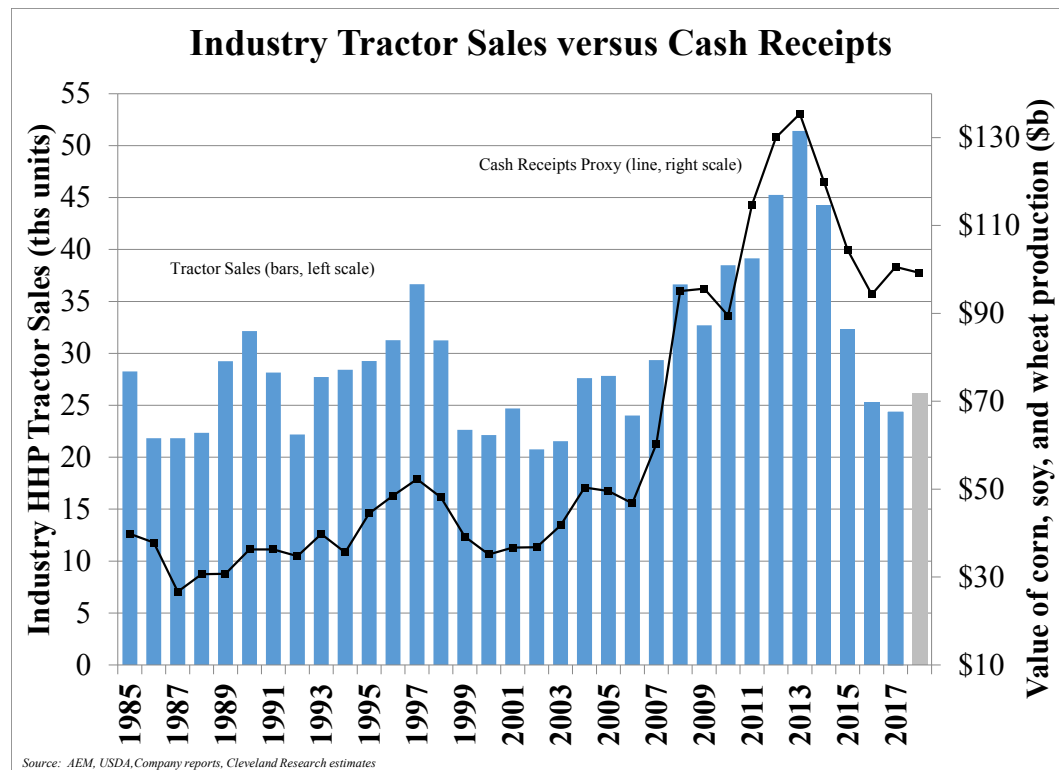
North America Large Ag Equipment Sales



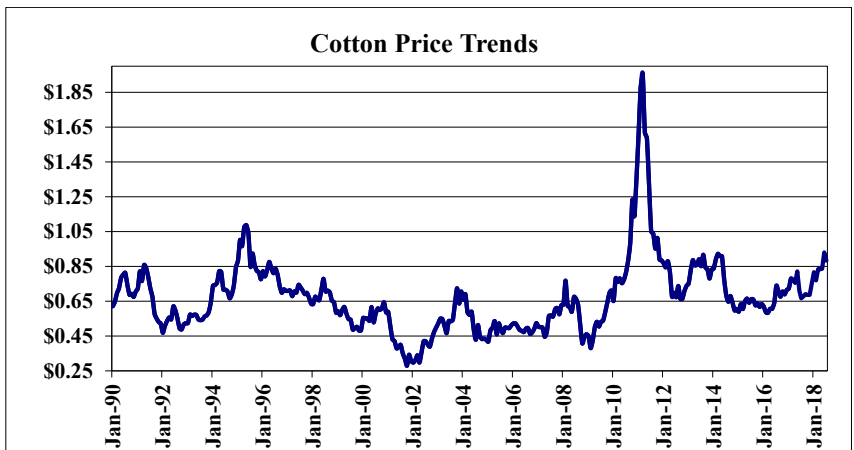
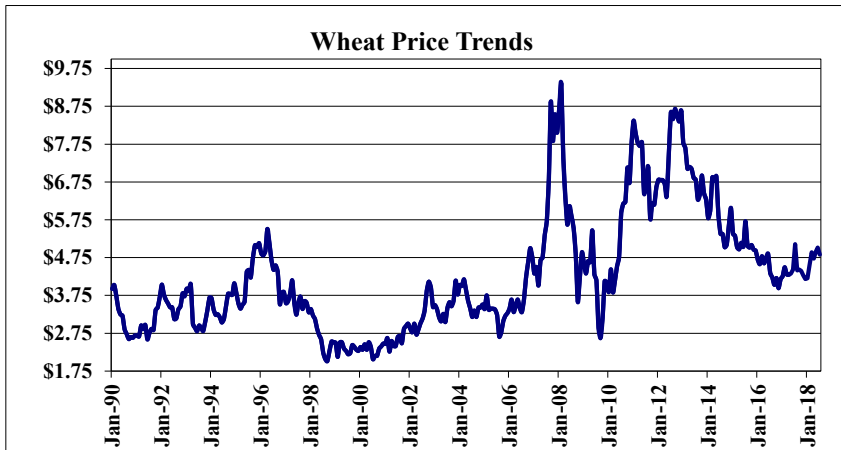
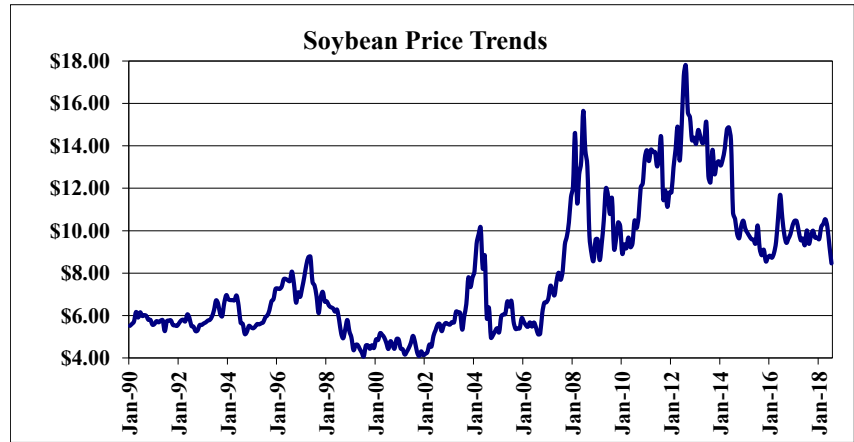
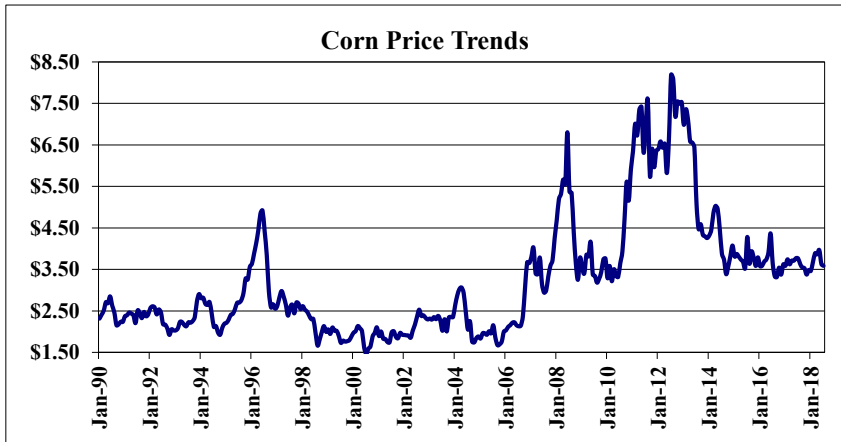
Commodity Prices – Cash Receipts vs. Next Year Equipment Sales

USDA's July 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 July crop report was softer versus June with 2018/19 cash receipts proxy forecast up 4% vs up 8% in June largely driven by declines in soybean pricing. Corn cash receipt forecasts are now for 9% growth vs 10% last month, wheat forecasts are now up 14% vs up 10% in June, and soybean forecasts are now for down 3% vs up 4% y/y in June.



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 2018													
US Corn Balance Sheet - USDA Long Term Forecast (Feb 2018)													
Millions of bushels	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/2027	2027/2028
Planted	88	94	90	89	90	90	90	90	89	89	88	88	88
Harvested	81	87	83	82	83	83	82	82	81	81	81	80	80
Yield (bu/acre)	168	175	177	174	176	178	180	182	184	186	188	190	192
Beginning Stocks (MM bu)	1,731	1,737	2,293	2,027	2,607	2,597	2,637	2,647	2,657	2,617	2,632	2,627	2,607
Production (MM bu)	13,601	15,148	14,604	14,230	14,515	14,680	14,755	14,920	14,900	15,065	15,130	15,200	15,360
Imports (MM bu)	67	57	45	50	50	50	50	50	50	50	50	50	50
Total Supply (MM bu)	15,399	16,942	16,942	16,307	17,172	17,327	17,442	17,617	17,607	17,732	17,812	17,877	18,017
Feed & Residual (MM Bu)	5,130	5,463	5,500	5,425	5,600	5,700	5,750	5,900	5,925	6,000	6,075	6,125	6,250
Food, Seed, & Industrial Total	6,635	6,891	7,040	7,105	7,025	7,015	7,020	7,010	6,990	7,000	6,985	6,970	6,955
Ethanol & By-Products	5,206	5,463	5,575	5,625	5,550	5,525	5,525	5,500	5,475	5,475	5,450	5,425	5,400
Domestic Use	11,765	12,354	12,540	12,530	12,625	12,715	12,770	12,910	12,915	13,000	13,060	13,095	13,205
Exports	1,898	2,293	2,300	2,225	1,950	1,975	2,025	2,050	2,075	2,100	2,125	2,175	2,200
Total Use	13,663	14,647	14,840	14,755	14,575	14,690	14,795	14,960	14,990	15,100	15,185	15,270	15,405
Ending Stocks	1,738	2,295	2,102	1,552	2,597	2,637	2,647	2,657	2,617	2,632	2,627	2,607	2,612
Ending Stocks/Use	12.7%	15.7%	14.2%	10.5%	17.8%	18.0%	17.9%	17.8%	17.5%	17.4%	17.3%	17.1%	17.0%
Weeks Carryover	6.6	8.1	7.4	5.5	9.3	9.3	9.3	9.2	9.1	9.1	9.0	8.9	8.8
Average Farm Price (\$/bu)	\$3.61	\$3.36	\$3.40	\$3.80	\$3.35	\$3.35	\$3.40	\$3.40	\$3.45	\$3.50	\$3.50	\$3.55	\$3.60
Value of Production	\$49,100	\$50,897	\$49,654	\$54,074	\$48,625	\$49,178	\$50,167	\$50,728	\$51,405	\$52,728	\$52,955	\$53,960	\$55,296
% change y/y	-7%	4%	-2%	9%	-10%	1%	2%	1%	1%	3%	0%	2%	2%
U.S. Soybean Balance Sheet - USDA Long Term Forecast (Feb 2018)													
Millions of bushels	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/2027	2027/2028
Planted	83	83	90	90	91	92	92	92	92	92	92	92	92
Harvested	82	83	90	89	90	91	91	91	91	91	91	91	91
Yield Per Harvested Acre (Bushels)	48	52	49	49	49	50	50	51	51	52	52	53	53
Beginning Stocks	191	197	302	465	376	351	324	323	325	328	321	324	331
Production	3,926	4,296	4,392	4,310	4,410	4,475	4,550	4,595	4,645	4,665	4,715	4,760	4,810
Imports	24	22	25	25	25	25	25	25	25	25	25	25	25
Total Supplies	4,141	4,515	4,718	4,800	4,811	4,851	4,899	4,943	4,995	5,018	5,061	5,109	5,166
Crush	1,886	1,899	2,015	2,045	1,985	2,005	2,025	2,050	2,075	2,095	2,120	2,145	2,165
Exports	1,936	2,174	2,065	2,040	2,335	2,380	2,410	2,425	2,450	2,460	2,475	2,490	2,515
Seed & Residual	121	128	128	128	140	141	142	142	142	142	142	143	143
Total Use	3,943	4,214	4,213	4,220	4,460	4,526	4,577	4,617	4,667	4,697	4,737	4,778	4,823
Ending Stocks	197	301	505	580	351	324	323	325	328	321	324	331	342
Stocks/Use	5.0%	7.1%	12.0%	13.7%	7.9%	7.2%	7.1%	7.0%	7.0%	6.8%	6.8%	6.9%	7.1%
Average Price (\$/bu)	\$8.95	\$9.47	\$9.40	\$9.25	\$9.45	\$9.45	\$9.50	\$9.50	\$9.60	\$9.75	\$9.75	\$9.80	\$9.80
Value of Production	\$35,138	\$40,683	\$41,285	\$39,868	\$41,675	\$42,289	\$43,225	\$43,653	\$44,592	\$45,484	\$45,971	\$46,648	\$47,138
% change y/y	-11%	16%	1%	-3%	5%	1%	2%	1%	2%	2%	1%	1%	1%

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

US Corn, Soy, and Wheat Supply and Demand - Long Term Annual Forecast 2018 (continued)

U.S. Wheat Balance Sheet - USDA Long Term Forecast (Feb 2018)

Millions of bushels	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/2027	2027/2028
Planted	55	50	46	48	46	47	47	47	47	48	48	48	48
Harvested	47	44	38	40	39	40	40	40	40	41	41	41	41
Yield Per Harvested Acre (Bushels)	44	53	46	48	48	48	49	49	49	50	50	51	51
Beginning Stocks	752	976	1,181	1,100	813	739	714	690	667	648	650	658	667
Production	2,062	2,309	1,741	1,881	1,869	1,928	1,944	1,960	1,976	2,032	2,048	2,064	2,077
Imports	113	118	155	135	130	130	130	130	130	120	120	120	120
Total Supplies	2,927	3,402	3,076	3,117	2,812	2,797	2,788	2,780	2,773	2,800	2,818	2,842	2,864
Food	957	949	963	965	950	950	955	960	960	965	965	970	975
Seed	67	61	63	62	63	63	63	63	65	65	65	65	65
Feed&residual	152	156	70	130	100	110	110	110	110	120	120	130	140
Exports	775	1,055	900	975	960	960	970	980	990	1,000	1,010	1,010	1,010
Total Use	1,952	2,222	1,996	2,132	2,073	2,083	2,098	2,113	2,125	2,150	2,160	2,175	2,190
Ending Stocks	976	1,181	1,080	985	739	714	690	667	648	650	658	667	674
Stocks/Use	50.0%	53.2%	54.1%	46.2%	35.6%	34.3%	32.9%	31.6%	30.5%	30.2%	30.5%	30.7%	30.8%
Average Price (\$/bu)	\$4.89	\$3.89	\$4.75	\$5.00	\$4.80	\$4.90	\$5.00	\$5.10	\$5.10	\$5.10	\$5.10	\$5.10	\$5.20
Value of Production	\$10,083	\$8,982	\$8,270	\$9,405	\$8,971	\$9,447	\$9,720	\$9,996	\$10,078	\$10,363	\$10,445	\$10,526	\$10,800
% change y/y	-17%	-11%	-8%	14%	-5%	5%	3%	3%	1%	3%	1%	1%	3%

Total Acreage and Value of U.S. Corn, Soy and Wheat Production - USDA February 2018 Projection

Total Corn, Soy, Wheat	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/2027	2027/2028
Planted (mm acres)	226	228	226	227	227	229	229	229	228	228	228	227	227
Harvested (mm acres)	210	213	210	210	212	213	213	213	212	213	212	212	212
Yield (bu/acre)	93	102	99	97	98	99	100	101	101	102	103	104	105
Production	19,589	21,753	20,737	20,421	20,794	21,083	21,249	21,475	21,521	21,762	21,893	22,024	22,247
Average Price (\$/bu)	\$4.81	\$4.62	\$4.78	\$5.06	\$4.77	\$4.79	\$4.85	\$4.86	\$4.93	\$4.99	\$5.00	\$5.05	\$5.09
Value of Production	\$94,320	\$100,562	\$99,208	\$103,347	\$99,271	\$100,914	\$103,112	\$104,377	\$106,075	\$108,574	\$109,371	\$111,134	\$113,234
% change y/y	-10%	7%	-1%	4%	-4%	2%	2%	1%	2%	2%	1%	2%	2%

Source: USDA, Cleveland Research estimates

U.S. Acreage Planted Per Crop Year

