# Ag Equipment Intelligence

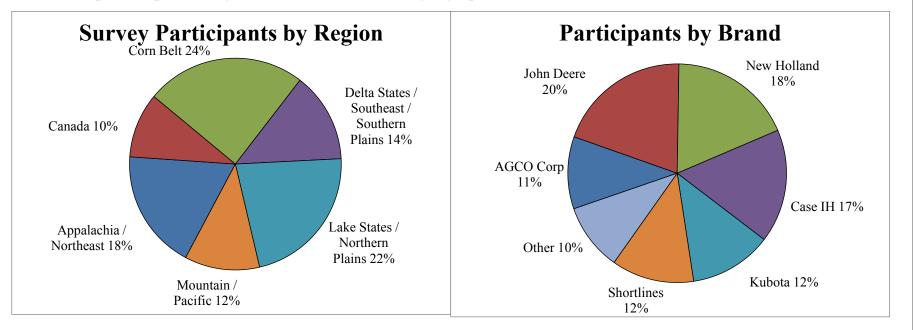
## June 2016 Dealer Sentiments & Business Conditions Update

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### Monthly Ag Equipment Intelligence North American Dealer Survey

#### **Background:**

- We are pleased to announce the results of the May 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 May survey had ~175 respondents representing combined annual revenues of roughly \$8 billion. Participants representing a broad cross section of geographies and brands are summarized in the charts below.



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.

Source: Farm Equipment Magazine Survey

#### **Highlights / Summary Thoughts**

- Sales Average dealer sales were reported down 6% in May, an improvement from the 10% decline reported in April. A net 13% of dealers missed their sales budget in May, making for over 2 years of consecutive monthly budget shortfalls. A net 26% of dealers reported a sales decline in the month vs a net 23% citing a decline in April. 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 9%, an improvement from the 11% decline forecast in April. A net 36% of dealers forecasting a sales decline for the year vs a net 35% forecasting a decline last month.
- **Inventory** A net 44% of dealers reported new equipment inventories as too high, a decline from the net 41% in April. Used inventory levels were better than April, as a net 41% of dealers reported inventory as too high vs. 42% last month. Used combine inventory has deteriorated in the past several months after improving throughout 2015.
- **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 large tractor pricing is reported down 8% y/y on average, a slight decline from the 7% decline reported in April, while small tractor pricing was up flat in the month. Used combine prices were reported down 11%, a slight decline from the 10% decline reported in April.

#### **Monthly Sales Growth**

- Average dealer sales were reported down 6% y/y in May, up from the down 10% reported in April. A net 13% of dealers missed their sales budgets in May, down from the 5% miss in April.
- A net 5% of dealers report they are less optimistic about overall business conditions, the best reading since 2014, as grain prices have recently rallied. Though better in the month, optimism has remained negative for 2+ consecutive years.

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

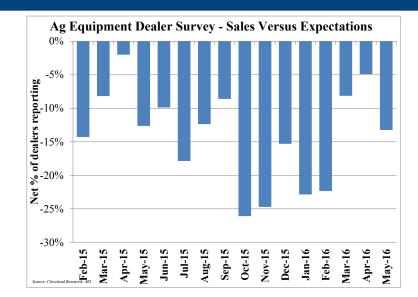
Source: Cleveland Research, AEI

N. American Farm Equipment Dealer Survey - Sales Versus Expectations																
% of Dealers Reporting	Feb-15	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
Better than expected	13%	20%	27%	23%	21%	18%	16%	19%	15%	12%	19%	12%	15%	20%	24%	21%
In line with expectations	59%	50%	44%	39%	48%	45%	56%	53%	43%	51%	47%	52%	47%	52%	48%	46%
Worse than expected	28%	28%	29%	36%	31%	36%	28%	28%	41%	37%	34%	35%	38%	28%	29%	34%
Net % (Better - Worse)	-14%	-8%	-2%	-13%	-10%	-18%	-12%	-9%	-26%	-25%	-15%	-23%	-22%	-8%	-5%	-13%

Source: Cleveland Research, AEI.

#### **Monthly Sales Growth Continued**





	N. American Farm Equipment Dealer Survey - Average Dealer Revenue Growth Trends															
% of Dealers Reporting	Feb-15	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
Positive Sales Growth	13%	20%	27%	29%	26%	20%	19%	24%	20%	16%	18%	14%	20%	23%	27%	29%
Flat Sales	59%	50%	11%	17%	11%	16%	16%	16%	15%	17%	10%	22%	20%	17%	23%	16%
Negative Sales Growth	28%	28%	62%	54%	63%	64%	65%	60%	65%	67%	72%	64%	60%	60%	50%	55%
Net % Reporting Growth	-14%	-8%	-35%	-25%	-37%	-43%	-46%	-35%	-46%	-52%	-54%	-50%	-40%	-37%	-23%	-26%
Average % Change y/y	-12%	-8%	-10%	-13%	-13%	-18%	-15%	-16%	-16%	-16%	-15%	-13%	-12%	-13%	-10%	-6%

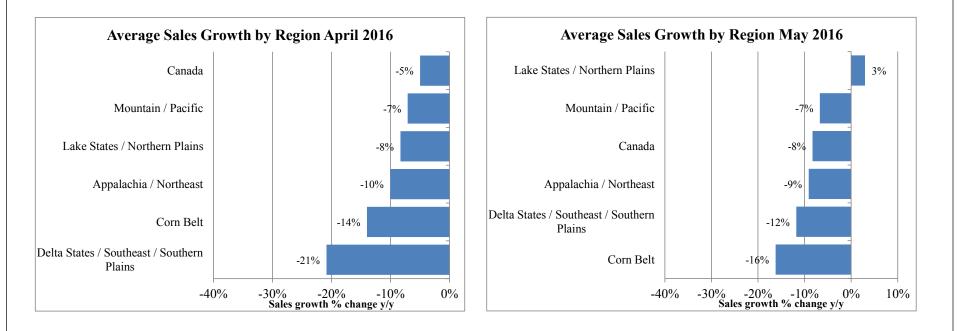
Source: Cleveland Research

	Optimism/Sentiment vs. Last Month															
% of Dealers Reporting	Feb-15	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
More Optimistic	9%	14%	14%	12%	13%	14%	11%	12%	8%	10%	8%	11%	13%	17%	15%	22%
Same	50%	42%	47%	48%	58%	52%	45%	51%	60%	52%	48%	46%	51%	55%	59%	51%
Less Optimistic	41%	43%	40%	40%	30%	35%	43%	37%	33%	38%	44%	43%	36%	28%	26%	27%
Net % Dealer Optimism	-31%	-29%	-26%	-26%	-18%	-21%	-32%	-26%	-25%	-28%	-35%	-31%	-24%	-11%	-11%	-4%

Source: Cleveland Research

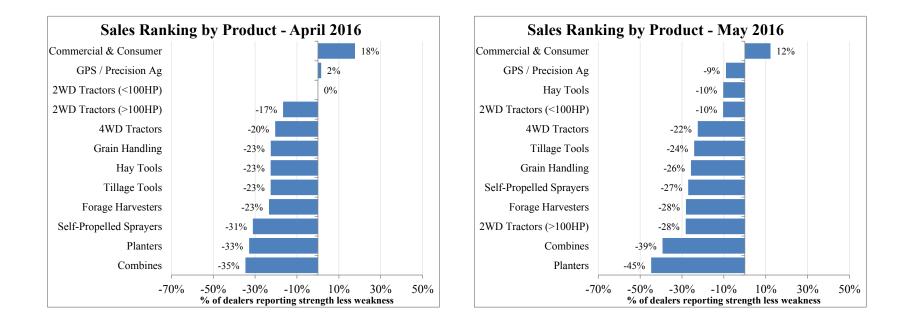
#### **Monthly Sales Growth by Region**

• Sales trends were mixed by region in the month, with Lake States / Northern Plains showing low-single digit growth in the month. All other states remain in negative territory with the Corn Belt continuing to show some of the most difficult sales trends down over 15% y/y, inline with the past few months.

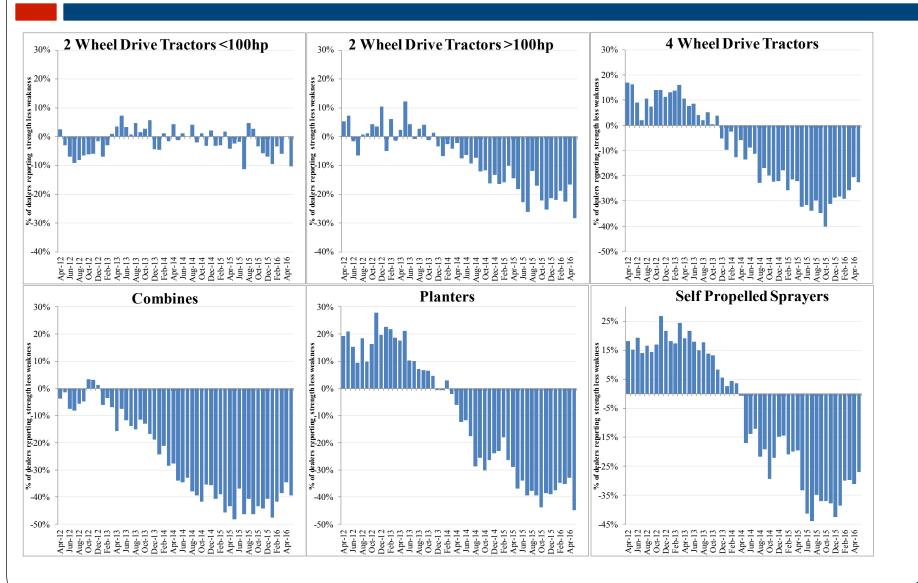


#### **Equipment Category Sales Trends**

• Commercial & consumer lawn equipment continues to show strength in contrast to declines in other categories (combines, planters, and sprayers in particular). Inline with the past few months GPS / Precision AG equipment has seen strength. We continue to see significant headwinds to large equipment sales.

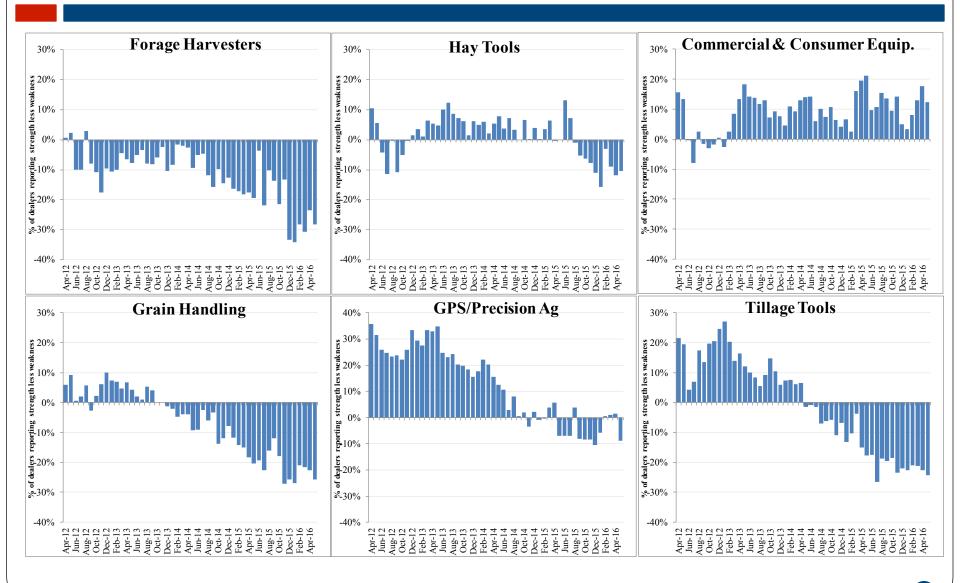


#### **Equipment Category Sales Trends**



Source: Farm Equipment Magazine Survey

#### **Equipment Category Sales Trends (Continued)**



Source: Farm Equipment Magazine Survey

#### **Most Interesting Commentary - Monthly Sales and Outlook**

- Manufacturers are generally holding prices and margins steady to offset sales declines. Landpride notably has given dealers an exchange-rate adjusted price for Canadian dealerships.
- Case's programs are all tied to ordering new equipment and often come with very short program windows to take advantage of the pricing. To get aid on selling a used unit requires ordering a new unit from Case.
- Kubota recently pushed through 6 year warranty and interest free financing for up to 5 years. This package could be helpful in the year.
- *AGCO* has helped us out with extra dollars to help move aged inventory.
- The recent grain price rally has us more optimistic on 2016, we've seen a good run in corn and soybeans. I hope farmers are locking in some of their profits, as we could see a tumble late in the summer.
- Grain prices have us feeling better, but we haven't seen the anticipated seasonal lift in sales. In net we're feeling weaker about the current state of affairs, but have hope there could be more buying later in the year.
- Used equipment values continue to hurt our bottom line. We just had to take some big write downs on combines to get them off the lot. Poor trade in allowances have stopped customers in there tracks.
- *Manufacturers are dumping used lease return product on the market destroying used equipment values.*
- Deere is challenging the used market by liquidating \$200M of JDF lease returns.
- I thought we would have hit bottom on used equipment prices by now, but we haven't.
- *Hay tool sales have been weaker than expected so far this year.*
- Accountants and bankers continue to encourage customers to delay equipment purchases.
- Bankers remember the '80s and are closing in, even on customers with outright ownership.
- Small equipment sales continue to trend strong.
- We're seeing lower hay prices due to the large carryover that resulted from last years port slow down.
- The lease programs are tightening up, which has been the main outlet for our customers to finance new equipment. There will be a large reeducation process for growers as the leasing industry corrects some of the unsustainable pricing models of the past few years.
- Weak economies in Oklahoma, caused from the oil industry, have farmers more cautious on large capital purchases right now. Much of the state is seeing layoffs.

#### **Average Dealer Sales Outlook**

- Dealers forecast 2016 sales down 9% y/y, better than May's forecast as crop prices have increased . A net 36% of dealers are forecasting a sales decline (25% increase, 15% about the same, 61% decline).
- 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 April 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					
AGCO	-9%	-8%	-7%	-9%	-10%	-6%	-15%	-6%	-7%					
John Deere	-6%	-10%	-9%	-8%	-12%	-10%	-12%	-10%	-6%					
New Holland	-5%	-12%	-9%	-13%	-6%	-11%	-12%	-8%	-2%					
Case IH	-7%	-8%	-10%	-10%	-12%	-15%	-11%	-15%	-23%					
Kubota	3%	3%	4%	2%	-7%	5%	9%	2%	0%					
Shortlines/Other	-9%	-15%	-8%	-6%	-12%	0%	-14%	-24%	-6%					
Overall	-6%	-9%	-9%	-9%	-11%	-10%	-11%	-11%	-9%					

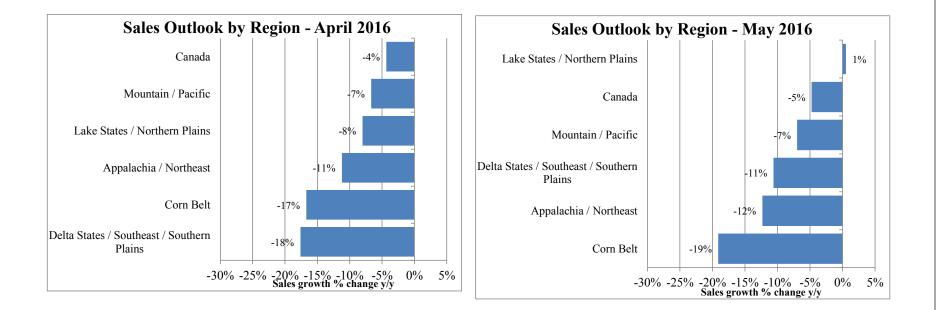
Source: Cleveland Research, AEI

	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 Flat, Combines (0-5%)	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

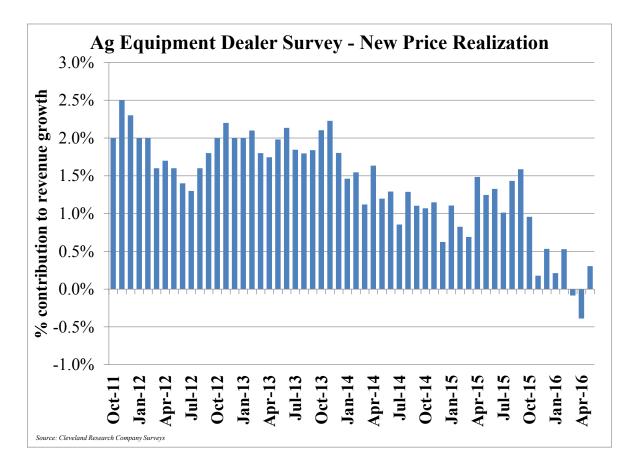
#### **2016 Sales Outlook**

• Trends were mixed by region in the month with Lake States / Northern Plains now expecting slight sales growth in the year, after several months of negative focuses. All other regions are forecasting negative sales in 2016 with the Corn Belt having the weakest forecast at down 15%+ for the year.



#### **Pricing Trends**

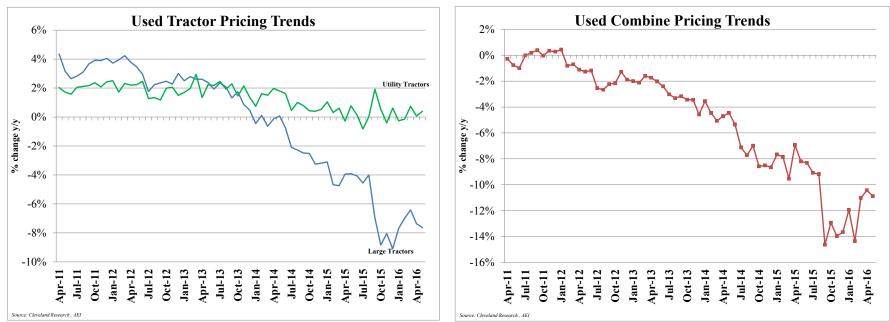
• Dealers report reported relatively flat pricing over the last few months, as incentives programs have more than offset list price increases back in 4Q. The effect of the strong US dollar on Canadian exchange rate has also played a part in pricing inflation within North America.



#### **Used Equipment Pricing**

• May saw ~flat pricing for small tractors, inline with the past few months. Large tractors were reported down 8% y/y on average, slightly worse than the 7% reported in April. Used combine pricing was down 11% y/y, a slight deterioration from the April's 10% decline.

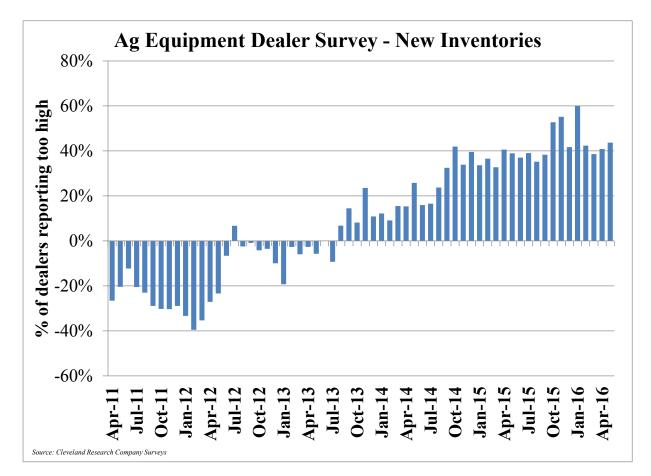
	Used Tractor and Combine Values (Y/Y)														
	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16						
Compact (<40HP)	2%	1%	(1%)	0%	(1%)	0%	1%	0%	1%						
Utility (40-100HP)	2%	0%	(0%)	1%	0%	(1%)	0%	0%	0%						
Row Crop (100HP+)	(4%)	(6%)	(7%)	(7%)	(6%)	(5%)	(5%)	(6%)	(7%)						
4WD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



Source: Farm Equipment Magazine Survey

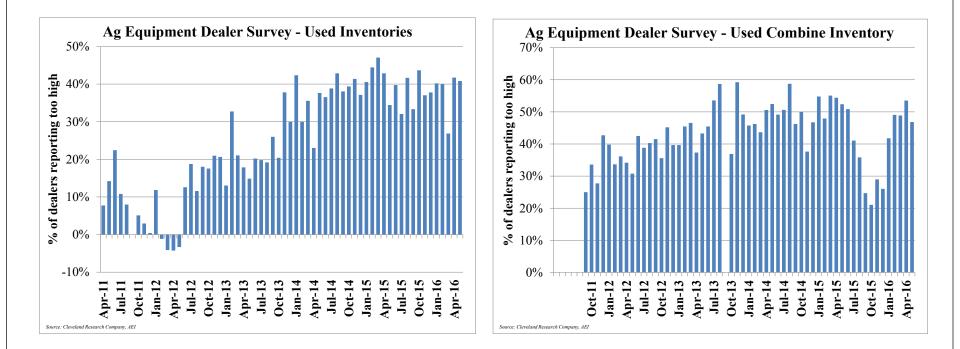
#### **New Equipment Inventory Levels**

• A net 44% of dealers reported new equipment inventories are too high (51% too high, 41% about right, 7% too low) vs 41% (49% too high, 43% about right, 8% too low) in April and an average of 47% in 1Q. This marks 21 months of new inventory levels reported as too high by more than a net 30% of dealers.



#### **Used Equipment Inventory Levels**

• A net 41% of dealers reported used equipment inventory as too high (52% too high, 38% about right, 11% too low) relatively inline with the 42% reporting heightened inventory in April (50% too high, 42% about right, 8% too low). Used combine inventory levels were reported as too high by a net 47% of dealers in May better than April's reading of 54% and March's 49%. Combine inventory appears to have reversed trend from 2H15, as inventory remains challenged.



#### North American Farm Equipment Industry Retail Sales

				Units						% cha	nge year-ov	er-year		
	<40 HP	Utility	Row Crop		Total Tractor	Row Crop & 4WD		<40 HP	Utility	Row Crop		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	15,664	6,558	2,411	300	24,933	2,711	505	3%	1%	-12%	-26%	0%	-14%	-40%
Jul-15	14,342	7,097	2,473	272	24,184	2,745	807	28%	20%	-23%	-30%	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%

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

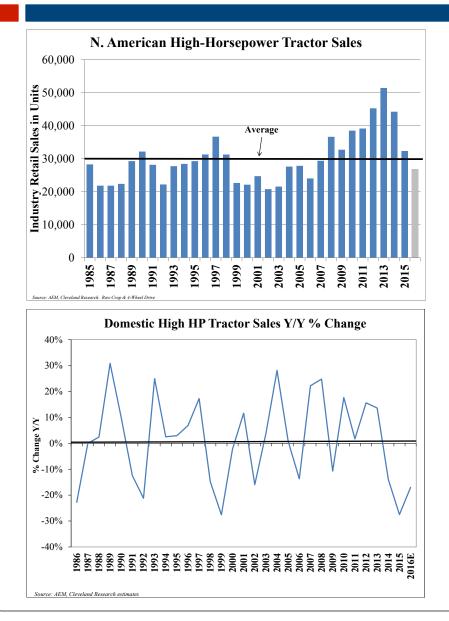
Source: AEM, CRC Estimates

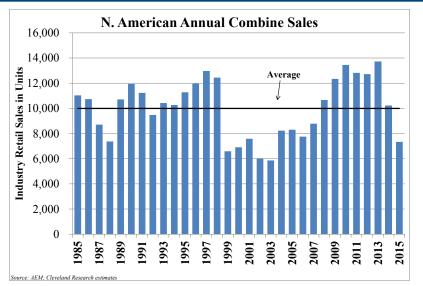
### North American Farm Equipment Industry Inventory

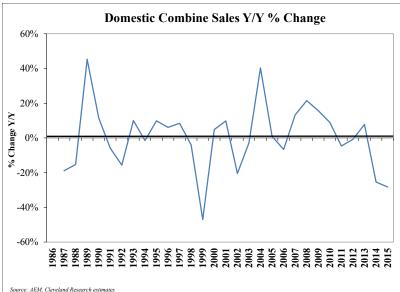
					NORTH A	MERICAN	FARM EQU	IPMENT IN	VENTORY	<i>l</i>				
			Inv	entory (Uni	its)					Invento	ory to 12-m	o. Sales		
					Total	Row Crop	)					Total	Row Crop	
	<40 HP	Utility	<b>Row Crop</b>	4-Wheel	Tractor	& 4WD	Combines	<40HP	Util	RC	4-WD	Tractor	& 4WD	Comb
Dec-13	67,863	32,028	13,318	2,049	115,258	15,367	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	57%	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%	47%	18%
Mar-16	93,703	45,127	13,327	1,131	153,288	14,458	1,281	69%	68%	52%	31%	66%	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%

Source: AEM; Cleveland Research Company estimates

#### Annual Agricultural Equipment Industry Sales (1985 - 2015)

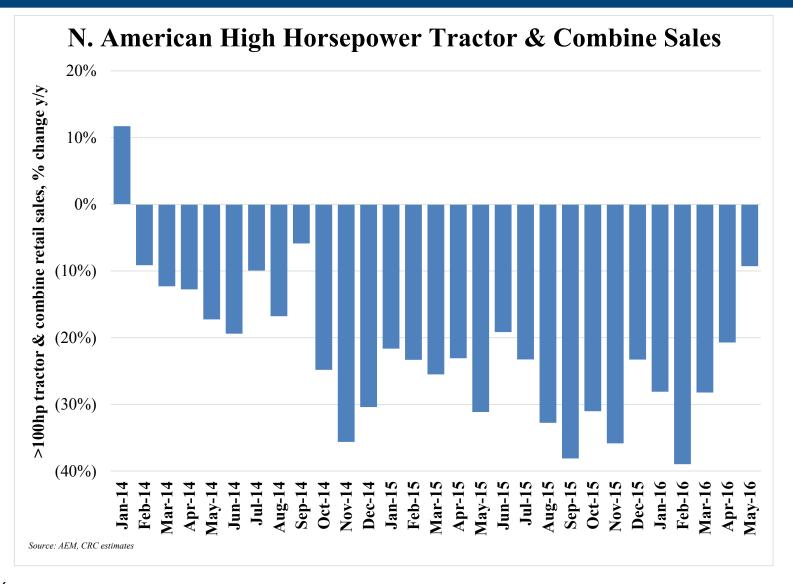






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#### North America Large Ag Equipment Sales



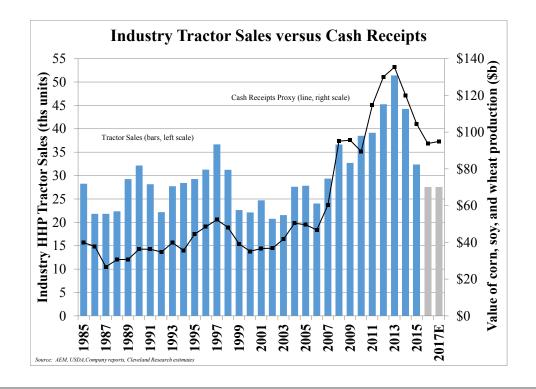
Source: AEM



#### **Commodity Prices – Cash Receipts vs. Next Year Equipment Sales**

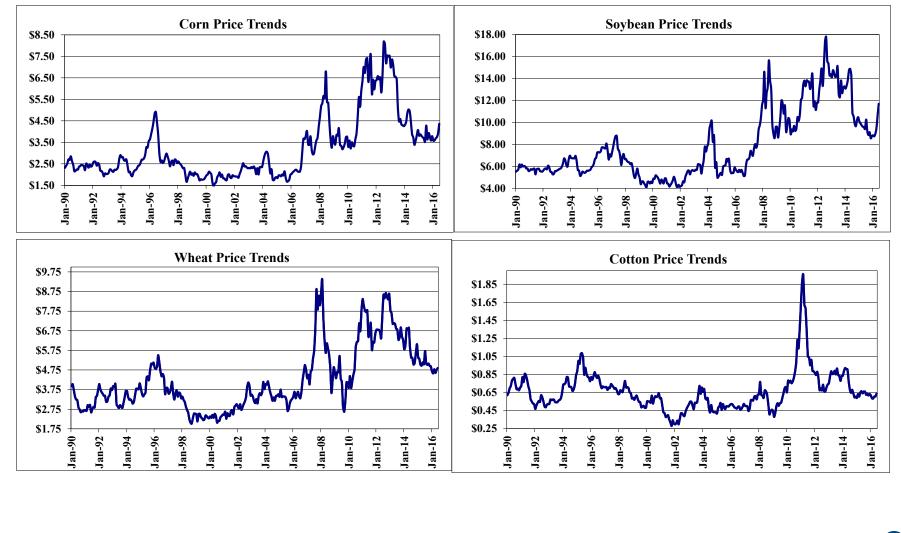
**USDA's June WASDE Update Highlights** – The following chart illustrates the historical relationship between the value of production of corn, soybeans, and wheat in the U.S. compared to annual industry sales of high horsepower tractors.

USDA's June crop report was better than May, with our cash receipts proxy forecast up 1% y/y in 2016/2017 vs. a projected 3% decline last month and an estimated 10% decline in the 2015/2016 crop season. The better forecast resulted from higher average corn/soybean price estimates, as anticipated beginning stock levels decreased for both crops.



Source: USDA, CRC estimates

#### **Long Term Commodity Price Trends**



#### **Commodity Trends – Long Run Supply and Demand Projections**

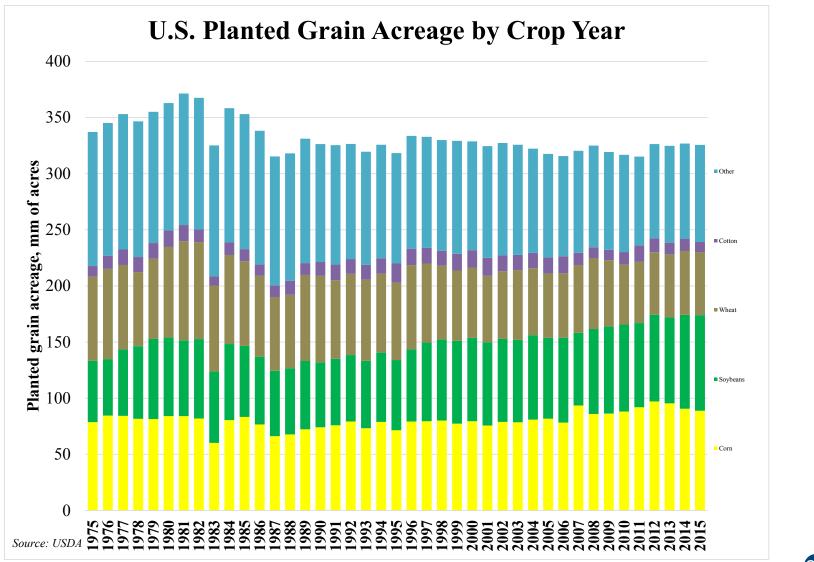
	US Co	rn, Soy, an	d Wheat S	upply and	Demand -	Long Ter	m Annual	Forecast	2016				
US Corn Balance Sheet - USDA Long Ter	m Forecast	(Feb 2016)											
Millions of bushels	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
Planted	95	91	88	94	90	90	90	90	90	89	89	88	88
Harvested	88	83	81	86	83	83	83	82	82	81	81	80	80
Yield (bu/acre)	158	171	168	168	170	172	174	176	178	180	182	184	186
Beginning Stocks (MM bu)	821	1,232	1,731	1,708	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	14,430	14,035	14,200	14,355	14,465	14,535	14,610	14,680	14,740	14,900
Imports (MM bu)	36	32	55	40	30	30	30	30	30	30	30	30	30
Total Supply (MM bu)	14,686	15,480	15,387	16,178	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	5,550	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	6,670	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	5,300	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	12,220	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	1,950	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	14,170	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	2,008	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%	14.2%	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	7.4	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	\$3.50	\$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	\$50,505	\$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%	1%	3%	1%	1%	0%	1%	0%	2%	1%
U.S. Soybean Balance Sheet - USDA Long			,	2014/15	2015/10	2010/10	2010/20	2020/21	2021/22	2022/22	2022/24	2024/25	2025/26
Millions of bushels Planted	<b>2013/14</b> 77	<b>2014/15</b> 83	<b>2015/16</b> 83	<u>2016/17</u> 82	<u>2017/18</u> 82	2018/19 82	2019/20 82	82	81	<b>2022/23</b> 81	<b>2023/24</b> 81	<b>2024/25</b> 81	2025/26
	76	83 83	83 82		82 81	82 81	82 81		81 80	81 80			81 80
Harvested	76 44	83 48	82 48	81 47	47		48	81 49	80 49	80 50	80 50	80 51	80 51
Yield Per Harvested Acre (Bushels)					.,	48							-
Beginning Stocks	141	92	191	370	421	382	348	323	299	275	270	270	265
Production	3,358	3,927	3,929	3,800	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	4,200	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	1,915	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	1,900	1,835	1,850	1,860	1,870	1,875	1,885	1,905	1,915	1,925
Seed & Residual	98	145	34	30	124	124	125	124	124	125	125	125	124
Total Use	3,479	3,861	3,654	3,940	3,879	3,914	3,945	3,974	3,994	4,015	4,050	4,070	4,094
Ending Stocks	92	191	400	260	382	348	323	299	275	270	270	265	266
Stocks/Use	2.7%	4.9%	10.9%	6.6%	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	\$9.50	\$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	\$36,100	\$33,528	\$34,458	\$35,010	\$35,672	\$36,248	\$36,616	\$36,984	\$37,526	\$38,008
% change y/y	0%	-9%	-12%	4%	-7%	3%	2%	2%	2%	1%	1%	1%	1%

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

US	5 Corn, So	oy, and Whe	eat Supply	and Dema	nd - Long	Term Anı	ual Forec	ast 2016 (	(continued				
U.S. Wheat Balance Sheet - USDA Long Ter	rm Foreca	st (Feb 201	6)										
_	2013/14			2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
Planted	56	57	55	50	51	52	52	52	52	52	52	52	52
Harvested	45	46	47	43	43	44	44	44	44	44	44	44	44
Yield Per Harvested Acre (Bushels)	47	44	44	49	46	47	47	47	48	48	48	49	49
Beginning Stocks	718	590	752	980	928	842	784	739	707	688	677	669	669
Production	2,134	2,026	2,052	2,077	2,000	2,035	2,050	2,065	2,080	2,095	2,110	2,130	2,140
Imports	169	144	120	125	130	135	140	145	150	155	160	165	170
Total Supplies	3,021	2,760	2,924	3,182	3,058	3,012	2,974	2,949	2,937	2,938	2,947	2,964	2,979
Food	955	960	960	963	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	200	215	210	200	190	180	175	175	175	175
Exports	1,176	855	780	900	950	960	970	980	990	1,000	1,010	1,020	1,030
Total Use	2,431	2,007	1,946	2,132	2,216	2,228	2,235	2,242	2,249	2,261	2,278	2,295	2,312
Ending Stocks	590	753	978	1,050	842	784	739	707	688	677	669	669	667
Stocks/Use	24.3%	37.5%	50.3%	49.2%	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	\$4.00	\$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	\$8,308	\$9,000	\$9,361	\$9,533	\$9,706	\$9,880	\$10,056	\$10,234	\$10,437	\$10,593
% change y/y	-16%	-17%	-17%	-17%	8%	4%	2%	2%	2%	2%	2%	2%	1%
Total Acre	age and V	alue of U.S.	Corn, Soy	and Whe	at Produc	tion - USE	A Februa	ry 2016 P	rojection				
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	225	223	223	223	223	222	222	221	220	220
Harvested (mm acres)	209	212	210	210	206	207	207	207	206	205	205	204	204
Yield (bu/acre)	92	95	93	97	96	97	98	99	100	101	102	103	104
Production	19,321	20,169	19,582	20,307	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	\$4.67	\$4.72	\$4.80	\$4.81	\$4.84	\$4.86	\$4.87	\$4.88	\$4.94	\$4.95
	5119,992	\$104,398	\$93,790	\$94,913	\$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**



Source: USDA, Cleveland Research estimates

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