







"In a gold rush, sell shovels." - JP Morgan

#### **TUESDAY, MAY 09, 2017**

**Morning Summary:** Stock markets continue to trade near record levels on extremely low volatility. In fact this is one of the longest streaks of low-volatility we've seen in years. The VIX actually plunged to under 9.90 recently, the lowest intraday print in a decade. I find this somewhat ironic as many experts projected a Trump presidency would bring nothing but extreme volatility. Interestingly if you look back at historical data on the S&P 500, the market tends to average a 1% up or down move about every fifth or sixth trading session. The folks at Convergex released data overnight that showed since the beginning of 2017 we've had 87 trading days, which should normally equate to 19 days of the S&P 500 moving higher or lower by 1%, this year however we have recorded only three such days with +1% moves either up or down: March 1st, 21st and 24th. There's just doesn't seem to be much fresh news in the headlines to swing the trade in an extreme manner. Many prominent insiders are now saying we should start bracing for much more extreme volatility and swings in price. In fact many experienced insiders I know are saying nothing good generally tends to come from this extend period of calm before the next storm. The bulls continue to point to the fact U.S. corporate earnings have been extremely strong with S&P 500 companies showing an average growth of +14.4%, and earnings for the second quarter expected to average another increase of +8.6%. Earnings highlights today include releases from Allergan, Disney, Duke Energy, Hostess Brands, News Corp, Nvidia, Office Depot, Sempra Energy, Sun Life, U.S. Foods, Valeant, Westar Energy and Yelp. Today's economic data includes the NFIB Small Business Optimism Index and JOLTS employment report. The latter will provide some more insight into the weak March payroll numbers of only +79,000 jobs being added compared to April's +211,000 created. We also have some Fed speak to digest today with Minneapolis Fed President Neel Kashkari, Boston Fed President Eric Rosengren and Dallas Fed President Robert Kaplan all delivering messages. In Washington, Senate Republicans are still working on their version of a repeal and replace bill for the Affordable Care Act. Members say there is no timeline on holding the vote, but supporters are hoping for something by the end of the month. Bottom line is it will not be a quick turn around like we saw in the House last week. The Senate is also expected to process three more of Trump's key nominees this week, including Robert Lighthizer's nomination to be the next U.S. trade representative.

### A Couple Of Thoughts From Shon Investment Conference:

Jeffrey Gundlach, founder of Double Line Capital, told a group of investors to be very afraid of the US stock market. He was speaking at the Sohn Investment conference. Specifically, he told attendees to go long the iShares Emerging Markets ETF and short the S&P 500. Last year Gundlach recommended Sohn attendees try a pair trade — long a mortgage REIT exchange-traded fund and short a utilities ETF. According to Bloomberg, that trade is up 42%. Gundlach also predicted that Donald Trump would

win the presidency and that he would increase the deficit. (Source: Business Insider)

**Venture Capitalist Chamath Palihapitiya on Tesla:** PalihapitiyaIf made a huge call last year on Amazon banking 40%, this year he's talking about Tesla... If you have a Tesla Model S you won't go back to other cars, he says. They're building batteries and manufacturing them, doing software and charging infrastructure. The iPhone 3 was the breakthrough Apple. Palihapitiya thinks Tesla can take 5% of the global auto market. They don't have unions, don't spend on R&D, no advertising or dealer network. Compare that with a Porsche or BMW, you see a business that could be worth hundreds of billions of dollars in a decade. Interesting thoughts...

**David Einhorn of Greenlight Capital,** who back in 2008 at the Sohn Conference made one of the most famous calls when he slammed Lehman Brothers, which later that year fell into bankruptcy, talked about his short position in Core Labs... Saying "Core will need much higher oil prices that bring back their most expensive oil production efforts, Einhorn says the company's CEO has repeated called for oil to rise. In fact, the company has been calling for a V-shaped recovery since 2015 and its just not in the cards.

#### Bitcoin tops \$1,700 and is now up over +80% this year.

Apple, The Most Valuable Company In The World: Apple's market capitalization briefly crossed the \$800 billion threshold for the first time on Monday, marking another major milestone for the world's most valuable company. The company's shares ended up closing up +2.7% for the day at \$153.01, good for a market value of \$797.8 billion. While that is not a nice round number, it still makes Apple the most valuable company in the world, with the company's shares soaring +33% so far this year and now accounts for approximately 3.5% of the S&P 500's total weight. The next most valuable companies are Alphabet (currently \$652 billion), Microsoft (\$530 billion), Amazon.com (\$451 billion), and Berkshire Hathaway (\$406 billion). Of course analysts are already talking about it being the first trillion dollar company, something insiders think is a very real possibility with the excitement building around the upcoming iPhone set to be released later this year. Wall Street thinks it will be a huge hit - 25 analysts have boosted their target on Apple since the company last reported earnings. Keep in mind, tax reform plans from President Trump seem to be helping Apple too. The company reportedly has over \$230 billion in cash stashed overseas. The hope is that a one-time lower tax rate to bring back cash from overseas would entice Apple and others to buy back stock, increase dividends, acquire companies, boost research and development expenses and maybe even hire more workers. To hit the \$1 trillion mark, Apple would need to climb another 33% to about \$190.

Gas Prices Are Doing Something Unusual: The month of May typically sees gas prices slowly moving upward as Memorial Day Weekend and the kick-off to the "summer driving season" approach. Not this year though. Gas prices are suddenly falling in step with plummeting oil prices. When 2017 began, analysts thought gasoline might approach \$3 per gallon by Memorial Day. Instead, the number of U.S. gas stations selling fuel for less than \$2 per gallon has nearly doubled since last week to 5,177, according to GasBuddy. Meanwhile, gas is cheaper in 49 of 50 states than it was last week, according to GasBuddy. Prices averaged \$2.33 as of Monday afternoon, down -6.6 cents from April and up +11.2 cents from a year earlier. "This is usually ripe ter-

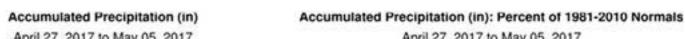
ritory for prices to be skyrocketing," GasBuddy analyst Patrick DeHaan said. But "we may dip quite a bit in the next week or two. It's a boon to motorists that are seeing a consistent decline for the last few weeks just ahead of Memorial Day weekend." With full employment and the stock markets in record territory, motorists are expected to go "full throttle" into the travel season. Oil prices have fallen more than 13% over the last month, dropping to below \$46 per barrel in midday trading yesterday (Monday). Behind the trend: U.S. shale oil producers have gotten more efficient and lowered the price at which they can turn a profit, now at about \$50 per barrel on average, Goldman Sachs analyst Brian Singer said in a research note. (Source: Gas Buddy, USA Today)

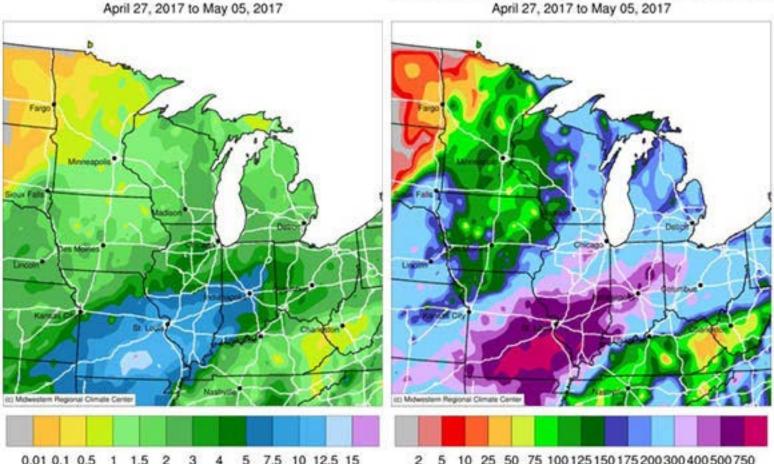
**Airlines Are Increasingly Uncomfortable:** Traveling by air is getting increasingly uncomfortable for consumers: In 2016, airlines ranked seventh-to-last out of 43 industries in the American Customer Satisfaction Index. Only one in four Americans say air travel is enjoyable and 27% say it's "awful" according to a January CNBC survey—and the top complaint of air travelers? Uncomfortable seats. Some 77% of Americans say these are the most hated aspect of flying, compared with 71% who say delays are the worst part and 67% who say cancellations, the same study found. Interestingly though, in the same survey, only 21% of Americans said they would pay for extra legroom on a flight less than three hours and 17% said they would pay for a wider seat. Travelers who value legroom may be better off picking airlines based on that factor alone, which you can find in the chart below. (Source: MarketWatch)

AIRLINE	SEAT PITCH	SEAT WIDTH	SEAT PITCH 04-May-2017
america	32"-38"	17.7"	Seat pitch is the space between a point on one seat and the same
jetBlue	32"-38"	17.8"-18.25"	point on the seat in front of it.  One or two extra inches can
Alaska.	31"-36"	17"-18.25"	make a huge difference in comfor
THAWAIIAN AIRLINES	31"-36"	16.5"-18"	
UNITED	31"-35"	17"-18.3"	
<b>▲</b> DELTA	31"-35"	17.2"-18.5"	
Southwest's	31"-33"	17"	
American Airlines 🔪	29"-37"	17"-18.5"	
FRONTIER	28"-38"	18"	
Spirit	28"-36"	20"	Seat pitch

**Weather** forecasts call for a contrast in fieldwork and planting prospects across the Midwest. Warm and dry conditions in the northwestern Midwest will improve conditions for planting. Meanwhile, wet and cool conditions in the east and southern will continue to slow planting progress. In the southern Plains, episodes of showers and warm temperatures favor development of winter wheat in the region during this week. In the South, sunny, dry weather is promoting fieldwork and crop development. Lowland flooding continues in parts of the mid-South, as water drains form creeks and tributaries into larger rivers. A developing storm system emerging form the Southwest will provide the focus for most of the week's significant precipitation. Five-day totals could reach 1 to 3 inches from the central and southern Rockies eastward into the southern Mid-Atlantic States. In contrast, only light precipitation will occur across the nation's northern tier. Looking to our neighbors in South America, warmer and drier conditions will favor development of second crop corn in Brazil, especially in Mato Grosso do Sul and Parana, following recent rain and cooler temperatures. In Argentina, rains during the weekend and again later this week may lead to delays in the harvest of corn and soybeans. Planting of winter wheat following the summer crop harvests may also be delayed. Favorable conditions for planting and early development of winter wheat are in place through major growing areas.

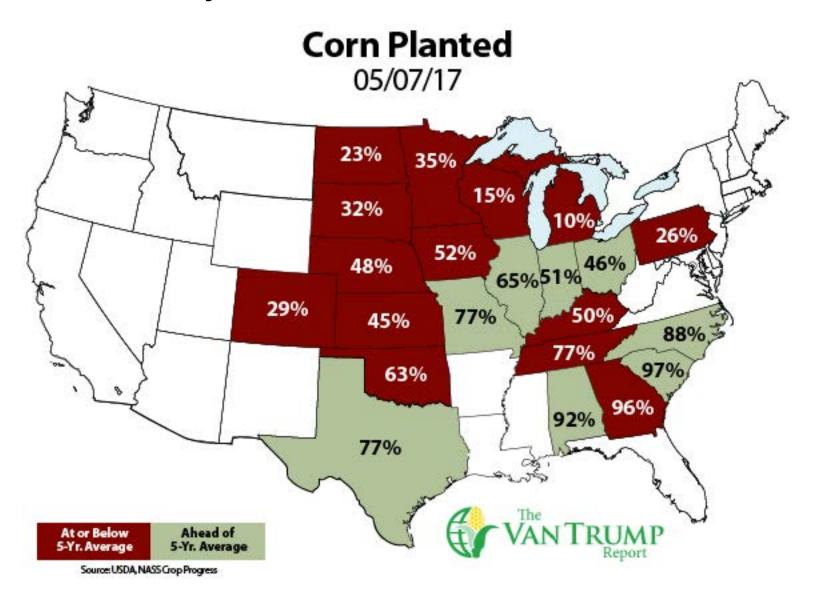
**Huge Rains in Midwest to End April:** After the weekend rains, here's a look at how much has fallen in the Midwest since last week. Parts of Missouri and Illinois have seen rain amounts up to 5 - 7 times higher than normal.





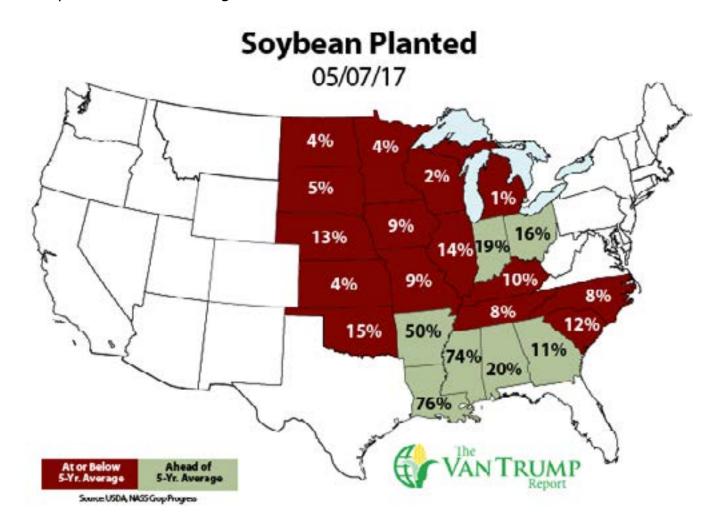
**Corn** bulls continue to talk about U.S. weather complications, especially for producer to the south and east. Meaning a more realistic chance of increased corn acres being pushed into "preventive plant" or towards an alternative crop. At the same time bulls are talking about a possible -10 to -15 MMT reduction in new-crop global ending stocks and perhaps a -200 to -225 million bushel reduction in U.S. new-crop ending stocks. The bears are simply shaking it off, saying who really cares, as U.S. ending stocks will still more than likely stay extremely burdensome at levels north of 2.1 billion bushels. The bears also continue to point to recharged U.S. soils on wide-spread spring time rains. The USDA showed U.S. corn crop planting up +13% last week to 47% now complete vs. 52% on average.

A deeper look inside the numbers show: Missouri, Texas and Tennesse at 77% planted; Illinois, while only planting +2% last week, still remains ahead of schedule with 65% now planted; Producers in Iowa planted +24% of their cars last week and now show 52% of the crop in the ground; Indiana and Kentucky also have over 50% planted; Nebraska jumped to 48% planted but still remains behind their average of 55% by this date; Minnesota is just 35% planted vs. the same traditional pace of 55% complete. Colorado, Kansas, Michigan, North Dakota, South Dakota and Wisconsin are all running behind schedule. On the flip side Ohio is 46% planted and well ahead of their 38% average.

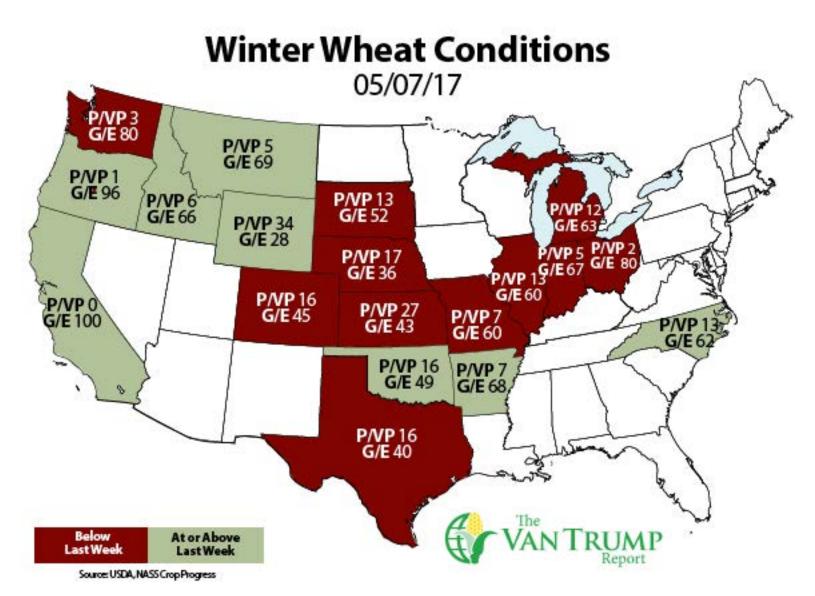


**Soybean** bears are talking about the very real likelihood of U.S. new-crop ending stocks jumping north of 550 million bushels, which will be one of the larger May estimates we've seen in years. Most inside the trade believe U.S. ending stocks are going to jump by 100 to 150 million bushels. The bears are also worried that number could push even higher, if the USDA proves to be currently underestimating new-crop yield at 48 bushels per acre. It's also worth noting that weekly soybean inspections were reported at the lowest level of the marketing year. Some argue that a weaker Brazilian currency as of late has sparked more farmer movement and is making their exports a bit more attractive. Soybean bulls continue to point to strong global demand, especially demand from the Chinese. In fact many sources inside the trade believe the USDA needs to bump their current Chinese import demand estimate higher. The bulls are also talking about bigger planting delays here in the U.S. and perhaps more early field damage and crop complications in some key growing regions due to excessive rains. The USDA nows shows planting progress at just 14% complete vs. the five-year historical average of 17%.

Inside the numbers we see: Louisiana at 76% complete vs. 55% on average; Mississippi 74% complete vs. 51% on average; Arkansas at 50% complete vs. 38% average; Indiana 19% complete vs. 17% average; Ohio 16% complete vs. 14% average; Illinois 14% complete vs. 16% average; Nebraska 13% complete vs. 18% average; Kentucky 10% complete vs. 12% average; Iowa 9% complete vs. 14% average; Missouri 9% complete vs. 12% average; North Carolina 8% planted vs. 8% complete; Tennesse 8% complete vs. 14% average; South Dakota 5% complete vs. 10% average; Kansas 4% complete vs. 9% average; Minnesota 4% complete vs. 24% average; North Dakota 4% complete vs. 12% average; Wisconsin 2% complete vs. 8% average; Michigan 1% complete vs. 11% average.



**Wheat** traders continue to debate U.S. weather and the problems it may have caused to crops in key locations. Bears argue it's no big deal as both the domestic and global balance sheets remain extremely burdensome. In fact several sources inside the trade believe the USDA is currently overestimating U.S. export demand and will need to trim their current guess. The bulls however point further out on the horizon, believing new-crop wheat stocks may need to be reduced by -200 to -250 million bushels. The trade also seems to be looking for a -5 to -7 MMT reduction in global ending stocks out on the horizon. In other words the domestic and global balance sheets may start to more aggressively shrink as greater weather complications arise. The USDA lowered their weekly crop condition ratings for U.S. winter wheat from 54% down to 53% now rated "Good-to-Excellent" vs. 62% rated "Good-to-Excellent" last year at this juncture. My guess is overall conditions slip a few more points next week on more reported damage. The winter wheat crop is also now reported as 50% "headed" vs. 46% on average. The USDA also reported spring wheat planting jumped by +23% to 54% complete vs. 60% on average. Reports show 21% of the spring wheat crop as "emerged".



## U.S. Ending Stocks 2016/17

	May #	Avg. Trade Est.	Trade Range	April 2017
Corn	777	2.326	2.269 - 2.500	2.320
Soybean	777	0.438	0.417 - 0.466	0.445
Wheat	???	1.162	1.145 - 1.200	1.159

### U.S. Ending Stocks 2017/18

	May #	Avg. Trade Est.	Trade Range
Corn	777	2.120	1.835 - 2.400
oybean	???	0.555	0.420 - 0.759
Wheat	???	0.933	0.842 - 1.000

## Global Ending Stocks 2016/17

	May #	Avg. Trade Est.	Trade Range	April 2017
Corn	777	223.3	221.5 - 228.8	223.0
Soybean	777	87.5	86.1 - 89.0	87.4
Wheat	???	252.2	250.7 - 253.2	252.3

## Global Ending Stocks 2017/18

	May #	Avg. Trade Est.	Trade Range
Corn	777	209.7	190.7 - 225.0
Soybean	???	86.6	80.5 - 94.0
Wheat	???	246.1	238.0 - 257.0

## U.S. Wheat Production 2017

	May #	Avg. Trade Est.	Trade Range	April 2017
All Wheat	???	1.859	1.776 - 1.984	2.310
Winter	???	1.293	1.200 - 1.474	1.672
Hard Red Winter	777	0.769	0.686 - 0.915	1.082
Soft Red Winter	7??	0.305	0.260 - 0.355	0.345
White	???	0.217	0.180 - 0.263	0.286

## South American Production 2016/17

	May #	Avg. Trade Est.	Trade Range	April 2017
Argentina Corn	???	38.5	37.0 - 39.0	38.5
Argentina Soybean	777	56.2	55.0 - 58.5	56.0
Brazil Corn	???	94.2	93.0 - 96.2	93.5
Brazil Soybean	7??	111.3	110.5 - 113.0	111.0



- > Wheat Millers Scrambling For High-Quality Wheat: U.S. flour millers were scrambling to find high-protein wheat supplies remaining from last year's harvest amid fears the developing crop, some of which was hit by snow in Kansas this week, could yield lower-quality grain, according to traders that spoke to Reuters. Wheat plants in Kansas, where farmers grow the hard red winter variety used primarily for bread, showed signs of nutrient deficiency. The worst-hit fields in the western part of the state could be plowed over due to extensive crop damage. (Source: Reuters)
- > China Soybean Imports Set Record High For Month: Soybean imports to China, the world's largest soy buyer, in April rose 13.4 percent from a year ago, supported by strong demand from the soymeal industry, data from the General Administration of Customs of China showed on Monday. China imported 8.02 million metric tons of soybeans in April, a record for the month, the data showed. This is the fourth month in a row that imports have set a record for their respective month. (Source: Reuters)\
- > Tyson Reports Earnings Setback After Plant Fires: Tyson revealed a setback to earnings from two plant fires, and said that it had been asked for information by Florida's attorney general undertaking a probe into anticompetitive conduct. Earnings for the first three months of 2017 fell -21% to \$340 million, which was equated to weakness in the chicken segment. Revenues eased -0.9% to \$9.08 billion. Tyson Foods said that in the latest quarter, its margins in chicken tumbled to 8.3% from 12.7% a year before, reflecting in part higher feed and marketing costs, but also a hit to sales volumes from fires at plants in Mississippi and Indiana. Furthermore, Tyson said that Florida's attorney general had requested information related primarily to Georgia Dock, the discredited chicken pricing regime formerly run by Georgia's agriculture department. (Source: Agrimoney)
- > Bayer To Sell Liberty Brands To Get Monsanto Deal Passed: Bayer has agreed to sell its Liberty herbicide and LibertyLink-branded seeds businesses to win antitrust approval for its acquisition of Monsanto. The divestment of the two global brands, a requirement imposed by South Africa's Competition Commission on Sunday, will account for the bulk of asset sales worth about \$2.5 billion which need to be made to satisfy competition regulators looking at the \$66 million Monsanto deal, sources close to the matter have said. While South Africa is a relatively small market for the two global agricultural supplies giants, the move marks the first time for Bayer to acknowledge it has to sell the two related Liberty brands, which compete with Monsanto's Roundup weed killer and Roundup Ready seeds. The planned divestitures are also widely expected to be required by competition regulators in larger jurisdictions, such as the United States, where approval has been requested, and the European Union, where an application for approval has yet to be made. (Source: Reuters)

- > ADM Buys One Of The World's Largest Ag Merchants: Archer Daniels Midland Co announced it had plans to close a deal for privately held Industries Centers in the coming months, pending Israeli regulatory approval, according to a statement. One of the world's largest agricultural merchants, the purchase will allow ADM to reach new customers and deliver products more directly to customers, it said in a statement. Terms were not disclosed. Industries Centers, founded in 1993, trades corn byproducts and other grain products, according to ADM.
- > ChemChina and Sinochem Plan Merger: ChemChina and Sinochem are planning to merge next year, creating the world's largest chemicals group with \$100bn of revenues, according to several senior bankers in Asia. The merger would follow ChemChina's \$43bn purchase of Swiss agrochemicals leader Syngenta, amid more general consolidation of the global agrochemicals industry. Bankers say the merger of the two domestic groups is politically driven, aimed at ensuring ChemChina has the financial strength to absorb Syngenta. The heavily indebted chemicals conglomerate will have achieved China's largest overseas acquisition when the Syngenta purchase is concluded. ChemChina had a debt-to-equity ratio of 256 per cent at the end of 2015, while Sinochem's ratio was 128 per cent, according to Bloomberg. Since then, Sinochem has completed \$1.4bn in acquisitions, with another \$113m offer pending. ChemChina has embarked on at least \$2.5bn of deals, not including the Syngenta purchase, according to Dealogic. (Source: Financial Times)
- > Judge Dismisses "Ag Gag" Lawsuit In North Carolina: A lawsuit filed by some animal rights groups against North Carolina's new "ag gag" law has been dismissed by a federal judge. The suit claims the Property Protection Act stifles their ability to investigate North Carolina employers "for illegal or unethical conduct" in violation of the U.S. and state constitutions, deterring them from conducting undercover investigations to expose animal cruelty. Violators of the law face civil penalties. The judge ruled that the plaintiffs did not show that the law has injured them. The groups include PETA (People for the Ethical Treatment of Animals) and the Animal Legal Defense Fund. According to AgriPulse, the plaintiffs say they will likely appeal the ruling.
- > Oldest Business In Each State: Is the oldest business in your state a mom-and-pop shop, or a famous megabrand? The map below shows a diverse range of companies that claim to be the most senior in their respective states. While many of them exist today as modest family-owned businesses such as pizzerias or taverns, some have also grown into respected brands known around the country, like Jim Beam or Imperial Sugar. Click the map for a larger view.





**Eastern Iowa -** We will get back in the field today to get back to planting our corn. We just have a small amount done and I would say that overall there is only about 20% of corn planted in this area. We do still have a few acres of cover crops to spray before we plant. I think the ground should work good. We had between 1" and 2" of rain last weekend but have had some good drying days this week. It looks like we will have between a five to seven day window to roll with the planters. There was a small window before the last rains but my problem was with the low temps that were supposed to come along with those rains. If we have the window to plant that they are talking about, we may start on a few bean acres if weather forecasts look favorable. Most guys have been fairly optimistic and are positive about this years crop.

**Central Illinois -** The water continues to keep building up here. We got another 1.5" yes-

terday, making the creeks run and filling up all the ponds around. Even though we are on hold now we have been able to knock a pretty good dent in our planting. As we sit today, we have about 60% of the corn in the ground and about 40% of our beans planted. I know that we have nearly 100 acres to replant now and I am sure that number will be larger as the water comes off the fields. Its hard to imagine but the guys just to the south of us have had more rains there. I feel that its still early and don't get to excited at this point on the planting pace. We had to replant some corn acres last year and did not get them in until after Memorial Day. Those late planted corn acres made over 200bpa, which is amazing. The seed genetics have improved greatly and it can handle the extreme soil condition better than ever before. I know that we will not change our rotation at all no matter what the calendar says. I think that I have planted corn all the way up to the 4th of July.

**Southeast Nebraska -** We have gotten most of our corn planted but are now sitting on the sidelines waiting for things to dry out. Along with the rains is the cold temperatures that we have seen across the state. We were lucky and didn't get the snow they got out west. There a many guys that have all of their corn in but I drug my feet when the weather called for rains and freezing temps. There is nothing growing that is in the ground. The rain totals of 2" last weekend then we got another .4", two nights ago. Earlier this week we tested the soil again and the ground temps were at 42 degrees. We like to see the temps in at least the mid 40 degree mark before we plant and trending warmer. The drying days have not made it to us yet but hoping it will soon. Right now the weather guys are saying we will warm up to the low 80 degree marks next week.



K-States Full Report On The 2017 Wheat Quality Tour: If you are interested in all the details found in Kansas wheat fields last week, check out the full 2017 Wheat Quality Tour Report from K-State. The 2017 Wheat Quality Tour took place during May 1 – May 4. More than 70 people actively scouted hundreds of Kansas wheat fields in six routes (Fig. 1), leaving Manhattan and heading to Colby on day 1, from Colby to Wichita on day 2, and finally from Wichita to Manhattan on day 3. The report says overall 2017 production estimate for Kansas resulting from the tour was 282 million bushels of wheat. Despite the high production estimate resulting from the tour, the Kansas wheat crop is currently facing many challenges, as described below, and will have to be exposed to near perfect weather conditions to be able to produce the 282 million bushels estimated. Read more HERE.

**How Maps Can Persuade Us To Make Purchases:** People seem to trust maps more than other forms of conveying information. Our natural inclination to believe whatever we see on maps makes them excellent tools of persuasion. This unique power has put maps at the center of many propaganda operations, morality movements, and political debates. Just last week, a map showing which parts of the country would be hurt by a U.S. withdrawal from the North American Free Trade Agreement (NAFTA) helped persuade the president to scrap that plan. Read more HERE.

To Help Tackle Inequality, Remember the Advantages You've Had: Most Americans view current levels of economic inequality as a problem: In fact, for 30 years, Gallup polls have consistently found a clear majority supporting a more even distribution of wealth and income. But there is far less agreement on how to achieve that goal. Do we need to level the playing field so that people born to modest circumstances have a better chance? Should we be trying to instill a stronger work ethic in the United States, and build a more robust culture of hard work? Counterproductive and, at times, bitter arguments bog down the search for solutions. A recent paper by the psychologists Shai Davidai of the New School of Social Research and Thomas Gilovich of Cornell University reveals a quirk in human psychology that, I think, is responsible for some of our failure to make much progress on those issues. Understanding that quirk could help us find common ground on how to help the poorest Americans. Read more from The Upshot.

How Chuck Taylor Taught America To Play Basketball: It was 1936, and the United States men's basketball team stepped onto the rain-soaked outdoor courts sporting bright white Converse shoes—patriotic blue and red pinstripes wrapping around each sole. The Americans were taking on the Canadians in the Olympic finals, and the conditions were miserable. As it poured, water inundated the courts, turning them into a "sea of mud," according to the New York Times. But, in a painfully low-scoring game, the U.S. ultimately won 19-8. This was basketball's inaugural year in the games and the first of seven consecutive Olympic gold medals for the U.S. men's team. But it also marked the first appearance of the iconic "Olympic white" Chuck Taylor shoes—a design still around to this day. Read more HERE.

**Secret Air Force Spaceplane Returns to Earth:** The Air Force's robotic X-37B mini space shuttle swooped out of obscurity today after 718 days spent in orbit on a secretive military mission, touching down at the Kennedy Space Center's orbiter runway on autopilot, the military announced on Twitter. "The landing of OTV-4 marks another success for the X-37B program and the nation," said Lt. Col. Ron Fehlen, X-37B program manager. "This mission once again set an on-orbit endurance record and marks the vehicle's first landing in the state of Florida. We are incredibly pleased with the performance of the space vehicle and are excited about the data gathered to support the scientific and space communities. We are extremely proud of the dedication and hard work by the entire team." Read about this historic flight HERE.





### **Smithfield Pushes Forward On Pig-Human Transplants**

The world's largest pork producer, Smithfield Foods, is breaking with traditional meatpacking and has established a separate bioscience unit to expand its role in supplying pig parts for medical uses. Ultimately, the meatpacker is launching Smithfield Biosciences to sell pig organs for transplantation into humans. Routine pig-to-human organ transplants might still be a few years away, but recent scientific advances are breaking down barriers that frustrated prior attempts to use pigs as a ready supply of replacement parts for sick or injured people, making it an attractive new market. Smithfield, the \$14 billion subsidiary of China's WH Group, in its first move has joined a public-private tissue engineering consortium funded by an \$80 million grant form the U.S. Department of Defense. Smithfield is the only pork producer, joining health-care companies including Abbott Laboratories, Medtronic and United Therapeutics Corp. Pigs have long been considered a possible source of transplants because their organs are so similar to humans. Fro example, a hog heart at the time of slaughter is about the size of an adult human heart. Other organs from pigs being researched for transplantation into humans include kidney, liver and lungs. Prior efforts at pig-to-human transplants have failed because of genetic differences that caused organ rejection or viruses that posed an infection risk. If you remember, Swiss drugmaker Novartis folded its \$1 billion xenotransplantation effort in 2001 because of safety concerns about pig viruses that could be passed to humans. But two years ago, along came

George Church, a Harvard Medical School genetics professor and researcher, who tackled the problem using a new genediting tool known as CRISPR to trim away potentially harmful virus genes that have impeded the use of pig organs for transplants in humans. Church has since formed a company named eGenesis Bio to develop humanized pigs that do not provoke a rejection response or transfer viruses to people. Church believes that eventually



they could harvest a dozen different organs and tissues from a single pig. Church estimates the first transplants involving humanized pig organs could occur in a clinical trial later this year, but these would only be used on people too sick to receive human organs. Of course, there are some ethnical issues that always come up when talking about animal-to-human transplants and genetics. However, let's not forget the goal here is to save human lives. It's estimated that, on average, 22 people die each day while waiting for a transplant. And not to be cynical, but there is also an estimated \$100 billion market for pork byproducts used for medical, pet food and non-food purposes. And that excludes any potential market for animal-to-human transplants. This convergence of animal and human bioscience is a huge potential space, and it looks like Smithfield is positioning itself at the leading edge. (Source: GlobalNewsWire)

#### Facebook's New "Mind Reading" Project

Facebook began assembling a team of highly specialized industry gurus about a year ago to develop so-called "moon shot" projects. The group is called "Building 8" and some of their seemingly far-fetched ideas were recently revealed at Facebook's annual developers conference. One that has been garnering a lot of attention is the team's "mind reading" project that would allow you to type with your brain. The unit working on the technology is headed up by a former John Hopkins neuroscientist who helped develop a mind-controlled prosthetic arm. Keep in mind that the mind-controlled prosthetic is a real, functioning technology, so typing with one's brain might not be as far-fetched as it might at first sound. Deciphering speech is much more complicated, but it has been successfully accomplished on a very small scale - a woman with ALS was given a pea-sized implant that could pick up on signals in her brain, allowing her to type eight words per minute. Facebook's ultimate goal is to develop a system that can read the brain five times faster than an individual can type on a smartphone. The way current mind-reading tech works involves surgical implants and analyzing which brain cells fill with blood. To track speech, they need to be able to track minerals moving in and out of each cell. Brain implants obviously aren't going to be very marketable, so Facebook is working to develop non-invasive sensors that can detect brain activity hundreds of times per second at high resolution. Facebook is looking at using optical imaging - using lasers to capture changes in the properties of neurons as they fire – to glean words straight from our brain before we say them. If these signals can be read, they can be transmitted silently to a device - in theory. There have naturally been some concerns raised that this could be a dangerously invasive

technology, capable of reading people's private thoughts, and particularly bothersome in the hands of the world's largest social network. Director of Building 8, Regina Dugan, explains that it is not about decoding random thoughts, though. "We're talking about decoding the words you've already decided to share by sending them to the speech center of your brain." Exactly how one would know whether the privacy of their "random thoughts" is also being violated remains to be seen, but Dugan describes the concept as having the "convenience of voice but the privacy of text". Another reason why Facebook wants to read our brain activity is to develop the equivalent of a "brain mouse" for augmented reality. At the developer conference, Dugan described a picture of a future where everyone wears augmented reality glasses that supplement our field of vision with additional information such as directions, and enhanced capabilities such as real-time translation of people's voice or the ability to "mute" specific people and noises from your soundscape. It may all sound like something right out of a science fiction movie, but at one time so did television and cameras! (Sources: Recode, Financial Times)



#### There Are Now 56 Self-Made Female Billionaires

My daughter is in an accelerated School of Architecture program in college. I was somewhat surprised by the fact there were very few other women in the program. It is definitely male dominated. Similar story with the School of Engineering. Women are definitely breaking down barriers, but there's still a long ways to go. I thought the recent article by Forbes, highlighting the "self-made" female billionaires was worth sharing and passing along. For all of those who have little girls at home keep encouraging and challenging

them... Below are just a few self-made female billionaires who have made it happen! To see the full list or read more visit Forbes.

**Zhou Qunfei,** the world's richest self-made billionaire woman is said to have grown up in an impoverished village in central China and reportedly quit school at 16 years old to work in a Shenzhen factory. In 1993, with about \$3,000 in savings, she started her own company making glass screens. Today, her publicly traded Lens Technology, makes glass covers for mobile phones for customers like Apple and Samsung

**Marian Ilitch** is now America's richest self-made woman. Ilitch founded Little Caesars pizza back in 1959 when it was just one pizza joint outside of Detroit. She also owns the NHL Detroit Red Wings and Detroit's MotorCity Casino.

**Sara Blakeley,** the 42-year old inventor of Spanx is the youngest billionaire to make the list. Blakeley went from doing standup comedy, to taking a \$5,000 investment and turning it into a billion dollars in net worth in just 13 years with her company Spanx Inc. WOW!

**Oprah Winfrey,** 59, needs no introduction. America's only African-American on the list is worth \$2.8 billion from her media company, Harpo Inc. These were dollars earned without the help of a billion-dollar inheritance.

**Tory Burch,** 46, made her fortune with her "preppy-boho" line of women's off-the-rack fashion with Tory Burch LLC. In less than a decade, she accumulated a billion dollars in wealth.

**Sheryl Sandberg,** 47, Facebook COO. Sandberg became one of the world's youngest female billionaires in June 2015, primarily thanks to the increased valuation of her Facebook stock holdings.

**Doris Fisher,** 81, founder of the San Francisco-based retail giant Gap Inc. is said to be worth \$2.8 billion.

**Diane Hendricks**, 69, owner of Hendricks Holding Company and ABC Supply. Hendricks started the roofing supply company, ABC Supply, in 1982. She rejected offers of buyouts, weathered the financial crisis and now chalks up annual sales of around \$6 billion.

**Judy Love,** 78, founder of Love's Travel Stops & Country Stores with husband Tom. The couple bought an abandoned gas station in 1964, which she expanded to over 40 stations and convenience stores in just a few years. Loe's now has more than 300 locations in 39 states.

**Lynda Resnick,** 73, owns The Wonderful Company which is the parent of notable brands like POM wonderful, FIJI Water and Wonderful Pistachios.

**Gail Miller,** 74, bought her first car dealership in 1979. The business is ranked as one of the ten largest auto dealerships in the country, taking in an estimated \$4.4 billion in 2016 revenue. In addition to 60 car lots, her business also owns 17 movie theaters

and the NBA's Utah Jazz.

**Peggy Cherng**, 68, founder of fast food restaurant chain Panda Express. Her nearly 2,000 restaurants stretch from its home base in the U.S. to Canada, Mexico, Dubai and South Korea.



# **CASH SALES & HEDGING TOTALS**

## CORN 2016 CROP 40% SOLD 40% HEDGED 20% UNPROTECTED 20% 40% 40% CORN 2017 CROP 15% SOLD 25% HEDGED **60% UNPROTECTED** 15% 25% \$10 P/A CORN 2018 CROP 10% SOLD 0% HEDGED 90% UNPROTECTED 10%

410.95

