



"Experience is what you get when you didn't know what you wanted." - Jill Shalvis

THURSDAY, JANUARY 05, 2017

Morning Summary: Stocks remain near all-time highs and the Dow seems content on making another run towards that somewhat elusive 20,000 level. On the flip side however, I continue to get the feeling many seasoned veterans are perhaps a bit reluctant and somewhat cautious in putting more assets to work while the market flirts with all-time highs, especially ahead of a host of anticipated major changes coming to the U.S. government. The release of the Federal Reserve's December meeting "minutes" yesterday highlighted those uncertainties, with many of the officials increasing their interest rate hike projections and acknowledging that there was "substantial uncertainty" about fiscal policy ahead. On a more cement fundamental note, one of the big reasons cited for increasing the forecast for rate hikes in 2017 stems from a dramatically improved employment situation. The thinking goes that a tighter labor market eventually means increasing wages, which in theory would send inflation higher. The Fed is trying to stay in front of such an event and prevent having to implement a fast and potentially market shocking response. Looking to today, the key U.S. data will be the ISM Non-Manufacturing Index, which is actually expected to dip a bit. That's largely due to other reports that are pointing to a decline in New Orders for December, but all-in-all, the U.S. Service Sector is seen chalking up another very solid month. We will also be digesting the latest in ADP employment numbers, which will provide perhaps a small clue about the governments monthly number scheduled for release on Friday. Most are looking for a gain of around +175,000 jobs during the month of December.

Consumer Electronics Show Starts In Vegas: *This is one of the biggest trade shows in America and many insiders believe products revealed at CES can set the tone for technology released throughout the rest of the year and can give many traders a bit of an edge on who will be leading the pack. In order to follow along and see some of the latest and greatest, I will be checking in regularly with the [QUARTZ BLOG](#). You can also use #CES17 on Twitter to follow all of the latest real-time updates. There will be all kinds of self-driving new car items unveiled, new housing technology, robots, drones, virtual reality products, and the latest in home entertainment to name a few... Pay close attention, things are changing extremely fast!*

U.S. Auto Sales Set A New Annual Record! *One of the biggest debates in the auto industry this year stemmed around whether new car sales could top last year's record sales pace. Despite all the doubts, they managed to do just that, surpassing yet*

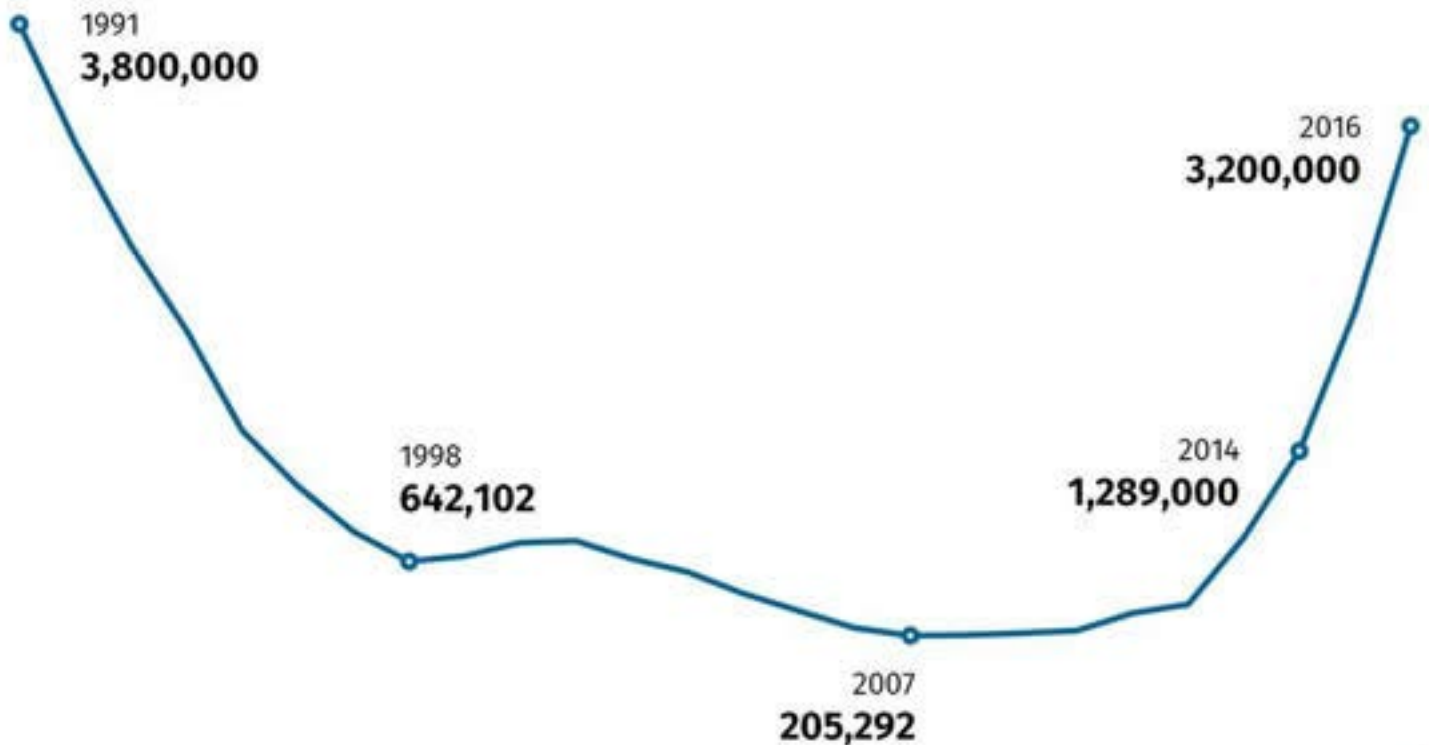
another milestone that cements the fact the U.S. economy has rebounded well. Total U.S. auto sales in 2016 hit 17.55 million, beating 2015's record of 17.47 million, according to Autodata Corp. It was the seventh consecutive year of year-over-year sales gains - which itself is also a record streak! Sales were led by SUVs and trucks again this year, with another year of low gas prices helping to promote those higher ticket items. Another popular sector included cars with the latest and greatest "gadgets", like backup cameras, automatic emergency braking and Apple CarPlay - vehicles such as the Chrysler Pacifica minivan, the Honda Civic and the all-electric Chevrolet Bolt all seemed to gain a sales boost from their advanced technology features. Breaking down the sales numbers, U.S. automakers were not the big winners - Ford's sales were up less than +1% while General Motors' said its year-over-year sales were down -1.3%. The big winners were Subaru whose sales were up +6%, Nissan sales up +5% and Honda up +3%. Surprisingly, sales for foreign manufacturer Toyota, a long time American favorite fell -2%. Toyota's U.S. sales chief, Bill Fay, said the consumers shift from cars to SUVs is one of the most dramatic the industry has ever seen. Three years ago, trucks and SUVs represented 50% of the U.S. market. They closed 2016 representing 63% of total sales, and analysts don't see that changing anytime soon. Nonetheless, the best selling car in the U.S. last year was hands down Ford's F-Series pickup, with 820,799 trucks sold. That's the equivalent of 93 trucks sold every hour!

Interesting Comments From A Hedge Fund Winner: Texan hedge fund manager Kyle Bass, the founder of Hayman Capital, says that global markets are at the "beginning of a tectonic shift." It might be worth taking note of his sentiment as Hayman saw one of the most dramatic turnarounds last year. As The Wall Street Journal reports, at mid-2016, the fund was down about -10% and managing \$770 million, compared to \$2.3 billion at the end of 2014. Bass turned it around though, "riding savvy currency and bond-market bets to score among the larger gains of any hedge-fund manager in the second half of 2016." The Hayman Master Fund ended up with a gain of +24.83% for 2016, compared to a +9.5% gain for the S&P 500 for 2016. Behind the turnaround: Mr. Bass benefited from a rise in the dollar while betting against, or shorting, currencies including the yen, euro and yuan, while also shorting bonds of many large countries, including those issued by the U.S., Japan and European nations. In his year-end letter to investors, Bass again pointed to those currency shifts, saying "Reconciling the potent strengths of the world's largest economies with their inherent weaknesses has revealed various investable anomalies." He didn't provide details in the letter as to his fund's investment strategy...but obviously he's betting on a pretty basic fundamental principal - the end of aggressive central bank intervention. Again, a direct quote - "Over the past several years, economic gravity has been pulling one way and central banks have been using aggressive monetary policy to pull the other. Investing in macro, while this phenomenon has existed, has been difficult to say the least." It's worth noting that Bass gained most of his investing notoriety for correctly betting against the U.S. subprime crisis. He's now highlighting China's "recklessly built" banking system, which he sees as overleveraged and irresponsible. According to him - Chinese banking system losses could be gargantuan. (Sources: CNBC, Yahoo Finance)

When Old Becomes Cool Again: Vinyl album sales in the UK are now back to levels last seen in the early 90s. Wow! The UK isn't the only place seeing a resurgence in the

old school music format - sales in the U.S. were up a whopping +25.9% last year. That compares to physical album sales (which includes CDs and all other formats) being down -11.7% from 2015. The number one selling vinyl record in the U.S. last year was Twenty One Pilots' 2015 record "Blurryface." More interestingly however are some of the other titles rounding out the top 10 best sellers, as most are older "deep catalog" releases, including The Beatles' "Abbey Road", David Bowie's "Blackstar", Bob Marley and the Wailers' "Legend" and Miles Davis's "Kind of Blue."

Total album vinyl sales in the UK 1991-2016



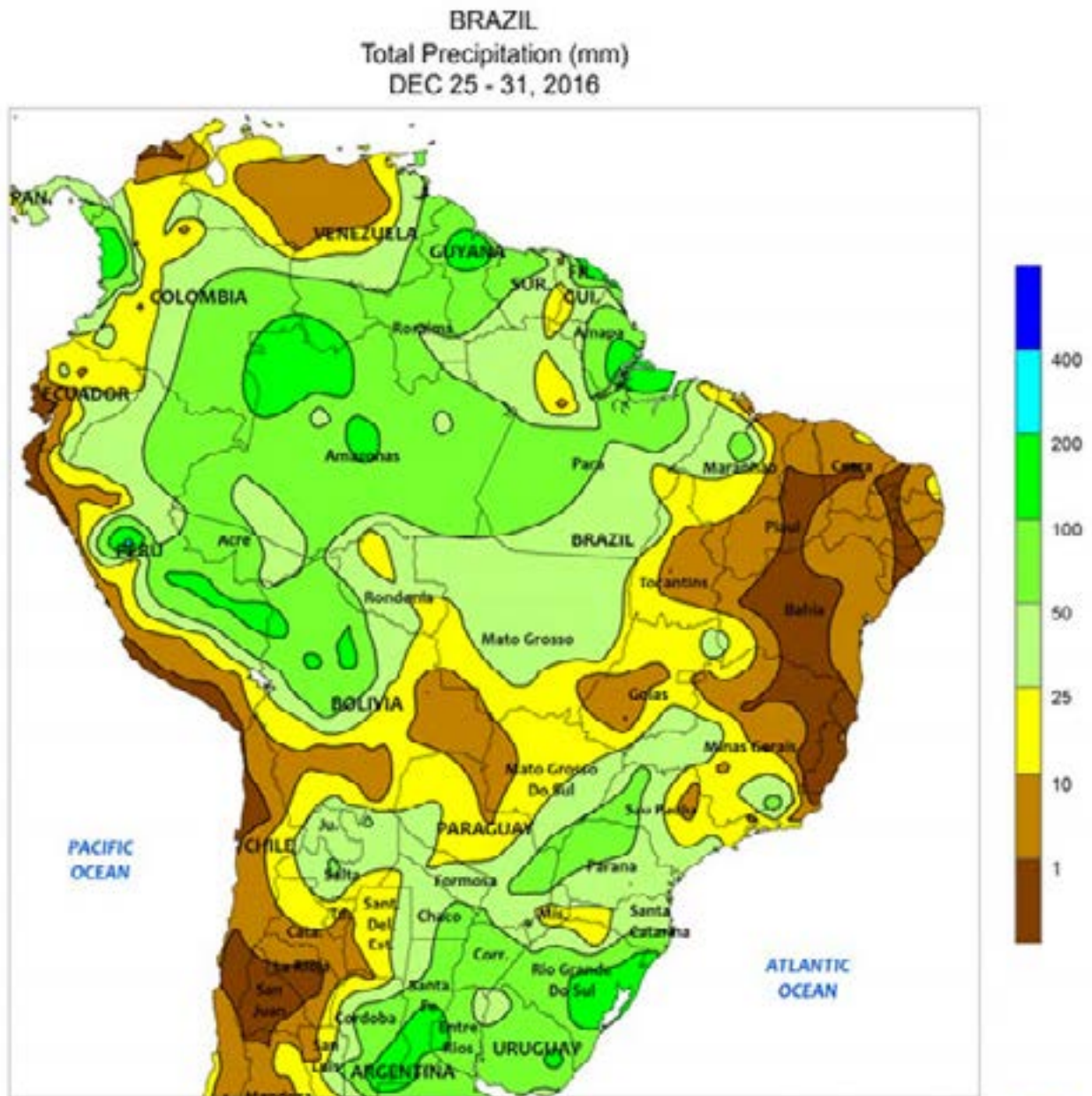
Source: BPI. Figures from 1991-94 are BPI estimated trade deliveries

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Weather continues to see bitterly cold air push across the nation's mid-section. This trend is expected to stay for the next five to seven days. On the Plains, this morning's low temperatures dipped near 0 degrees F as far south as northwestern Kansas. -20 degrees F were reported in parts of North Dakota and Montana over the past two days. The severity of the cold conditions will cause some transportation delays and livestock stress through the coming weekend. Snow from earlier storms covers much of Montana and the Dakotas and should provide protection from winterkill. In the southern Plains, winter wheat areas have no significant precipitation in the 10-day forecast. Wheat conditions have declined over the past month. This new round of very low temperatures this week bears watching as it could possibly push into the region and cause damage to uncovered stands. In the South, lingering showers are confined to Florida's peninsular, where more rain is needed. Farther west, however, recent downpours have eradicated drought in the central Gulf Coast region. Looking ahead, a limited amount of precipitation (snow) will fall east of the Rockies, spreading from the central Plains to the Mid-Atlantic States by tonight. By week's

end, some additional rain and snow may fall across the Southeast. Farther north, snow squalls will affect areas downwind of the Great Lakes. By Saturday, much of the U.S. -- except for the Desert Southwest and southern Florida -- will be engulfed by cold air.

Dryness Continues for Northeast Brazil: Looking back to last week, beneficial rain maintained generally favorable conditions for corn and soybeans in the main production areas of southern Brazil. According to reports from Rio Grande do Sul, a portion of soybeans and corn in that state had reached reproduction as of December 29, making the continuation of rainfall timely. Farther north, light to moderate rain fell in Mato Grosso but a generally drier pattern dominated the remainder of the Center-West, as well as northeastern Brazil, reducing moisture for soybeans and cotton. Unseasonable warmth and dryness in the northeastern interior raised concern for potential stress to vulnerable crops. Now, we are getting reports of very little rain indicated for this areas through this week. Again, this will continue to pose the potential for reduced soybean production in northeastern Brazil.



CLIMATE PREDICTION CENTER, NOAA
Computer generated contours
Based on preliminary data

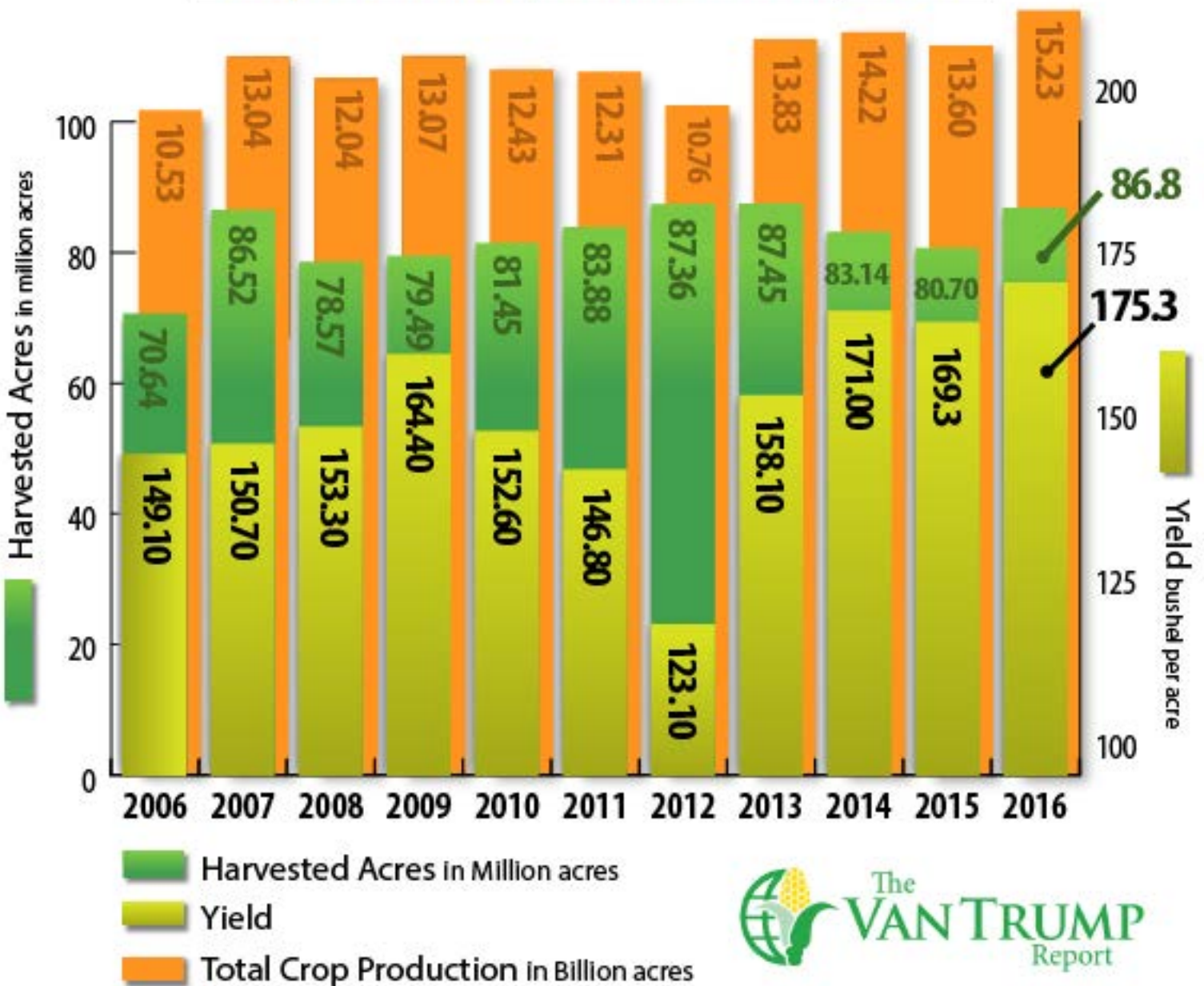


Corn prices have caught a small tailwind on continued flooding concerns in parts of Argentina and some dry pockets in various parts of South America. It seems difficult to get accurate information out of some of these areas, but the word on the street is that a small portion of the corn crop could be adversely impacted, while areas that haven't been washed out may enjoy yield benefits from the additional moisture. Net-net I suspect Argentine production estimates will backpedal a bit in the days ahead, but nothing as of yet that seems to be a major game changer. Perhaps also weighing on my mind and not allowing me to be overly bullish is the fact the USDA is still forecasting ending stocks north of +2.4 billion bushels and a U.S. record harvest in 2016 that was some +1.625 billion bushels higher than last year. As a producer I'm respecting the recent pop to the upside, but also keeping a very close eye on the trade. I'm thinking the next leg higher, perhaps a +20 cent jump to the upside, might prompt me to make another sale and reduce additional longer-term price risk. Keep in mind, as a producer my goal is to get another 15% of my estimated new-crop production risk eliminated at profitable levels between now and the end of March. With expenses coming down and yields continuing to work their way higher, small profits may soon be on the table for some producers. In other words you might want to start perking up your ears and paying close attention to the headlines the next few weeks. I still like the thought of placing sell orders with buyers ahead of time so it helps us execute and overcome some of the psychological barriers associated with making early sales. Keep in mind the big end-of-year USDA report is coming out next Thursday and there's some early talk that U.S. production could inch its way even higher while corn feeding could lose way to increased wheat feeding estimates. Exports remain a wild-card, while ethanol seems to have been recently adjusted higher and within most current estimates.

U.S. Corn Production Graphic For Past Decade: *The numbers below show a record monster crop being harvested in 2016. The questions moving forward are will the USDA raise the 2016 production estimates even higher. Then how many fewer corn acres will U.S. producer plant in 2017?*

Corn Production 2006 -2016

Crop Production | Harvested Acres | Yields



Data Source: Updated WASDE, December 09, 2016

Soybean traders are again debating South American weather? The dryness in northeastern Brazil is still being heavily debated. The bulls see it as a more serious issue that could be spreading, while the bears see it mostly as a problem that's only impacting some of the lower producing areas. There's also some continued debate about Argentina, where heavy rains in some areas could create further complications with late season planting and harvesting. From what I'm hearing, heavy rains and flooding could ripen out 2 to 3 million acres of Argentine soy. While in other parts of Argentina there's still some concerns circulating in regard to dry conditions and more extreme heat. Remember, the planting window in Argentina is very close to closing, so this could certainly lead insiders to start lowering

their production estimates. We are clearly in the midst of a South American weather market, with outside influence coming from the direction of the U.S. dollar, potential hiccups in U.S./Chinese relations, and perhaps +5 million more U.S. soybean acres being planted in 2017? I have to imagine as long as we have South American weather “uncertainties”, those headlines will continue to trump most other cards. Fundamentally it certainly feels like the stars are lining up for the bears, but with global demand strong and funds propensity to plow more money into the bean market at the slightest sign of a bullish headline, I’m apprehensive in making additional new-crop sales. I’ve already reduced the risk on 40% of our estimated 2017 production, well ahead of my goal, and feel I could quickly start to get myself into what feels like an “oversold” environment. Remember, we still have a ton of weather left in South America and a U.S. crop that’s not even close to being out of the bag or planted. As a spec the perspective could be a bit different, thinking we might re-test the \$9.50 level before re-testing the \$10.50 level.

Bird Flu Funny... Thought this was worth passing along. It recently ran in the [Star-Tribune](#) and was created by Steve Sack.



Wheat bulls continue to talk about lack of snow cover here in the U.S. and the recent cold snap potentially causing more extreme “winter-kill” concerns. I suspect with the massive reduction in planted U.S. winter wheat acres, weather hiccups and complications in 2017 could become amplified even though we are still sitting on a glut of global supply and domestic ending stocks. There’s also some talk that parts of Russia and the Black Sea region might soon be dealing with more harsh conditions. I just feel like the markets have become more headline and event driven over the past few years. Meaning less emphasis on traditional fundamentals and more emphasis on money-flow, macros, and media!

USDA Expresses Concerns About Winter Wheat: *The USDA reported worsening conditions for winter wheat in the U.S. Plains, particularly Kansas and Oklahoma. The agency rates just 44% of the Kansas crop in good-to-excellent condition - 19% is rated poor-to-very poor - and warns that most of the state still remains dry, prompting further concerns about winter wheat development. Cold and dry conditions were cited as a concern for Oklahoma wheat. Just 25% of the Oklahoma crop is rated good-to-excellent. Additionally, USDA says many growing areas in the northern half of the U.S., such as Colorado, Nebraska and Montana may also lack adequate snow cover to protect the crop from a cold snap that’s settling in this week.*



> LDP Payments on Wheat Set New Record: *The U.S. Department of Agriculture in the 2016-17 crop year to date (June 1, 2016, through Dec. 26) has made a record \$110.9 million in loan deficiency payments (LDPs) to wheat growers, eclipsing the previous record outlay of \$106.7 million on LDPs for wheat for all of 2009-10. All or nearly all of the payments this year have been made to producers of hard red winter wheat. In contrast, the “vast majority” of LDPs totaling \$106.7 million in 2009-10 and \$102.7 million in 2010-11 were made to durum growers, according to the USDA. I encourage to read more about LDP’s and some of the specifics at World-Grain.com. You can also visit the FSA site for additional specifics about coverage and loan rate tables.*

> Bird Flu Continues Its Spread Through Europe: *New cases of bird flu continue to be reported in Europe, with Bulgaria and the Czech Republic adding new outbreaks. Bulgaria’s Ag Ministry says their current outbreak has spread to at least 26 farms, nearly double the figure reported on December 30. More than 110,000 are expected to be culled this week, mostly ducks. Bulgaria has already introduced a nationwide ban on poultry markets and has banned fishing in lakes and wetlands inhabited by wild migrating birds. The Czech Republic says bird flu has been found in swans and at two small poultry farms, the first infections the Czech Republic has found in nearly 10 years. Germany, France, Ireland, and Israel are among countries to have found cases of the strain in recent weeks.*

> Egypt Plans To Increase Wheat Area, Bolster Ties With U.S.: *Egypt's ag ministry says the country will allocate 3.6 million acres of land for growing wheat in the 2017-18 season, up from about 3.53 million acres last season. While the ministry did not give an estimate for total production, they did say they expect it to be greater than last year's, which totaled 9.6 million metric tons. The ministry reports that Egypt's current wheat reserves are sufficient to last for five months, with about 1 million metric tons of imports expected to arrive in the upcoming weeks. According to the minister, the large import is part of a plan to increase the country's reserves of essential food commodities. El-Sheikh's statements came during a meeting with the US Wheat Associates' Regional Director for Middle East and North African Countries Ian Flagg, in which both sides agreed to bolster ties in the fields of wheat and other agricultural imports like soybeans.*

> Trump Assures Iowa Governor On Pro-Ethanol Stance: *Iowa's governor says President-elect Donald Trump has reassured him the Trump Administration will be pro-ethanol. Governor Terry Branstad was concerned initially when he heard Trump asked the attorney general from oil-rich Oklahoma to be head of the Environmental Protection Agency. "Donald Trump told both me and my son, Eric: 'Don't worry. He's going to support ethanol.'" Trump has asked Branstad to serve as U.S. ambassador to China. Mike Fitzgerald, the state treasurer, asked Branstad if he would be "the representative for ethanol" in the Trump Administration. "One of my new assignments is going to get more ethanol and DDGs sold in China," Branstad said as the two talked during a meeting of the state executive council. (Source: Radio Iowa)*

> China Suspends Research Licenses Amid GMO Testing Violations: *China has suspended the trial licenses for 11 research institutes that were found to be conducting field trials of genetically modified corn, rice and sugarcane, none of which were authorized by the ag ministry. The institutions include research bodies in the northeast provinces of Liaoning and Jilin, southern provinces of Hunan, Jiangxi, Fujian and Guangxi, the country's top sugarcane area. The illegal practices were discovered after the ministry's nationwide investigation into 93 institutions across 30 provinces in 2016. The offending institutions are now disqualified from conducting future trials.*

> Origin Agritech and DuPont Pioneer Sign Agreement: *Origin Agritech and DuPont Pioneer have reached a tentative agreement in which Origin will gain access to non-GM corn seed products from Dupont. Origin anticipates having commercial seed products available for sale in U.S. Market for spring 2017 planting. Financial details of the deal have not yet been disclosed. In April 2016, DuPont and Origin had agreed to develop new seed technologies in China for the Chinese farmers together. The latest agreement supports Origin's progress in launching its North America growth platform, Pillar III, which will be focused on serving non-GM/Organic markets. The company will be providing farmers in the U.S. with these products via a digitally enabled route. (Source: Nasdaq)*

> Amazon Delivered A Record 2 Billion Items In 2016: *Amazon.com Inc. AMZN, +0.44% said Wednesday its Fulfillment by Amazon (FBA) service delivered a record more than 2 billion items for sellers worldwide in 2016. Items shipped by FBA rose 50% in the holiday season, while deliveries to prime members numbered in the millions. The online retailer said active sellers using the FBA service increased more than 70% in 2016, and units shipped grew more than 80% outside the U.S. The number of sellers that reached*

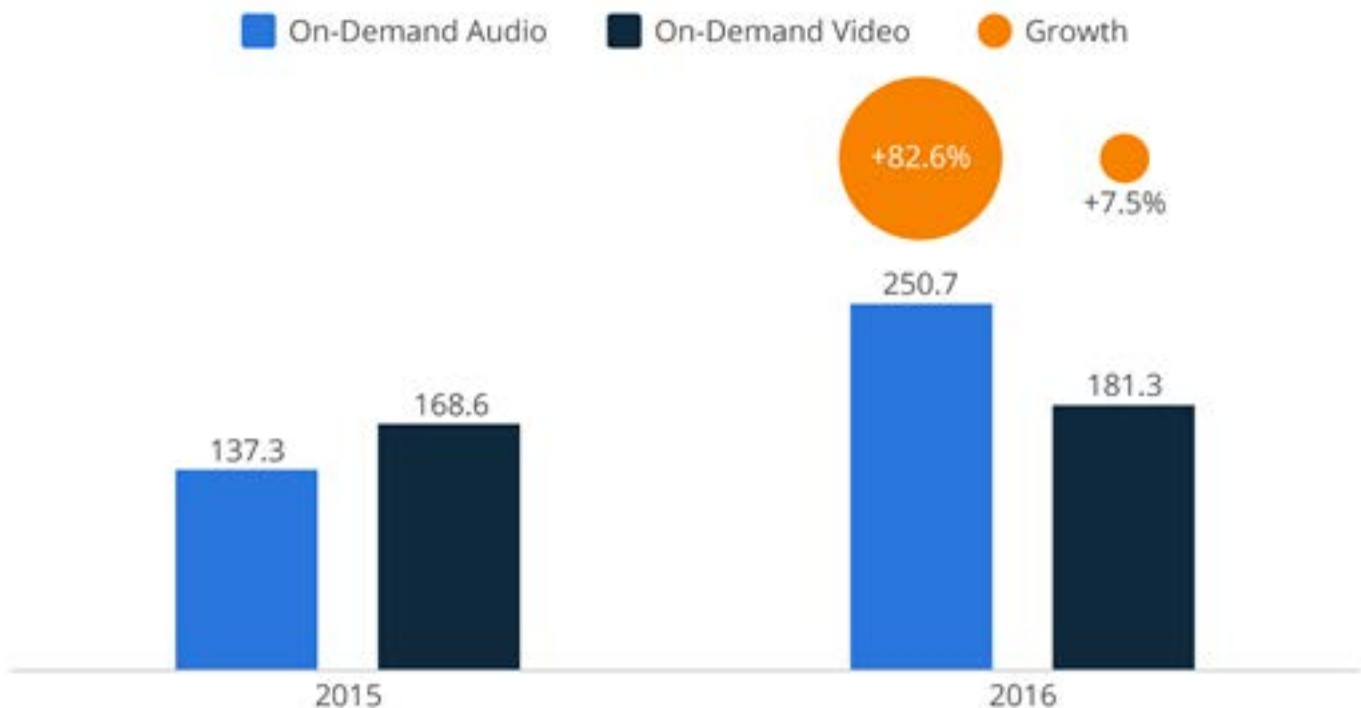
\$100,000 in sales rose by 30%. The company estimates that sellers have created more than 600,000 new jobs outside of Amazon. (Source: MarketWatch)

> **Why Companies Want In On The Music Streaming Market:** Competition in the music streaming space has intensified in recent years, with Apple, Amazon, and Google all launching their own services to compete against upstarts like Spotify. One simple reason for this is the on-demand music streaming market's mind-boggling pace of growth. According to BuzzAngle, the number of on-demand audio consumption jumped a whopping 82.6% year-over-year in 2016 to reach 250 billion total streams. That's a much bigger increase than the total number of on-demand video streams, which went up just 7.5% year-over-year. What's perhaps more interesting is that the streaming growth came at the expense of album and song sales, which each dropped 15% and 24% from the previous year, respectively. Don't expect a slow down any time soon: Streaming will grow to 50% of the global music market by mid-2019 and to 80% in 2025, according to Macquarie. (Source: Business Insider)

Tech Chart of the Day

Audio Streaming's Stunning Resurgence

Number of on-demand audio & video streams in the U.S. in 2015 & 2016 (billions)





Southeast South Dakota - *Getting ready to hop in truck and head to Vermillion for the Farm Show. We got a good 1.5" of rain a couple of days ago and washed away the snow that was remaining. I am an agronomist with a seed company as well as a farmer. We are definitely seeing more plans for greater soybean acres and less corn as everyone struggles penciling in profits with corn. I've seen a few of our big boys in the area exit the game after they couldn't negotiate the rental agreements they were seeking. Going rates currently run between \$260 - \$280. They were bidding at \$200 and it wasn't accepted so the equipment is being sold and the guys are retiring. Can't wait to see the USDA report in a week.*

Central Missouri - *We finished up our corn harvest the first week or two into December. It had a little break in the middle with some rains but the weather at the end of harvest was pretty good. We are running trucks every day, hauling to fill contracts that we did earlier in the year. Most fields looked great from the road but once you got in them there were issues. The crop was just too wet too long this year. Our agronomist thought we may have had an over abundance of rain that just didn't let the corn develop properly. The yields definitely reflected that issue with yields only 150bpa to 160bpa for our whole farm average. We did not have many fields that produced corn that made 200bpa or above. We have seen trend line creep up the last 2 or 3 years but this year we took a step back. The beans did not see a bad yield hit like corn. Our beans made right at 57bpa. We have quite a few beans sold north of \$10, so those will be profitable at those levels. We are debating the rotation right now. Might have a few more bean acres but nothing dramatic, and really those are more a result of our normal rotation.*

South western Ontario - *I'm kind of curious to know what kind of fertilizer program others are using on their soybeans. I have low p and k, so I know I really need to start putting more fertilizer on, especially potash. I'm thinking about just broadcasting first thing in the spring and running the disc a couple of times over it before seeding with my old Massey 33 drill. I will probably use co-ops spreader or maybe my little 3 point Vicon spreader. It seems like the general consensus is that fertilizing in furrow will kill germination on beans. The co-op's ag guy said a little bit in furrow on my soil will help, so I might do a test plot to see.*



Argentina Soybean Crop Disrupted by Adverse Weather: *With recent heavy rains and localized flooding, Argentina has taken center stage in South America. Argentina has been hard to categorize this growing season. The weather during October was very wet only to be followed by dryer weather during November and the first half of December. It has now turned wet again with heavy rains over the holidays with more rain in the forecast. According to Soybean & Corn Advisor, it is hard to get accurate information concerning the extent of the flooding due to the holidays, but they cite one report that mentioned 450,000 hectares had been declared a state of emergency. "The area where the flooding occurred is a mixture of row crops and pastures, but we do not know how many hectares of soybeans or corn have been impacted." Additionally, there are still about 3 million hectares of soybeans left to be planted, and the consultancy says there's a strong possibility that not all of that will make it into the ground. Read more at [Corn & Soybean Digest](#). As always some of the best South American insight in the industry!*

China's \$26 Trillion Commodity Binge: *Chinese investors traded a record volume of commodity futures last year as speculators poured in and out of the market on bets that shortages are looming. Chinese investors, flush with credit and hunting for returns, piled into commodities futures last year, spurred by bets that the government's efforts to cut industrial capacity would lead to shortages of raw materials. They charged into markets several times in 2016 and bought everything from iron ore to cotton, driving up prices and stoking fears of a bubble. Authorities introduced curbs on excessive speculation to quell the mania. During the year, prices of everything from steel to coal, soymeal and zinc surged to multi-year highs in China and in some cases record high levels. Read more from [Bloomberg](#).*

Musk Brother Just Opened A Shipping Container Farm Compound: *Kimbal Musk (brother of Elon) is trying to change the way we eat by creating what he calls a "real food revolution." For over a decade, he has run two restaurant chains, The Kitchen and Next Door, which serve dishes made strictly with locally-sourced meat and veggies. In 2011, he started a nonprofit program that has installed "Learning Gardens" in over 300 schools, with the intention of teaching kids about agriculture. In early November, Musk and fellow entrepreneur Tobias Peggs launched Square Roots, an urban farming incubator program in Brooklyn, New York. The setup consists of 10 steel shipping container farms where young entrepreneurs work to develop vertical farming startups. Business Insider has pics from a tour took and more details about the startup [HERE](#).*

Neuroscience Confirms To Be Truly Happy, You Always Need Something More: *What's the sign of a life well lived? If you were to judge by LinkedIn resumes alone, you might be impressed by prestigious job titles and accolades. But in person, the importance of these formal achievements quickly fades away. Regardless of career success, there can*

be something very dispiriting, almost lifeless, about someone who moves without strife through the ranks of their law firm. Nobody's deepest yearning is to be a decently-salaried professional whose only goal is to get a table at a trendy restaurant. Whether we're striving for a new job, more meaningful relationships, or personal enlightenment, we need to actively want something more in order to live well. In fact, neuroscience shows that the act of seeking itself, rather than the goals we realize, is key to satisfaction. Read more from [Quartz](#).

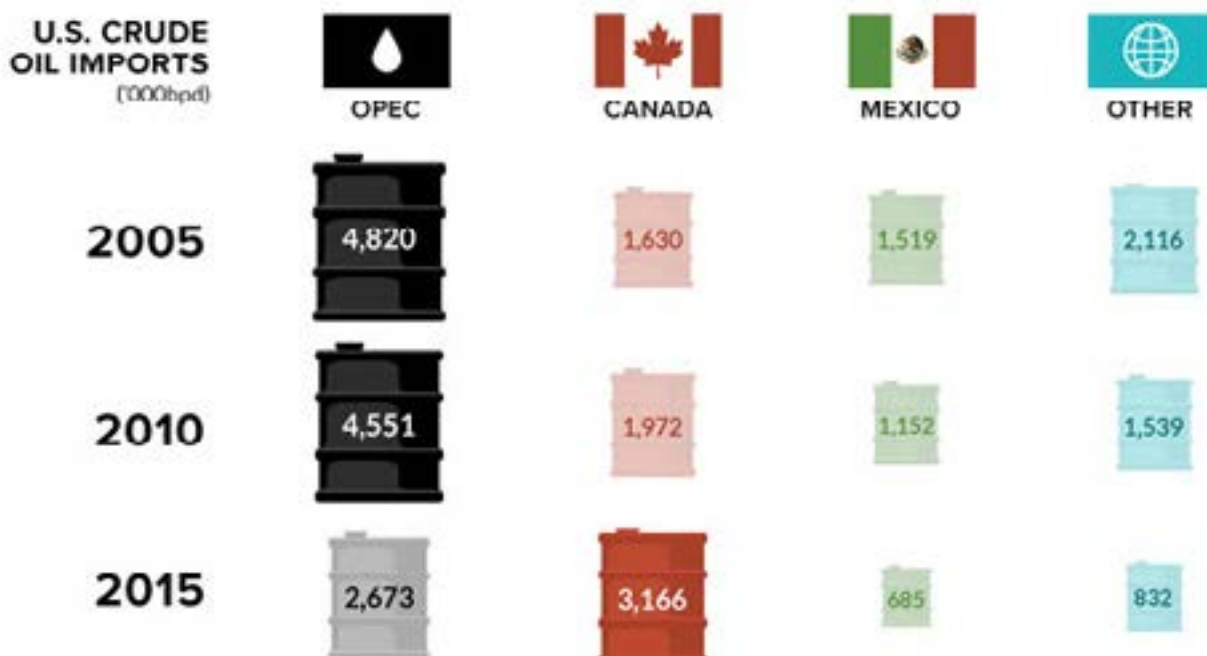
Don't Carry These 5 Things in Your Wallet: Most of us have been there, that moment when you start to panic because you can't find your wallet. It's an unfortunate situation that for many, means a big headache. Although it can be difficult to keep what you carry in your wallet to a minimum, it can certainly save you time and money should you lose it. Here are 5 things you should never carry in your wallet: Click [HERE](#)

The Changing Anatomy of U.S. Oil Imports Over the Last Decade: OPEC was once a name that made world leaders shake in their boots. In the early 1970s, the infamous oil cartel controlled more than 50% of global market share. The power of the cartel was also clear – in response to the Yom Kippur War of 1973, many OPEC countries (that were a part of OAPEC – the Organization for Arab Petroleum Exporting Countries) initiated production cuts and an oil embargo against Western countries. Oil prices quadrupled from \$3 to \$12, and OPEC producers raked in the cash. Meanwhile, the West was in a panic. Emergency energy rations were imposed, currencies were devalued, gasoline sales were restricted, and Sunday driving was banned in seven European countries. The organization still has some influence, though it seems to be harder to come by. It seems the cartel's peak influence is in the rear-view mirror due to several external factors. Read more from [Visual Capitalist](#).

Chart of the Week

THE CHANGING ANATOMY OF U.S. OIL IMPORTS

In just 10 short years, Canada has surpassed the once mighty OPEC



U.S. CRUDE OIL PRODUCTION

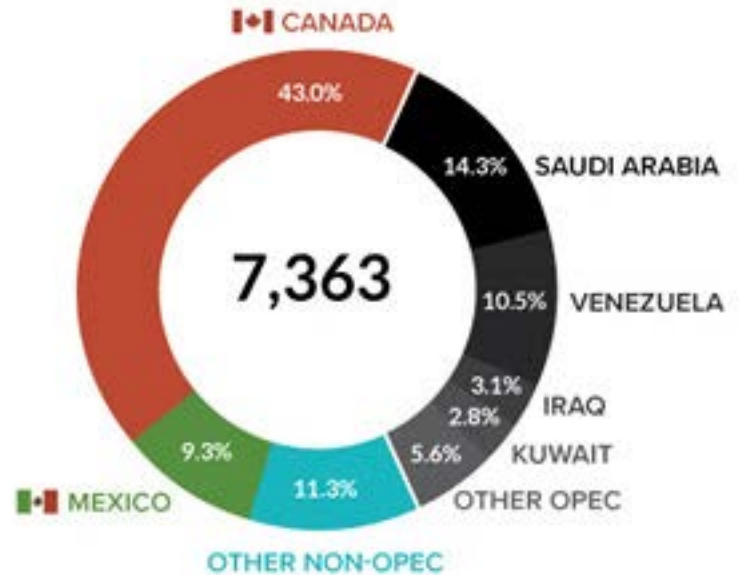
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U.S. CRUDE OIL IMPORTS

('000bpd, 2015)

NON-OPEC 63.7% 36.3% OPEC



Source: EIA

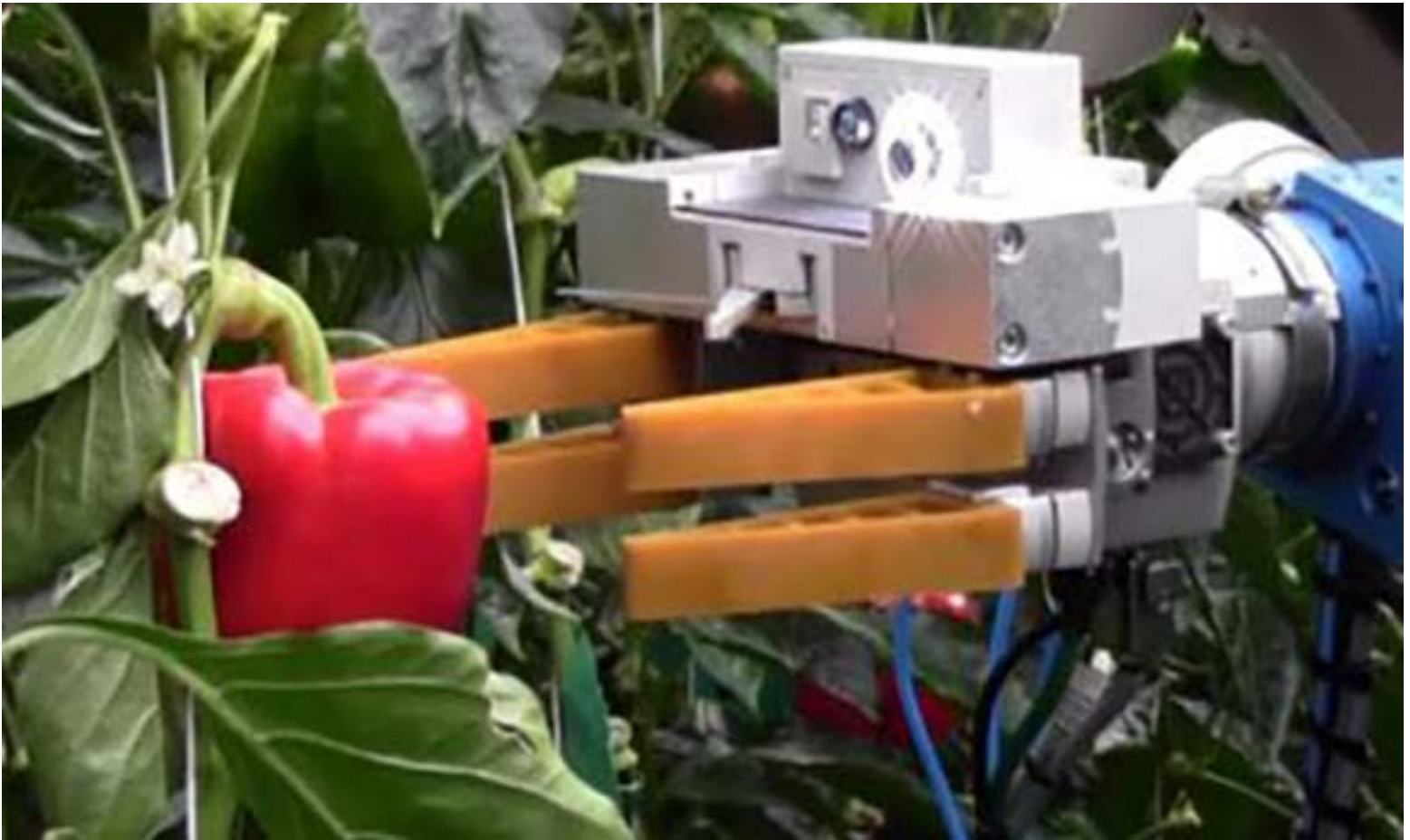
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\$3 Million In Public Funding Being Made Available For Robotics Research in Ag

With each year of investment in agricultural robotic research we learn more about how humans benefit from automation in the field. These technologies are working to help meet farm labor needs and make farming safer, more efficient and more profitable for the U.S. producer. Nobody understands this better than the National Robotics Initiative (NRI), a federal research partnership that includes NIFA, the National Science Foundation (NSF), National Aeronautics and Space Administration (NASA), Department of Defense and Department of Energy. From what I understand they are making \$3 million available for robotics research, application and education for agricultural systems that benefit consumers and rural communities. Ultimately, the goal of the NRI program is to speed the development and use of robots that work alongside or cooperatively with people in agriculture. This latest funding opportunity supports research on the scalability and variety of collaborative human-robot (co-robot) interactions. Basically, they want to study how robot/human teams work together in the field and understand the long-term social, behavioral, and economic implications of co-robots across all areas of human activity. Furthermore, NIFA is encouraging robotics research, applications and education to enhance agricultural production, processing, and distribution systems that benefit consumers and rural communities. NIFA is considering projects comprising of budgets of approximately \$150,000 to \$300,000 per year in total costs, and durations of two to five years. Eligible applicants

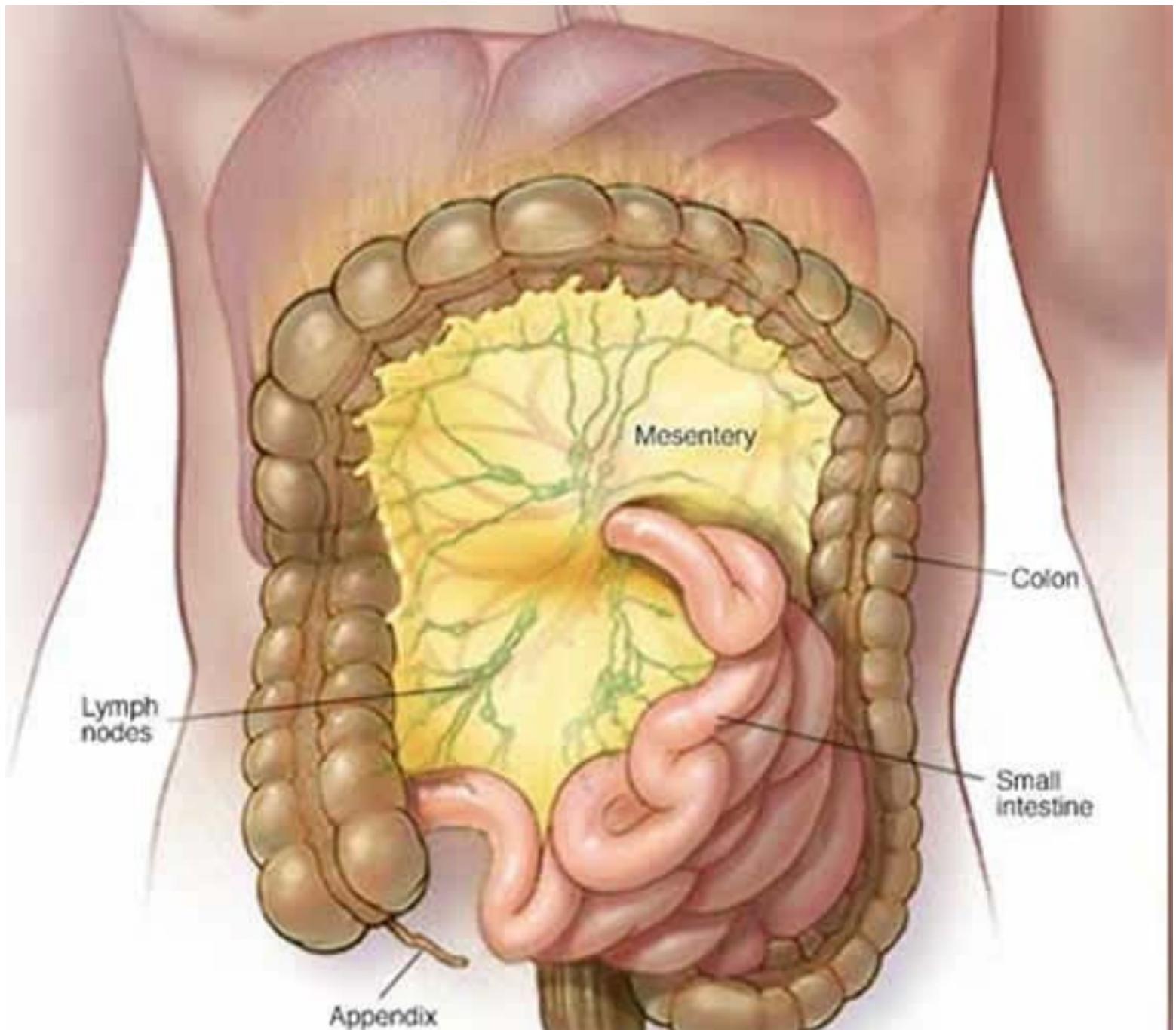
include state agricultural experiment stations; colleges and universities; other research institutions; federal agencies; corporations; and individuals who are U.S. citizens, nationals, or permanent residents. Foreign and international organizations are not eligible. The deadline for applications is 5 p.m. on Feb. 2, 2017. See the [request for applications](#) for more detail. To date, NIFA has funded more than \$15 million for research in Robotics. Previous projects include University of Minnesota work to develop algorithms that allow off-the-shelf robotics to work autonomously in complex environments such as apple orchards. Another project, led by the University of Pennsylvania, uses human-operated drones to produce high-resolution, multidimensional maps to improve the efficiency and yield of farm operations. Since 2009, USDA has invested \$19 billion in research which has resulted in 883 patent applications filed, 405 patents issued and 1,151 new inventions disclosures covering a wide range of topics and discoveries. Change is certainly coming to the farm! (Source: USDA NIFA)



New Human Organ Identified... Could be a Game Changer for some Diseases

Scientists have just determined that we have one more organ than previously thought. It is not new to the human body - in fact, you could say it's been hiding in plain sight for centuries. However, just recently researchers have come to a deep enough understanding of the tiny structure in the human digestive system to confidently reclassify it as a free-standing "organ". The new organ is being called the "mesentery". From an elementary perspective it's explained as the fold of membrane that connects the intestine to the abdomen, which was previously thought to be a series of separate membranes. Instead, Irish researchers are saying is incorrect as it's really one continuous organ. Their research has since been peer reviewed and is now being accepted across the medical community. In fact, Gray's Anatomy, the world's best-known series of medical textbooks, has added

the new definition. Researchers still don't seem real certain about what the "mesentery" does outside of acting as a connective layer, and more research is being completed. Even so, there's a lot of excitement surrounding the discovery as it could lead to a whole new field of science which in turn could lead to a greater understanding and treatment of a host of abdominal diseases. Organ's are very distinct from other body tissues in that they are "self-contained" and serve a specific purpose - like the heart pumps blood and the lungs circulate air. As the "mesentery" has never been researched as an organ, there is no telling what can be learned or treatments that might lead to other cures. One of the key things will be fully determining its function, which will then allow scientists to determine abnormal function and possibly rethinking the cause behind some diseases. It could also hopefully lead to more effective and less invasive treatments, and all around better outcomes for the patients suffering from various health complications. Right now, scientists are trying to determine whether it is part of the intestinal, vascular, endocrine, cardiovascular, or immunological systems - or even plays an important role in all of them. It's pretty exciting that even after hundreds of years of medical advancement, the human body is still hiding some surprises!



105-Year-Old Cyclist Rides To A World Record

Once again confirming it's never too late to start, Robert Marchand set a new world record Wednesday when he cycled 14 miles in an hour at the age of 105. From what I understand, Marchand completed 92 laps yesterday at the Velodrome National, an indoor track near Paris that's used for elite cycling events. He received a standing ovation from people in the crowd, who chanted "Robert, Robert" as he rolled to a stop. For what it's worth, the best cyclist in the world rode 34 miles in one hour back in 2015. The AP has this on Marchand's background: Marchand, a former firefighter who was born in 1911 in the northern town of Amiens, has lived through two world wars. He led an eventful life that took him to Venezuela, where he worked as a truck driver near the end of the 1940s. He then moved to Canada and became a lumberjack for a while. "Back in France in the 1960s, Marchand made a living through various jobs that left him with no time to practice sports. "He finally took up his bike again when he was 68 years old and began a series of cycling feats. "The diminutive Marchand — he is 1.52 meters (5-foot) tall and weighs 52 kilograms (115 pounds) — rode from Bordeaux to Paris, and Paris to Roubaix several times. He also cycled to Moscow from Paris in 1992. "Ten years later, he set the record for someone over the age of 100 riding 100 kilometers (62 miles)." So what's his secret? Marchand's coach and friend Gerard Mistler told the AP it's simple: He eats fruits and vegetables, doesn't smoke, drinks wine only on occasion, goes to bed at 9 p.m. and exercises every day. In competitive spirit, at the end of the race, Marchand said, "I could have done better.."



CASH SALES & HEDGING TOTALS

CORN 2015 CROP

100% SOLD
0% HEDGED
0% Cash Remaining



SOYBEANS 2015 CROP

100% SOLD
0% HEDGED
0% Cash Remaining



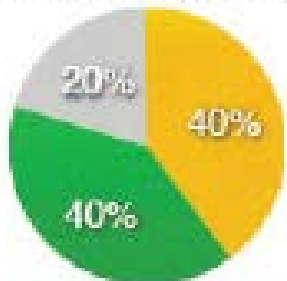
WHEAT 2015 CROP

100% SOLD
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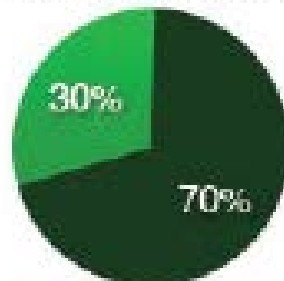
CORN 2016 CROP

40% SOLD
40% HEDGED
20% UNPROTECTED



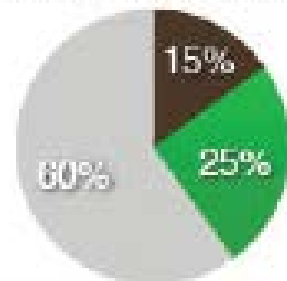
SOYBEANS 2016 CROP

70% SOLD
30% HEDGED
0% UNPROTECTED



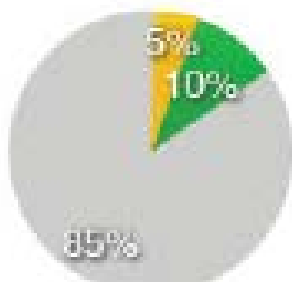
WHEAT 2016 CROP

15% SOLD
25% HEDGED
60% UNPROTECTED



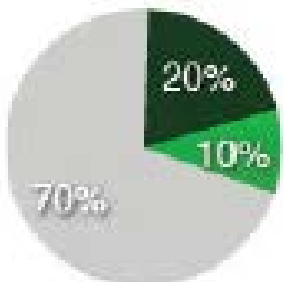
CORN 2017 CROP

5% SOLD
10% HEDGED
85% UNPROTECTED



SOYBEANS 2017 CROP

20% SOLD
10% HEDGED
70% UNPROTECTED



WHEAT 2017 CROP

0% SOLD
10% HEDGED
90% UNPROTECTED

