Keynote Address of Commissioner Brian Quintenz before the 2018 Agricultural Commodity Futures Conference

The Weed Garden

April 6, 2018

Thank you for that kind introduction. Before I begin, let me make the usual disclaimer and quickly say that the views contained in this speech are my own and do not represent the views of the Commodity Futures Trading Commission (CFTC or Commission).

When I first heard that the Commission was partnering with the Center for Risk Management Education and Research at Kansas State University to host "Protecting America's Agricultural Markets: An Agricultural Commodity Futures Conference," I was delighted. The conference is the first-of-its-kind, and hopefully the first of many conferences, that focuses on how our state-of-the-art futures markets impact America's agricultural community. Given the fundamental transformation that both the commodity markets and the agricultural futures market have undergone over the past few years, it is critical to have conferences like this one, where farmers, industry, and academia can come together to share their insights about liquidity, market developments, and the integrity of the marketplace. I am honored to be with you today.

Our Chairman started yesterday with a story about Winston Churchill. I am going to begin with something much smaller and less grand: a personal story about Newark Street in Washington D.C. That is where, for the past two years, I have had a small community garden plot. After what seemed like an incredible amount of work to clear out the overgrowth due to the past occupant's neglect, I planted my first crop. To say it was unsuccessful is a massive understatement. In fact, after two years of ownership, I have come to one strong conclusion: unless there is a market for weeds, I am not cut out to be a farmer. In fact, as far as weeds go versus the seeds and bulbs that I have tried to cultivate, it is amazing to see how much I can grow of what I do not want and how little I can grow of what I do. If my 15x15 foot area takes this much attention, it is hard to fathom how much effort a 1,000 acre farm requires. But it is not hard to fathom that America's farmers and ranchers are up to the challenge.

I used to work on Capitol Hill as a policy aide. When you work in a Congressional office as a policy aide, you cover a number of different issues—some with which you are quite familiar, and some with which you are not. One of the areas I covered, and with which I was not that familiar, was agriculture. But it was a fascinating experience—as I have told many friends and strangers since leaving the Hill, the farmers with whom I met on Capitol Hill were some of the most impressive people I have ever encountered. And with all due respect to my very distinguished colleagues at the CFTC, that remains true to this day.

Yesterday, Dean Floros was discussing the need to train today's college students for the possibility of having six or seven different professions over their career. I believe

that has always been true of America's farmers—they are economists, they are accountants, they are traders. They are marketers, logistics experts, conservationists, and land stewards. They are scientists: ecologists, biologists, chemists, and botanists. And, if you have ever shaken a farmer's or rancher's hand, you know that many are also physical laborers. When I say that I think America's farmers are an impressive bunch, I do not say that just to get into everyone's good graces. I say it because I have seen it, I know it, and it is true.

The moral of my community garden story is that in order to grow something, in order to build something, it is not enough to simply plant seeds in the ground, walk away, and wait impatiently for them to mature. Instead, it takes constant vigilance, care, hard work, patience, ingenuity. America's farmers and ranchers tirelessly dedicate themselves to the future success of their farms and ranches. So must we, the regulators, as well as the futures exchanges and market intermediaries, work tirelessly to ensure the vibrancy of our futures market, so that it remains a reliable, efficient hedging tool for the Ag industry and so that all of the intelligence and sweat which farmers and ranchers put into their product does not go to waste.

Understanding the Needs of American Farmers and Ranchers

I grew up in the Midwest and in close proximity to American agriculture – close enough to have always had an appreciation for the important role that agriculture plays in the economy. And while I visited some farmers in our Congressional District when I was a policy aide, I did not have much first-hand experience with farming before I became a CFTC Commissioner. As I prepared for the role of CFTC Commissioner, the agency's history of protecting America's farmers and ranchers stood out quite clearly for me. It is those farmers and ranchers who depend upon liquid, well-functioning agricultural futures and swaps markets to hedge production risks. One of my first acts as Commissioner was to travel to Kansas and Missouri where I met with farmers, grain elevators, processors, and ranchers to learn about their businesses.

Since that time, I have also visited Tennessee, Mississippi, Louisiana, Arkansas, and Texas to meet with Ag producers, cooperatives, energy producers, and manufacturers to learn first-hand about their experiences with our futures and swaps markets. I have been consistently impressed and humbled by their work ethic, sophistication, and dedication to growing their businesses, many of which are family-owned, in the face of historically low commodity prices and intense international competition. Indeed, the combination of steep declines in the prices of physical commodities and global supply and demand forces has put unrelenting pressure on America's farmers to increase yields, cut costs, and drive efficiencies to remain profitable. For the fifth consecutive year, the American farmer is expected to see a decline in net farm income.[1]

And yet, despite these challenges, America's farmers remain the most productive in the world. The agricultural output per U.S. farm has more than doubled since 1948.[2] In 2015, output from U.S. farms contributed $136.7 billion to the American economy—about one percent of GDP.[3] In 2016, direct on-farm employment accounted for about 2.6 million jobs.[4] Agriculture-related industries, like forestry or food manufacturing, accounted for another 3.3 million jobs.[5] This expansion has been spurred by American technological innovation and ingenuity. Since 2000, many crops have

experienced upwards of a 30% yield increase per acre.[6] Perhaps this phenomenal growth in the face of significant challenges should be unsurprising; as I recently heard someone state: In the city, you work until quitting time. On the farm, you work until the job is finished.

Well, that saying is undoubtedly true of the American farmer and rancher. And that is why it is incumbent on the CFTC now more than ever to ensure that the futures markets continue to work for Ag producers as they have for over 100 years. Faced with slimmer profit margins and intense competition, the ability of our famers to manage risk nimbly and effectively has never been more important to their survival and long-term health. During my visits with Ag producers and cooperatives, I asked about their experiences using the futures markets. Many stated they largely continued to use the futures markets as they had in the past. But some expressed that they no longer felt comfortable using the futures market to hedge their risks. Instead, these producers felt like the market had become too complex for them.

The CFTC has five advisory committees which solicit the input of outside experts on different topic areas to advise the agency on developments, risks, and regulatory issues. In fact, the Agricultural Advisory Committee had its first meeting since 2015 yesterday morning in this building. I have the privilege of sponsoring the Technology Advisory Committee (TAC)—we had our first meeting in two years back in February, with one result being the recommendation of forming a subcommittee to explore the complexities and risks associated with the modern electronic trading environment. I was interested to hear from some of this Conference's participants yesterday about their concerns regarding market structure issues, from matching engines and order book visibility, to the amount of message traffic and the timing effect of speculation-induced price moves. I would welcome the TAC's automated trading subcommittee's exploration of these topics.

During my meetings with farmers and ranchers, I was also concerned to hear of isolated instances where producers were forced to liquidate their hedge positions because they were unable to secure financing to meet their margin calls. I understand that historically low commodity prices have put strain on farm equity and made it more difficult for some to receive extensions of credit. Although the CFTC has no role to play over global commodity prices, the agency's authority over futures exchanges gives it tools to promote convergence between the futures and cash markets, so that hedgers can trust that amounts lost on futures hedge positions will be offset with gains in the cash markets.

I take the concerns I heard seriously. I am committed to working with the agricultural community and the exchanges to strengthen the trust that Ag producers have in our futures markets. I know this is also a priority for Chairman Christopher Giancarlo, who has asked the CFTC's Office of Customer Education and Outreach to help assess whether there are information gaps that may prevent the next generation of farmers and ranchers from accessing the futures market.[7] I support this effort. Additional information and transparency about the mechanics of the futures market will boost knowledgeable participation. More so than many other risk management techniques, futures contracts enable farmers to execute precise hedges highly correlated to cash

market prices. I hope that through continued outreach and education, we will continue to be responsive to the needs and concerns of smaller Ag producers.

Market Integrity and Vigilant Oversight

Market integrity is essential to ensuring that Ag producers and cooperatives feel comfortable participating in our futures market. One of the CFTC's core duties is to promote futures markets that reflect supply and demand fundamentals and remain free from fraud and market manipulation.[8] In order to have well-functioning, efficient markets, the terms of the futures contracts themselves must be sound. This is why the CFTC requires all futures exchanges to monitor the terms and conditions of any futures contract that it offers.[9] In particular, exchanges monitor to ensure that the terms of futures contracts keep pace with developments in the underlying cash markets and that futures and cash price convergence occurs.[10] Without consistent convergence, market participants will not trust the contract to provide a reliable hedge, with the long term result that the futures markets will no longer provide a means of price discovery and risk mitigation.

While it is not the CFTC's role to design futures contracts – that job belongs to the futures exchanges – it is the CFTC's responsibility to oversee the exchanges and ensure they are proactively and appropriately monitoring the performance of their contracts. If problems arise, CFTC staff work with the exchanges and market participants to resolve any issues. We have seen this most recently with exchanges adjusting the design of certain contracts by adding or removing delivery points, in the case of the CME Live Cattle futures contract, or implementing a market-based storage rate, in the case of CBOT's Hard Red Winter Wheat contract. Of course, these modifications are part of an ongoing, iterative review process. I encourage market participants to continue voicing their concerns and experiences, both good and bad, to the exchanges and CFTC staff. I know the Commission and the exchanges are committed to improving contracts so they perform as intended.

FCM Concentration

Another crucial aspect of ensuring farmers and ranchers continue to use the futures markets to hedge risk is access. Futures commission merchants (FCMs) are the gateway to participation in our futures markets. Over the past 10 years, the FCM sector has consolidated at an alarming rate. Just prior to the 2008 financial crisis, there were 154 registered FCMs;[11] today there are only 55 FCMs actively carrying customer accounts.[12] That is a 64% decrease in the number of FCMs available to facilitate customer access to the futures markets. Moreover, within this ever-shrinking population of FCMs, clearing business is becoming increasingly concentrated. As of 2017, the top ten FCMs clearing futures and options for customers controlled approximately 70% of the business.[13]

There are many reasons behind this mass exodus and the increasing concentration in the FCM industry: persistent, historically low interest rates, increasing regulatory costs, and the impact of the supplementary leverage ratio (SLR), to name a few.[14] This confluence of factors has a uniquely harmful impact on Ag producers and processors, who have found that some of the remaining larger FCMs are limiting the services they offer to smaller, less-active clients. I am concerned that without a robust, healthy FCM

industry, smaller end-users will lose their ability to hedge their risks in our futures markets.

In the past, I have spoken at length about how the SLR penalizes banks' provision of clearing services by treating segregated customer margin as an exposure of the bank.[15] I believe that if the SLR calculation is not rationalized to accurately reflect the risk-reducing nature of segregated margin, the health of the U.S. clearing industry will continue to be jeopardized. For example, there are now real concerns about the viability of porting customer positions in the event of a clearing member default, given the punitive capital charges the accepting FCM would face.

I am encouraged by the growing momentum to address this issue and ensure that client clearing services are encouraged, rather than penalized.[16] I stand ready to help in any way I can.

Leading the Way: Innovation in the Agriculture Markets

Agricultural technology, or AgTech, is paving the way for America's next generation of farmers to feed the world. Today, the average American farm feeds 165 people annually.[17] During the next 30 years, the global population is expected to increase to 9.7 billion, which means the world's farmers will have to grow about 70 percent more food than what is currently produced.[18] Technological innovations are occurring now that will enable this growth. In particular, blockchain technology has demonstrated its ability to modernize the burdensome, paper-based, back office operations of the Ag supply chain.

Using blockchain for supply chain management helps companies make decisions that improve the quality, yields, and profitability of their crops. For example, blockchain can be used to record measurements of environmental factors so that farmers can make informed decisions about irrigation, fertilization, or harvesting.[19] Introducing real-time transparency into the supply chain can also help farmers optimize their profitability by enabling them to better set their own prices and determine how much of their products they wish to sell in certain markets.

From a transactional perspective, blockchain also has the potential to ensure that payments occur simultaneously with title transfers. Earlier this year, Louis Dreyfus Company completed the first agricultural deal using blockchain. The transaction involved the sale of roughly 60,000 tonnes of U.S. soybeans to China. Louis Drefyus noted that the elimination of paperwork involving letters of credit and inspection documents resulted in a processing time that was about a fifth of their paper-based process.[20]

Similarly, this year an agriculture blockchain start-up in Australia received a $5.5 million investment for a private blockchain that records grain transactions and supply movements. [21]

The blockchain has over 1,300 users and has facilitated transactions involving $1.5 million tonnes of grain and $360 million in payments.

Blockchain also has the potential to provide consumers with knowledge about the origins and journey of their food from farm to table that before now has been impossible. In a time when consumers are calling for greater transparency and food

safety requirements are increasingly stringent, blockchain can help companies track food more efficiently than the existing technologies. This past Thanksgiving, Cargill tested blockchain technology for this purpose on a smaller scale by using blockchain to enable families to track their turkeys back to their original farms and read comments from the farmers themselves.[22]

AgTech holds promise in other areas as well. Recently, a company used data analytics and facial recognition to track and monitor cows' living conditions and behavior, with the result that farms were able to increase milk production by 11.7 percent while decreasing costs.[23] Other companies are investing in artificial intelligence to teach machines how to farm by identifying patterns in data that could predict crop threats like pests and disease.[24] Although agriculture may be one of the world's oldest industries, it certainly remains on the frontline of innovation and experimentation today.

Conclusion

In closing, for over 150 years, the U.S. futures markets have enabled farmers and ranchers to hedge their commercial risk in the most liquid, competitive, and vibrant futures market in the world. This is no small accomplishment. It has taken generations of hard-working, creative, and aspirational thinkers to build today's futures industry. I am committed to ensuring this longstanding tradition continues for America's next generation of farmers.

---

[1] U.S. Dep't of Agric., 2018 Farm Sector Income Forecast,https://www.ers.usda.gov/topics/farm-economy/farm-sector-income-finances/farm-sector-income-forecast/. In 2018, the net farm income is forecast to decrease $4.3 billion (6.7 percent) to $59.5 billion, which is the lowest level in nominal terms since 2006.

[2] U.S. Dep't of Agric., Economic Research Service, Summary of Recent Findings,https://www.ers.usda.gov/data-products/agricultural-productivity-in-the-us/summary-of-recent-findings/.

[3] U.S. Dep't of Agric., Economic Research Service, Ag and Food Sectors and the Economy,https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/ag-and-food-sectors-and-the-economy/.

[4] U.S. Dep't of Agric., Ag and Food Sectors and the Economy, https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/ag-and-food-sectors-and-the-economy/.

[5] U.S. Dep't of Agric., Ag and Food Sectors and the Economy, https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/ag-and-food-sectors-and-the-economy/.

[6] *See* U.S. Dep't of Agric., Nat'l Agric. Statistics Service, Crop Production Annual Summary (1.12.2018), http://usda.mannlib.cornell.edu/usda/current/CropProdSu/CropProdSu-01-12-2018.pdfand Crop Production Annual Summary (1.12.2000),http://usda.mannlib.cornell.edu/usda/nass/CropProdSu//2000s/2000/CropProdSu-01-12-2000.pdf.

[7] *Remarks of Acting Chairman J. Christopher Giancarlo on Comments before the Montana Ag Summit* (June 1, 2017), https://www.cftc.gov/PressRoom/SpeechesTestimony/opagiancarlo-23a. For more information about the Office, please seehttps://www.cftc.gov/ConsumerProtection/Resources/index.htm.

[8] CEA Section 3(a) (noting that transactions subject to the CEA "are affected with a national public interest by providing a means for managing and assuming price risks, discovering prices, or disseminating pricing information through trading in liquid, fair and financially secure trading facilities"); CEA Section 3(b) ("[I]t is further the purpose of this Act to deter and prevent price manipulation or any

other disruptions to market integrity; to ensure the financial integrity of all transactions subject to this Act and the avoidance of systemic risk…").

[9] 17 C.F.R. § 38.252.

[10] 17 C.F.R. § 38.252. *See also* Core Principles and Other Requirements for Designated Contracts Markets; Final Rule, 77 Fed. Reg. 36612, 36636 (June 19, 2012) ("The Commission is of the view that a DCM must monitor the performance of its contracts to ensure they continue to perform their economic function.").

[11] CFTC, Selected FCM Financial Data as of December 31, 2007, https://www.cftc.gov/files/tm/fcm/fcmdata1207.pdf (excludes firms registered solely as retail foreign exchange dealers).

[12] CFTC, Selected FCM Financial Data as of January 31, 2018,https://www.cftc.gov/sites/default/files/idc/groups/public/%40financialdataforfcms/documents/file/fcmdata0118.pdf(excludes firms registered solely as retail foreign exchange dealers). Of the 63 FCMs registered with the Commission, only 55 hold customer funds required to be segregated under CEA Section 4d(a)(2).

[13] Percentage calculated using total customer segregated funds for futures and options as a proxy for total clearing activity. *See* FIA FCM Tracker, FCM Comparison Table, available athttps://fia.org/fcm-comparison-table.

[14] Joanne Morrison, *CFTC Examines FCM Consolidation*, MARKET VOICE: FIA'S MAGAZINE OF THE GLOBAL FUTURES, OPTIONS AND CLEARED SWAPS MARKETS, Nov. 15, 2015, https://marketvoice.fia.org/articles/cftc-examines-fcm-consolidation.

[15] Remarks of Commissioner Brian Quintenz before the Structured Finance Industry Group Vegas Conference (Feb. 26, 2018),https://www.cftc.gov/PressRoom/SpeechesTestimony/opaquintenz7; Keynote Remarks of Commissioner Brian Quintenz before the Federal Reserve Bank of Chicago's Fourth Annual Conference on CCP Risk Management (Oct. 17, 2017),https://www.cftc.gov/PressRoom/SpeechesTestimony/opaquintenz2.

[16] *See, e.g.,* Remarks by Randal K. Quarles, Vice Chairman of Supervision, Board of Governors of the Federal Reserve System at the ABA Banking Law Committee Annual Meeting (Jan. 19, 2018); Economic Growth, Regulatory Relief, and Consumer Protection Act, S. 2155, 115th Congress (allowing custodial banks to exclude funds held at central banks from the SLR calculation), https://www.congress.gov/115/bills/s2155/BILLS-115s2155es.pdf;https://www.congress.gov/bill/115th-congress/senate-bill/2155/text; H.R. 4659, 115th Congress (excluding initial client margin from inclusion in SLR),https://www.congress.gov/115/bills/hr4659/BILLS-115hr4659ih.pdf.; U.S. Treasury Report: "A Financial System that Creates Economic Opportunities: Capital Markets," October 6, 2017,https://www.treasury.gov/press-center/press-releases/Documents/A-Financial-System-Capital-Markets-FINAL-FINAL.pdf.

[17] American Farm Bureau Federation, Fast Facts about Agriculture,https://www.fb.org/newsroom/fast-facts.

[18] American Farm Bureau Federation, Fast Facts about Agriculture,https://www.fb.org/newsroom/fast-facts.

[19] *Analog Devices' Monitoring Initiative Aims to Improve Crop Quality and Yields and Boost Profitability of Local Farmers,* BUSINESS WIRE, Aug, 23, 2017.

[20] Emiko Terazono, *Agriculture Deal a First for Blockchain*, FIN. TIMES, Jan. 22, 2018.

[21] James Eyers, *Agriculture Blockchain Start-Up Raises $5.5M*, AFR ONLINE, Feb. 26, 2018.

[22] Nikhilesh De, *Turkeycoin? Food Giant Cargill Launches Blockchain Tracking Pilot*, COIN DESK, Oct. 26, 2017, https://www.coindesk.com/turkeychain-food-giant-cargill-launches-blockchain-tracking-pilot/.

[23] Mario Parker, *Cargill's Big Data Makes Happier—And More Productive—Cows*, BLOOMBERG, Sept. 12, 2017, https://www.bloomberg.com/news/articles/2017-09-12/cargill-data-helps-farmers-make-happier-cows-that-make-more-milk.

[24] Jacob Bunge, *Agriculture Giants Teach Computers to Farm,* WALL ST. J., Sept. 13, 2017,https://www.wsj.com/articles/leaf-recognition-technology-agriculture-digs-into-artificial-intelligence-1505300400.