

**Christopher G. Kennedy
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I want to thank John for that nice introduction and for the invitation to be with all of you today.

There are obviously many people in this room who know a lot more about the working relationship between big agriculture, big pharma, bioengineering, biotech and computational power and their relationship with the U of I and the State of Illinois than I do.

I stand before you not as an expert in the field but instead as a beneficiary of your work. I am here today to thank you for all that you have done for our state and for our country and for the help you have supplied which has benefited some of the organizations, like the University of Illinois, that I have been involved with.

In addition to thanking you, I want to ask you for your continued effort to strengthen the programs that already exist and to extend the partnership between the University and the Farm Bureau to new areas.

First let me say that, today, speaking at the Food & Agriculture Summit meeting is a great thrill for me.

In many ways, it represents the fulfillment of my greatest hopes as a young man to achieve the dream of contributing even in a small way to the efforts to feed people in the United States and around the world. Twenty five years ago, I dreamt of coming to Illinois to learn the fundamentals of food distribution in the United States so that I could find a way to work in the industry and to contribute to the fight against hunger.

As some of you may know, I am one of Bobby and Ethel Kennedy's eleven children. When I was in high school, my oldest brother, Joe Kennedy, started Citizens Energy. Citizens Energy was the first not-for-profit oil company founded in the United States. The idea of a transaction-based, market-oriented, not-for-profit was so new at the time that nobody quite knew how to describe it.

Citizens Energy would buy oil and then refine it. Citizens would sell off the byproduct of this process, products like gasoline and jet fuel, and they would be left with the home heating oil, which Citizens would then distribute to poor people throughout Massachusetts. The program became incredibly successful and spread throughout the country.

As a twenty-year old college student, I loved the idea. I wanted to be part of what I considered a movement to tie together the two great traditions of American values—free enterprise and a dedication to the common wealth.

I appreciate my own parents' dedication to public service, but I've always been inspired by my grandfather, Joseph P. Kennedy, who always made the most of American economic leadership. I loved the idea of conjuring up market forces to help alleviate social problems.

I wanted to go into the field, but I knew I didn't want to work for my oldest brother. Any of you who are part of a larger family will need no further explanation for this sentiment.

I was at Boston College at the time, and they developed the best Irish history department in the United States. I had always known the story that the Kennedys, like most Irish Catholics in America, came here as a result of the Irish potato famine in the mid-1800s. What I had not understood until I studied Irish history more thoroughly was that only 15% of the farmland in the 1840s was used for potatoes. The other 85% was being used for export crops or feed stocks. And despite great efforts from many good people, they could not overcome the economic, social and political constraints that would have allowed the island to feed its own population.

I decided to go into the food industry.

I spoke with a professor at Harvard at the time, Ray Goldberg, who had developed the Agribusiness Program at Harvard Business School in 1955. He told me that if I wanted to ever understand the food industry, I needed to work for a grain processor. This was 1985, and he went on to say that there were three great grain processors in the United States – Pillsbury, Cargill and Archer Daniels Midland, and that the ADM management team in the 1980s was the best of the bunch.

This was before the internet, and I found some sort of guide to corporate America. It listed the chairman's name, and in 1986, when I was about 22 years old, I called up Dwayne Andreas and asked for a job. He asked me why I wanted to work at ADM, and I told him I wanted to learn how ADM worked so that I could start a not-for-profit. He said, "So you want to put me out of business?"

I said, "I suppose so." He laughed and gave me an opportunity.

I arrived in downstate Illinois in the fall of 1986, after playing a role in the successful management of my brother Joe's Congressional campaign in Massachusetts, which was winding up after a successful victory in the fall of that year.

I moved from Boston, and arrived in Decatur. There were, of course, many differences. I was most confused by the fact that I had never before been in a town with two separate Main Streets.

Aside from that challenge, it was really a great experience.

I learned a lot about ADM, I learned a lot about the agricultural economy in our state, and I learned a lot about corruption in Illinois.

ADM quickly enrolled me in a training program they developed for me and one other executive. The other fellow and I would move around Illinois and the Midwest, working at various ADM facilities, trying to learn the business. I started in a small grain elevator in Mt. Auburn, just outside of Decatur, buying corn and soybeans from farmers, and I was moved to a larger elevator that bought corn and soybeans from small elevators, like the one I had been at the week before. Eventually, I ended up on a railhead and then at the giant ADM corn plant in Peoria. I still have nightmares from my time in Peoria, waking up in the middle of the night with the fear that I had sparked a fire, igniting the alcohol in the storage vats and the airborne corn dust in the plant, which in my dream resulted in blowing the central part of the state of Illinois and myself clear to the moon.

I spent some time in the wheat business in Salina, Kansas, and in Lincoln, Nebraska. I traded barge freight on the St. Louis Merchants Exchange, visited the export operations down in Louisiana and eventually ended up at the Board of Trade in Chicago.

Today in Chicago, the futures industry is dominated by high-speed trading firms. High-speed trading is completely reliant on matching the trade data from both parties, the buyer and the seller, to make sure they agree or match. The downtime between the trade's input and confirmation is called "the period of latency," and latency is the enemy of high-speed trading. Today, it is measured in fractions of a second.

When I was a runner at the Board of Trade 25 years ago, the latency period might have been two to three hours. The market would close around 1:00 in the afternoon. The computers would run to try to match trades, identifying instances in which one trader said that he had sold perhaps 10,000 bushels of corn at \$1.56 and another trader said he bought 156 bushels at \$10,000. In those days, this process for identifying out trades might take several hours.

During that downtime, there really wasn't much to do, so we engaged in what most 22-year olds did at the time with nothing to do in the middle of the day—we drank.

There was a small bar in the basement of the Board of Trade building, Ceres Cafe. As I mentioned earlier, there was another fellow in the ADM trading program, and by then, the two of us had ended up in Chicago. His name was Rick Carlson, and he was the most likable person I've ever met in my life. He looked a lot like former Senator John Culver from Iowa, which of course endeared him to me, but he was shorter, heavier and completely bald. On the Board of Trade, he acquired the nickname "Fester," based on his lookalike, Uncle Fester from the Addams Family. He was incredibly affable, and he could spark instant affection in anyone he met.

We would go down to the bar and bring some of the traders with us. Rick would buy the first round, and we'd start to pump the traders for information about how the market and the exchange worked. They would tell Rick anything; it was an incredible education.

I remember a discussion about bucket trading, which is sort of akin to forerunning, the idea that a trade would come into the floor and two of the traders would signal each other. They might consummate the transaction on the side of the pit at a price an eighth above

what the market was trading at and then settle up in a public manner in the middle of the pit, a couple of eighths above where the market had been trading, and then later they would split the profits.

These and other stories flowed from the mouths of other traders just as quickly as the cocktails flowed from the tap of the bar.

Months later, it would be revealed to everyone, including the traders and to me, that Rick was an undercover FBI agent. The training program had been nothing but an elaborate ruse to embed him in the pits at the Exchange, and all of the traders who had been nicking ADM and other major customers for an eighth here or there were indicted, and most of them went to jail.

This episode was sort of the middle act of a three-act play.

It was preceded by and, in my mind, linked to the earlier Ferruzzi dispute with the Chicago Board of Trade. Both of these issues were followed by the ADM Mark Whitacre lysine scandal, which was the subject of the movie "The Informant" with Matt Damon.

The situation with Rick was a startling event, and I learned important lessons as a young man.

First, I don't drink during the day. Secondly, it has never occurred to me to try to nick a client for an eighth here or an eighth there, and, finally, I assume that everyone I'm talking to in Chicago is wearing a wire. Truthfully, these weren't bad lessons to learn as a young man.

Later that year, I got engaged to a girl from Winnetka, Sheila Berner, and she wanted me back closer to home. I left ADM and joined The Merchandise Mart.

One thing led to another at The Mart, and I eventually became President of the place, and we expanded the business across North America. I loved every minute I was there and stayed for 25 years.

While stationed in Chicago for my role at ADM, I ended up meeting with many of the people involved at the Greater Chicago Food Depository, the nation's largest food bank, and I became a volunteer there. Eventually I became chairman of the Food Depository's board of directors. During my term as chairman, we doubled the size of the warehouse, we introduced the first fresh fruit and vegetable program. I began putting plans together to launch Top Box Foods, the hunger-fighting social business that Sheila and I run together today. During my time at the Food Depository, we also rebuilt the Board of Directors.

I went to close friends first, people like Todd Warnock, who is Chicago's premier investment banker in biohealth. He, in turn, reached out to other friends, like Steve Koch, who joined the board and provided tremendous leadership to the food bank.

Because of my work at the Food Depository, I ended up meeting a lot of people in the food service and hospitality industry in Chicago. I eventually became Chairman of the Chicago Convention and Tourism Bureau, which had the largest volunteer membership of any such bureau in the country.

During my term as chairman there, we removed the president of the Bureau and replaced him with Jim Reilly. I was a prominent Democrat, and he was a prominent Republican, but I recognized in Jim one of the most competent public servants I had come across. We were lucky to have Jim Reilly then, and we are lucky that Jim is back, solving problems at McCormick Place and Navy Pier today.

While at the Convention Bureau, I also became great friends with Marc Schulman, President of Eli's Cheesecake. He is co-chair of the Chicago High School for Agricultural Sciences Business Advisory Board, and, thanks in part to the support Bob Easter, they built the Illinois Center for Urban Agricultural Education, a collaborative effort between the University and the High School.

When I joined the Board at the University of Illinois, Bob Easter became one of my closest advisors. The College of ACES is so important to the heart and soul of the University, and Bob is such a thoughtful leader that we were lucky to have him, as the Dean of ACES, step into the all-important position of Chancellor for the Urbana campus.

The board at the U of I meets at least six times a year. We take 20 to 30 votes, so in the last four years, we've taken 480 to 620 votes. The most important vote was the one in which we appointed Bob Easter as the President of the University of Illinois.

Academic leadership is almost always rooted in high academic achievement and great accomplishments, and Bob's role as an international leader in agriculture and academia is a pretty good instructional tale about this dynamic.

ACES is home to a living example of the greatest potential for the University to live up to its land grant mission, serving industry by providing leadership to bring the economy's many parts together. The University of Illinois has one of the strongest engineering programs in the world, it has some of the most robust computational power housed in the fastest computers in the nation and it has the College of ACES, a school that we believe is second to none. The great potential of the University is to serve industry by combining the greatness from various parts of the school into a unified response to the biggest issues that face our country and the world.

The Illinois Laboratory for Agricultural Remote Sensing is perhaps the best example of such an outcome. It is a partnership between ACES and John Deere. It's led by Lei Tian, and we've used the great computational power which is involved in the GPS mapping system to map the farmland, some say to accuracy measured within inches. The quality of the soil is measured and recorded, and we can now recommend specific crops, certain varieties of these crops and specific seed to individual farmers. Fertilizer can be deployed with incredible specificity. Each field is rated, and the application rates can vary so that in sandy areas, which are prone to leeching, additional fertilizer is applied, and the density

of planting can be altered. This program is resulting in much greater crop yields, lower prices and an ability to feed more people.

The benefits of the University are not limited to the people of our nation but are instead global in scope. Whether it's in Rwanda or Brazil, our principal investigators are identifying new ways to apply knowledge first developed at the U of I. We opened the national center for livestock improvement in Rwanda, and in places like Panama and Brazil, we believe we can develop dairy cows that thrive in tropical environments with improved milk production, cows which are engineered and bred and which produce milk that vastly reduces diarrhea and sickness among the local population.

These stories illustrate the importance of working together.

University of Illinois Focus

The lessons that can be learned from the University and its role in our state can be used to marshal greater support for our efforts around innovations in the agricultural field.

Agriculture can't be seen in isolation. It touches every part of our economy, from transportation and logistics to retail to antipoverty programs, from big pharma to biological sciences and technology.

As we gather today to discuss our future, a good reference point can be found in the states success with technology.

iBio, the institution run by David Miller, has done an incredible job for Illinois by leveraging relationships with companies like Abbott and Baxter. This has allowed us in Illinois to lure the largest bio science companies in Japan to headquarter their U.S. operations in our state. The organization iBio has saved jobs, created new ones and brought to our state some of the smartest minds and deepest pockets from around the world.

We are lucky to have their example to inspire us and their leadership in our state and their participation here today as part of our own effort to re-envision our future. iBio is a great example, and if we can build on our links to their industry as partners, we can change the world.

I-Wire Story

At the University of Illinois, technology like broadband has played a critical role in the success of the school as a major research institution and provides another good example of strategic planning.

Much of that success we have enjoyed is attributable to the work of a small number of people who created iWire by working together in the late 1990s, to urge government action, which thankfully government leaders responded to. That government action, which included the capital outlays of some \$14mm eventually attracted \$250mm in funded research, all of which flowed to our state.

In the late '90s, a group of researchers at places like Argonne and Northwestern and the University of Illinois gathered together. They were motivated by the rising cost of access to high-speed fiber, and they recognized that they had an opportunity to work together, not as rivals and competitors, but rather as collaborators and teammates and co-investigators. They developed a vision for a high-speed cable network that would aid complex research efforts.

Their cooperative spirit captured the imagination of state officials.

They went to the legislature and the governor, which together funded the effort with about \$14mm, much of which came from the federal government. They stitched together a dark-fiber network to be used for research purposes, which eventually connected over 20 sites, including the University of Illinois at Urbana-Champaign, Argonne Laboratories, FERMI, the University of Chicago, UIC and Northwestern as well as a range of other sites.

A great example of the benefit of this coordination was the perigrind program that linked super computers at Argonne and the University of Illinois' super computers in Urbana, a linkage which could not have been made without access to the dark fiber, which would not have been available had they not worked together to garner the government support in the first place.

This aggregation of computation power was nearly unprecedented. Scientists from around the world sought time on the newly linked network, which was capable of ushering in solutions to help with everything from curing diseases to improving military defense networks.

The perigrind project alone yielded over \$250MM of sponsored research from the federal government and other sources. Researchers from around the world used those linked computers to study everything from weather patterns to protein behavior and the spread of disease.

Eventually, many researchers found it beneficial to work more closely with the great researchers already living here, and these researchers came from far and wide to relocate to Illinois. We created in Illinois something like what nuclear physicists call critical mass, but instead of doing it with atoms, we did it with leading researchers. The momentum began to build on itself with great research in the pipeline, a pipeline whose pump was primed by a relatively low investment in a fiber optic network.

These stories illustrate the importance of working together.

If you follow the story a bit farther, you can see the potential of leadership for industry-changing job creation.

Several stock markets and futures exchanges, including the Chicago Mercantile Exchange, the New York Stock Exchange, and the Intercontinental Exchange, known as ICE, which was originally headquartered in Atlanta, all set up matching engines, linked to the dark fiber. This was critically important to the economic wellbeing of Chicago

because, as the big exchanges—the Board of Trade, the Mercantile Exchange and the Midwest Stock Exchange—abandoned their trading floors, small, boutique trading firms emerged and replaced the exchanges as the spearhead for global economic advancement. Many of these newly emerging trading firms specialized in high-speed trading, and they became incredibly successful and are now part of the fastest-growing employment sector in the city.

With all of this broadband infrastructure in place, Chicago began its own renaissance as it became very attractive to the new breed of successful trading firms. These firms have become enormous employers in Chicago.

The rebirth of the economy in Chicago related to trading firms is, in a broad sense, a roadmap for what we can do if we combine science from universities, leadership from industry and thoughtful support from the government.

This resurgence in Chicago is a microcosm of the massive change in the economy we can bring about if we work together. That is, an entire economic sector, futures trading, arguably the most important in the city, is blossoming with explosive growth that is entirely dependent on high-speed cable. You can start to see the incredible leverage provided by that initial limited capital investment by the state and academic leadership from iWire in installing the first broadband cable network.

Mandate

There is something special about academic research institutions like the U of I, and they therefore have a special mantle of leadership and a certain burden to help industry. It is a mandate which our President, Bob Easter, believes in and which he embraces every day.

Our country's research institutions have a special role in creating not just jobs and companies but to fulfill the potential to spawn entire industries which can contribute to the economic rebirth of each state and entire regions.

I think there is a unique role that research universities play in the economy of our country and therefore in the communities which that economy supports. That special role is the creation of new knowledge, which leads to the development of new products, which ultimately leads to new jobs.

Boston as an Economic Engine

Before I moved to Illinois, I lived in Boston, and I saw firsthand how research universities can drive the rebirth of an economy.

Boston as an economic center has died multiple times and yet, again and again, it has risen from those ashes as a formidable economic center by unleashing the transformative power of great research institutions. Over and over, Boston died and was reborn—first as a shipping capital, then as a banking capital, then Route 128 emerged as the center of the country's high-tech boom with companies like Wang Computers and Digital

Equipment Corporation. Then that sector died in Boston, and now the city is re-emerging as a leader in biotechnology and nanotechnology, and the economy there remains strong.

This constant economic rebirth was driven by the research institutions in the region which have led the way in every economic recovery.

Boston Universities' Role in Economic Sustainability

This was achievable in part because the leadership of those great research institutions stayed close to the political and business leadership.

Those political leaders brought home federal government research grants, which funded basic research, which supported applied research, which created new ideas, around which were built new companies that employed new people who paid taxes, which funded local schools and created a whole new supply of highly educated students capable of propelling the cycle once again.

The university research operations in the Boston region created new jobs over and over again.

Boston Universities' Leadership

I went to college in Boston and graduated from BC in 1986.

Everyone in Boston at that time knew of Father Monan who ran BC and, like the rest of the university leaders there, had an incredibly high profile. They also knew Derek Bok, who was the president of Harvard at the time. The man who was president of Boston University, John Silber, ran for governor of Massachusetts and came close to winning. The president of the Massachusetts State Senate, Bill Bulger, left that job to become head of the University of Massachusetts.

There was great interplay between the university presidents, the political officials and the business leadership.

Boston Universities' Relationships with Political Leadership

The university presidents encouraged business leaders to support elected officials like Senator John Kerry and Ted Kennedy and Tip O'Neill and to become fully engaged in the political process. John Kerry and Teddy and Tip went to Washington to bring home federal government research grants for places like Harvard and Boston College and MIT and Brandeis and other colleges there.

Those schools invested in basic research, and that research sloughed off applied research, and the trustees and other business leaders invested in those ideas, which created small companies that employed people who paid taxes, which funded better schools, and that virtuous cycle continued again and again. MIT alumni alone have founded over 25,000 companies.

Importance of Political, Business and Academic Leaderships in Illinois

Improving the effectiveness for academic research institutions is dependent on a close working relationship between political, industry and academic leadership in the great research institutions themselves.

That dynamic has not always existed in a great way in Illinois.

Illinois' Share of Federal Research Pie

The result has been devastating to our capacity to align our resources to garner a larger share of the federal government research pie.

We in Illinois rank something like 45th out of 50 states in terms of what we send to the federal government in taxes and what they send back to our state. In fact, we get about 78 cents back for every dollar we send to the federal government.

Protecting the best interests of our state by ensuring that the great research institutions fulfill their land grant missions to serve industry and advise government is our great task. We need to work together to reaffirm our society's view of the importance of higher education and its mission to support industry and to guide sound, science-based government policy. If we do, industry will expand, the universities will thrive, and both will ultimately serve the best interests of our state and its people.

Need for Agriculture Plan

Agriculture in Illinois is too important not to be managed with a massive, comprehensive, strategic plan.

Today, there are great planning documents that are guiding the City's efforts, many of which have been pulled together by World Business Chicago, the Chicago Metropolitan Agency for Planning and other entities.

I serve on the committee to manage the City of Chicago's comprehensive sustainability plan, and I co-chair the advisory council that oversees Cook County's sustainability planning. In both instances, we've brought in stakeholders from the government, industry, and the university sectors to our strategic planning. Other firms, like McKinsey and Company and Boston Consulting group, offered their strategic consulting services pro bono.

I learned of the benefits of long-range planning early on.

Fifteen years ago, when I led the Convention Bureau, I worked with Jerry Roper at the Chicagoland Chamber of Commerce, and we retained McKinsey on a pro bono basis to develop a plan to rebuild Chicago's convention and tourism industry. That plan resulted in tripling our state funding for promotion and recruiting of tradeshow. The investment in the convention industry resulted, over the five subsequent years, in unprecedented expansion.

In another example, the Chicago Council on Global Affairs recruited the Brookings Institute to work with the OECD to create a tri-state strategic plan for the 14-county area around Chicago in Wisconsin, Illinois and Indiana. Many of the issues that are identified in this document show up in the state's CREATE planning documents, which now help guide infrastructure funding in the Chicago region. In fact, hundreds of millions of dollars of federal funding and private investments related to the expansion of the intermodal transportation hub on the edge of Chicago, in the Will County, is being guided by the state of Illinois.

Searle Example

In the biomedical industry, which is totally related to our work in agriculture, there's another great example of Daniel Searle, heir to the Searle fortune.

He worked with the Chicago Community Trust to fund, at \$5 million annually, biomedical research at Northwestern, the University of Chicago, and UIC. He incentivized the universities to work together and with their peers at Argonne National Laboratory and the Fermi Institute, and this \$5 million a year has been leveraged into hundreds of millions of dollars of research grants that now flow into our state from the federal government.

1871 Example

At The Merchandise Mart, we worked with JB Pritzker and took an idea, first developed by his cousin in New York on a very small scale, to co-locate budding technology companies together.

In Chicago, we pulled these firms together at The Merchandise Mart in a space called 1871, which was previously occupied by giftware showrooms. Today, 250 startups are thriving in Chicago. An ecosystem was created first on paper in a strategic plan then implemented with government grants and support from the great foundations in Chicago.

One of the most exciting examples of the benefits of strategic planning is the new UI Labs project, which has already secured \$70 million from industry partners who will match a like amount from the federal government to create a state-of-the-art, cutting-edge, advanced manufacturing research center in Chicago.

The Challenge

As we develop a plan, we need to understand the magnitude of the challenge we face.

The Deutsche Bank Climate Change advisors produced an asset management perspective of big ag, and they're looking at it purely from an investment point of view. They say and I quote, that "food 'shortages' recently experienced globally were a result of sub-optimal agriculture policies, distortions including subsidies and export restrictions, a lack of investment, limited farmer knowledge and management and productivity shortfalls." They go on to say that, in the future, "Combining the food and potential fuel needs of 9 billion people, [they] project a 50% increase in productivity demand." Later in the report, they say, "With proper policy guidelines in place that encourage farm modernization, free markets, and tech adoption, the production gap can be closed, but it is a large task."

Peer Comparison

This is our task, we need to take it on—here, in Illinois.

To guide our efforts in agriculture, it's important to look at ourselves in Illinois and learn from what we have done historically and are doing around the state today. Perhaps more importantly, it's good to look elsewhere and be aware of what our peers and competitors are doing.

For me, two of the most depressing facts in Deutsche Bank's impressive report are the fact that they partnered with the Center for Sustainability & the Global Environment of the University of Wisconsin in developing research. Secondly, they based much of their projections on work done at MIT.

In Illinois, we need to do better than what they do in Wisconsin and Massachusetts. We should be the reference point for thought leaders around the world, and the penalty for not playing that role is clear.

St. Louis Story

All we have to do is look at St. Louis. In Eastern Missouri, they developed a plan that resulted in massive state support for agriculture.

University of Illinois President Bob Easter and I were recently in the St. Louis area to meet with civic leaders there, including people like an executive of their version of the chamber of commerce and the heads of their great universities.

Today, that region is flourishing.

St. Louis is radically different from many Midwestern cities like Detroit and others because it is thriving. It is doing well in part because it's become the global center of plant research. Twenty years ago, the leadership developed a plan for the community which now works together with the great research institutions, they've leveraged their relationships with the federal government, and today they are recognized around the world as the center of their field. In St. Louis, they have created jobs, driven down unemployment and created a global destination for great minds and hard workers.

If you look around the country at the planning exercises around agriculture, you can see that, in places like Boston, Atlanta, New York, Washington, Minneapolis and Chicago, enormous resources have been spent by well-meaning people, incredible charitable institutions, some of the largest funders in the country to research and implement urban agriculture.

Long-Term Agriculture Solution

Urban agriculture will, in many ways, help unite communities, raise awareness of healthy eating, give people greater insight into the food that they eat, and perhaps absorb abandoned land or abandoned buildings.

But I, for one, can't believe that urban agriculture is a long-term solution to feeding Americans or the world or rebuilding the economy in our state.

If we could take the money that has been spent and the effort that has been expended around urban agriculture and devote it in Illinois to big ag, we have the potential to reinvent our economy, attack the problem of hunger in our state, confront the issues of starvation around the world, and provide a growing and expanding economy, which will help keep our children close to home.

Illinois' Competitive Positioning

We are incredibly well positioned in Illinois.

Not only are we one of the top five states in critical commodity crops, but we're home to the dominant exchanges. Their presence here helps our citizens lead and influence regulatory institutions like the Commodity Futures Trading Commission. We have enormous ports, a great river system, incredible airports and the best location in the world.

Problems Illinois Faces

In the last couple of weeks, the newspapers have been filled with important stories, often carried on the front page.

The papers covered the story of whether the state should work to retain ADM to remain in Illinois. At other times, they mention the fact that a new farm bill has not been passed by the federal government. The paper carried the story about how the Port of Chicago privatization program failed, and with that failure, so, too, collapsed the proposed infrastructure investment needed to modernize the ports.

Fresh Moves, one of the most prominent programs around urban agriculture, parked its trucks and shut its doors. The City of Chicago agreed to shutter two of the oldest coal-burning power plants in the city.

The thing is that papers didn't provide a great context for the importance of these seemingly unrelated events.

Agriculture is the Core

Developing an agricultural strategic plan for the state will help connect these dots and help shape government policy. In my mind, these events are all linked; they are all part of the issue surrounding agriculture in Illinois.

We need to know what we want to be in Illinois. Perhaps it's simply to be a producer of raw materials like crops, but maybe we want to move up the value chain with giant and complex, value-added processing like ADM and others. We need to understand how we're going to feed the poor people in our cities. Is it with urban agriculture or greater productivity in fields?

We need to understand how we're going to feed the world, and if that is our job, which I believe it is, what ports we are going to need to get the goods we produce in Illinois to Rotterdam and Osaka, to Africa and to China.

If we are shutting down power plants, we need to understand what our energy policy is in our state so that we have reliable, inexpensive power to give us a competitive advantage in retaining companies and luring others, and to inexpensively and sustainably power everything from cars and trucks to grain elevators and from processing plants to cold storage.

Loss of Ag Funding

The media is not making these connections, and neither is state government.

In fact, the state government has been retreating from its leadership role with significant cuts in funding to agricultural leadership.

Two of the big losses in state funding were both in grant programs run by Dave Chicoine, then Dean of ACES at the University of Illinois. The Illinois Council on Food and Agricultural Research, aka CFAR, at its height was receiving \$15 million in State grant funds. It now receives \$0. There was also a \$3 million grant program called AgriFirst, and again, there is no funding for the program.

To give some perspective on what has happened to the State, this is data on the Illinois Department of Agriculture. Between 2002 and 2014, the Illinois Department of Agriculture has lost nearly \$19 million in funding that was previously dedicated to extension service programs and grant programs. These cuts have been devastating to the University of Illinois Extension program just when we need it the most to help industry transition from its past to its future.

Large vs. Small Farms

In Illinois, according to this Farm Bureau chart, only 19% of farms sell more than \$250,000 a year in agricultural products.

This next slide shows the percent of the total value of sales of agricultural products, broken out by per-farm sales. If we combine the effects of these two charts, we can conclude that 20% of farms produce more than 83% of all sales.

Our traditional model of extension may not be what it needs to be in the future.

At the University of Illinois, we need to explore the way we balance our support of agriculture. We need to be sharing best practices with isolated family farmers and play a larger role in creating a productive community in big agriculture and related industries.

There are a lot of positive reasons to create a strategic plan for the agricultural economy, but there are also ways to avoid negative consequences as well.

Educating the Public - Hawaii

We need to educate the public around the truth about the science used in agriculture.

If we don't, we might end up like Hawaii, where a small group of people opposing GMO research may eliminate the science-based corn fields on the islands there, which would decimate corn production throughout the United States and around the world.

People don't like what they don't understand, and they don't understand the science behind big agriculture and its increasing dependence on bioscience. The need for an overarching plan is important because in it we can address the important regulatory matters that fundamentally affect the development of different parts of our industry.

Educating the Public – Chicken Story

If we look at the growth in the broiler-chicken sector and compare our growth rates to those of Indiana and Wisconsin, we can see that something is going on that's preventing Illinois from keeping up with its neighbors.

Fifty years ago, the state of Illinois produced more chickens than any state in America. But things have changed, and we are now a lagger.

In Illinois, for instance, we require chicken farmers to use an impermeable surface like concrete in their coops. We do this because there was a fear that chicken droppings might leech through a wood floor or other surface and contribute nitrogen in the ground and ground water.

That sounds like a legitimate fear; the problem is, it's not based on real science.

At the U of I, our researchers have looked into the issue and concluded that the contribution from this sort of leeching in the broader context of nitrogen use is not significant, but the legislature passed a fear-based bill, not one based on hard science.

The legislation is what it is, and now it is the law of our land. As a result of this and other ill-conceived regulatory decisions, we are slowly losing an entire sector of our agricultural economy to neighboring states.

Today, there are 20 to 25 million chickens in Indiana and around 50 million egg-laying chickens in Iowa but just 3 to 5 million chickens left in Illinois.

We are in fact losing market share and falling rapidly behind. This trend is probably attributable to imprudent regulation, which frankly was not science-based. It makes it much easier to build a wood facility with hay on the floor in Indiana or Iowa than it is to build a concrete facility in Illinois, so the fryer industry has moved away.

Citing Difficulties

We have a similar problem in the dairy industry, where the agricultural facilities management act, which was a thoughtful piece of legislation, had unintended consequences.

The fact that we now require public meetings before citing decisions are finalized puts tremendous, unanticipated pressure on regulators like the state department of agriculture, who nearly always have to succumb to local pressure to prevent citing in various communities.

Dairies are job-intensive agricultural activities, and we're losing market share to places like Wisconsin and Indiana. This occurs at a time when the expansion of urbanization in California is consuming and eliminating enormous dairy operations in what were once rural areas and are now suburbia. Those dairymen, loaded with cash from selling their farms to real estate developers, are coming to the Midwest to cite new facilities, and we in Illinois are no longer a viable option.

As part of a comprehensive plan for agriculture, we need to address the role of the government.

The truth is, the Farm Bureau and the Department of Agriculture create some of the most thoughtful research documents of any industry of in the state, so we have a great start. Additionally, the Farm Bureau has created a very thoughtful and inclusive process for developing positions on legislative issues, which allows every stakeholder to have a role in the creation of policy.

We can build on these great strengths, but we need to be cognizant of political change.

When I arrived in Illinois in 1986, both houses of the state legislature were solidly republican and decidedly anti-Chicago, and the governor at the time was the great Jim Thompson, who was in the midst of an unprecedented four terms.

Things have changed.

Today the state's top three leaders—the Governor, the President of the Senate and the Speaker of the House—Pat Quinn, John Cullerton and Mike Madigan—are all democrats with supermajorities from Chicago. This leadership cannot rely on personal histories to give them insight into agriculture, and they are not returning to the farm when they go home at night.

We need to work smartly to educate them about the continuous changes and challenges we face. We need to build a winning and unbeatable coalition to support our plan.

We need to build together a legislative coalition that includes not just the obvious representatives of Champaign-Urbana, Decatur, Peoria and all of downstate, but also the representatives in Lake County who represent Baxter and Abbott. They need to understand that this is their issue, too.

We need to convince the legislators representing the Mercantile Exchange and the Chicago Board Options Exchange in downtown Chicago that this is their battle as well.

We need to convince the people who represent the intermodal transportation center and the freight operations at O'Hare airport that we want them at our side, too.

Government Involvement in Agriculture

The truth is, Illinois ranks among the most productive in the United States for soy beans and corn, but really we are an urban state.

That's where the people are; that's where the votes come from.

If we want the government to act on our behalf, we need to recognize that engaging the public is critical to our success. The government needs to play a larger role in supporting agriculture.

Nebraska's governor, Dave Heineman, helped a delegation from his state secure a \$400 million-order of Nebraska corn from the Taiwanese.

Illinois Department of Agriculture director Bob Flider has done a great job with leading agriculture tours of foreign buyers, but we need greater support for his efforts. The market is there, we just need to grab it.

At the University of Illinois, we want to work with all of you to develop a plan for agriculture in our state.

The National Advisory Council on State and Local Budgeting has a guiding document for state and local government strategic planning. Their primary recommendation is to identify stakeholder concerns, needs and priorities.

The first principle is to establish broad goals to guide government decision-making. The first element of the first principle is to assess community needs, priorities, challenges and opportunities. They provide a rationale, indicating that "the limited resources of a government should be directed in a manner consistent with the concerns, needs and priorities of stakeholders; hence, a government must be aware of the concerns, needs and priorities."

Let's follow their simple and wise advice. Let's pull together stakeholders from across the state and from the industries that are critical to our future, like bioengineering and big pharma and technology. Let's get our leading foundations and not-for-profits to fund our efforts and provide guidance and leadership. Let's engage government so they can play the role they need to in our future.

Just as the Illinois Lab for Agricultural Remote Sensing has mapped our farmland within inches, let's work together to map our future with great success. Let's get our state's best consulting firms to provide pro bono help because they have as large a stake in the future of our economy as we do. Let's get the academic leadership at our great universities and the researchers at the federal labs like Argonne and Fermi to pitch in as well.

By working together, we can have the best outcomes of any state in the nation.

Retaining Graduates in Our State

More than anything else, we want to retain in our Illinois communities the minds of our young researchers and brilliant students. These are our collective children, and we want to keep them close to home.

These are the ones who will reinvent our society over and over again, with new ideas that create new companies, which hire new employees, who pay taxes, which support schools, which educate a whole new generation ready to begin the cycle again.

These are the young people who we want leading our companies in the future.

In Illinois, good things only happen when lots of different people from across the state in a range of industries with diverse backgrounds and varied interests come together to find common ground and to work side by side.

The state itself is a communal enterprise.

There may be states which grow more corn than we do. There may be states that harvest more beans than we do. There may be a place like St. Jose, with more venture capital than we have, and there may be states that have exchanges like ours or universities like ours and an educated population like ours.

But we, unlike everyone else, have it all.

We in Illinois have huge crops and giant yields, corn and soybeans, long rivers and Great Lakes, the Board of Trade and the Mercantile Exchange, Abbott and Baxter, ADM and Kraft, Caterpillar and John Deere, Fermi and Argonne, iBio and the Illinois Science and Technology Coalition, World Business Chicago and the Chamber of Commerce, the Farm Bureau and the Illinois Department of Agriculture, super computers and great engineering, Dick Durbin and Mark Kirk, and the President of the United States.

Ladies and gentlemen, there is no place in the entire world with more assets in one place than ours. Let's pull it all together to work for big ag. And if we do, we can come together to speak with one strong and powerful voice and say that we truly are the greatest state in America.