

York Distinguished Lecture Series
U.S. Congressman Adam H. Putnam
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Emerson Alumni Hall, University of Florida

Thank you Dr. Arrington and thank all of you for being here. I want to particularly thank President Machen, President Criser, Provost and Aunt Martha. I appreciate all of you being here. And when they were showing the grid of the different county offices and research stations that are able to view this as well, I saw my son in the Bartow office so this is kind of like the children's nursery, that is probably where he should be for a lecture like this to watch it on video until such time as he's had enough of the future of the land grant mission. But, it is a pleasure to be here. It is an honor to be here. It is not lost on how significant the York Lecture series is, the reputation it enjoys nationally, and the reputation of its namesake. And, I have to tell you I was pretty anxious about, excited when I was offered the opportunity to give this lecture, but it was also a little bit nerve racking. I feel like I am defending a thesis and I'm not going to have anything to show for it afterwards with such an auspicious audience to really talk about the future of the land grant mission. How we got to where we are, where we have the potential to proceed in the future as a state, as a higher education system and certainly this particular land grant institution. The inaugural speaker for this lecture series was a Nobel Prize winner. And, in flipping through the program that they handed us when walking in, I noticed that only two of the lecturers who have come who have done this in the past were not doctors. And, one of them was a Nobel and Pulitzer Prize nominee. So, this is a little nerve racking for somebody who escaped from the University of Florida by the skin of his teeth with Bachelor's in Food and Resource Economics. But, I am excited about this and I feel like if you wanted an academic presentation you would have invited an academic to give it. So, this will be a little different than some of the lecture topics that I've seen that have been given in the past. This grew out of the Centennial of 4-H, and the celebration of 100 years of that tremendous youth leadership program. And, candidly, I would not be here but for 4-H. The skill sets that it gives young people, the confidence that it instills in young people to stand in front of a group of peers, whether it's to give a club presentation at the age of 8 or younger as my children went through as part of their club demonstrations, to give them the confidence to succeed later in life in whatever profession or field they choose for themselves, it is a phenomenal program that touches the lives of 260,000 plus youth, 12,000 volunteers, gives 8,000 young people the opportunity to stand for election and take on a leadership role in their club, or their county or their district. Those are life skills those are not

agricultural skills, they are not land grant skills, those are life skills and it's an important program that we need to continue to support. And, as Dr. Arrington mentioned in the introduction, I consider myself a land grant baby. I was introduced to the land grant mission as a 4-Her at the age 8. A 10 year 4Her had the opportunity to take on leadership roles which led to opportunity to study here on the campus at the University of Florida through the teaching mission after the extension mission and as a citrus and cattleman, witnessed firsthand the important transfer of knowledge that comes from the research mission. So I've always proudly considered myself a land grant baby and fully benefited from all of the legs of that stool. Dr. Borlaug who was that Nobel Prize winner, who was the first lecturer, really represented that land grant mission too. The extension of knowledge, he's a man who when given the Nobel Prize, the judges said, "more than any other single person of this age, he has helped to provide bread for a hungry world." He single handedly launched the grain revolution and saved a billion lives in Asia and in Africa. And his approach was not in creating a hand out but a hand up it was that extension of knowledge from the research bench, from the laboratory to the field and not just the field of a developed nation, not just a field of a nation like America that they could continue to dominate global grain markets, but to transfer that knowledge, to transfer that technology to the people who desperately needed it. And, it is in that legacy, that I am proud to be here today and to take a moment and acknowledge the work of Dr. E.T. and Mrs. Vam York, a couple who have given so much to the state of Florida. Dr. York's a stand out Floridian even if he is an Auburn grad. He is a founder of IFAS, former Chancellor of the State University System, the official holder of politician's feet to the fire. I'm not sure if that's a title that is necessarily earned or given but in my view that is a role he has continued to play and staunch the fence of the pursuit of excellence in our academic system in this state and I'm honored to be a part of that and will certainly keep them in our prayers. And, Vam York, certainly a fixture in the community. She was the judge in the Homecoming pageant that my wife competed in. She's just always given back, and given back and been a real fixture. But, Dr. Borlaug and Dr. York together have improved the human condition by living out the mission of a land grant institution. By living out that land grant purpose. That is why we are here today to discuss the looming and increasingly urgent need for the University of Florida and IFAS to lead in the extension of knowledge to an array of challenges not only confronting Florida but confronting our planet. So, how did we get here? First, a short history of land grant, Justin Morrill, mid-1800's, recognizes the need to create access to higher education and he said this on the 25th anniversary of the passage of the land grant act. He said, "the land grant colleges were founded on the idea that a higher and broader education should be placed in every state within the reach of those whose destiny

assigns them to or who may have the courage to choose industrial locations where the wealth of nations is produced where advanced civilization unfolds its comforts and where a much larger number of the people need wider educational advantages and impatiently await their possession. It would be a mistake to suppose it was intended that every student should become either a farmer or a mechanic when the design comprehended not only the instruction for those who may hold the plow or follow a trade, but such instruction as any person might need with the world all before them where to choose.” Those were the words of the founder of the land grant mission on the 25th anniversary of the passage of that bill. Later, of course, after the Civil War, they came back under his leadership passed the second round to create the 1890 institutions so that Florida and other states now have two land grant missions with our other university in Tallahassee, FAMU—very well representing that land grant mission in addition to the University of Florida. But this concept was radical at the time. Universities were the province of the elite, universities were for the wealthy, universities were for the easterners. And, this radical notion was a very American notion. But the foundation of a democratic society was rooted in an educated population. And that legislation directed the sale of those public lands in the west to the states to build an institution where they would offer agricultural and mechanical arts, engineering, military arts—and it has worked tremendously. Later, they added the extension, later they added the research component and together they make up that three legged stool. Today, the state of Florida finds itself consistently short changed in the funding formulas for the research, extension and teaching component, because that funding formula is an antiquated model that does not recognize the diversity of what we produce in Florida. But through the land grant university heritage, millions of students are now able to study every academic discipline and explore fields of inquiry far beyond the scope ever envisioned by Senator Morrill. Today, American’s land grant universities continue to fulfill their democratic mandate for research, teaching and service to the people. And, many of these institutions have joined the ranks of the nation’s most distinguished public research universities. Indeed, in many states, the land grant university is a flagship university, globally renown and with the highest admission standards. So that the original mission of access has actually evolved over time and become one of the most renowned and most elite public institutions in America. The profound impact of this legislation, of this model on agriculture in America is undeniable. Today, one and half percent of the population feeds the world to feed the other 98-1/2%. In 1960, the 17 largest crops grown in America totaled 252 million tons of production. Thirty years later, there were 600 million tons of production on 25 million fewer acres. What other industry can claim such efficiency. Manufacturing , trade, banking, and manufacturing arts. What other industry can claim a one and half percent

efficiency. But in some ways that efficiency is a threat, is threatened by its own success. As American society has become increasingly urbanized, people have lost their sense of where their food comes from. Ask a school child today where their food comes from and if you're lucky they'll answer the grocery store, but they'll more likely to answer a fast food restaurant. And that is not limited to the school children. Anyone who has ever volunteered in Ag in the Classroom will know that not only do questions that are rooted in a lack of awareness shall we say of where our food comes from, not only do they come from mouths of fourth graders they may come from the mouths of fourth grade teachers. Because we are now multiple generations removed from the land and that's not limited to food that's not limited to agriculture. The loss of contact with the land has allowed us to lose touch with where energy comes from. Something happens and we flip the switch everything's fine. If the shelves are full at the grocery store, everything's fine. If something comes out of the pump at the gas station, everything's fine. And, yet, all three of those industries, energy, electricity, mobile fuels, and food have a tremendous infrastructure behind them that are rooted in the land. And, as we move away from that as generations mature, as we become too sophisticated for lack of a better term as a nation, generations will grow up without an appreciation for the source of their food and in doing so there's a real risk that that complacency will allow this country to pursue policies that are harmful to the future of American agriculture and, therefore, US food security. The potential consequences for that are disastrous not only for America but for the planet. It is projected that the human population will be nearly 10 billion by 2050. In order to feed the entire world at the level currently enjoyed by the west, it would require a 430 percent increase in food production. And, that's just to deal with the fairly simple trajectory of population growth – it doesn't take into account shifts in diet. And, as Asian populations and African populations and Latin populations develop and improve their lot which all of us would share as a goal that diet evolves from being grain based introducing more and more meat and for every pound of meat produced we have to grow 5 pounds of grain. So, who will feed that restless world? Its research and the transfer of research-based knowledge that has driven our stunning improvement in productivity and drives improvements on a wide array of other practical matters. Because, you see not only as the world looking to the land grant mission and looking to researchers and our fine universities to feed a growing planet, but a whole host of issues that are not related to food production as well. And, that's where the land grant mission continues to finds its role in the 21st century, even as we've evolved tasking a society where 98% are involved in food production, we've reversed that. Even as we've evolved beyond the land, beyond the farm, the role is just as significant for the land grant mission. It's just as necessary for IFAS when you look at the issues dealing with natural resources.

Two-thirds of the land mass in the state of Florida is agricultural in nature. According to the IFAS' own study, that is land mass critical to water supply, water quality, pollution abatement, erosion control, carbon sequestration, climate stabilization, wildlife habitat and outdoor recreation. So, even as we maintain our emphasis on production agriculture, we recognize that an evolving mission for this institution and for the land grant mission, touches urban lives and rural lives alike. The production side, the ecological side, the energy side of the equation, UF/IFAS engages in and shares research that directly impact all Floridians not just farmers and ranchers. Every tax payer, every voter, every citizen of our state has a vested interest in the work being done here at the University of Florida. And, indeed, what makes the University of Florida a flagship university in a state full of outstanding universities, is the land grant mission. It is IFAS that gives entrée to every county. IFAS that touches hundreds of thousands of future voters and policy makers through the 4-H program. IFAS that showcases world class research for the betterment of humanity and the prosperity of Floridians. That's where IFAS opens up doors in every community, in every county not just in Gainesville, not just from campus but that extension of knowledge into every home and every community--that's the fulfillment of the land grant mission, that's the relevance, that's the realization of that original vision of Justin Morrill.

Now, there are any number of challenges facing our state, I've chosen half a dozen to discuss with you today, briefly. Anyone of them could have on their own been the topic of discussion, but they are all issues that that land grant mission is well poised to help provide a solution to. In fact, perhaps, perfectly poised to play a role in solving these challenges.

Beginning with water, there is no more consequential issue facing Florida than water--water quality, water quantity. Everything boils down to the question of water. Planting an orange grove, building a subdivision, building a shopping mall, setting aside timber for some energy abatement program or renewable fuel. Everything boils down to water. Restoring the Everglades, protecting our springs, protecting our surface waters, avoiding a civil war in the state of Florida of moving water from the north to the south. Water will dictate public policy for generations to come. And, while we are blessed to have tremendous average annual rainfall, the term average is misleading. We have tremendous abundance of rain in some parts of the year and then we have tremendous droughts for other parts of the year. Questions surrounding water policy will have a profound impact on public policy, whether it's an EPA Numeric Nutrient Criteria rule, Everglades restoration, the acquisition of lands from reservoirs, aquifers storage and recovery as it does or does not evolve, finding the balance between human, agricultural and ecological

needs, that will be the dominant challenge. Whether the real estate market is hot or not. In fact, the issues like the Numeric Nutrient Criteria rule we're facing immediate deadlines that have tremendous impact. Not just on agriculture, but on every municipality, every person who turns on their tap water, every person who is tied into a municipal water system. So, water will remain a dominant issue that will require improving efforts in our conservation measures, continued technological advances in water storage, reuse and reclaimed water infrastructure. The challenges are present on both the quality and the quantity fronts. Agriculture must continue to develop common cause for the municipal users, demonstrate and communicate the technological advances that have been made in agriculture and that is to the University of Florida's credit. The tremendous investment on the part of the private sector in low volume irrigation is a direct result of research done through the University of Florida/IFAS. And, it has saved millions of gallons of water. And, it has saved an industry. In a winter like we've just completed, that had sustained durations of cold, twelve days, thirteen days below 32 degrees, with low temperatures every bit as low as some of the devastating freezes of the 80's, the difference between the outcome in the 80's and the outcome in the winter of this year was the cold protection developed using irrigation that came of this land grant institution. It's a story that has to be told, and yet, the new demands and the urbanization of areas that were once nothing but farmland have also created a new set of challenges in Hillsborough County and Polk County that require us to continue to evolve and develop new ways to providing frost freeze protection, using water and other methods and find that balance in the urban/rural interface. The need for further work is still there, but the story to tell should not be lost on the 17 million Floridians who benefited from that research and the \$10 billion industry in citrus and in strawberries that benefited from that research that extended into those fields and saved family farms and saved a sustainable source of fresh produce in the winter months.

Energy—our ever expanding population ranks third in the nation in total energy consumption. We use over 8-1/2 billion gallons of gas every year just in the state of Florida and consumption is growing by 300 million gallons annually. Our demand for energy will increase 30 percent in the next decade just in our state. Florida has to take a comprehensive approach in finding energy solutions that balance the affordable, reliable sources of energy. But Florida has an opportunity to lead and they are leading thanks the work of last year's lecturer, Dr. Lonnie Ingram. Florida is the best position state in America to lead in biomass production. And, through your research stations around the state, we're finding the right mix of feed stocks whether it's for the production of electricity or the production of cellulosic ethanol, whether it works best in timber country or works best in former

range lands in south Highlands County, the enzyme that was born in the city of Gainesville is finding its results in a multi-million dollar private sector investment that is partnering farmers and British Petroleum through the Verenum project-- somewhere in the neighborhood of Venus, Moorehaven and Palmdale. That's a transformational event. It's a potential new revenue stream for farmers so that when other crop mixes decline in value they can add revenue through a different commodity mix so that their last and only option isn't just development anymore. As a nation it reduces our dependence on countries who don't like us for sources of energy, and it broadens out our renewable energy portfolio so that we're not using as much corn to produce a renewable fuel that puts pressure on other commodity prices, puts pressure on grocery prices, and frankly it's questionable in the chemistry equation on just how much energy we're putting into something that is a renewable energy source. It's a tremendous leap forward and Florida is well positioned through the production of biomass in a year-round growing season to lead the way and because of the University of Florida we are leading the way.

Part and parcel of energy policy is carbon policy. One of the more controversial items being debated in Washington right now. And, what I have told farmers and what I will tell a group of academics it may not matter what Washington does on carbon policy because the industry, the market is moving far faster than Congress is capable of moving. If Pepsi Cola who owns Tropicana finds this intriguing enough to commission a study on the carbon footprint of a half gallon of orange juice, then markets are moving regardless of where the regulators are. Carbon policy will be a reality in some form if Wal-Mart decides to have a carbon policy. And, they are already moving towards that. They are asking their vendors, their suppliers to analyze what is your carbon footprint, what is your water footprint. The next logical step for a retailer like Wal-Mart would be to say, well if it is x then reduce it next year by 5% and 5% every year thereafter for the next five years. And, so farmers and ranchers have to prepare for that inevitability whether a cap in trade or a pure carbon tax or some hybrid of the two pass or not. Carbon policy will impact the market place. And, again if done well it represents a new revenue stream for landowners. Tree farmers—people who sequester carbon as part of the natural management practices of their property. Or, if poorly written, it becomes a death sentence for traditional agriculture. That's on the regulatory side. But, the market will determine that there's a carbon policy in America long before Congress acts in my view.

Trade-related impacts-- I'm thrilled to see a number of faculty members here from the FRE department. People who had a major role in molding my mind. Florida is in a really interesting position when it comes to trade. Even though basically the

entire world is in a protectionist mode at the moment. Tough economic times, high employment, countries withdrawal from the negotiating table for a number of reasons, mostly political. But, that will change. The steady march is toward freer and open markets. And, by and large, Florida as a state benefits from that. North south trade will continue to expand and grow. Latin American trade. Miami is the unofficial capital of the western hemisphere. There are tremendous opportunities in that, but there are tremendous consequences to that, particularly for agriculture. Particularly for what we in Florida produce in agriculture. And, so we have to manage the opportunities and challenges that are there. The first exports that any developing nation really ever has, are agricultural exports—that's the first thing that they have that they really get their foot in the door and make enough of to send elsewhere. And, the big winners, the first winners anyway, in trade negotiations from this country's standpoint, tend to be the big guys. Boeing can make a deal with the Brazilian Air Force or Venezuelan Air Force or the Ecuadorian Air Force, you know they can sell enough planes to buy and sell the value of the strawberry fields in Florida several times over. You know, if Bank of America and other financial service companies can go down there—John Deere, Caterpillar, the numbers are so skewed that they have a tremendous impact on much of what we grow in the state of Florida. We have to prepare for that. Global diets are changing. American diets are changing. Despite the trend and the discussion about locally sourced food, American's palate is as sophisticated as it has ever been. The American palate is constantly looking for some new flavor--Asian spices, Latin American produce. The demand, despite the trend on one level to go local, the trend is also to be a man or woman of the world, be a renaissance man, and understand what all these different flavors are. Flip through a Williams-Sonoma, see what all these things look like. It is not enough just have to McCormick's vanilla extract anymore, you got to get the stuff straight from Burma, all these different places where's it twelve times more expensive. So, as the palates change, and globalization continues in food. And, frankly, the demographics of America are changing that drive the change in our diet as well. We currently expect less than one percent of all food imports and don't hold imported foods to the same standards as we hold domestically produced foods—that has to change. That's in the process of changing, we need to get it through the Senate, but we have to at least hold imported foods to the same standards as domestic produce. New technologies need to come from this institution and other land grants that allow us to grow from the basic research phase to allow faster more accurate testing of perishable commodities in our ports. This will continue to be a challenge. We also need to move our agricultural inspectors back into Department of Agriculture and out of the Department of Homeland Security. As long as you have a choice between being the officer at the port who captures a

human smuggler, a drug runner, a gun runner or pink hibiscus mealy bug, or the laurel wilt, or citrus canker—as long as those are your options which one is going to get the attention for the average customs and border protection officer? So, it needs to go back into the Department of Agriculture where people will make it a priority at our ports. As trade expands, and as global tourist travel rebounds, the risk of imported plant and animal and human pest and diseases will continue to grow proportionately. I'm proud of the work that President Machen and this University have done with the Emerging Pathogens Institute. Because, many of the greatest human scourges are zoological scourges first: H1N1, Avian bird flu, anthrax are just some examples. There's a clear connection, even if we can't build the political will to get upset about threats to the avocado industry, threats to the citrus industry, threats to the Live Oak trees, Africanized bees—even if we can't do that, we can find common ground when you start talking about H1N1, Avian bird flu, anthrax and other cross-over diseases. And, in doing so, making that a priority. Priority funding must follow these public and agricultural health risks. We've spent billions dealing with the consequences of invasive pests and diseases, it is time to get ahead of the curve—a million dollars in prevention is worth a billion dollars of cure. We have to move forward with that.

Labor—Florida is disproportionately dependent on hand labor. Urgent, sustained attention has to be given to the development of mechanical harvesting technologies jointly funded by the public and private sectors. There's been a lot of great work done by this university on the citrus side, mostly coming out of Lake Alfred but also coming from the main campus and other places. Working with the industry, we've almost cracked that code, but we have to expand it to the other crops. The reality is, I do not envision a recipe in the near future for sustained comprehensive immigration reform, even though this country desperately needs it. We have to do more to secure our borders. We have to do more to be a magnet for talent from around the world, across sectors of the economy. I don't have to tell a university population how silly it is that we invite the brightest and the best minds here to do their master's work, their PhD work, their undergraduate work—they're exposed to the talents, the ideas, to the technology that exists in this country and then we hand them a diploma and a plant ticket and send them back. I mean obviously there are benefits for a number going back and rebuilding their country, their community, their villages—that clearly is an important part of the international trade and knowledge. But, for those who want to build their businesses here, develop their technologies here, create the next big thing here, we have a foolish immigration policy that kicks them out just when they're prepared to produce in this economy. And for agriculture we have to have a stable, legal workforce using a temporary worker program. It doesn't matter if the unemployment...well, we've

seen it, when the unemployment rate was four percent, we could not find workers adequate to harvest America's crops. With the unemployment at fourteen percent in Florida, ten percent nationally, we cannot find the labor adequate to harvest America's crops that require hand labor. There's no family in America regardless of their economic status who sits around the breakfast table and says, you know son, you know daughter, if you play hard you play by the rules, you too can go into ag harvesting. It's not a part of the American ambition. So, we have two choices, create a workable temporary labor program where people come into this country through a series of checks, perform their duties for a period of time and return home with an awful lot of hard earned money, or we export the production of fruits and vegetables to another country. And, we add to our dependence on energy in countries like Saudi Arabia and Libya, Iran, Iraq, and Venezuela, a new dependence for food from countries from Honduras, Nicaragua, Costa Rica, Mexico and other place--that's unacceptable. So a smart immigration policy will deal with all of those facets. For agriculture, it begins with ag jobs. But, it has to be comprehensive in order to bring our entire economy where it should be in the 21st century with a smart legal immigration system, a defendable border, and an ability to know where people are when they've over stayed their visas.

Nutrition and healthy eating—It goes without saying we want the food we eat to be the most wholesome available. This is a perfect example of where the interests of the farmer, the interest of the producer and the interest of the consumer are wholly in line. The role of this institution, the role of the land grant is not only to continue to introduce healthier eating habits because as a nation we've become more obese, as a nation we've lost our healthy eating habits, public obesity has tripled. USDA spends more than 10 billion dollars a year on programs that provide food to our school children. But, many times its food that doesn't meet the guidelines that any of us would expect that people serving our children should follow. First Lady, Michelle Obama, has done an admirable job drawing attention to this. And, lately there is a show featuring a television chef, Jamie Oliver, who teaches public school lunchroom managers how to prepare healthy and more locally produced foods for their children. If locally sourced food is the new mantra, then in the dead of winter, in January, who's the best prepared to source locally—Florida is. We have to see the initiative that's been built around this concept already and maximize it to the benefit of producers and consumers. We've introduced legislation to try and do that, getting a salad bar in every school, getting fresh fruits and vegetables into lunch and school breakfast programs. The state of Florida should shift the responsibility for providing wholesome, locally grown items to our school children from the Department of Education for whom it is not a top priority to the Department of Agriculture for whom it will be. Other states have led the way on

this, and Florida should make this reform as well. The food safety issues tie in with that. There have been too many instances, mostly of imported items, that have undermined public confidence in our food supply. It is in the farmer's best interest to have rapid trace-back ability developed in our institutions of higher learning. Using the same technology that allows a student on campus to carry Campus 1 Card to track all their expenditures. Using the same kind of technology that allows my daughter who is checking out a book at her elementary school to do so without the assistance of a librarian to get the book she wants, walk up to the front desk, pull out the little ray gun, shoot it, it prints out a receipt, she knows when it's due, the school knows who has the book. Technologies all around us, it has to be applied to the food industry as well. It's in producers best interest to be able to quickly trace back the source of the pathogen, the source of the illness, and free up everyone else so that you don't kill an entire market for the year, and, of course, it is in the interest of the consumer that the FDA and the Centers for Disease Control can quickly identify the source of the problem and correct it. There's no daylight between the interest of the farmer and the interest of the consumer when it comes to food safety issues. It is well within the land grant mission to continue to build on the successes that we've already had. That is a part and parcel of our food security issues. As I've said a percent and a half of the population feeds the rest of the world. Our food security is a national security asset. But there are two debates raging in the world today. One holds that we must return to the land--smaller, closer. This Norman Rockwell archetype of what the family farm is. That is a growing trend, a growing sentiment and it has fueled a growth in small farms all across Florida and all across the country that has added value to locally grown foods. It adds value to restaurant menus to be able to say, in Sarasota on St. Armand, this is Lakewood Ranch beef, Ruskin tomatoes, Plant City strawberries. It is a very important marketing tool that decommoditizes a product and adds value by branding, by creating a system of support where you ask for it by name. As a former 4Her who showed Herefords, I have marveled at what Angus has done in convincing the world that Angus beef is the only beef worth eating—more power to them. It is an incredible marketing success story. But, the other view is a more desperate question asked daily outside of the United States and other developed nations. It asks how will we feed a continent that subsists on less than a dollar a day? As Dr. York himself said, “a world filled with hungry, sick and poverty ridden people, is likely to be an unstable world.” We have to recognize the existence of both. The difference between the two debates is generically speaking the stability of our government, many famines are politically induced. And, the progress that has been made possible by innovation in America's land grant research universities. As Dr. Borlaug said on the 30th anniversary of his Nobel Prize: “while the affluent nations can certainly afford to

adopt ultra low risk positions and pay more for food the 1 billion chronically undernourished people of the low income, food deficit nations cannot.” For all the people who are returning to the land and producing the growth explosion in small farms, it is nothing but helpful to production agriculture as it exposes more and more people to how food is produced. But it cannot substitute the tremendous gains and yield in productivity that have occurred over the last century that allow one and half percent of the population to feed the other 98. It’s not an either or. And, if we’re going to feed the billion who live on less than a dollar a day, we must continue to have production agriculture, safely produced, scientifically proven in the laboratories, in research and extension stations of the land grant universities. Our nation’s food security is every bit as important as our energy security. We cannot export our food production for U.S. consumption to other nations that may not always be our allies or whose supply lines could be interrupted, that means we have keep agriculture production in America viable. The greatest threat to food security are government imposed threats. Government imposed threats through the generational transfer of farms, the barriers to entry for new farmers, the lack of vigilance on our borders targeting pests and diseases, as well as a loss of the sense of strategic importance that food independence represents. Much of it can be summed up in that sentence. It is the loss of the sense of strategic importance of being able to feed ourselves represents. So, having laid out all the bad stuff, all the challenges, let me just share some of the observations that I may have. These six issues that I’ve talked about are ones that I believe will continue to define the public policy debates that best represent the opportunity for the land grant mission to prove its 21st century value to a very different audience than one Justin Morrill ever could have imagined.

But, I would add these ideas for your thoughts:

Florida has been described by political scientists as being four different states. I would add that it also has three or four different countries included in those three or four different states. We have little sense of place, little regard for our history and little understanding of our anchor industry which is agriculture. This land grant school, this flagship university must do more to highlight the common culture we share as Floridians and to better communicate the agricultural and land based perspective on issues. The need for a highly regarded source of information on issues dealing with agriculture and natural resources is vital. It will not be easy but the pieces are in place in what has been recognized as the number one aged and communication school in the country. Given the diversity of our production and the diversity of the state’s population, along with the diffusion of media outlets, we must work to help our fellow citizens understand how and why things

are and what is being done to constantly improve the human condition because of the work of researchers, teachers, and practitioners of the most ancient of all industries, yes 4-H and others. A summit, a summit for lack of better term of various stakeholders, rural and urban, public and private, academic and industry, from across the sectors should be held each year to intensively focus on a single given challenge with assignments leading up to the event and a work product expected at the event's conclusion. The Wedgworth Leadership group is a model of challenging convention to its participants. But, I envision this event as being a broader slice of our state and a shorter time commitment. Other institutes, the Aspen Institute, the Askew Institute here on this campus and others have refined this model—it's time that we applied it to the questions that impact agriculture and natural resources. Who better to perfect the transfer of solutions from the relatively sublime campus to the rough and tumble public policymaking world but a land grant institution. Next, public policy makers must make a sustained commitment to the priority of higher education. While elementary and secondary school equips students with the basic life skills to survive, a robust higher education system equips the curious with the skills to thrive, to innovate, to cultivate their own culture of learning. Given limited resources, IFAS and the Department of Agriculture should partner through their research and extension arms to better serve the public. Jointness, as with the military, should be the new order of the day. Common laboratory facilities built or renovated once not twice or more make perfect sense in a world of rapid obsolescence and ever increasing costs for equipment and staff. I envision a common building where undergraduates learn in classrooms on lower floors, graduate students perform research on upper floors and work closely not only with professors but state scientists analyzing samples, identifying pathogens or tracking down a new strain of disease from field samples. The most perfect sense to build on the economy of scale to build on the human capital that has grown up around this land grant university. Everyone benefits from a common sense of purpose and an interaction that fosters new thinking. In a private sector lab, collaboration is rewarded, in a public sector one it can be precluded by the sheer logistics of place. Around the state I think we should expect trusting partnerships when working toward common goals of renewable energy, better nutrition in the schools, food safety improvements and educating local governments before they adopt new ordinances affecting resources when they lack the robust science to justify them, among other issues that touch every Floridian, every Floridian, not just farmers and ranches in our natural world. If we are to be a well rounded economy, and one that might prey on the comparative disadvantages of the other states, their higher taxes, their regulatory burdens, their lack of decent football or dreary climate, we must build upon the success of our existing universities. We must recruit far and wide, retain our very best, reward

outcomes and build successful business models around the transfer of new technologies and techniques.

When I was first elected I had an opportunity to chair a sub-committee on technology and I took the sub-committee to Silicon Valley. We went through every major company you can imagine. We went to IBM and moved an atom using an electron microscope. We went to Apple where they unveiled this... At the time, one of the challenges that we had as a committee, was finding the right public policy as these spy sharings and other intellectual property invasive techniques were spreading around campuses and spreading across the globe, and Apple unveiled a new model that no one had heard of before that would make music downloading so cheap that no one would need to steal it and it was called the iPod. But, we went to all of these laboratories and companies that do tremendously creative things. And, I said why are you in California? California is notoriously bad place to conduct business, it's very expensive. High costs, high levels of regulatory involvement, high permitting issues, why do you stay in California? And, their answer was, we tolerate all of those things, for the human capital that's built up around our universities. We put up with a lot to get the brightest and the best and the spin-off technologies that come from the Stanfords, and the Berkeleys, the Davis' and the UCLA's of the world. That's where Florida can be. Without having to tolerate all the bad stuff. If you love California, you'll love Florida, we're just a little more humid. We have to build a culture of innovation. To come out of this recession stronger more diversified than we went into it. Even in tight budgets which we will face for the foreseeable future, higher education must be a priority. It is the seed corn of our future and the land grant mission is well suited to that vision so long as it is not bound by its own orthodoxy.

Finally, let us remember that the original purpose of the land grant university was access. The opportunity for a farm boy or farm girl to seek a better way of caring for the land, marketing that product and transferring knowledge from the lab to the field. It was put forward to expand higher education beyond the elite. That was the land grant mission.

As I said in the beginning, many of our finest land grant institutions have become our most our most elite public institutions of any kind. We're all aware of just how difficult it has become to be granted citizenship in the Gator Nation.

While we should be proud of the highest standards and the desire of so many to come here, we must ask what portion of that mission is jeopardized for the prospective student from a rural area, without an International Baccalaureate

program or multiple Advanced Placement courses when the odds of admission have diminished so much. It isn't a matter of access to some form of higher education but the opportunity for a land grant education and if we lose those students we've lost our way. It's a delicate balance that we must find to continue to attract the brightest and best from all backgrounds to sustain the dynamism of the 21st century of agriculture and natural resources in the most peculiar place on this earth, Florida.

Thank you for the work that you do, thank you for the service that you perform to the sustainability of agriculture and to the state of Florida. And, thank you for this opportunity to share my thoughts, however ill formed they may be. The seeds of this talk were planted in a 4-H meeting at that extension center in the John Brenneman Auditorium at Camp Cloverleaf in a canoe, in McCarty Hall, in P.J. van Blokland's pub, and the AGR house or in a family citrus grove. As I said at the beginning, I'm a land grant baby.

Thank you all very much and go Gators!

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