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21ST CENTURY AGRICULTURE IN A 21ST CENTURY URBAN WORLD

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Thank you, Karl. I want to know how in the world you figured out I was from Texas? It's a pleasure to be here. Good morning; everybody awake? For those of you new to the campus or here for the first time, welcome to New Mexico State University. Those of you who have visited the campus before, welcome back. Those of us who are fortunate enough to work on this beautiful campus we know how lucky we are. For those who are visiting for the first time, if there is anything that you would like to see or do or participate in, let one of us know. We will be glad to help you figure out how to go about doing what you want to do. This university is truly one of New Mexico's crown jewels and New Mexico has several. So let one of us know if we can help you out, we are very, very honored that you are here.

I'm filling in today or pitch-hitting for our president, Michael Martin, who I understand is in North Korea at the moment. Hopefully our governor and Mike will convince the North Koreans that perhaps they need to feed themselves first before creating nuclear weapons. Hopefully it will be a good trip for them.

It's a pleasure to be here. Karl said it's the 50th water conference. I don't know about you, but every time a birthday is celebrated, I think about this gentleman who was celebrating his 100th birthday and a newspaper guy got wind of it and called him up and got an appointment with him. He asked the old man what he contributed his longevity to and the old man said, "I think my longevity is attributed to never letting that demon 'alcohol' touch my lips. The reporter writes this down and asks him if there is anything else. He said,

“Yes, I think the reason I’ve lived 100 years is because those bad foods, demon foods, have never touched my lips.” The reporter writes this down and asks if there is anything else. “Yeah, I think it’s because that demon ‘tobacco’ has never touch my lips. I’ve never smoked or chewed or dipped.” The reporter asks if there is anything else. “Yes, I never stayed up late or caroused around, that’s what I contribute my longevity to. And tomorrow, I’m going to celebrate my 100th birthday! The reporter looked at him and asked, “How?”

I think you have a wonderful program ready to go. I’m kind of weird folks, so I’m going to make this griefless and painless for you. I’m an economist and I’m just weird as can be, and all economists are weird. The longer I’m in the profession the more I know we are weird because we view the world differently. Most

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importantly, have you ever heard an economist say anything good about anything? We have correctly forecasted 15 of the last five recessions. It’s true, for

every recession that comes along we have said three would happen. We are always telling you, oh this, oh that. We are the people who are telling you today why yesterday’s forecast was wrong and then we repeat, and then we repeat because we are always wrong. I’ve come to realize the difference between a dog and an economist at your back door is, when you let them both in, the dog quits whining. We whine, we moan, and we complain, but I’m not going to do that today.

I’m going to talk to you today about two major drivers that I think are changing water, changing natural resources. I think they are changing the way we live and I think they are changing agriculture. First and foremost the thing we like to talk about in my profession is called money. Never in the history of the world, and we have about 6,000 years of recorded history, have so many people had so much cash. It’s true. My estimate right now is you have 106.6 million households in the United States, in cash, that means you can spend about \$7 trillion. That’s \$7 trillion. But I saw a program not too long ago where another economist said, “Stop telling people it’s \$7 trillion, I don’t think that’s right, I think it’s \$9.7 trillion.” That’s a big difference. Then I saw another program with another economist and he said, “Quit telling people it’s \$7 trillion, I think it’s \$4 trillion.” Big difference folks between \$4

trillion, \$7 trillion, and \$9.7 trillion. So I was doing some work not too long ago with the Federal Reserve. These are the people that count your money, keep track of it, and cause it to be printed, so they should know. So I said, “Guys, help me here. I have all kinds of answers going on here.” And being an economist I had to give it to them in this way. Is it (a) \$4 trillion, is it (b) \$7 trillion, is it (c) \$9.7 trillion, (d) none of the above, or (e) all of the above? Their answer was, “Yes.” They don’t know! People that count it, keep track of it in this society don’t know. We’ve never had so much money. It’s never happened in history. The Canadians keep better records than we do and we know they have \$2 trillion, the Japanese keep better records than we do and we know they have \$4 trillion, Australians have \$1 trillion, and Europe, \$8 trillion. Never in the history of the world have so many people had so much idle money floating around. I tell you this because you never hear it from my profession and you never hear it on the news.

I saw another program with another economist not too long ago, and for 30 minutes he beats up on the audience. He tells them that Americans have never been in so much debt, which is true. But all the time he is telling them this, I’m thinking that when beer goes on sale, I’ll fill up the garage! Debt has never been cheaper in 54 years. He’s an economist. Please understand that I’m not telling you to misuse debt, but what he didn’t tell the audience was this – it is true that Americans have never had so much consumer debt, but it is also true that it’s never been cheaper in 54 years, and a prudent person would have some. More importantly, what he did not tell them is that the number that matters the most is the relationship of debt to your income. That’s what matters.

Fifteen years ago to pay your mortgage and to pay all of your consumer debt, it took 16.1 percent of your disposable income; today it takes 15.75. Yes, we have never had more debt, but we have never been more capable of handling that debt as a society. What I’m trying to tell you is that there has never been so much money, and money changes people. Money causes us to do weird things. Money does change people.

At the end of WWII, there were 51 sovereign nations on the planet, today there are 206. If Quebec secedes, it will be 207. Money causes us to change things. We differentiate or segment. My mother said it to me crudely when I was 13 years old and I’ll tell you what she told me. “People bitch the loudest when their bellies are full.” Now bitching is an old Southern term for complaining real bad. When you are hungry, kidney

pie sounds pretty good, but when you get a little bit of money, what do you start to do? You start wanting to complain or differentiate. “I don’t want kidney pie any more, I want Steak Tartar.” Whatever that is. You start differentiating or segmenting.

What I’m trying to tell you is that at the end of WWII we stopped manufacturing war goods and starting manufacturing consumer goods. The world right now, folks, has a 40 percent excess capacity for producing things, including food. Do you understand what I just told you? We are real good at producing things now. We have a 40 percent excess capacity in the world for producing things. We know how to do that now. But we did not during WWII. In 1942, during WWII we quit manufacturing automobiles. We didn’t start again until the model year of 1946. In December 1945, the first model of the 1946 year rolled off the assembly line. Now if you offered to my father’s generation, which did not have any money let me tell you, if you offered that generation a 4-door autographed Chevrolet, their first response was, “Yes, thank you, we will take it!” If I offered you a 4-door autographed Chevrolet today, know what you would tell me? [waving fingers under chin] You know what that means? That’s a French expression for ‘No thank you!’

What I’m trying to tell you is that we have left the production world and entered the consumer world. And the consumers have more money than they ever had and what do you think? Do you think they are going to differentiate, or bitch or complain more or less? [nods yes] Which means my father’s generation was happy to put food on the table and was happy when they got sick to share a semi-private room in the hospital. Now what in the world is a semi-private room? What I’m trying to tell you is that that’s gone, and in its place are the most demanding, complaining consumers on the planet and they aren’t just here. It’s happening all over the world. It’s called “progressive affluence” and it’s not just an American phenomenon. It’s a phenomenon that’s happening all over the world. We are going to differentiate, we are going to segment, and we are going to be consumers and that changes the whole paradigm.

To differentiate and segment is called money, never had it before and if you don’t believe that, understand a couple of other things. Now I’ve said this to many of you before, but it bears repeating again for you who deal with money. In my father’s generation, 10 percent of them got to graduate from high school and 4 percent of them got to go to college. Let’s see, is there a relationship between income and education? Hello!

Kind of! Guess what? If you get a college degree today, it is worth \$1.4 million more than a high school degree. \$1.4 million more! There is a relationship between income and education. My father’s generation who didn’t get to go to college said to my generation, “We are going to send you to 3,791 institutions of higher education.” Sixty-two percent of my generation, Baby Boomers, have had some college, one-third of us have a college degree.

We are the largest mass-educated generation that has ever existed on the planet and there is a relationship between income and education. I know. My generation today has 62 percent more money adjusted for inflation than my parents had at any point in their lives. I have no PowerPoint today – I’m my own PowerPoint – three

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dimensional. We have 62 percent more income, and as I said, excess capacity to produce things, including food. In 1969, how much of our disposable income did we spend on food? It was 31 percent, and today we spend 10 percent. If you are a household that earns \$75,000 or more, incidentally that’s one out of four households in American today (which doubled in the last decade), you don’t spend 10 percent of your income to eat, you spend 4 percent. Darn near free. So let’s see. I have 62 percent more money, and I don’t spend jack to eat.

At the end of WWII we quit manufacturing war goods and started manufacturing consumer goods. What’s happening to the real price of every appliance that makes your life better? That’s dishwashers, washing machines, and color television sets. Have they gone up in price or down in price? The average person who lives in poverty, which incidentally today, ladies and gentlemen, has an income level of \$19,200, \$800 less than my annual salary at my first job here at New Mexico State University 27 years ago. That’s a person who lives in poverty. In 1955, 22 percent of Americans lived in poverty, today it’s 11 percent. Do you understand what I’m telling you? Poverty is \$19,200 bucks. It’s an incredible number, there’s some money. Guess what? The average person who lives in poverty today has more dishwashers, washing machines, and more

television sets. They have 2.3 color television sets. The average person who doesn't live in poverty has 2.4. So are you with me here? Sixty-two percent more money, you don't spend jack to eat, and you don't spend jack to have a nice life. The difference is called disposable income. Hello! That is the biggest pressure on natural resources on the planet. It has changed natural resources forever.

Texas, the old country – those places that you stumble over to find a better place to run cattle in my father's generation – is a beautiful part of the world

Give people what they want, when they want it, and where they want it, and where's the price? If I truly give you what you want, when you want it, where is the price? It's never in the top 10 – never.

except it's filled with water moccasins, ticks, airborne and water-borne diseases of the likes of which cattle don't like, humans don't like, and dogs don't like. You can't touch a

100-acre ranch in the Texas hill country for under a million bucks because it's not about running cattle anymore. It's about a disposable income that's higher than any other time in history, and we buy things not because of their utilitarian value, but because we are weaker. Money causes us to be weird as can be. If you don't believe so, understand that my generation grew up in 1,400 square foot homes, .9 bathrooms, and 4.2 people lived in them. Point nine bathrooms – either you go or you don't go. I don't understand that number.

Now we just saw the new numbers updated in January 2005. The average home in America is now 2,400 square feet with 2.5 bathrooms, and 2.6 people living in them. Wait a minute, we used to have 4.2 people living in 1,400 square feet with .9 bathrooms; we have 2,400 square feet with 2.6 people and 2.5 bathrooms! We call it the SUVing of homes. You've got a house that's just a little bit bigger than you need because for 28 years the number one selling vehicle in America has not been a car but is in fact a truck. Have you looked in the back of those trucks? They are not hauling jack. They're just trucks. For 13 years the number one selling vehicle by sales increase category is SUVs, off-road vehicles. Ninety-eight percent of all off-road

vehicles have never been off the road. Hello? So we have a bigger vehicle, bigger house, and fewer people because we are a bunch of spoiled brats. That's what money does. It's not wrong or right, it just changes what we want in things.

It's called progressive affluence, and it's changing every aspect of agriculture's natural resources. If you don't believe so, understand this: the fastest growing little food chain in America, well not so little a chain anymore, just surpassed a month ago \$1.2 million. They are called Whole Foods. Or as people who go to them call them 'whole paycheck'; there is one in Albuquerque and one in Santa Fe. The president of that company understood about 62 percent more money and households making \$75,000 more and spending 4 percent of their disposable income on food. He thought, "I think I'm going to get more of you." And he does, everyday.

If you don't believe that, understand right now that every year we slaughter about 35 million head of cattle. And guess what? Only 2 percent of them make the grade of prime. But the people who slaughter and sell them say, "Guess what? If you would give us three times that amount we will sell it. We can't produce enough prime beef; we could sell three times more of it. At the upper end of the choice range, if you can double it, then we can sell it." I just ran the numbers last week. If we did that in agriculture, it would mean to the cattle producers a mean one billion more dollars because consumers today are saying we want more prime beef. We want more high-end choices, we want it different. My father's generation was just happy to have meat on the table. Now we have a lot of money and are saying we don't want just meat on the table. I want prime, high-end choice meat, and I want it smart – I want you to certify to me that you know where it came from. I want you to certify to me that it came from 'happy' cows. I want you to certify to me that the natural resources to produce it were prudently used and produced. It's called 'smart meat.' And if you don't think we are going to do the same for smart corn and other smart food, just hang on because we have a bunch of spoiled brat consumers who say they now have the money to back it up, so give me what I want. It is forever changing the face of agriculture. It is opening up new avenues to making money like you've never dreamed possible – new avenues to monitor and get paid for ecological service fees, to be paid for being prudent stewards of the land, and prudent stewards of

water use. We now have the mechanism in place to do that. Consumers have proved in many cases more than willing to pay for it.

We know, for example, in Australia they have done this with utilities. Several utilities users have gone to producers in and around the cities of Sidney and Melbourne and said to the farmers, "If you will let us monitor the crops that you produce, let us change a bit of the mix of them and you can sell your products into the marketplace like you normally would, just let us monitor them." Because you know what plants do – they scrub out phenomenal amounts of carbon dioxide and give the world a lot of life-giving oxygen. These utilities would monitor it and then say, "Guess what? We cleaned up the air. We can prove it. We've scrubbed out the carbon dioxide and certain other nasty chemicals, and we've given back more life-giving oxygen." Then they went to the Australian government and said, "We are making it better to live around Sidney and Melbourne. How about giving us a tax credit?" And the government did! Win. Win. Win! It's a more prudent use of natural resources; farmers make more money, and consumers are better off. Never in the history of the world did we have a better chance of integrating agriculture and natural resources than today in ways we never dreamed possible. Phenomenal opportunities and the driver is money because people got it and they don't know what in the hell to do with it. Take some of it. They will give it to you if you have what they want.

There is an old axiom in economics, folks. Give people what they want, when they want it, and where they want it, and where's the price? If I truly give you what you want, when you want it, where is the price? It's never in the top 10 – never. But if I don't give you what you want when you want it, where's the price? It's always in the top 10! It's always number 1. If I want you to drive a 4-door autographed Chevrolet, I better cut the price, but if I find out what kind of car you want...and well it happened to me two years ago in Albuquerque driving a rental car past the Mazda dealership; I saw a taxi-cab yellow Mazda Miata with the top down. I woke up when I was on the phone with my wife and she said, "You bought what?" You know what? It was what I wanted, when I wanted it, and I have no idea what I paid for it.

If you give people smart water, price will not be an issue, but it better be smart. That applies to lots of things. Do the right thing and price won't matter. This

is the most affluent world we live in, and that's the major driver.

Second major driver, you've heard this one before but let me frame it for you. Let me put it in terms you've heard – we're a bunch of old people. Or more correctly, we are an aging society. Every 6.8 seconds someone in my generation turns 50 and will until the year 2014. Folks, 15 years ago 36 percent of the population was 18 and under. Today, it's 24 percent; five years from now it will be 21 percent, in the year 2018 it will be 18 percent of the population, 18 percent 18-years-old and under. In my generation 40 percent of the population was 18 and under. When you are 40 percent of the population, people listen to you. Heck, we made them listen to us. We are the generation that protested on college campuses, smoked dope, and did drugs. Heck, we still do drugs, but now it's Prozac and Metamucil. We are a large number. Eighteen percent of the population won't have a political voice. It will be attributed to how well we are. There is an old saying, "How civilized a society is, is how well they treat their minorities." The greatest minority we will have very quickly in this society is young people – 18 and under. They will be different just as every generation is different. There is an old saying, "people are more like the times they grow up in than their moms and dads." We have a fancy name for it in economics, cohort analysis. You're more a function of what you buy, how you live, of the times you grew up in than your mom and dad. Maybe your character comes from your mom and dad. What you buy, what you eat, the clothes you wear, the music you listen to, that's a function of when you grew up.

Understand that each generation changes. What is a luxury to one generation becomes a necessity to another. A generation is mathematically 19 years. Go back 20 years, 1985 – we'll just call it a generation. Can you believe as recently as 1985, only 1 in 8 Americans had never flown in an airplane? Today, the average American has flown eight times. It was a luxury in my father's generation to get to fly, and I guarantee it is a necessity to this one. Southwest Airlines has made it so, and in the process they are the most profitable airline that has ever existed on the planet because they are giving people what they want, when they want it, and where they want it. Guess what? The next generation will consider air travel an absolute necessity.

It was my father's generation that went through the Great Depression, saw contaminated water wells,

and went on a great rampage to see that there was enough food to put on the table for everybody. They were going to try and make sure that nobody died from contaminated water and thank God they did because we have the safest public water system in the world. You can turn on any water hose in rural or urban America and feel like you can drink the stuff. But since 1991, the fastest growing seller of any drink has been bottled water. All soft drink sales are flat at 1 percent since 1991, but bottled water is at 9 percent. Bottled water grows 9 percent a year. Well, last year it grew 12 percent so it's not slowing down. The darn stuff is

In an aging and affluent population, demands on us not only require meat on the table, but smart meat; not only food on the table, but smart food. What that implies is a smart use of our natural resources, everything from the water to the way we handle the runoff.

free. It's not wrong or right, we are just the most affluent world that has ever existed that can buy bottled water. And then we have water tastings. "Oh, I think the Evian has a slight little flavor above the . . ." Who knows?! It's not wrong or right, it's just the reason

we have 241 balsamic vinegar choices. Heck, I didn't even know what balsamic vinegar was until two years ago. We have 241 choices now. I think that's enough to hold me for awhile. It's not wrong or right, it's a differentiated world. The thing about aging is your 'got to' view is different. It's that cohort analysis.

Let's take that 18- to 33-year-old generation. A new phenomenon just came out a few weeks ago. If you are a young man age 18 to 33, guess what's happened to your TV consumption in the last decade? It's gone down 50 percent. People don't watch TV anymore to speak of, but what's more than doubled is their time on electronic or video games. It's driving advertisers cuckoo. Before they reached people by TV, but guess what? You can't reach them there anymore. Advertisers are trying to figure out how they can get into video or electronic games because that is where young men spend most of their time. If you are a 33- to 55-year-old male, a new phenomenon came out just a

few weeks ago. It's called the Starbucks Affect. Seems that 33- to 55-year-old-men are leaving for work 30 minutes earlier every morning, supposedly to stop at a Starbucks to get their morning coffee. We are so lazy that we can't even perk it at home anymore. My father's generation would not have purchased a Starbucks. The average Starbucks customer goes to a Starbucks 19 times a month and spends an average of four bucks. A good cup of coffee, as my late father would say, was ruined by too dang much money. They call it lattes, and it's entered into our societies so much that we are leaving home 30 minutes earlier to get a dang cup of coffee; we don't even make it ourselves anymore – foolish changes. Then that aging point comes back – we are weird. What a luxury is to one generation becomes standard to another, a necessity to them. They must have their Starbucks, got to have that choice. It's not wrong or right, but you must have it though. We are more like the times we grow up in.

Take the big drivers, the Baby Boomers, and understand why you need to know them and natural resources because the car companies missed us bigger than Dallas. The car companies said about the Baby Boomers, "Oh, they're just 82 million." Well, they got that wrong. They called it 76 million, and they don't even upgrade their numbers for immigrants. Eighty-two million Baby Boomers were born between 1946 and 1964. They used 76 million – wrong as can be, that's a big miss. But 82 million of us, and guess what? They are going to be just like the rat in the python. They are going to move through society, and as they move through society and get older they are going to want to drive 4-door autographed Chevrolets, and they won't want to drive convertibles. So by 1989 how many convertibles could you buy in the United States? None, squat, nada, because they didn't understand us and quit making them. The average convertible owner today looks a lot like me – 51 years old and balding. Follow them, they're just a bunch of balding men. So how many convertibles can you get in American today? Forty-three, we add three a year – because we are different.

Were you like me at age 16 and wanted a motorcycle? I begged by late father, please dad, please, please, let me have a motorcycle. "No, boy. You're as wild as a March hare. You'll be dead in 2 years," he would say. He wisely didn't let me get a motorcycle. Now we buy them at age 47, which is the average age of an owner of a Harley. They are a bunch of fat dentists.

Then we are dead by 49. It's not wrong or right, it's just we're different. Put those two together, aging and affluence, and you get the implications to water and natural resources and agriculture.

First and foremost, an aging and affluent society demands, number one, more services. The demand for services is growing by leaps and bounds. I restore old cars, and I haven't changed the oil in them in 5 years. It's changed. I just don't do it anymore. Even in Las Cruces, New Mexico, every hundred yards there is a Jiffy Lube or someone that will do it for me for three bucks. And, oh, by the way, while they are doing it, I can have a latte. The demand for services for all dimensions is going to grow and what do you think the demand for equality will be for those goods and services? Will it go down, or will it go up?

Folks, my father's generation was just happy to have meat on the table, have food on the table. In an aging and affluent population, demands on us not only require meat on the table, but smart meat; not only food on the table, but smart food. What that implies is a smart use of our natural resources, everything from the water to the way we handle the runoff. If we will make all those natural resources smart, you will own it, and price will not be a problem. Sounds complicated, but maybe it isn't. Maybe it's as simple a message as what my father told me about a farm. "If you water it and it dies, it's a cash crop. If you pull it out and it comes back, it's a weed." I didn't understand that until I became an economist. It's really very simple folks. Let's make them smarter, we can, and in the process we will have better food, a better environment, and more income.

The Water Resources Research Institute at this university has had 50 years of this conference and has tried to figure out what those needs are. It has done an outstanding job. It has an excellent record of trying to help you solve these problems. Jim Halligan, the former president of this university, said it very well one time when he said, "Universities exist to solve people's problems." The only way we know what these problems are, is to ask them and be them. It's not what water can do for water, it's what you've done for water for 50 years. Continue to do so, continue to ask us, and we at New Mexico State University will do our best to help you. We've not real smart, but what you do with water is smarter than you are.

Thank you for letting me be a part of this program. Have a great conference!