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Abstract: David Seibert was born on November 21st, 1944 in Belleville, Illinois and raised on a livestock and grain farm in St Clair County Illinois. He graduated with a BS and MS from the Southern Illinois University in Carbondale in 1968. After graduation he was hired as Associate Extension Adviser for McDonough County from August 1968 to August 1971. He managed the U of Illinois Swine Nutrition Research Farm in Urbana from 1971 until 1974 when we accepted the responsibilities of Area Livestock Adviser and Animal Systems Educator for the U of I Extension Service. Dave currently serves in this capacity and has for the past 34 years. His primary focus during this tenure has been beef cattle production.

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Interview with David Seibert

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September 18, 2008

Interviewer: Dick Hall

(one minute delay)

Hall: Hello, my name is Dick Hall. I am a volunteer for the Abraham Lincoln Presidential Library. Today is September 18, 2008, and we are interviewing Dave Seibert. Dave is a University of Illinois animal systems extensions educator. Dave, tell us a little bit about yourself and your early years.

Seibert: Dick, I was born and raised in south-central Illinois—actually in New Athens, which is fairly close to Belleville. I was born and raised on a livestock and grain farm. It was a diversified livestock farm: we had beef cattle, swine, and dairy. During my high school years and even grade school years, I was involved in 4-H and FFA. For those, beef cattle was the projects that I had. And with the FFA, I was involved in officer—actually president of our local chapter, and active in 4-H offices as well.

At the completion of my high school education, I went to Southern Illinois University down at Carbondale. I majored in animal science, and with that, I obtained a BS and MS degree. During my undergraduate [studies], I was involved in livestock judging. I traveled and was part of the livestock judging team. For my Master's, I did my Master's work in swine production—actually, genetic aspects of swine production. Also during my Master's, I was a teaching assistant and worked with the animal science classes that were out at the farm as well as assisted with the livestock judging team at SIU.

Hall: When did you decide that you was interested in Extension?

Seibert: Actually, it went back a few years. There's, I would say, some individuals that were very influential. One, during my Master's degree, I worked under a gentleman by the name of Dr. Howard Miller. And Dr. Miller knew individuals in University of Illinois Extension, notably Dick Carlisle—Professor Dick Carlisle—who was well known as the Swine Extension Specialist. And with that, I got to know Dick, and enjoyed what he was doing—the type of work he was doing—in assisting livestock producers throughout Illinois. So really, I would say even before my Master's, in my undergraduate work, I was leaning towards going into the Extension service.

Hall: And these two fellows were your mentors, is that right?

Seibert: That's right, yes. As I mentioned, during college, it was this Dr. Howard Miller, the Swine Extension Specialist [Professor at SIU]. And then throughout many of my Extension career, Professor Dick Carlisle who is nationally known—internationally known. He had a great influence on my career choice as well as those changes that I made during my career, in which I was first of all moved from a county Extension office, back to campus, and then, of course, went into an area position [in Peoria].

Hall: And where was that area?

Seibert: The first employment I had was in 1968. I started my Extension career in McDonough County, which is located at Macomb, western Illinois. I worked as what they called assistant and associate ag advisor—Extension advisor back then. Even had a specialty of working with livestock; they call it livestock specialty. And then I was there for three years—actually I started in '68, through 1971. In '71, I went to the University of Illinois and managed their swine nutritional research farm. The University of Illinois has a very strong swine department. Many of the nationally-known professors came through the University of Illinois or were at the University of Illinois. And nutrition is especially their strong point over at the U of I. And by managing the swine nutritional research farm, I worked closely with people like [Dr.] Dave Baker and [Dr.] Bud Harmon. These are all professors at the U of I. Al Jenson—Dr. Al Jenson. Dr. Gene Becker, who was really my—he was in charge of the farm. He was department head at that time. So it really allowed me to have very close contact with many influential people and gain a tremendous experience.

So I went in 1971. I was there [U. of I.] until December of '73, for just about two and a half years. And then starting in January of '74 is when I moved to the Peoria area and started my career as first of all an area livestock advisor, and then as they reorganized in 1993, as an animal systems educator. And I've been at Peoria since 1974.

Hall: And an animal systems educator—what's your function there?

Seibert: Okay, actually the role of Extension is to transfer research-based information to producers. And of course, Extension has many different areas they work in. Actually, there's thirteen different specialties on an educator area. But in my particular one, as mentioned, I was transferring research-based information from University of Illinois, other universities, as well as USDA research stations, to producers. This might involve numerous different areas. It could involve rations, maybe new rations that are coming; different management techniques; housing—there's been a lot of changes in housing; in management, of how you manage those animals; in selection and breeding; carcass evaluation, in which you really look at compositions. So what you do is try to have producers adapt new technology that would make their operation more efficient, more profitable, more sustainable. And that was my main role.

And my vehicle of doing that would be several. Probably the educational-type meetings, seminars, field days—those types of things are many times the backbone of our program over those years. Another thing [method] would be one-on-one consultation, and that might be by phone calls, where you receive a phone call request discussing maybe one-on-one particular problems that they would like to have answers to. It might involve more recently, internet, e-mail requests for information and sending that out to them. The one-on-one might even be going to the producer's farm and actually on-site providing of the information or assessing what their needs are. And then, of course, even more recently as well, is the development of web-based sites in which we develop websites and post information that would be of value to them. So there's multiple vehicles that we transfer information to producers.

Hall: Dave, can you tell us a little bit about the Extension—how it came about, like a little history on that?

Seibert: Yeah, actually going back even a little bit before Extension, the Morrill Act was passed in 1862, and this particular act established what we call the land-grant colleges or land-grant university—land-grant act. And of course each state has a land-grant university, and the one here at Illinois is the University of Illinois and Champaign [-Urbana]. And then, of course,

starting in 1914, an act was passed that was called the Smith-Lever Act. And the Smith-Lever Act was passed to mainly set up the Agriculture Extension Service. And of course, early years, that really meant the farm advisor, the ag agent. And then later years, came along the home demonstration agent or the home ec advisor. And that was really to provide for each county a place where that would, you know, coordinate, would set up, would assist farmers, and of course homeowners and housewives, in adapting new technology or improving agriculture production initially. And I guess something that's happened over the years is by, I think, really having that vehicle out there, we have greatly improved the production, whether that might be corn production or soybeans, or the growth of livestock or reproduction of livestock, composition. All these things was in. And it was really set up so USDA had a vehicle to really expand the development of food first of all, and then later, the family. And I think over the years, we of course have become an exporter of many of those products, whether it's feed grains or whether it's the finished product, meaning, beef exported to other countries, pork exported to other countries, as a result of the Smith-Lever Act and as a result of the Morrill Act that has really allowed research to be used, adapted very quickly by the producers out in the field.

Hall: And who funds that? Is that funded through the USDA, or...?

Seibert: Yeah, actually the local Extension or Extension is a partnership. There's money comes from federal for a certain percentage of the support, there's state money that's also appropriated through the state of Illinois, and then there's local support. In the county base, there's referendums passed, there's county support from the county Board of Supervisors. So it's really a tri-partnership as far as the funding of that organization—of the Cooperative Extension Service. And it initially started as a Cooperative Extension Service, over the years, it's changed its name to now, where we're called University of Illinois Extension.

Hall: I think that probably, the way I understand it, you've kind of moved into cattle. You've left the Extension part of the hogs, but you have specialized in the cattle end of it now, is that right?

Seibert: That's right. Actually, as I mentioned, when I was at the University of Illinois—well, first of all, I got my Master's in pork production, and that was the influence of the major professor, my mentor [Dr. Howard Miller], when I was at Southern Illinois University. I went to the University of Illinois because of Dick Carlisle—Professor Dick Carlisle—telling me, "This would be a good career move." And that, of course, managed the swine research farm at the University of Illinois. And then when I came back into Extension, we were really area livestock advisors, so we really covered all areas—but mostly beef, swine, and sheep was the area. But when I first started, because of my background experience, I probably spent 60 percent, maybe 65 percent of my time in the swine area, and then additional amounts were spent, of course, in beef, and some in the youth area as well, which had been the 4-H livestock program.

However, if we go back to what's happened, and we will kind of share some of the changes in numbers that has occurred, the swine area has really consolidated, meaning that there was probably when I started around 35,000 [50,000] pork farms when I came into Extension in 1968. And of course, through consolidation, I believe the number now in year 2008 is down to 2,800. So there's really been a consolidation of numbers, and of course, that's really resulted in much larger operations. And really, that same thing has happened in all species. It's happened in the number of farms and the size of those farms. As we see a decrease of those specie

operations and those farming operations, we usually see a resulting increase in the number of animals or number of acres that's in a farming enterprise.

So at that point, I really decided to kind of specialize in an area, and even though my youth area was with beef cattle and I've worked a lot with beef cattle, that's the area that I really expanded into. And I would say now, I probably spend probably 90 percent of my time in the beef cattle area, with much of that in the cow-calf area. I do work out of Peoria, which is in the north-central part of the state. And of course, in beef cattle production, we can have the cow-calf—we can have a stocker program, where the cow-calf takes those calves up to about four to five to six hundred pounds, and then we have a stocker operation that may grow those to around 800 pounds, and then we have finishing that takes them all the way to market.

But really, in my area, there's probably a fairly high percentage of the operations are cow-calf operations. Not that many feedlots, really, in Illinois, and most of the feedlots are located in western Illinois and also in northwest Illinois. So that's really resulted in my working mostly in the cow-calf area, and as I mentioned, probably spend 85-90 percent of my time working with cow-calf producers.

Hall: Would you like to kind of share some of the history of how the progression of cattle was selected and...?

Seibert: Yeah. I guess, if we go back, and this might be in the—let's say in the mid-1800s—we would see probably animals that would be somewhat of this type here, that was just kind of a mixture of multiple animals. And we can even go pack prior to that. When we think about Abe Lincoln, when he was out at New Salem, there was the oxen out there at that time that was used for multiple purposes. They were used for draft, to pull carts; they were used for the hides; might have also been animals within that population that was used for milk production. And probably if we go back to that same time, maybe the beef part of it was the lesser importance of those animals out there.

And then, of course, as other genetics were brought in, we probably would see something like these animals I'm showing right here that would be found on many of the farms. And then as we kind of move from there, we could probably see animals that were the longhorns. And the longhorns were very popular out West. Again, animals that would thrive on a little less forage production and may not have quite the growth potential we have in animals today. So the mixture of animals I showed previously, the oxen I talked about in Abraham Lincoln's time, as well as the longhorns, were kind of the early animals—beef cattle animals—that we had in the United States.

From there, we of course were importing animals. We brought in the British breeds from Europe [England]. These would be familiar that you've probably heard, many people, of Angus—Angus beef and that type of thing. They were brought in. There's a breed called Herefords that were brought in, also from England. These were all British breeds. As well as Shorthorns. Those were some of the early breeds that were brought into the United States. As well as down South would be Brahman-based cattle, and then also Charolais, which was a French breed, was brought in. And the whole concept there was to improve the quality of those animals that I previously shown, whether that might be the reproduction, whether it might be the growth rate, whether it might be the [meat] palatability—meaning their juiciness, flavor, that would be found in the lean. And much of this occurred during the mid- to latter part of 1800s that we were going in to Europe and bringing those breeds back.

And then as we move into the early part and through the mid part of the 1900s, we started to exhibit those animals, show those animals. And then, of course, the eye of the master, the eye of the stockman, was the person who really decided what type of animals that we might have. And this particular slide right here kind of shows a change that we had in those animals. The upper-left part of the slide would show in the fifties and the early sixties as what we refer to as really belt buckle—a very small frame, almost baby beef–type cattle. And they felt that the family was going to be fairly small, so we really didn't want this large cuts of meat or this real big animal. And of course, what happened at that point is these animals wouldn't grow very fast. They would mature—meaning get to a market weight—at a fairly light weight, and then also the product had a fair amount of fat in it.

So the feedlot people and the people out West, they really felt we needed a much bigger frame, a much faster-growing kind of animal. And in the center of the slide would depict what was kind of selected in the 1970s: a little bigger frame, a little more moderate frame. But it seemed like in livestock production or in many things, we always overcompensate for our previous mistake, meaning we got them too small, so what we did then was make them too big, and that would kind of depict this animal down here. And this is kind of the wilt-and-stilt concept, is depicted down here, meaning going from one extreme to the other extreme. So we got them too big, and that was really in the eighties.

But another phenomenal happened during that period of time is we started bringing in a lot of Continental breeds, we called them. And these were European breeds, and they were breeds that was used in Europe for draft, for milk, as well as for meat reasons. And examples of those would be like the Simmental breed, and the Limousin breed, and the Gelbvieh, and the Maine-Anjou, and there's a number of those breeds. And they were used then, they were brought in in the late sixties and through the seventies to really increase the growth of the lean composition of the cattle that we had here, to use in crossbreeding.

Hall: But in that selection, sometimes things went awry, is that right?

Seibert: Yeah, that's right. And we mentioned one earlier regarding the really big-framed cattle. And there's probably a lot of people we can kind of blame for that, and probably university people had a lot to do with it because they were, many times, the people who were the judges at some of these events. So that was one problem. A second problem occurred as, again, we had this British breed base that most of our cow herds—their genetics. And of course, when they brought in these Continental breeds and used what we call that first cross, meaning that Continental breed on that British-bred female, it was really a great response that we got. It increased the growth, it increased the frame, it increased the muscle and everything. And then, of course, with success, we tend to do that [breed to the Continental] again, and we had three-quarter bloods. And then all of a sudden, they did it again; we had a seven-eights. And really for the feedlot operators, said, "That's more than we need," because they couldn't get these cattle to marble. And second of all, the cows got really big then, too.

So we got this factory out there in the beef cattle industry, and it's called this beef cow, that we have to make sure that she's efficient, that she rebreeds, that she doesn't require more feed than the environment—meaning the pastures that we have for her, will sustain [her production].

So moderation in many things is kind of the best thing, and that's where we need to really be. And our result of getting cattle too big—they weren't moderate-framed, you know; they were just really, extremely big-framed. The cows were just definitely too heavy, too big a frame.

And the same as we start incorporating some of the Continental breed into them. We can get too much of that half-blood, quarter-blood—meaning a quarter Continental, which would be like the Simmental, the Maine-Anjou, the Limousine, and three-quarter British, is kind of ideal. Maybe half-Continental, half-British is a good mixture as well.

Hall: Putting that large-frame bull on those smaller heifers, sometimes run into calving problems, right?

Seibert: Yeah, that's exactly correct. And of course, your background experience in the vet business—I'm sure many times you were called out in the middle of the night, where a British-bred female was having calving problems. And the British-bred animal, usually seventy, eighty pounds is kind of our average birth weight. And of course, these Continentals, you know, and all of a sudden, we were having ninety- and a 100-pound calves, or maybe even a little more than that. So that was really a serious problem, and one that people, you know—many times, people that was their first experience, meaning they had to set a British-bred cattle, that were probably fairly small-frame kind of cattle, and you brought in this big Continental bull on them. And you had two things there. First of all, his birthweight was a lot heavier. Second of all, and when we start crossing animals like that, we call that "hybrid vigor" or "heterosis," and with that, we can jump up the birthweight as well, even more than the average of the two. So there was compounding factors there that was occurring, and if they bred those Continental bulls to some smaller-frame British heifers, they were in a lot of trouble. And that was many people's first exposure to the Continentals, was when they first dropped those calves on the ground, and that was a bad experience for a lot of people.

Hall: Dave, can you kind of tell us what part the state of Illinois played in the cattle industry? Give us a little history on that.

Seibert: Yeah. The state of Illinois really has a terrific background, you know, as far as the impact they had on the cattle industry. And of course, if we go back early on, one of the early things—when we think about the Chicago fire, and the story of Mrs. O'Leary's cow kicking over the bucket, of the milk cow and burning down a good portion of Chicago. So that really was a factor that occurred that I think has a big influence on the cow, on what happened here in Illinois. Second of all, out West where many of the cattle are raised, they would tend to bring those cattle up to maybe a rail head in Kansas or somewhere, and of course, where would they ship them? They'd ship them back East. And where would they end up at? Well, quite often, Chicago, because Chicago was kind of a central hub for several things, and one of those things was the Chicago Stockyards. Chicago Stockyards was without a doubt the largest stockyards in the world. They handled millions of cattle there, it was a very big facility, and it was the place where people wanted to get cattle to, especially if finished cattle—whether they were grass-finished cattle, as we produced many years ago, or whether they were grain-fed cattle as was shipped there.

And then, of course, we had the stockyard. So what attracts the stockyards is a packing industry. And of course, Chicago was really the meatpacking industry of the world—of the United States. And there was names that we think of in the packing industry. Armour—that's a name that was originally from Chicago. Also, Swift is a family that started the meatpacking industry in Chicago. So that really resulted in those cattle coming to Chicago, going through the stockyards, being harvested at the packing plants in Chicago.

Of course, being the center of that, there was another facility up there [Chicago] that had national recognition, and that was the Chicago International Livestock Exposition. It was without a doubt the center of showing cattle and bringing cattle in the United States. And of course, many times the bulls that was chosen as the champions in Chicago, at the International, were those that generated the [future] seed stock. And of course, what people would want to do is—back then we were not using AI—artificial insemination—so they would try to buy a son out of one of those bulls. So that really influenced a lot about the breeding that took place—the Chicago International.

And then, you know, after that, another thing was the Cows on Parade, or the figures that they had on display—I think that was in the late nineties—in which they had like 300 fiberglass cows that they painted up and decorated and had in Chicago. And that was probably the first place that had ever had that type of thing. And I know since then, there has been different cities that have picked up on that with their particular thing that they have there.

The other thing that happened, too, is when you think about beef cattle production, we have different quality grades, and those quality grades might be something that people hear of—Choice—and then of course, they might hear also one called Prime. And those really dictate what we call the palatability of the steaks that we eat. And probably the Chicago stockyards and maybe even, as well, Illinois, it might be the prime beef capital of the world. A lot of cattle feeders would want to ship their steers to Chicago, and it was quite an honor to what we call topping the market up there—getting the highest price, and that were probably cattle that were grade Prime. And of course, from there, those Prime cattle would result in producing steaks for the very best steakhouses not only in Chicago, but all the way into New York and the East Coast. So Illinois has a terrific history and impact on the beef cattle industry in the United States, and some of those were centered around Chicago, but the others were centered around the state of Illinois.

Another thing that happened too is—we talked about bringing those breeds over from England. And one of the very first breed associations was the American Angus Association. And it was started in Chicago. The headquarters for that was in Chicago. And of course, as result of that, we had some of the very best purebred operations here in Illinois. And certain names like L.B. Pierce and Sons from Creston, Illinois—that's really in the northern part of the state. There's also one that's probably, when you talk about genetics in Illinois, is J. Garrett Tolan, and J. Garrett Tolan was at Pleasant Plains, which is actually just west of Springfield. And that particular operation probably had more of the really elite sales and provided a lot of genetics for the Angus breed. Also there as other breeds as well, and I think another one, located just west of here [Springfield], was the Les Mathers herd. It's really called Leveldale Farms. And they were some of the early people to bring Shorthorn cattle into United States. They were nationally recognized for many years. I actually worked with that operation when I first started into Extension. And back then, when you won the Chicago International, you were probably given a ribbon, but more importantly, you were given a plaque—it was a metal plate that you would probably hang above the animal at the fair, and then, of course, you took that home with you. And I remember working with the Leveldale Farm, and when we processed cattle in their facility—which is Mason County, just west of Springfield—they would have many of those plaques or those plates nailed up in their barn for their winnings that occurred in the 1950s and the early 1960s and things. And then there's another farm, too, in northern Illinois; it's called Northern Pump. And it's a Hereford farm, and they were nationally known, as well.

So Illinois has some of the very best seed stock [operations]—meaning purebred, and that would pertain to a particular breed—operations that we find in the United States. Had a great influence on the genetics that was used in the United States. And I think of those purebred operations is kind of because we were close to the International, which had such a great influence on genetics that was developed in the early years.

Hall: I think you had some pictures here of the old stockyards. Is that...?

Seibert: That's right. Actually, this first one I have here is of the International Amphitheater, where the International Livestock Exposition was held in Chicago. Of course, it's not there any more, but that facility named many of the grand champions. Matter of fact, when we talk about beef cattle, early years, it was mostly straight-bred cattle that was raised. And then, of course, crossbreeding came into use. And the first crossbred steer that won in the Chicago International I think was about 1969, maybe 1970. And I was there that particular year when they chose the [first crossbred] grand champion steer. Don Good, who was the chairman of the department out at Kansas State University, he judged that particular show, and he was a Charlet-Angus crossed steer. So even though it was a show, it really impacted what many people did in the livestock industry. And we can talk a little later about crossbreeding and some of its values. But that was one of the milestones that happened in the state of Illinois.

You also mentioned the Chicago stockyards. This particular picture here is the entrance to the Chicago stockyards. It still stands—it's actually a historic site. Also, too, this would be many of the pens that you would see. Actually, the Chicago stockyards covered I think fifty or sixty acres. I mean, it was a huge facility. They had up to, I think one time, 25,000 people working there. So that was quite a development up there, and one that really set the market for livestock in the United States, especially finished livestock. This, of course, is no longer standing—it's been converted into industrial use—but it did have a great history of beef cattle production in Illinois and in the United States.

Hall: Can you tell us a little bit about—you mentioned the crossbreeding and types. You want to go into that a little father?

Seibert: Yeah. We have different breeds, and we mentioned many of those breeds. And this would kind of depict some of the breeds that we have here in the United States. We talked a lot about the British breeds, which of course, you notice up here, we have an Angus—we even have a Red Angus—there is a red gene in the Angus industry—as well as Herefords. And this shows the number of purebred cattle that's raised. You notice here about 56 percent of all the purebred cattle raised in the United States are of the British breeds. Then, of course, we talked about the Continental breeds. These would be your Charolais and your Limousin and Maine-Anjous and that type of genetics. Those are brought in from Europe, and they offered a bigger frame, more muscle, more milk production. And then down at the bottom here, we have the Brahman influence. Now, we don't have many Brahman cattle in Illinois—there are a few down in the southern part of the state—but most of them would be your British-bred cattle and your Continental-type cattle.

And of course, as you straight-breed those, you don't obtain what we call "heterosis." And heterosis is when we start crossing animals of different genetic background. And there's different crossbreeding programs. We can have just the initial cross, which we call the F1 cross, and we get a tremendous response from that, but many crossbreeding programs are set

up so that they can sustain themselves. They might be a two-breed backcross, in which we use Angus and maybe Simmental, and we just keep backcrossing those two [breeds].

And of course, what happens in that particular situation? First of all, we improve conception rate by using crossbreeding. Second of all, we improve the percentage calf crop. We get more cows to calve and have live calves. And third of all, we increase our weaning weight. And weaning weight usually occurs at about 205 days, and we can pick up an additional thirty or forty pounds by doing that. And then, of course, from there, we put them into the feedlot. We have more rapid gain. And then probably really of importance is you start combining breeds together that will allow you to end up with an end product that has more lean composition—more muscle—and maybe has adequate marbling. So what you do is blend different breeds together in order to get all these added effects, and actually, it can come up to about 25 percent more pounds of calf wean per cow exposed, which is considerable.

And I talked about different crossbreeding programs. This is actually what we call a three-breed rotation. And we can start over here with breed A, and of course, we mate that to, let's say, a set of cows, and their offsprings—their daughters—we mate to breed B down here. And then, of course, their offsprings, we mate to breed C. So you might have the Angus, you might have Simmental, and you might have Hereford, and you just rotate those three breeds around, and that's how you can really tend to pick up additional pounds of calf wean. At the end of the feedlot, you can end up with a lot more pounds.

Just a pictorial part of that would be this picture right here, which shows what we call a Baldy cow, meaning this is a black cow that has a white face. So you kind of think of that cow being an Angus-Hereford cow. It's what we refer to as an F1 cow. And then you would take that F1 cow and you mate it to a Charolais bull. And a Charolais bull it would be, is a Continental; it's a French breed. It's a very heavy-muscled, fast-growing breed. And then as a result of that, you end up with this calf right here that is a Smokey calf. And of course, as far as hybrid vigor, heterosis, that's what we call a terminal crossbreeding program. And you can probably obtain maximum heterosis by using this type of crossbreeding here. So really, crossbreeding can really add some additional pounds, some additional economics, to an operation.

Crossbreeding doesn't come with all positives, and one of the negatives that we have is many times in crossbreeding, people do not continue with an organized crossbreeding program. So they really kind of don't set it up as a two-breed backcross, or let's say a three-breed rotation or a terminal cross. In a terminal cross program, all offspring go to market, so you have to go out and buy the replacement heifers, and that can create a problem as well. So crossbreeding is a great management tool, breeding tool, but again, you have to make sure you do it in an organized fashion with the different breeds that match and meet together, and also that those cattle have economic value, meaning—and we'll talk about a little bit later on about genetic merit, meaning how do we know that those animals—where they rank within their particular breed? So crossbreeding is an excellent tool, one that's used throughout Illinois, but without good management, it can result in disappointment.

Hall: You mentioned earlier that there's been quite a change in the farming practices—the size of farms. Just what has changed? Can you kind of highlight that just a little bit?

Seibert: Yeah. We talked earlier about some of the things that have occurred as far as size of operation. And let me just slip over here and pull out a little more... (pause) And what I'm going to do is base these numbers all on the past forty years, because that's kind of my career span. As I

mentioned earlier, I started in Extension in 1968. Again, this past August, I just completed my fortieth year of working for the University of Illinois. So I'm going to kind of talk about the changes that have occurred during that period of time. And of course, I'm going to start, first of all, talk about farm numbers and farming operations.

And if we go back to 1968, we have about 131,000 farms in Illinois. And if we look at this year, now—2008—we have about 72,000. So we decreased almost half—actually 46 percent of the number of farms. And that's due to consolidation. I mean, I was born and raised on a small family farm—it was a diversified farm—and to try to sustain a family on that farm as your only source of income would be very difficult anymore. There is people who farm smaller farms, but usually they do that somewhat as a hobby, and they do work off-farm.

But of course, now we see a lot of those farms being consolidated together, and that results in a number of acres. Of course, we had a reduction in the number of farms, about 46 percent. Likewise, we had an increase in the size of those farms, and that's occurred about 68 percent, going from about 227 acres up to 377 acres, or we're pushing up towards 400 acres per farm. And of course, there's a lot of farms much larger than that, but of course, we've had decrease in numbers, increase in acres.

The cow-calf operation—I talked a lot about cow-calf operations. Worked with those. There was about 35,000 [68,000] cow-calf operations when I started in 1968. Now, there's about 14,700. So we've seen about a 60 percent decrease in the number of cow-calf operations, and of course, the resulting increase of the number of cows per operation from the low twenties to just right at thirty cows per operation. And now we see operations that may have 500, 600, or 700, or maybe even a few more cows. That's kind of unusual, but we see larger operations.

I guess our hog thing has changed probably the most. And as I mentioned, earlier on when I came into Extension, I worked extensively in the pork production area. And if we go back to 1968, we had about 58,000 [50,000] hog operations. I mean, it wasn't unusual to drive down a rural road and pass a number of farms that would have swine as a part of their enterprise. And of course, we've had terrific consolidation; from those 53,000 operations, we're down to 2,800 operations now. So a terrific amount of consolidation in the swine area. And of course, the resulting change in the number of hogs they marketed. Back in 1968, the average number of hogs that were marketed per operation was 119, and now we're almost 1,400 per farm, as far as the number of hogs, and that's actually over 1000—almost 1,100 percent increase, you know, in the number of hogs marketed per operation.

Another area would be like in dairy production. We had 18,000 dairy farms, and as I mentioned at the very beginning, we had dairy cows at home. Not many, but we had I think twenty, twenty-five dairy cows. And of course, we're down from 18,000 forty years ago to only 1,200 now. And of course that would result in only having an average of eighteen cows back then, so we were kind of average back in 1968. And now there's eighty-six cows per operation.

And sheep production—about 16,000 farms; we're down to about 2,000 farms. Ewes, of course, have increased. And then turkey production, just terrific increase in that as well.

So when I talked about specializing earlier, the reason I specialize is because I really went with an area that I enjoy working with, which is beef cattle, but more so, there's still 14,700 operations out there that have cow-calf in Illinois, so there's a lot of clientele to work with.

And that's one reason I went that way, is because a lot of clientele. You hold educational programs, and you usually get a pretty good response.

Hall: Now, is that specialization—do we see a drop in the amount of animals actually marketed?

Seibert: There has been. Actually, there has been a reduction in the number of animals that we have in Illinois. Actually, nationally, there's been a reduction in the number of animals in almost all areas. Maybe not so much in poultry or turkeys, but I would say of our beef, swine, dairy, sheep, we have seen a reduction. And one reason for that is the animals have become much more productive. When we think about weaning weight in cattle, they used to wean maybe under 400 pounds, and now, it's not unusual to have weaning weights of 600 pounds. When you think about market weights, we used to market them at 900, maybe 1,000 pounds—probably 900. Now, 1,300-1,400. They grow much faster. Their reproduction as far as conception rate and calving percentage is much higher now as they used to be in the past. So with fewer units, and especially so in the swine area... In pork production, we used to—if we had sixteen pigs per sow per year, we'd farrow twice a year. Now, twenty-five, twenty-seven pigs per sow per year is not that unusual, and of course, they grow so much faster as well. Dairy production, we probably went from fifteen, sixteen thousand pounds of milk, maybe even less than that, up to 22,000-23,000 pounds of milk per cow. So we become much more efficient, whether it's the reproduction that we're doing, whether it's the rate of grain we're doing, whether it's the product—for example, in dairy, the milk they produce. So nationally, almost all of our species have reduced in number. Poultry probably hasn't, but we're producing more pounds of product going to the market—the retail market—than we did in the past.

Hall: You mentioned that Chicago was such a large processor for beef. What has filled that void since they've closed the markets up there?

Seibert: There's really only one packing plant in Chicago. It's called Aurora Pack. And what's happened is the feeding industry used to be in the corn belt. I mean, just as every farm would have maybe some dairy cows or maybe some hogs, they usually had a feedlot as well because we had a surplus of grain. What happened, as many of these feedlots have moved west to, let's say, Kansas, Nebraska, Texas panhandle, even into Colorado. And a couple reasons for that is much of our grain here—we still maintain our pork production, because the Midwest is really the main pork production area. But with the cattle, many of the commercial cowherds or ranches or things were located out West.

Also, too, in Illinois, we have a thing called the Mississippi and Illinois River that we could export a lot of grain down the Mississippi and export it to numerous other countries. So when we think about pricing that grain, the price of corn was much higher here, along the Mississippi and Illinois River, because of the export market, than it was out West—let's say in Nebraska and Kansas. Things started happening out there, too. They started irrigating out there. If you just fly over Nebraska and Kansas, you know a lot of center-pivot irrigation takes place out there.

So what happened to those packing industries—and first of all, the feedlot industry moved out West, simply because cheaper feed grains out there. Second of all, the environment was a little more moderate out there for those feedlots. And then third of all, the feedlot industry moved out there; the packers moved out there as well—moved close to the feedlot industry. So Chicago lost their center as far as being the center of the packing industry a number of years ago.

Hall: Good. Let's move to... Tell us a little bit about your involvement with the Illinois Performance Tested Bull Sale. When did that get started, and just how involved have you been in that?

Seibert: Yeah, actually as people wanted to, you know, we used to select cattle—and all species really—kind of the eye of the master would select what they think was right. And of course, that served us fairly well, but that really didn't have a lot of economic value to it when we think about some of the important traits—for example, the reproduction and the growth and the composition and that type of thing. So we started back in the—let's say it was in the sixties. The early sixties is when we started talking about performance testing. And performance testing was developed—usually many of the universities had a person and field people like myself that would start working with producers to go out and start collecting information on their herd. And that collection of information would include, first of all, when the cow calved, and of course, they'd have to tag the calf at that time. We would also collect what we refer to as weaning weights, and that's adjusted at 205 days. And then we also would collect yearling weights.

But moving back to weaning weights, we can have animals that may calve almost at the same time but may have forty, fifty, 100 pounds difference in weaning weights. And by taking that information and feeding it through a computer and making numerous adjustments—meaning age of birth, sex of the calf, age of the dam. You know, a two-year-old dam is going to produce a different-weight calf than let's say a mature five- or six-year-old dam. Well, by using computer programs, we can start adjusting all those calves back to a common age and a common sex, and we start comparing those cows. And what that resulted in is you had some cows that were doing a great job in herds, and then you had some cows that year after year weren't producing a very heavy calf or a very profitable calf. So what do you do? You multiply and keep heifers out of those very top calves, and you market those bottom calves.

And that's really the basis of performance testing, is going into herds, and trying to collect data, and comparing animals within a herd to make genetic improvement. And while the university—and ours was called the Illinois Performance Testing Program—was doing genetic improvement, the breed associations were starting their breed program. Probably one of the best-known is the Angus, and we talked a lot about the Angus. It's called AHIR—Angus Herd Improvement Records. And of course, for the different purebred herds, they were sending in [weight and measurement] to their association. So they started tying those different weights to the pedigree, and then of course, from there, identifying animals that were superior in performance criteria.

And actually, forty years ago, we started a thing [program] that we call the Illinois Performance Tested Bull Sale. It's an event that has been held here in Springfield for forty years. Actually, one year it wasn't. And what we do is identify and bring in bulls to that sale that excel in genetic traits, and we sell those to purebred [and commercial]producers. About 20 percent of them go to purebred operations. And what we do is we identify actually six different traits that we think are of economic importance. One is birthweight, and you mentioned earlier about the problem we had when we started bringing in the Continental breeds and using them on British breeds, that we had a birthweight problem. And we place emphasis on birthweight, that we want lighter birthweights in those bulls, so when they go out, the people who buy those bulls will not have calving problems. The second thing we look at is weaning weights. And that weaning weight—we want to add as much growth up to weaning to those herds that purchase those genetics. Another one is yearling weight, and that would be a 365-day weight.

For the feedlot operation—how much they're going to weigh at the end of their feeding period. And then there's two carcass traits that we look at.

One is rib eye area, and that's your rib eye steaks that you would go to the store and eat. And of course, the bigger the rib eye the better—and that's what we're trying to do, is put more muscle into those cattle. And the other one is what we refer to as marbling. And marbling is really those little flakes of fat within the lean. And that's really what gives us our juiciness and our flavor to our beef. And that goes back to when I talked about Choice beef and Prime Beef—the more marbling adds value to those calves, as well, once they go into the feedlot. And of course, when you ship cattle to market and you got, let's say, some Prime beef cattle going in, and let's say—there's Prime, Choice, and then Select—and you've got Select beef, there might be a fifteen-dollar difference in the price that you receive for those.

So it all goes back to the bull sale, where we try to select traits of economic value and show differences in those genetics—for commercial people, mostly, but there's about 20 percent of those bulls going to purebred herds. Some of them have even gone into AI—artificial insemination—studs.

Hall: And you get that information through sonograms, is that right?

Seibert: That's right. The birthweight, weaning weight, yearling weight, and even the maternal milk, those are all weighed traits, meaning those animals are weighed at a certain point. Now the carcass traits—we used to only be able to get carcass traits by harvesting animals, meaning that the breed association would take—much of it was what we called a standardized test, in which they used multiple sires, identify the offsprings of those, put them through the feedlot, harvest them, you know, on the rail, and collect the data.

Of course, through technology, and really pulling equipment from the medical field, we use ultrasonics now. And we can go in now at yearling weight, we call it—365 days, and we can scan future herd sires, bulls, and then heifers in a herd, and we can collect that carcass data, and yet also be able to use the animal then for reproduction purposes. So it's really had a major impact on improving lean composition, which is the size of the eye, and of course, quality, which would be the marbling of cattle. And that's all fed into this association, and the association, actually, they take these, and it really results in millions of data that was collected, all the way from an animal's born all the way until maybe the data is collected through ultrasounds. There might be some half-sibs that would go onto the rail and be harvested. Or maybe bulls that are used, and their offspring. So you use this whole thing, and it's all fed into the university. They actually historically have used supercomputers to analyze this information, and it's all compressed down to a trait that has really impacted all species of livestock, and it's called EPDs—Expected Progeny Differences. And what it tells is how much differences there's going to be in pounds at calf wean, weaning weight, yearling weight, size of the rib eye in square inches, amount of marbling. So it's driving the seed stock industry, as far as what the value is of purebred animals that go into commercial herds.

Hall: Now, at the bull sale, do they have to be registered, or do you have crossbreeds there, too?

Seibert: Actually, our British breeds, which would be the Angus, Shorthorn, and Hereford, they have to be purebred. All animals are registered, you know, in our bull sale, but those three have to be purebred, meaning that you can trace their pedigree back many, many generations. As the composites—as the Continental breeds came into the United States, there was two things that

happened there. Early on, much of those animals' semen was brought in. And of course, what they did was they crossed those Continental breeds with existing—and many of them were British-bred animals—and they produce what we call F1s. And then they would upgrade those to F2s, which would be three-quarter bloods, and then to seven eighths and fifteen sixteenths.

So many of those breeds were really brought in, and in a grading up program, by having different percentages. The other thing, of course, some of them [Continentals] were actually brought in as the animal, and they might have also brought some ETs—that's called embryo transfer—they might have brought some embryos in as well. So you have two things there. You have what we call full-bloods, and those would be the ET or the purebred animals that were brought in; you have purebreds, which are graded up animals that might be fifteen sixteenths, thirty-one thirty-seconds, or something of that nature.

Now, in our sale, then, the Continental breeds of Simmental, Limousine, all those breeds, we sell half-bloods, as well as three-quarters, as well as seven-eighths and on up the line. And really, in our breeding program, there's a pretty good demand for half-bloods and three-quarter-blood Continentals. And when you think about that cross-breeding program, it really maintains kind of that half-blood or quarter-blood Continental and British breeding in the finished product. So yes, we do allow—and we call them composites, which would be the half-bloods, three-quarters, seven-eighths, and that can happen in the Simmental and all the Continentals. The British breeds, we require them to be purebred.

Hall: Dave, where do you think the cattle industry is going to go from here? I mean, we've seen so many changes in the forty years you've been in Extension. Looking in your crystal ball, what do you see is the changes out there in the future?

Seibert: We're going to see specialization, you know. First of all, I think the size of the operations will probably continue to increase. We see some of those herds already getting larger. I think the second thing that's going to happen is we're going to see more specialization. Meaning specialization, there's a lot of niches out there as far as the beef cattle industry. When I talk about niches, I'm talking about branded-type products, I'm talking about how that animal might be raised. And when I think about branded-type products, there's one that probably stands out, and that's Certified Angus Beef. That has been a brand that probably has been around the longest than any of them and has the largest volume of any branded products. It's probably a name that's known. Of course, there's others. There's Certified Hereford Beef. So some of those are all breed-oriented.

The other thing is there's natural-type beef that's becoming very popular. Meaning those that may not have any growth-promotants or maybe not antibiotics, and each of those different brands have their own specifications that they must meet. And then, of course, there can be organic—there's organic-type beef. And of course, with that, organic-type beef, you have to have your pastures and all your feedstuff that you provide to those animals have to be organic-certified. There's been a lot of interest lately in grass-fed beef. And actually, when I think about the beef cattle industry and beef that's consumed worldwide, grain-fed beef is kind of a common factor here in the United States, but throughout most of the world, grass-fed beef is really the norm, especially as you travel to Australia, to Brazil, to Argentina. Grass-fed beef is the only beef you find in most of those, simply because they don't have the feed grains that we have here. And that's really the result of our grain-fed beef, is surplus of feed grains that we had here. And of course, then the taste and the tenderness and the juiciness and the flavor, you

know, of those grain-fed beef. Actually, if you look at the number of brands, there's over fifty different brands that we have, that are produced here in the United States, and some of those we've mentioned—breeds—some of them are method-of-production, some of them are different types of [specifications]—whether it's natural, organic, grass-fed. So that's one thing we're going to see, is a lot more specialization. And as long as there's a market for that, I think we'll see a great expansion of that.

The other thing, I think efficiency of production. To maintain cows during a year is a very, very costly enterprise, meaning that cow usually produces one calf, and once she's weaned that calf, you have to maintain that cow on pasture or something. So what we're trying to do now is reduce the cost of wintering those cows. Historically, we used hay as our main feed source. I think we're going to move to crop residues, meaning corn stalks, straw, that type of thing, to help winter those cows to reduce the cost. And then we have another product here in the United States, and that's really our coproducts, I call them, out of our ethanol industry, which would be our corn glutens and our distills grain. And they are playing a much, much bigger role in the beef cattle industry simply because they can supplement those poorer feed supplies—the straws and the stalks. And I think we might even see some of the feeding industry maybe move back to the Midwest, simply because of the amount of feed grains that we have available here. We're sure seeing it happen in the dairy. You know, much of the dairy industry went to California, and we're seeing that come back to the Midwest simply because the cost of feed out there is just too much.

So there's going to be more specialization, larger herds, probably trying to reduce the cost of maintaining those cows around. Another area that's receiving a lot of play is efficiency. There's a lot of research being done now on identifying animals that have differences in their feed efficiency, and it just goes all back to the EPDs, the Expected Progeny Difference. We have around thirty of those [EPD] traits that we've identified. We don't have one that's a feed efficiency yet, but they're working on it. Actually, the University of Illinois is very, very involved in working with two breed associations. One is the Angus Association, that have genetics based on a lot of cattle out of Dixon Springs, which is one of our research stations down in southern Illinois. They're [U. of I.] working on the Simmental as well, and that would be cattle that are brought out of Montana to the University of Illinois and put on feed lot, feeding troughs simply because they have a new facility over there that can measure feed efficiency for each individual animal that goes through the facility.

Hall: We see, anymore, quite a bit of discussion with consumers on what they want to dictate to the producer as to animal welfare situations. Do you see that that is going to play a part in the beef industry, as well as what we see in the poultry and the pork industry?

Seibert: It used to. I mean, not in the past, it didn't. And when we think about what has happened in livestock production, we used to just raise whatever species it was and take it to market, and sell it at the market, and the person would buy it, and you wouldn't know anything about it from that point on. Well, as we went to these branded products—and that's kind of the result of consumers. They're saying, "Hey, I don't want..." Not all the cars are black and of the same color anymore. You know, whenever automobile industries first started. Everybody has different desires and different tastes and different criteria they would like to have. So the consumer, over time, is playing a big part in telling and dictating, you know, what we're doing. And the branded product was one of those.

The other thing I think that's becoming more and more is we're tending to trace those animals all the way from where they're calved or where they're born all the way through the packer and into the retail location, because that consumer wants to know how that animal was raised, that there's no residues in the product that they are purchasing. So the consumer is playing, and will continue to play, a very large role in what type of product we produce—also how we raise that animal and maybe how we care for that animal.

Hall: That brings us to premises ID and animal ID. You're seeing more of that being practiced now?

Seibert: Exactly. And that goes all the way back to first of all, premise ID is really mainly to prevent the outbreak and spread of a disease that might come to the United States. If a disease would occur in a particular area that we know where all the other animals are within, let's say a twenty-mile or a thirty-mile range, or a five-mile range of that animal... And that's really premise identification, and that would greatly help in case of any outbreak of a disease that might happen. And of course, in order to market animals, many of the packers now are demanding that you have a premise ID. Before you can actually market it, you have to have a premise ID. And the next step, then, beyond that, is to have individual animal ID. And of course, many operations here, and I think in the Midwest, at least, with beef cattle, dairy—maybe a little bit less for sheep—have individual animal identification. As we move to some of the other species, poultry and hogs, they would have PIN identification. So yeah. And now, of course, we have access to electronic identification in which we can go in and electronically read those animals. It has a button tag beyond the visible tag that we see in animals. And of course, as we process those on the farm, as they move through let's say a marketing setup or even into the packer, that we can maintain that identification all the way through.

Premise IDs are something that we definitely should be doing, and it's not required, but it's something that we highly recommend that producers do. Packers require it as well. Individual animal identification is still in the development stage as far as its being required, but I think it's moving there as well. And then, of course, the other thing is country-of-origin. I think that's going to help drive both those, I think, as well—the premise ID as well as the individual animal ID.

Hall: Currently, where is the beef producer on those issues?

Seibert: I would say if you're a progressive cattleman, meaning for sure a purebred person, you have individual animal identification anyway. If you're a progressive commercial operation, you most likely would have individual animal identification. Because it helps really build and determine the economic value of all of your animals, as well as being able to sort off those that are not near as performance-oriented and market those. So we're definitely moving to it. We encourage it, but we haven't gotten there yet. I think with time, people will realize that it's something they need to do.

Hall: Have we missed any points you want to bring up, Dave, at all?

Seibert: I think we have pretty well covered most things. I guess the important thing is, beef cattle used to be just something we did, but it's a very scientific business now, just as so many. And there's a lot of technologies out there that we can use, and those might be in type of rations we use, and in my meetings, I encourage people to collect feed samples on the feed that they have. I encourage them to use ration-balancing programs because the cost of feed is one of their biggest inputs. Reproduction has really changed as well. We see a lot of AI being used—

artificial insemination. We now even have estrus synchronization, where we can go in and synchronize a group of heifers or a group of cows and what we call time-mate those. And then, of course, in the purebred industry, the ET—the embryo transfer—is being used extensively. Because that way, instead of getting one offspring per female, all of a sudden, you can what we call super-ovulate that cow, and we can end up with six, eight, ten, twelve, maybe even fifteen or twenty offsprings per female. And that allows us to really multiply the really superior animals. And I guess over the years, AI—artificial insemination—has really had a super big impact because it allows the concentration of the very best sires in a breed to be used by anyone that's a purebred breeder as well as a commercial producer. So all these technologies are being used. It has really improved the efficiency of operation, and I think we'll probably see more of them come down the line. And the important thing is incorporate those [new technologies] as rapidly as possible, because that gives you a competitive edge. And we here in the United States, we have to compete with Australia and New Zealand, Argentina, Brazil, even a country down South America—Uruguay is a very progressive country. They're mainly a grass-fed country, but they use all the technologies we have up here. So we have to really make sure we become an efficient producer of a high-quality product as possible.

Hall: This afternoon, we have an opportunity to visit a farm that's applying all these basics that you've been talking about this morning. Where do you think we're headed with Extension in the state or in the country, as far as that's concerned? You've been forty years into it now.

Seibert: Yeah, as any governmental agency, or many businesses, we have some economic restraints right now. And really, the past year or two, we've seen some real troubling times for Extension. One of the things that we had was the County Extension Offices, who we mentioned had these three-pronged—or Extension in general—have these three-pronged support. One of them is federal support. And over the years, the federal support has been what we call level funding. And of course, with inflation, you tend to have an erosion of dollars there; you don't have as much. The second of all is state funding, which we've seen some increases in that over the year, but just in the past year, we had a loss of much of that state support because of the budget here in Illinois. And it really resulted in what we call our match for our county offices. They raise funds locally, and then they also get a match from the state. And they thought for a while that they money to make that match would not be there. So it was really tough sledding for those counties. That money did come through, but I think this next year, now, they're funding at 85 percent. So we're seeing some real reduction in the amount of funding.

And then the other area is myself as a center educator, and then also we have the state specialists that work across all areas. That's supported by general revenue funds, and we've seen that money actually decrease over time. So in my particular situation—I'm an area educator, really an animal systems educator. I cover a fairly good-sized area. Actually, I've been in [Extension], like I mentioned, in this forty years, and I've covered over sixty counties in Illinois with only four being the same. So I basically cover anywhere from Interstate 80 down to Interstate 70, and even lap over some from that as well.

Well, when we moved to our center concept, there was like 150 positions, and now we're down to about ninety positions. So we've seen a decrease in people like myself, and we're going to see further erosion of that as well, on the area basis as well as the state specialist. So there's going to be fewer Extension people in the future, especially specialists and educators.

Hall: One more question. In your forty years professional Extension, what do you consider your greatest contribution?

Seibert: Actually several. Two areas I mainly work with. One, in the youth area. And I haven't mentioned a lot about that, but I have worked extensively in the 4-H program and across the youth program, whether that might be in the county basis, whether we provide workshops there; whether it might be on an area basis—and I hold a lot of area events. One of them I've been holding in Morton, Illinois; it's been a meats-judging contest, and I think it's been almost thirty years that I've held that meats-judging contest. I was also involved in the state fair, for it was over thirty years I was involved in the state fair. So that impact... I guess as I noticed young people coming through 4-H or FFA, or working with livestock, having an influence on them has really been something that I really treasured. And I've coached the State Livestock Judging team four years. I ran the national contest down at Louisville, Kentucky, at the North American, for four years. So that's one thing that's happened, is working with young people, seeing them maybe going into agriculture, maybe going into another field, has been very rewarding to me, because you influence people. And that's what we're about; we're about influencing people.

And then the other thing is—probably what's most rewarding—is working with an operation and seeing that operation develop and mature, and use all these technologies we talked about. That is very encouraging, and to look back and say, "Well, I had an impact on that operation," and I had impact on hopefully many operations throughout the central part of Illinois—maybe even broader-based than that.

The other thing that I've done a lot is travel internationally. I started, actually, when my daughter going to Australia. And I went down to visit her and went to a number of stations and studs down there and developed a PowerPoint presentation. I actually gave it I think thirty-two times throughout Illinois, Missouri. And I've done the same thing by going to Brazil, Argentina, to Uruguay, the Ukraine, Mexico, and bringing back and sharing international agriculture with people in, like I say, the Midwest. Mostly about livestock production, mostly about cattle production, but also talking about the countries. I've greatly enjoyed that—sharing international agriculture. And it goes back to many years ago. I had a coworker, and he was very fluent in Spanish, and he went down to Brazil, mainly to talk about soybean production down there. And I remember him coming back and saying, "Well, they will never be competitive with us in soybean production." And unfortunately, they are the leaders in soybean production. And I guess that's what we have to be aware, that the world has shrunk, in the sense that the technologies we develop or they develop, we use and exchange, and they can be just as competitive, just as efficient in production, as we are. So the international travel, the working with producers to really improve their productivity, their enterprise, and then the youth component has been very rewarding.

Hall: That's what Extension's all about.

Seibert: Right.

Hall: Thank you, David Seibert. We appreciate this time.

Seibert: I enjoyed it.