

CONNECTICUT 20TH CENTURY AGRICULTURAL HISTORY PROJECT ORAL HISTORIES

Interviewer: Luane J. Lange, CANR, Extension

Name of Person Interviewed: Bill Aho, Professor, College of Agriculture and Natural Resources, (Ret.)

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Interviewee Address:

LL: Bill, thank you for coming in and working with us on this project trying to document the transformation of Connecticut agriculture. Let's start with a few questions, perhaps, about yourself. Where did you attend college?

BH: Michigan State University; B.S. and M.S. degrees. B.S. before the war; M.S. after the war and I worked in Extension at Michigan State for three years and then I came here in 1952.

LL: And what was your specialty area in college and then in Extension?

BH: Poultry. Poultry Science has been my specialty area entirely.

LL: What were your first connections to agriculture?

BH: Well, I grew up in a mining community in the Upper Peninsula of Michigan and my father worked in the mine. He had progressed from an immigrant to a shift boss, which was quite a lot for him. Then came the Depression. People were laid off and my father bought a farm, kind of a hard-scrabble farm, but it did provide a living during the Depression and from this I had an interest in agriculture and this is why when I went to Michigan State, I went into agriculture.

LL: Where did your father emigrate from?

BH: Finland.

LL: And how old was he then?

BH: I guess he was about sixteen or seventeen years old.

LL: Did he come over alone or with his family?

BH: Well, he had one brother here and he followed his brother.

LL: Did he also go into agriculture eventually?

BH: My uncle was... went into agriculture very shortly after he came here and he had an established farm by the time my father got into agriculture.

LL: And what kind of agriculture was he in?

BH: Well, in the Upper Peninsula it was general agriculture, mostly dairy, some potatoes, very few grains and poultry was a by-product. As poultry was a by-product for most farmers at that time.

LL: For their own living?

BH:

LL: It wasn't... was it a cash...mainly for cash?

BH: Well, it wasn't a cash crop in the Upper Peninsula, very little. When I went on the staff at Michigan State in 1948, and doing Extension work, poultry was basically a by-product on the farm, handled by the women. The women...the wife had a small flock, maybe a hundred chickens. Five hundred chickens was a huge flock on a farm, but she used it for her cash. She used the feed off the farm and could sell the eggs and each of these general farms had a little bit of a poultry enterprise and that was in 1948. There were a few commercial farms but generally, it was a small enterprise on the farm and eggs were collected in the flush of the season, early spring, early summer and they were hauled to Chicago, put into storage then pulled out of storage late fall, winter when the chickens quit laying. That was before we had technology of light being a factor in egg production.

LL: So when you...when you eventually came to Connecticut in 1952, what did you find here that was the status of the poultry industry?

BH: Well, in Connecticut they were quite a bit advanced from general farming in Michigan. The farms were larger. I would say that in egg production, we had farms from two thousand to as many as ten thousand birds for egg production and in every area they were a little more advanced in production, marketing and supplies than we had in Michigan. There were instances in Michigan where this was on par. For instance, in the Holland-Zealand area of Michigan, was well advanced in cooperatives and marketing and supplies but generally, the rest of the state was behind Connecticut. New England was well advanced in poultry at that point.

LL: And so what were some of the practices that you found when you got here? Now this is back in the Forties?

BH: I came here in '52.

LL: O.K., all right.

BH: Well, ...what was unusual about Connecticut production and most of New England, was that instead of having the small Leghorn hen that produced the white egg, New England had a brown egg and this is produced by what they call the sex-link bird which had a Barred Rock female and a Rhode Island Red male that produced what they call the black pullet. They was a very prolific egg layer. It was brown and the story goes, as I told you, these stored eggs in Chicago came on the market early winter, had been in storage all summer and fall and when they came on the market in New England they didn't hold up very well. So, New England consumers came to the conclusion that all white eggs were poor quality and all brown eggs were good quality because the brown eggs were local eggs and were always fresh. So, the brown egg market demanded a higher premium than the white egg and for many, many years brown eggs sold for as much as fifteen cents more than the white egg even after the white egg was finally fresh from the farm it still had the onus of being poor quality. But eventually now most of the eggs in New England are white, there are now very few brown eggs.

LL: At the grocery store there are still brown eggs. Are they coming from other places?

BH: No. Most of them are from New England. Other places all have Leghorns. The Leghorn is a smaller hen and produces the same size egg with less feed cost. It has taken over the egg marketing but people still consider...many of the older generations consider that the brown egg is better.

LL: The Leghorn is the one that produces white eggs? (Yes.) O.K.

LL: What was the process for gathering? Now, you mentioned they were put into storage in Chicago. How did farmers get their eggs to that point and then...and then in comparison, how did Connecticut get their eggs to market?

BH: Well, you know, we're going way back to those small farms with the women selling those eggs. The women took those eggs on Saturday into town, traded it for groceries and what not and those eggs then went to an egg dealer who sold it to a larger collector and then they went on into storage in Chicago. Not all eggs went this way and light was a factor in egg production and this wasn't known for a long time. Even if it was known, it couldn't use it because electricity wasn't on the farm until the 1930's or something. So, the egg production was always low in the winter. In Connecticut when I came here, egg marketing had advanced to a point there were at least six cooperatives that collected eggs from farmers and marketed the eggs. There was one in Hamden, one in East Hartford and then the Central Connecticut Cooperative was in Willimantic. Their egg division was in Willimantic, their feed division was in Manchester. And then there was an egg cooperative, another egg cooperative in Willimantic and then in Brooklyn and Moosup and one in Providence. So, there were quite a few cooperative egg marketing associations at around...in the 1950's.

LL: And these were all...on the eastern side of the State? Was there poultry on the... other part of the State?

BH: Yes. There was poultry all over the state. But the eastern part had the concentration of poultry and the Hamden Auction handled most of the western eggs. But there were also private egg collectors, private dealers ...that collected eggs and sold them. One of the biggest was, um, Deep River Egg Company. But then, gradually, there became a change and the change actually happened because of the retail grocery business. Instead of the mom and pop stores we got the chain stores and the super chain stores and you had to have a large quantity of eggs to offer a supermarket. Instead of all these small mom and pop stores, the supermarket demanded thousands of cases of eggs at...city stores. The co-ops changed their tactics and gathered more eggs and birds, and then we had some individuals that got together to create larger marketing organizations like the New England Egg Company was John Lombardi and Kill and Strickland. They figured they haven't got enough eggs individually to offer a chain store, so they got

together and produced enough eggs so they ...could have an offering.

LL: Were some of the people who did this on their own, were they different kinds of producers in terms of...I guess their mind set as to how they were thinking about marketing compared to other poultry?

BH: Yes, These were innovators; people who could see...like Lombardi, Kill and Strickland or young men who could see that if they were going to stay in the chicken business, they had to have a large number of eggs to offer the people that were buying them. So, they...they got together and formed the...the processing and marketing organizations.

LL: Now, how had they gotten into the business?

BH: Well, let's see. Strickland was an old yankee family and a very interesting story. His father was in dairy and he got into the poultry business Ex and his ... father was an enlightened person; he let his son take over right out of high school and he did very well. John Lombardi, same route. His father died. He and his mother ...got together and brought the farm out of debt and he established a feed mill, K & L Feed Mill, and egg marketing. Roomey, came up, pulling on his own boot straps and Kill, the same thing, á young person that had a farm and just developed.

LL: Were any of the poultry farms started new? I mean, did any people combine into...let's say if the area was known for it's poultry, did people come in and begin businesses?

BH: Yeah, most of it was new business. ...Well of course, there were many old yankees as we say, that were in the chicken business & were good breeders. Many of them were poultry breeders and you could look up in what we've called the ROP, that's Record of Performance, to get all those old poultry breeders. But the production areas were people that moved in here during the Depression and shortly after the Depression, leaving the big cities. New York City, for instance, many of the people came from New York City and bought these hard-scrabble farms on the east side and started to get into poultry.

LL: You said hard-scrabble farms, what do you mean?

BH: Well, ... they weren't... what you would farming for grain..

LL: But then the soil was different.

BH: Well, you didn't have large patches of good soil. There were a lot of stones and the only thing that you could do was livestock. You couldn't produce grain. Well, you could have some; there is corn silage in many of the places but livestock was the best thing, dairy or poultry and many of these poultry farmers came from New York City and started brooder operations and egg operations.

LL: Had they had experience?

BH: Very few. Many of them had been carpenters and construction workers in New York City, came up and the cooperatives helped them with the information they needed and the Extension Service, of course, was a big factor in distributing information to these farmers.

LL: Tell me about your role in all... and as this was evolving in the '50's.

BH: Well, the Extension Service had a very strong role in bringing the information from the University to these people and there were a lot of problems that had to be solved especially disease control; Salmonella, pulorum was a big factor and because of disease there was an organization created

nationally and on a State level called Poultry Improvement Association and breeders, qualified in various categories depending on the level of infection they had in their flocks. And ..then the ROP Association gave information on the ability of these breeders to produce chickens that laid .. a large number of eggs. Then also, we had the egg laying contest. The University of Connecticut conducted a contest each year. They brought breeders from all over the country, sent in twenty-six pullets, and the University kept records of their mortality and egg production and feed consumption and published these records so that farmers could make decisions of what chickens to buy. And this contest ran from, let's see, 1914 to 1960 I believe; a pretty long time. One of the first and last contests to exist.

And then, of course, the Extension service had specialist;, we used to call them poultry diseases. Now it's called poultry pathology. But, we had some very innovative scientists in this area and we also had some very good scientists in poultry science, for instance, in feed. I'm trying to find a word, development of feeds.

For instance, Connecticut developed the high-energy broiler ration which changed the feeding of broilers completely from at a time when you needed four to five pounds of feed to produce a pound of broiler, it reduced it to two-and-a half to three pounds. So, the Connecticut high-energy broiler ration was a big step forward.

And, of course, ...there were some vaccines developed at the University also. Louie Vanderhyde developed the viral arthritis vaccine and a lot of work was done on Salmonella, pulorum, vicoplasic arisepticum. The Pathobiology Department was very well known around the world. A current project that I...people are worried about Pfizer complications and what they'll pollute. Pathobiology has been developing vaccines for sixty years and has never polluted and I don't think Pfizer would do anything different.

LL: Part of the controversy on Horse Barn Hill.

BH: Horse Barn Hill, yeah. I had to put that in.

LL: That's good, good for the record. In your particular role, were you primarily the person, the specialist who went out to the field. Were you in a field office or were you doing research and teaching?

BH: Extension people did practical research and we worked in the field quite a bit. Most of it in the '50's was environment, poultry housing and environment and, of course, disease control and feed development. But we worked primarily with & through the County Agents with meetings, night meetings, day meetings, farm visits and annual meetings and through associations. They had the Connecticut Poultry Association that is still alive and they have their annual meetings, and Turkey Growers Association.

LL: Turkeys. I found something in old photographs of the Connecticut turkey. A yellow-something...(Oh, Yellowtag.) Yellowtag turkey, can you tell about that?

BH: Well, we had to differentiate Connecticut turkeys from other people's turkeys and.....for marketing purposes. So the Department of Agriculture came up with the Yellowtag turkey, and this is a turkey like they had inspected and found to...meet their qualifications....

LL: Well, the pictures show a plain turkey. I don't know how, you know, how they had selected them. Then they showed the Connecticut Yellowtag turkey. Of course, it doesn't compare to anything be today's turkey either but it was...you could see the physical difference. Now ... was this a marketing piece to...produce turkeys for local consumption? Because they didn't freeze things. When did they start freezing turkeys and shipping them?

BH: This was a development, let's see Turkey industry grouping & competition ...in the late '60's and

'70's industry finally came to the point where all the turkeys were frozen, eviscerated and frozen. But up to that time, Connecticut turkey growers benefited by being local producers and they could sell the turkey live, fresh at Thanksgiving and at Christmas time. But when the competition from North Carolina and the Middle West came...these turkey growers produced turkeys of equal quality and dressed and froze them and they came on the market much cheaper than what our local people could produce. So, actually, our turkey business diminished. There's only a few people left on a niche market of live turkeys.

LL: And back to having non-frozen local turkeys? What happened? Where were these turkeys and where were these birds processed?

BH: Most of the turkeys in Connecticut were processed right on the farm; small dressing plants. There was one big processing plant in Plainfield and this was nature of turkey processing formerly a broiler processing plant that left, and I'll talk about the broiler industry later but the broiler industry left Connecticut and two of the turkey growers, Capulabar Brod and Ed Aberle, bought the broiler processing plant and started processing turkeys. But they weren't in the processing business very long. But most of the turkeys were processed on the farm; small processing plants.

BH: Go on about the brothers.

LL: Okay. The broiler business, an ...actually the broiler business is not a very old business. Even the original ones the historians say, started in the Delmarva Peninsula maybe in the middle '30's and Connecticut...

LL: Now the Delmarva...out in California?

BH: Delmarva, that's Delaware, Maryland and Virginia. That's a peninsula where they still have...it's still a major broiler area. Delmarva. And in Connecticut, the broiler industry had its start in the late '30's, '40's, '50's, were strong, and then by the '60's they start diminishing. But at one point, we had five broiler dressing plants in Connecticut; Hartford, Willimantic, Brooklyn, Voluntown...but Connecticut and New England was a source of broilers for the big cities, New York and Boston. Not only Connecticut but all the other states, New England States, were strong broiler producers.

LL: What made broilers so much more desirable...I mean, why was there a sudden interest in broilers? I mean, what's changed about chickens?

BH: Well, up to that point, you could get what they called "springers." These were chickens from the general flock of egg layers. They came unsexed, they had both the males and females. And ...at a certain age, you took the males out because they weren't egg producers and they sold them as springers. Well, coming from egg producers, they had very poor conformation, very poor as far as chicken meat yield was concerned. Then they developed specific broiler breeds that had good conformation with wider breasts and more meat and these were sold then as specifically as broiler chickens.

LL: What was changing in the consumer market to have ...the bigger interest in...in broilers? And again, I think of old stewing chickens and so on. I remember you used to buy the difference between...you went in and shopped for a different kind of chicken and I don't see that anymore.

BH: No...this...I have to talk a little bit about the...what was available. At that point, we had the stewing hen and New England had the advantage. Remember I told you about this brown egg? Well, that was produced by a bigger chicken. It was a cross between a Barred Rock and Rhode Island Red - this black pullet as they called it.

Connecticut farmers kept that black pullet in production for maybe six months or seven months, when it was still in prime condition. They sold it as a stewing chicken on the New York market, and the New

York market had a large consumer population than from the Eastern Europe that wanted that stewing chicken. This prime hen that wasn't laid to the last egg was prime and it was sold as a stewing chicken from New England.

And along with that there was a prize chicken called a pullet, a meat pullet. This was a heavy egg layer that they raised it as a pullet and sold it as a pullet before it even laid eggs and this demanded a huge premium over the stewing hen.

And then, of course, the broiler came and the broiler was designed for meat yield, wide breasts, good...and with the advance in feeds, the high-energy feed, we produced that three pound chicken...I'm trying to remember um...in eight weeks. From twelve weeks down to eight weeks and now it's even down to six weeks and we have this beautiful bird that's tender and the broiler industry developed.

And as I said before, we had in full bloom, the Connecticut broiler industry it had five processing plants.

But the problem in Connecticut as it developed is that it was disjointed. You had the farmer, the producer who bought chicks from a hatchery and he bought feed from either a private company or a cooperative and then he sold his broilers to a processing plant. So, there were three or four people that had to take a profit on that chicken.

What happened in the '60's in Delmarba and in Georgia is that they integrate this whole operation. One person bought or controlled, merged the producer, the hatchery, the feed and the processing and the marketing. So there was only one profit that was taken from that whole enterprise. So, this scheme outbid New England and we finally lost central of the business. We didn't have the people that were willing to start this integrated operation. The other factor was that there were so many other opportunities for these broiler people in New England that they didn't have to go into this integration.

LL: So what did they do when they were no longer raising broilers? The other opportunities.

BH: Well, the other opportunities? Well, then we still had the egg production and many of them went into the egg production and many of them from the broiler business took their money and built motels, bowling alleys, all kinds of other enterprises. They had made money in the broiler business and it was, had been, a very lucrative business for a whole generation and these farmers who had come from New York City and what...had started these small farms, their sons and daughters went to college and into other enterprises.

LL: But did they sell their own land to make these other businesses, or did they invest in them in other places?

BH: Invested in other places. They were were entrepreneurs that used their money.

LL: What happened to their farms?

BH: Well, if you go to Eastern Connecticut...well, what happened to many of them, we didn't talk about the breeders. One of the successful breeders is a company called Arbor Acres and Arbor Acres was successful in breeding broiler breeds.

LL: Is that where a Cornish...tell me how Cornish hens began in Connecticut.

BH: Well, there were a couple of Cornish breeders. ...At eighty-one not everything comes back; but we had one big Cornish breeder in...around west of Hartford. (But it wasn't Arbor Acres?) No, it wasn't Arbor Acres. But Arbor Acres was one of the first to offer a white feathered bird, a White Rock, white feathered bird. And the others had dark feathered birds. The heavy birds were dark feathered and the problem with the dark feathered bird is we are trying to sell the bird at a young age like eight weeks, it

still had pin feathers and those pin feathers were black. So when Arbor Acres came with a good White Rock, those white pin feathers didn't show so it took over the broiler market. And then, of course, their geneticist crossed him with Cornish and other...good blood lines so it's no longer a straight White Rock, it's a combination of things.

LL: You said "their geneticist". They had their own research going on or did they work within the University system?

BH: No. They had their own geneticist.

LL: And this was back in the '60's isn't it? Approximately.

BH: No, Arbor Acres started in 1948 I think. Oh, I forgot to mention one of the reasons that Arbor Acres became so prominent is in the late '40's, there was a marketing man at the Atlantic and Pacific Tea Company by the name of Pierce that wanted a better broiler for the consumer.

So, he started what was called "The Chicken of Tomorrow" contest and a broiler breeder could send a case of eggs to...I'm trying to think of the place that it went someplace in Arkansas I think, and they hatched those eggs and raised those chicks into broilers and announced the amount of feed that it took to gain one pound of broiler and the mortality and the conformation. Arbor Acres was fortunate to win that first contest and, of course, that was a real bonanza for them and they had the foresight to immediately hire some geneticists and marketing people and they became a national figure, a national concern and then an international concern.

They moved into South America. And moving into South America with their product, the Rockefeller people had a philanthropic organization trying to improve agriculture in South America. And they could see that this broiler business could be something that would help farmers in South America. So, they bought Arbor Acres. Rockefeller, I forget what the name was, but it's still Arbor Acres.

LL: And when would have that been then?

BH: Oh, that had to be...um...in the '60's.

LL: Who had owned Arbor Acres before?

BH: This is interesting. It was a family by the name of Saglio and the Saglio's were truck farmers in Glastonbury. Their principal business was raising truck crops except two of the brothers were in chickens and they raised these White Rocks.

When this question of sending a case of eggs to this contest came up, the University Extension man encouraged him to do it and the rest of the family didn't want him to do it because, you know, a case of eggs is a lot of money.

But he did send the eggs, and he won the contest and, of course, that became the story.

LL: So then when Rockefeller bought them. So...now they're still in Glas...are they still in Glastonbury?

BH: Yeah. They are still in Glastonbury and, of course, the Saglio's ran the farm ...and all their personnel was intact and then the Rockefeller's sold the enterprise to Booker. You know, the Booker Book peo...the Book place in England? Booker is an aggregate of groceries I guess, is their biggest business, and they wanted a supply of chickens so they bought Arbor Acres from the Rodefellers. And it's still owned by the Booker Corporation...

LL: Did Arbor Acres ever produce meals for airlines?

BH: No. That's...that's a different company. No, entirely different niche in the broiler business. This was a company in man; the name doesn't come to me right now, but they...it was an enterprising ...Jock Machowski. Oh, he...Jock Machowski is another one of those poultry characters. His family left Russia before the Revolution and ended in France. They were lithographers and then they left France before World War II and ended up in New York City and had a lithograph company there and when Jock Machowski retired, he came to Connecticut and bought one of those farms that I'm talking about in Pomfret.

He Started to developet...he said he'll raise pheasants and sell them to his friends in New York. Well raising pheasants is not an easy job. They have all kinds of problems. So, he finally decided that well, chickens would be better and he developed a cross between a Cornish and a White Rock and he sold it at that point at six weeks and it was two-and-a-half pounds and he...and he called it the "Cornish game hen." It's still called the Cornish game hen and it became a huge success, this two-and-a-half pound chicken that dressed out...

LL: Why did he call it Cornish?

BH: Well, he had to give it a...well, it is partly Cornish and the game...he put in the name game in there to sort of say that well, it came from something that was gamey and it was a big...it was a huge success. He made millions because he was the first one with that name and with that particular niche bird and then other people came in there including...this entertainer .. singer? No?) Anyway, I'll get to him but Jock Machowski got into making airline dinners and uh...

LL: Is there still a business in Pomfret?

BH: Yeah. It's owned by a different outfit and they still make airline dinners. But I remember when Jack Machowski came out with that Cornish game hen, I had somebody from, I think it was USDA or some consumer outfit in Washington saying that, "Is it actually a game bird?" And, of course, being a University professor, I had to profess the truth and I said, "I think it comes from...there's a bird in England called an English game hen and I think part of that blood line is from that." But he did make a fortune on that and then he sold it. I'm trying to remember the entertainer.

He still entertains, but he had a farm down in Fairfield County where he raised Cornish game birds and he had a small processing plant he sold and he got on television with one of the entertainers who had a talk show and he told him about raising pheasants on his farm and...I was trying to remember the name of...oh, he sold pheasants but they had a name for selling pheasants that...had two, a couple and the entertainer said, "Well, how many are there in a couple...or in this particular name?" He says, "The good thing about the consumer doesn't know. Anyway, the Cornish game hen was a niche product that...now everybody produces it. I say everybody it isn't as profitable as it was originally.

LL: So there were...there were a lot of poultry farms. One of the books that's out recently is about the Jewish farmer in Connecticut and it identifies along with some of the things you have mentioned about when they moved here their land did not produce so they became poultry people or they became...they had resorts but when...where did the Jewish community come from?

BH: Many of those came from New York City also but some of them were refugees. You know, the Rothschild Foundation provided means for them to buy farms here and they got into poultry and dairy.

LL: And that foundation, the Barons Foundation subsidized them for a certain number of years or bought the land.

BH: I'm not sure exactly how ... I think they provided sufficient funds to buy the place and then they paid the Foundation back. But then the Jewish community formed the Central Connecticut Cooperative Farmers, and this was a feed organization and they produced feed, a very competitive company that is still in existence in Manchester. And ...then...one of the Jewish refugees was...his name was Julius Reitman and he came and started a dairy farm and then he developed his own little feed mill on the farm and then from that little feed mill he built a bigger feed mill on the railroad site and then another bigger mill than that. So, Julius Reitman became... successful.

LL: What town was that?

BH: In Franklin. And besides the feed mill then he developed production units, and he had huge egg laying production and a processing plant. He ...he had enough chickens so that he could provide.

LL: Would you talk to us about Kofkoff?

BH: Okay. Sam Kofkoff was one of the young fellows that after the war he got into the broiler business.

LL: So he came home. Had he been from the farm to begin with?

BH: I'm not sure of his background...I don't think so. But he was from Connecticut and he started in the broiler business after the war and he was a very successful broiler producer, but then when the broiler industry, the processors and...and other facilities moves, south, he went into the egg business and developed into a major producer. I think he has over two million birds at the present time and a processing plant for cartoning and marketing the eggs and he bought Julius Reitman's feed mill. So, he has the production, the processing and the feed production.

LL: How has the breeding and raising of poultry changed most recently? I mean, you see people talking about animal rights and so on and, you know, has it...has it changed so drastically that people wouldn't recognize it or what are the ...some of the newest things?

BH: Well, one of the...the animal rights people, the factor that they are concerned about, is that the egg layers are in cages and by putting the chicken in a cage it automates the whole operation. This is why you can have a building with eighty thousand birds in it and the eggs are laid in the cage, they roll onto a belt, the belt brings it to the processing plant where people candle it under a light. They pick out the defective ones, cracked ones and so forth. And then they are washed and packaged and nobody handles the eggs. It's a very efficient system. I know that in Northern England, Northern Europe some countries have got to the point where they outlawed cages for chickens and this is the animal rights process. But personally, I see no problem with having the birds in cages. If the chickens really objected to it, they wouldn't lay very many eggs; but we get record numbers of eggs from these same birds in cages than we do from the floor.

LL: How many people do you think, in Connecticut, this is a really strange question, raise chickens for their own use?

BH: Well, there's quite a few. I have friends that have half a dozen chickens. It's surprising how people just like to have their own chickens.

LL: How about guinea hens? Is there any kind of industry for guinea hens?

BH: Not here. No. Some people may have a few guinea hens around the yard and they're noisy and good watch dogs.

LL: That's what I've been told.

BH: Yeah. But in Michigan, when I worked in Michigan, there were two producers that raised ten thousand guinea hens each and they were processed and sold as guinea hens. It was a niche operation but no, it's not an industry in Connecticut.

LL: Do you think there's future for ostriches and emus?

BH: I'm not familiar with that at all. I know it's like many of the other things; if you're in first and you sell to other people you make money. But they have a lot of marketing techniques that point out that it's low in cholesterol and all this other stuff but no, I'm not familiar with that. That was after my time.

LL: Tell me about the Finnish community.

BH: Well, most of the Finnish community came from New York City. They had been carpenters and construction workers and they wanted out from the big cities and they bought these little farms in Eastern Connecticut and they were very cooperative minded. They had two or three cooperative establishments in Eastern Connecticut for feed and marketing. Two of them were associated with the United Cooperative Farmers which was the parent company, or parent cooperative in Fitchburg, Mass. So ...they had a community that ...worked together and mostly in egg production. But then a few of them got into the broiler business also.

LL: And is there still a community here of more recent generations? How many, how far do we go?

BH: Most of them were very few recent immigrants. I'm not sure that any of them that came now or recently are in the chicken business. As a matter of fact, there are very few Fins that are in the chicken business any longer.

LL: And the farms that they had there, have they been passed on to their family members or what's happened to them?

BH: Oh, some of them are passed. Well, as I pointed out, I know of three families that bought motels and one family got into the Christmas tree...they are a huge Christmas tree provider. They market all over New England as far as the Midwest but I don't know of any large poultry operation any longer that they raised their families and they've gone on to other enterprises.

LL: What were your days like when you were...were a Specialist. (A Specialist, yeah.) What...can you think of...what were some of your days like?

BH: Well, you started from the office and you had a routine. You worked with the County Agents. For instance, if you went into Windham County, you visited problem farms with the County Agent. It might have been housing or feeding or disease.

LL: And you did all three, I mean, you...you did everything related to poultry?

BH: Everything related to poultry. And then they might have an evening meeting arranged; so you

stayed down and you had a poultry meeting. We would have as many as a hundred and over a hundred poultry men attend the meeting and we would have a group of specialists from here. Maybe a Poultry Pathologist, the Nutritionist, Engineer and a Production person which...Environmentalists like myself and we would give talks and answer questions and we'd get home about 11:00 o'clock, get up in the morning and answer the letters that came in and start over. We'd develop bulletins on various topics.

LL: Did you have a newspaper column back then?

BH: No, we did have a poultry newsletter that we sent out and then we published our papers in a poultry science journal and conducted, not basic research, but practical research.

LL: For example.

BH: For instance, mite control. We found that if you fed...what did we feed? It was a noxious drug and if you fed it the mites didn't like it at all so they'd disappear.

LL: It's like garlic now. You feed your dog garlic and the fleas go away.

BH: But...this was some of the minor things that we worked on.

LL: What were some of the things that gave you the most satisfaction?

BH: Oh. Well, it was nice to see people succeed. I remember one poignant story. There was a woman raising turkeys and she raised them to a certain point and sold them as live turkeys and she called me in and wondered if it was time to sell her turkeys and I went to look at them and you could tell by the amount of fat that was on the breast by squeezing the fat between your fingers if it was ready for marketing. And ...I said, "Yeah, those turkeys are ready to go." And she said, "Well, I usually keep them two or three weeks later," and I said "Well, if you do, it's going to cost you a lot of money to put that extra fat on them." Then she sold them and she was real happy that she had made more money than she had previously because she didn't put all that feed into them. But it was little stories like that were always satisfying.

LL: So you said that your days consisted of work at the office and going to meetings and then working again into the night and then starting over again the next day. How much traveling did you do around the state?

BH: Oh, quite a bit.

LL: Did you get down to Fairfield County much?

BH: Oh yes. Fairfield and Litchfield County.

LL: What was down there?

BH: Fairfield County. Yeah, we still had some chickens down there. I'm trying to think...around New Haven. That's New Haven County but Fairfield County...there were...there was at least one hatchery down there and then there was some people that it was part time farming. I remember one pathologist worked at the New Haven Hospital and he had a nice little operation and he sold eggs around the neighborhood but mostly that.

In Litchfield County we had some bigger operators that had...and some breeders and they had their own marketing operations. But Litchfield County, we would leave in the morning, make some farm calls, as

we call them, and then the local church women had a supper for the farmers and then we had a meeting and then we got home before midnight

I remember one evening meeting in New London. We had a group. We had a State car, a University car and we were coming back about 11:00 o'clock and it was kind of a slushy road and this was during Ribicoff's tenure as Governor and he had the fifty-five mile law and he was real strict on it and I was driving and we were coming up and I...we were in a hurry to get home and I passed this car and when I passed it I looked , it was the Governor and the State Police driving and I wasn't going to back out any more and I went ahead. But they didn't stop us and I thought, "Well, maybe tomorrow he's going to call the President." but we never heard a word.

LL: Which technology do you think made some of the major differences in the industry? You mentioned the lighting. You mentioned patho-biology that would be the disease control. Is there any other kind of technology that...?

BH: Well, the feed, development in feed.

LL: So ...where did the feed come from and then they tested it and what did they add to it? Pretend I know nothing about the feed.

BH: Yeah. Well, the formulation of the feed with, basic ingredients of corn and soybean oil meal and then you have all the other micro-ingredients that go into it...a balance of amino acids, carbohydrates, energy, vitamins, minerals. At one point we had a problem with a disease, it was comparable to the white muscle disease in calves and it became kind of a mushy brain disease in chickens and the combination of our Nutritionist and pathobiologist discovered that it was a lack of selenium. And the amount of selenium that you put into a ton of feed is what you might have on the end of an eraser. So, how do you put that much selenium into a ton of feed, you know? But it did correct the problem.

LL: Interesting. And now they're using it for humans. They are much more aware of what it does for humans, too. (Yeah.) How do you think farming and agriculture in Connecticut was different? You have mentioned it kind of, as we've gone through this but how is it different from other parts of the country as you met other poultry specialists from around the country, what did you find was unique about Connecticut if anything?

BH: Well, we were close to the market so it provided a lot of niche operations. People could sell their eggs right here. We had a lot of small towns, mom and pop grocery stores, restaurants. Here was a population...we were in the center of the population so it was easy to market. So that was one difference.

LL: And there's trucking. Maybe as our transportation modes changed and it allowed them to ship, even packaging.

BH: Yeah. Now you can have eggs produced in Indiana one day and two days later they can be in a supermarket here.

LL: When did some of these packaging changes take place? I mean, I'm thinking of different kinds of cartons,...

BH: Well, the carton hasn't changed too much in the last thirty years, but how the eggs are put into the carton and...and the logistics of getting that carton into the...the supermarket has changed.

LL: What do you mean how the eggs...you mean automated?

BH: Automated, yeah. It's all automated. Eggs are lifted with vacuum cups and they are dropped into these carton, and the carton is sealed automatically, and then they are put into the crates and the crates move into storage briefly and then onto the trucks.

LL: So, when they are coming along the conveyor belt? How do they...I mean, they're put in the...in the cartons thick end down or pointed end down?

BH: Oh the thick end is up.

LL: All right. So what are they in when the vacuum picks them up that keeps them in that position?

BH: They're channeled so that the point's up.

LL: ...You mentioned that...that a couple of the producers shipped internationally. Whatever has happened with...with, like you said, that the Rockefeller piece went down to Mexico and so on, is there anything that happened...that has happened during your time internationally with poultry?

BH: Oh, yeah. I think the poultry industry was the dynamic industry in agriculture and it became global. The broiler industry is a global industry right now. There are just a few major breeders of poultry of broiler stock. One of them is in England and...three in the U.S. But this breeder stock is sold all over the world. There's no limit; Arbor Acres sells in about twenty-six different countries. And the rest of them do the same.

LL: They ship these eggs?

BH: They ship the...they ship the chicks.

LL: The little chicks...so they go to that point?

BH: We can ship chicks from here to China in about twenty-six hours and when a chick hatches it has yolk sac that will provide food for about five days and so logistically you've got five days but you try to do it as quickly as possible because the earlier it gets onto feed, the stronger it becomes. But you have a lag time there of shipping chicks all over the world.

LL: So now are there like...when you are breeding cattle or dairy cows, you have blood lines and so on and now when these breeders...they have certain things they're known for as far as their kind of stock that they produce?

BH: Oh, yeah. In the broiler...what they're breeding for is a fast growing chicken that gains weight with the least amount of feed with a good livability. What good livability means is that it's free of disease, inherited disease and preventive disease and all these factors are known and integrators. I'm talking about people that own poultry operations that are integrated from production to marketing. They keep accurate records and, of course, computers have made this possible in a fraction of a difference in weight gained, or feed needed. It makes a big difference if you are raising millions of birds, this fraction makes a difference. So, the competition for the breeder is events, and they put their resources into developing of these fractions of improvements.

LL: You said that there about four major breeders in the world?

BH: Well, let's see. There's Arbor Acres in Connecticut and then there's Hubbard in New Hampshire and Hubbard is owned by Merck Pharmaceuticals. And then Tyson has a company called Cobb which

was originally in Massachusetts, Cobb Broilers. And then Ross in New England, those are the four leading ones and then there are some smaller ones.

LL: And are there other countries who have big breeders that are competition?

BH: Not much. No. Not...these are the breeders that...the global breeders...

LL: What about your professional associations with other specialists? Now, Extension has changed a lot in the last number of years but did the specialists from different land grants get together? What kind of friendships were there?

BH: Yeah. There was the Poultry Science Association and they, let see, were the original meeting way back, I think it was early '20's and they have an annual meeting and it's spread. Connecticut had it in 1952 and that's when I was interviewed for my job. I came here to the Poultry Science Association meeting, meeting has gone from university to university and recently they have even held them in large hotels; ...the attendance has been pretty steady with over a thousand attending. But the number of poultry science departments at universities has dwindled. I think there are only six poultry science departments left in the United States. There's none here at the University of Connecticut. We have a poultry scientist in the Animal Science Department and we have poultry pathologists, but no poultry science department.

LL: And even those people serve part of New England because other universities don't

BH: Yeah, and the Nutritional Science Building was originally the Poultry Science Building and it was...the reason that it's there is that the poultry industry, the Poultry Association, went to the Legislature and got that money to build a poultry science building and it wasn't on President Jorgensen's agenda and he wasn't very happy that the poultrymen were able to get that money to build this building.

LL: So they went to bonding or someplace. ...

BH: Well, at that point, it was before the one vote one legislator and many of the legislators were rural legislators and they...they backed the Poultry Association's demands for a poultry science building. So the Nutrition Department can be very grateful to the poultry people like they have a building now.

LL: When would that have been, do you know? I probably can find it in the records.

BH: I think it was '59. (Is it?) Yeah.

LL: It was built in 1959? (Yeah.) Very interesting. Are there any stories with your family and how that related to your work as a Specialist? How did family life work into this?

BH: Well, my family had to get used to my night meetings but they were very supportive and my wife...

LL: Was your wife from Michigan?

BH: She's from Michigan also, also from the Upper Peninsula and she had a degree in Home Economics from Michigan State and then when she came...when we came here she got a degree, a Master's Degree and she was on the staff in what was then called Home Economics. And then she moved from there to the Welfare Department in Hartford. My son, he would accompany me on some of my trips. The Extension Program then was also the Connecticut representative for the National Poultry Improvement Association and for the Record of Performance. And these meetings were held around the

country and if the rest of the family didn't join me on those meetings, my son would. And he went on and got a Ph.D. in Poultry Economics and he lives right in town here and he has a consulting business in poultry economics.

LL: Did you have -----acres also or did you...what kind of...

BH: No, I lived right on campus here and we bought a house and we live on Route 44.

LL: Okay. Is there anything else you would like to share with us about any of your experiences as you...were...were working as a Specialist?

BH: Well, I often feel very lucky. People say, "Well, how come you got into the chicken business?" You know, they ask me. What I had done and I tell them I was a Chicken Specialist. But the Chicken Specialist took me around the world. After I retired from the University of Connecticut, I worked for Arbor Acres. I directed management school for eighteen years and I had students from all over the world that way. Very pleasing to have these people and I visited some of them in Japan and Thailand and then I worked for Arbor Acres in Jordan and stopped in Greece and Spain. So it...oh, and then...yeah...and Sweden and Finland.

LL: Now you said you did management classes before. Like what kind of...

BH: Yeah. Arbor Acres as one of their marketing techniques, they invite people from around the world, middle management people that they bring into Arbor Acres and they have this six week course...It's a concentrated course including genetics, nutrition, disease, marketing, the whole bit but in a capsule kind of a way and when I took over this course, I encouraged them to house them on the campus here so that they would be in touch with Pathobiology and people on campus. So, from 1976 on they have been housed on campus here in Whitney Dorm and Bishop Center has had most of the classes and then, of course, we go / farms and to Arbor Acres for other purposes. But it has been a very successful marketing tool for Arbor Acres, and in my tenure with them I had over four hundred students. You can imagine four hundred students starting in 1976. These people are running these companies now and they have a good feeling about Arbor Acres.

LL: So they...their middle management may have had all different levels of experiences with poultry and so this was a way to kind of level the field and give them all a basic background?

BH: Right and to insure they would be loyal to Arbor Acres. (Sure, sure.) Yeah, this was one of the pluses of being a Poultry Specialist, a very unusual thing for a miner's son to become a Poultry Specialist.

LL: What did your father think about when you...?

BH: Of course, they didn't think that was very good at all. They're...of course, they had very few role models coming from rural Finland at seventeen years of age, fighting his way up the ladder, he didn't think poultry was a very...they thought more like, engineering or...or what else would they...accounting or business or something like that. But they had no concept that anybody could make a living understanding poultry Just like my friend who was a...specialized in human sexuality, his father was an old yankee here, over in...and I met his father and he said that he can't believe that F--- can make a living with human sexuality. But he said, "If he loses that job, he's a good electrician."

LL: That's funny. When...you were talking about the poultry industry and your father, something crossed my mind...oh, this is the...this century is when scientific and educational agriculture really had it's heyday because like, with our first experiment station here in the State because... and that...the whole idea

of scientific agriculture and teaching agriculture was just...just begun in this century really. So, you're in the right place at the right time.

BH: Right. It was. When I think of it, the changes have been tremendous. I always remember the story when another disease would strike the poultry farmers they would say the University invented another disease.

LL: ...What do you hear now about, you know, with subdivisions and developments coming in and this, I know, in Pennsylvania they're having big issues of the odors from the poultry areas and this whole urban-rural interface thing. What kind of things have you heard about this or have you...

BH: Yeah, that is a problem. I don't think that poultry has impacted the problem as much as the hog people. I think the hog people have a real problem with smells. The poultry people have their problems too. Yeah, this is a big problem. Of course, the chicken people were there first out in the country, and then the houses came around, and then the houses start complaining about this so, how to solve this. They still want chickens and eggs.

LL: Talk to me about waste management.

BH: Oh, yeah. I didn't mention that at all

LL: Oh, that's a big one isn't it?

BH: I think the last five years that I was active on the staff here, we spent much of our time with waste management. This was after the introduction of cage operations then we have this huge accumulation of manure in the...beneath the cages in the pit, and what to do with that manure. One of the things that we did is loaded it onto truck mobile spreaders and we went into...one experiment was to spread it in the forest. There was a pine...Connecticut State Forest in New London County up near Voluntown and we built trails in there and then sprayed the manure into the forest. And we did this for six months, not every day but on occasions. And then to check the effect on the forest, when you flew over it you could tell this square that we had manured. It was a brighter, darker green than the rest of the forest and when you spread it, of course, it was objectionable smell at that point but it dried up very quickly and it dried up so fast there was no fly problem and the rains eventually washed down whatever went on the trunks of these.

That was one experiment that we had. Then another experiment was what we called "maximixing." We would let the liquid manure run out of the coop downhill into a pond. Then we would get a big bulldozer and mix the earth around it and the manure into a what we call a "maximix."...

LL: What was the consistency

BH: Kind of muddy. (Mud?) Yeah, muddy. We used...depending how much earth you used to mix it, just like mixing a pancake dough or something. And that was quite successful. It didn't pollute the ground water. The New Haven Experiment Station cooperated with us and the ag engineers and soil scientists. We had test wells around it and it didn't pollute the ground water.

LL: So then...it could be then used elsewhere on property or farms or sold as a bagged product?

BH: Yeah. This was done also, especially if it was litter material, the wet poultry manure cost quite a bit to dry, but there are operations that do it and there are operations now that use that wet manure and mix it with other organic materials.

LL: Do we have any of these in Connecticut?

BH: I think there's one down in Franklin that does some of that.

LL: At the time you did this maximix, what happened after that? Was it a practice that was then instituted around...?

BH: It doesn't...these things don't pick up. They...and everybody has their own Solutions; ...but these are some of the things that we did. And...of course, getting rid of dead birds was a big problem, too. With big operations you had a certain amount of mortality and, of course, we developed incinerators and Composing Operations and the ag engineers developed a heated septic tank. They...had a big ordinary septic tank, but they heated the water in it to ninety degrees and when you dropped the dead birds in there, they decomposed very rapidly. Bacteria at that temperature just chewed up the carcasses.

LL: What things do you do with feathers?

BH: The processing plants they make feather meal.

LL: Feather meal?

BH: Yeah. It's separated and it's actually a source of amino acids. It's lacking in...it's strong in...I don't remember the amino acids now that they have but it's a feed product, feed ingredient, amino acid feed ingredient.

LL: Well, this has been...is there anything else to say? This has been very interesting and I thank you so much for taking the time to come. This has been an interview with Bill Aho, who had been a Poultry Specialist at the University of Connecticut. Is there anything else you want to say before the tape runs out?

BH: Well, it's been very interesting reviewing all these things.

LL: Thank you so much.

(End of Interview)