



A Century of Extension in the Klamath Basin, March 10, 2016

Title

Klamath Extension Animal Scientist

Date

March 10, 2016

Location

Valley Library, Oregon State University.

Summary

In his interview, Ron Hathaway describes his upbringing on his family's ranch, the influence that Extension programs made upon him as a youth, his undergraduate education in Animal Husbandry at Cal Poly - San Luis Obispo, and his master's studies in Animal Science at the University of Nevada. From there, he recounts his move to Klamath Falls and the status of the Klamath Extension branch at the time of his hiring; his early impressions of community life within the Klamath Basin; and his initial involvement in outreach and research activities, including a project analyzing the sheep market in Oregon. He then recalls his Ph.D. studies in Animal Science at OSU, noting the research that he conducted on selenium deficiency and the individuals who were important to him, and likewise commenting on the logistical difficulties posed by pursuing a doctorate in Corvallis while working as an Extension Agent in Klamath Falls.

The session then turns its attention to the 2001 Klamath water crisis, including a discussion of the role that the Klamath Extension branch played in helping to bring the community together, and Hathaway's thoughts on how the region might approach water conflicts in the future. The interview also touches upon Hathaway's administrative work, and his involvement with both the Oregon Agricultural Extension Association and the Agricultural Research Foundation. The session concludes with thoughts on change in the region with specific focus on challenges facing agriculture in and around Klamath Falls; Hathaway's perspective on the future of the Land Grant mission going forward; and his sense of the continuing connection between the Klamath Extension branch with OSU's main Corvallis campus.

Interviewee

Ron Hathaway

Interviewer

Geoff Somnitz

Website

<http://scarc.library.oregonstate.edu/oh150/klamath/>

Transcript

Chris Petersen: OK, today is March 10th, 2016. We're in the Valley Library with Ron Hathaway, retired Extension agent from the Klamath Basin Research and Extension Center. We'll be conducting an interview with him for the OSU Sesquicentennial Oral History Project and I'm Chris Petersen here, but running the show today will be Geoff Somnitz leading the interview. So Geoff, if you'd like to take it away.

Geoff Somnitz: Alright, thank you for coming today, Ron.

Ron Hathaway: Glad to be here.

GS: To begin, I'd like to begin to capture a biographical sketch of your early life. Could you start by talking about where you were born?

RH: Oh, I was born in Redding, California. I went through the fourth grade in a one-room schoolhouse in Oak Run, which is just east of Redding. Second-generation beef cattle ranch, and the original homestead, some of the deeds actually got a wooden stamp from Lincoln. So we'd been there a while. We had bought some summer pasture that's in a foothill range which is good from about November to about March, April maybe. So we bought some summer pasture in Burney, and when I was the fifth grade we moved up there. So I attended Burney Elementary School, and then for high school. Eventually went on to Cal Poly - San Luis Obispo and University of Nevada at Reno, and got a job here with Oregon State University in 1972.

GS: Could you talk about your parents' background?

RH: My mother's family had moved, I think probably, I don't think during the Depression but probably recently after, to California. I think my mother's dad came out to work on Shasta Dam, which was just before World War II. He came from West Virginia. My dad's family originally came from, I think, the Missouri area and came out there and homesteaded. I often wonder, they had to go through Sacramento to get to Oak Run. Oak Run is kind of the uplands of the California Central Valley, but they wanted to be someplace where they were alone and they ran cattle. They could have got some of the best farm ground in California, but they were looking for range.

GS: Okay. Could you talk about your upbringing and maybe ranch life?

RH: Uh, yeah. The earliest, well, the things that I can remember, we still fed cows in the winter in Oak Run with a team of horses. That's, you know, like, that's the early fifties. I was born in 1946, so that would have been old enough that I could remember. I don't know when that is, three, four years old. But we actually would feed, it was loose hay, and some was also baled. We did one time, my granddad hooked up one of the last workhorses to a single bob plow and we got to play with that. I say "play" because we were not heavy enough to really do anything with it. We had one that was like an orchard tractor, we traded that for something else, and then had a crawler tractor, that was about the extent of the machinery. I can remember baling hay. We had someone come in with a custom baler, but you hauled the hay to the bailer. And that was some of the earliest things. I can remember, I said "well can those guys make a fort?" You know, because it was like Lincoln Logs, and he says "well, I don't think they're going to do that."

When we moved to Burney, then we actually had hay ground, and baled hay and got a baler, rakes, and mowers and that whole thing. And that's what we did in the summer 'til I actually graduated from college and went off to do something else. And that was us. That was our job, was the summer hay crew. Things were, we probably started driving when we were – like farm equipment – I think in the fourth, fifth grade, which means we were probably ten, eleven years old. We started driving pickups around the farm, the ranch, when we were big enough to reach the pedals. I don't know that getting a driver's license was any real great thing to us because there were lots of back roads, and we could go where we wanted to go pretty much, which wasn't that far. Spent a lot of time outdoors, played some sports in high school, mostly football, wrassled a little, and that was about it.

GS: How was your community life? You mentioned athletics, was there anything else you did in the community?

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RH: Burney was really a lumber town at the time, and some ranch communities there. We had some neighbors that were right next to us. Their families were like the best friends, went on vacations together, and travelled together. They went to Medicine Lake, which is at high elevation, like almost six thousand feet up in the Medicine Lake Highlands. It's kind of between Burney and Klamath Falls. We went up there a lot in the summer. Other than putting up hay, you know, we just, I can remember, I don't think our parents ever worried where we were. You know, we were gone in the morning and we were with kids in the neighborhood. We lived right on the edge of Burney, which was like 3,100 people, not very big, but there were two lumber mills there. And you ate lunch at whoever's house you were at when you happened to be hungry and it was around noon. And you showed up back at home in the evening, and I don't think anybody worried where you went or what you did. It's like you were with a group and that ain't completely different than today.

GS: Were you involved in any organizations like 4-H or FFA?

RH: Yeah, we were in 4-H; started whenever you start, I think that's like fourth or fifth grade. We moved to Burney when I was in the fifth grade, so we started 4-H there. Had like a steer project, you know, you fed one, took it to the fair, did the auction thing. The fair was actually in Anderson, California. That's about sixty miles away, so we got to go to Anderson and stay at the fairgrounds. The high school kids kind of watched out for us, you know, we weren't in high school, we were still in grade school. It was that sense of community that was there. It was not a high school in Burney, it was Fall River High School, which took in probably about a fifty-mile radius, so we got to know kids that we'd never got to know if we hadn't been a unified high school. It was just a completely kind of different upbringing then what our kids are experiencing now.

We did some organized sports things, like played Little League baseball, some other things; 4-H went on. Then in high school I got into FFA, and that was really something I was interested in. It expanded, you know, from just having a steer to - my dad and granddad went to the sale and bought both my brother and I a heifer. I've got the three brothers. And then we had the heifer, and then you had some calves, and pretty soon we had a small registered herd. And then I was active, like the chapter president, and went on to hold a sectional office. I was the superior region president, and then held a state office in California in FFA my freshman year of college.

That was probably one of the reasons I went to Cal Poly is the vice dean of agriculture had said, "you're coming to Cal Poly." I was like, "I am?" There was really competition to get the FFA officers to go to different places. I had applied to go to Cal Poly just because a friend of mine and I were sitting in, I don't know if it was a history class, study hall, or something. I said, "where are you going to college?" "Oh I'm going to go to Cal Poly," because he had an aunt that lived in San Luis Obispo where Cal Poly is. And so for some reason - it had a really good math program, and that's what he was interested in. I was just interested in agriculture and that was it. I would have probably either went to Shasta College or to Chico had I not got the state office and got the scholarship to go to San Luis Obispo, but that was one of the best things I ever did. I got to stay in what they called Herdsmen Hall, which was an old Army officer's barracks. There were six rooms, but there were twelve guys in it. But we got, you know, as a freshman, you just kind of don't know where to go. But it was immediately, we had this social support group of seniors, juniors, and sophomores. I was a long way from home, and when I went home for Thanksgiving, I was like, "I don't think I'm going back." So I went back to get my stuff and Jim Ellis, that was one of the guys in there, he says "well, you might want to stay, why don't you stay until Christmas and see how that works out?" And so I stayed until Christmas and finished up there four years later.

GS: You got your degree in Animal Husbandry?

RH: Yes.

GS: When you were in high school, did FFA influence you to eventually do that in college?

RH: What I intended to do, from whenever I could remember, was just go back and be on a ranch. I was the one that got to go to college, two other brothers didn't. My next younger brother had actually gone to Chico; he was five years younger than I am, and he got a degree and taught Ag in California. Well, he started out in Portland but eventually got back to California and taught there.

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And then I got drafted when I graduated in '68, and also got married in September after I graduated. Since I was going to go in the Army – my wife Deanna was from Junction City, so we moved up here so she wouldn't be there for like three weeks, and then what's she going to do after that? So we moved up here and eventually got in the National Guard. And I was working on her folks' farm in Junction City and so I was working there, but there was another student from Cal Poly that was doing his graduate work here, and he met a fellow, Tony Lesbenon, from the University of Nevada-Reno. He had an assistantship in Animal Science over there, and I expressed some kind of interest, so he says, "come over to Reno and I'll give you that assistantship." The interview was about ten minutes even, if that. And so I ended up going from Junction City to Nevada-Reno, and got my master's degree there.

When I graduated from Reno, we were looking for a job, and there was an Extension job open at Klamath Falls. There was also one at Burns. I filled out the application, came to OSU, and was kind of checking on things, and I think it was Lou Oester at the time, he says, "well yeah it is open," so he says "why don't you go down to Withercombe." We were in Ballard Extension Hall, and he says go down to Withercombe. Well, how many signs are there on a university campus that tells you where to go? Everybody knows where everything is. So I think part of the interview, the test, was can you find Withercombe?

He says, "you're going down there and you're going to meet with John Landers and Dean." I'm meeting with the Dean? It was Dean Frischknecht, he was the beef specialist for Oregon State University. There was Guy Reynolds, who was the Extension veterinarian, and Dean Frischknecht and John Landers were the sheep specialists. These guys were down there writing the tansy ragwort bulletin. They're kind of in the conference room, so I walk in and it's like "Hi," whatever, and that was the extent of the interview.

So I go back down and see Lou Oester and he says, "well, on your way back to Reno" or whatever, he says, "can you run over to Bend and see Turner Bond?" Well okay. So he gives me the address of Turner Bond, which is on First Street in Bend, but it was a really narrow little board going upstairs and ... So I'm wandering around Bend, probably pretty conspicuous looking, and there was a fellow there working for Oregon State University that was going to lunch and Turner wasn't there. But he says, "oh, Extension," he says, "this is a really good outfit to work with." He says, "campus is clear over on the west side." He says, "they only bother us when you do something bad. It's the greatest job, you work with the community, you find out what their needs are, you work with them to resolve that, and best job in the world." So it's like, okay, I don't have anything else so...

When I came to Corvallis and talked to Lou Oester again it was like, well, you got a choice, either Burns or Klamath Falls. Well, Klamath Falls was halfway in between Deanna's folks and my folks, so we said, "okay Klamath Falls." He says, "on your way back to Reno stop by Klamath and see Walt Jendrzewski. He's in the post office." That was the extent of the directions. So anyway, I got to meet Walt Jendrzewski. That was a total of a five-minute interview. I'm not sure if somebody could walk and talk and then go to Klamath Falls, if you got the job or not, but anyway that's how I started off with Extension. And it was probably one of the second best moves – after Cal Poly – that I ever did.

GS: Just going back a hair to University of Nevada. What kind of research did you do there for your master's degree?

RH: We were feeding ionophore to feedlot cattle and it was a high roughage diet. And so the cattle were fed out of Newlands in Fallon, which is a little over sixty miles from Reno. But we'd actually drive out there, you know, weigh the cattle, do whatever, and drive back to Reno. And that was just kind of the norm, you know, travelling an hour to do something and coming back. And there, that was a smaller group of graduate students. At the time, Reno wasn't as big as it – well of course Oregon State's bigger now than it was forty-plus years ago. And eventually, I did it in like eighteen months because we were married and had our oldest daughter, it was like I had more incentive than to just hang around graduate school. That was a good experience too.

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One of the things that I think stuck in my mind is we were doing, we had some fistula, esophageal, so we've got a cannula in their neck, and so then they've got a bag, and we'd haul them over on the California-Nevada border, and this whole study was to see what sheep ate. And we were over there with Espil's [?] herd and herder, and he was a Basque that could speak pretty good English. So he figures out kind of what we were doing, he says, "Oh," he says, "you want to know what the sheep eat?" So he's out there saying they eat this, they eat this, they eat of lot of this, not much of this, and some of

this, and some of that. It's like, so why did we bother with all this other stuff? Why didn't we just go talk to somebody that actually was out there observing and knew what was going on? That was kind of, I filed that away someplace. So yeah you can do all this, you know, research and numbers and replicated whatever, but you need to talk to somebody that's actually done it. That'll give you a better idea how to go about doing it.

GS: Going back to Klamath Basin Extension.

RH: Yeah.

GS: What was the status of the branch when you arrived there?

RH: We were in the third floor post office. That's where the Extension office was, and the Experiment Station was probably three miles away, south of town, Washburn, where they are now. There were two separate offices. We kind of did some things together, but it was two, they were research and we were Extension. The fellow that preceded me, Ray Peterson, was really a hands on guy, and so they had been doing some work with – it started out as pasture varieties to see which varieties adapted better to Klamath Falls and which ones produced more forage, measured as pounds of beef, not pounds of forage. They moved the trial from just west and south of Klamath Falls, where the Weyerhaeuser mill is now, to North Klamath Lake, because there's mineral soils and that was kind of what they were doing out by Weyerhaeuser. And there were the dried up reclaimed lakes that were high organic muck soils, so they moved down there. When they went down there, they encountered a selenium deficiency and in addition to doing the pasture grass varieties things, they were also trying to supplement selenium, which is another really interesting story because Oregon State University were one of the first ones that recognized that selenium was essential for general animal health, in particular white muscle disease.

[Otto] Muth was a veterinarian on campus and Jim Oldfield too, the early – what do you call them? – research pioneers in the relationship between selenium and curing white muscle disease, which is caused by a lack of selenium. Ray Peterson worked with some of the local veterinarians; Fred Wheatum, and a couple of the others down there, that were, they were sort of brewing up their own selenium injectable thing, distilled water and everything else. And Ray was really trying to get the people on the university side who had an interest in it also, to do some kind of – injectable selenium was the first thing that they really came up with, which eventually someone developed and patented. I didn't really realize how... It's not like magic, but it's an essential nutrient that without, the baby lambs, they're born with muscular dystrophy, they have no ability to stand and walk and the muscles just don't function.

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I was down with Leonard Will who was the, he was a sheep producer, homesteaded from World War II, a Navy veteran. And he had a, it wasn't a band, it was a flock of sheep because a band, I always think, are out on a range and a flock is under fence. I was down there and he was using the injectable selenium. This lamb is born while I'm there, and he's like, "this lamb is just lying." In general, a lamb will kick and wag their tail and get up and give you a little nudge, and this lamb is just lying there. I said, "well, what you need is selenium." So he gets his syringe and gives him probably two cc's, and within about thirty seconds, I would not have believed it if somebody had told me this story, this lamb stands up, finds the mother, and starts nursing. It's like, "whoa, there is something to this," so that whole thing sort of evolved. I did my PhD here at Oregon State and it was on oral supplementation of selenium. If we could supplement it to the – we were working with beef cattle and it would work for sheep and anything else that had a proficiency. If you could provide it to them in a mineral mix you wouldn't have to, the mother would have the adequate levels so the offspring would have the adequate levels, you wouldn't have to do the injection thing. Eventually we got that resolved.

After a few other years, we finally got – New Zealand was working with, and Australia were working with adding selenium to fertilizer and applying it. So the selenium was actually in the forage and we'd moved on to that and did some work there in Klamath. And then the guys in Burns and La Grande had done some other work over there and then did the actual trials. They fertilized the feed and fed the hay to the replacement heifers and did all the blood serum levels stuff. We actually, eventually, got that approved as a fertilizer and then through the Oregon Department of Agriculture, which was a major step forward. An easier way to solve the problem other than catch every newborn and give them an injection.

GS: Definitely. When you first came to Klamath, what were your initial impressions of the region?

RH: I was relatively impressed that there was a really good group of cattlemen there. Ray Peterson had worked – Extension when I started was, I'd say it was different. We didn't have Internet, we had computers but they were mostly calculators. You either talked to someone on the phone or wrote them a letter. You went to meetings and talked to them face to face. If it necessitated itself, you went out to their place and actually looked at what their situation was and talked to them about it. I don't think we ever gave advice or recommendations, we just tried to get them to understand what their alternatives or their decision-making process could be. We did a lot of meetings one on one, phone calls, wrote letters. That was back when you wrote the letter, and the secretary typed it up, then you corrected a draft, then you mailed it to them, and they got it three days later.

And we worked really closely with the producers. There was Wayne Freischultz, who was the son in law of Louie Randall, who eventually became a president of the American Cattleman's Association. Wayne and Judy – that's his wife – were the first people that invited us over to their house. It was kind of like you were just accepted into the community because you worked for Oregon State University and were an Extension person. We went to write a – you know how hard it'd be if nobody knows you, to write a check? So we were down at House of Shoes and Jess House was the guy that ran the place. I didn't know who he was at the time, but we got to know him later. We said "can we write a check?" And he says "sure, why not?" And it was like, "really? This is not Reno."

The other one was when we rented, and then we actually bought a house, and we were going to build a fence in the backyard. And so went down to Swan Lake Lumber and Fred Eilers was the guy that was managing it. Of course we didn't have, whatever, we started lower on the scale than we certainly do now. It was like we needed these boards and these posts and this other stuff, and he's like, "oh, just charge it," and he said "you can just pay us at the end of the month, or a couple months." And it's like, "really? This is Klamath Falls; this is what life is about." Yeah it was great.

The veterinarians, the ones there, you were just immediately accepted. Fred Weiland was one, he was one of the guys that – way back to Guy Reynolds and Jim Oldfield and those guys. It was one of the mobile veterinarians that was helping with the selenium stuff to start with. So it's like this sort of acceptance that you're there. There was also a good family friend of ours that had a ranch in Keno. They also had a ranch down out of Red Bluff, and so he was doing some performance testing on his heifers. He'd weigh them, and see what they gain, and so I got to go out and help him do that, which I found out how cold it is in Klamath Falls. The second thing I bought there was a pair of packs. [0:25:37]

GS: What was some of your early research when you were there? Your early research topics.

RH: Actually, Extension didn't do research when I started. We may have been involved in some, but we really did more demonstration plots. You do kind of an experimental plot to see if it works, and you do the full-fledged, publishable, and the Experiment Station did that. What we did, what I understand – it may be an oversimplified understanding – is that Research did the research and Extension extended that. We translated the university-ese into lay language and then either through – a lot of it was through demonstration or interpreting the results of the research that was done. So it's like a show and tell kind of thing. You would put a demonstration plot out where you were pretty sure of what the results were going to be, because you had years of research that did that.

There was a couple of them we did. One was Burt Wilcox, did soils, and he was in the office when I got there, so he and I went out to Louie Randall's and put out a fertilizer trial. Well, when we came back in three months later, it was pretty obvious that fertilizer increased production. The other one was at Fort Klamath, which is in the Wood River Valley. It's kind of a pumice soil; it's an alluvial fan of Annie Creek out at Crater Lake National Park. And it's pretty low in organic material, and phosphorus is one of the things that would respond up there. Well, we knew that but we put on a demonstration trial and it was right by the main highway, and of course everybody in Fort Klamath, that's a small enough community that if you were up there, they knew you were there and they knew what you were doing. And it was absolutely – we got three times the yield off of the fertilized plots that we did just using sulfur and just using regular nitrogen fertilizer. And then we had gathered all that stuff and actually kept the samples from the plots, and then had a meeting kind of a thing at the local civic hall there, and it was – I think it was two things. One, it was a big social and the other thing is, there was a couple other things on the program, and it was pretty obvious what they did.

But one of the things we did was through the demonstration, and I think that kind of came back from, if you kind of think back where Extension started from with the Land Grant university, Lincoln is the one that started it. And his, oversimplified, was, if you were just a person, a common person, you couldn't go to higher education, college. It was all

the Ivy League; it was all the wealthy. And he really thought that everybody ought to have access to it and started the Land Grant university system. The Experiment Station came along later to sort of develop new techniques and methods of farming and those kind of things. Then Extension was the third leg of that, and that was to extend the research and the findings of the university to the general populace. And, of course, it was tough. If you think back in the early 1900s, not a lot of people had anything beyond an eighth-grade education. And 4-H, I think, part of what 4-H was started for is you teach the kids, through demonstrations and other kinds of things, and Dad's going to be standing there – or the mom or whoever – and going, "oh, that works?" So that was still kind of where we were.

It changed later, because when we got computers and the Internet and software and all of this – slides and PowerPoints and I don't know what we are now – it sort of changed, and I think we evolved over time too.

GS: So in '79 you took a sabbatical and you were studying sheep?

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RH: Well, the first one I took was a real short sabbatical. Carl O'Connor was an economist here and Carl came from down in the Klamath Basin. And at the time, the sheep numbers, lamb numbers, were really dropping in Oregon. I don't know if you guys remember when, if you drove up and down I-5, either way you looked, there was nothing but sheep on all this rye grass and grass seed pastures, because they needed to sort of move the growth curve of the maturity of those back, and grazing sheep was one of the ways to do it. But when I started in Klamath, I mentioned that Leonard Will was the president of the wool pool, we also had a lamb pool. So we put together – a guy came from some place and would sort the lambs and fat lambs and the feeder lambs, and put a load together, two loads or whatever it was. And you'd bid them to whoever would bid, and eventually that became – there was a PNW Kellogg auction, they would talk to the buyers on a telephone. The thing was, when we first started out, there were probably seven places that killed – processed – sheep on the West Coast, including as far as Denver. And those went down until there was about two left, and one in Denver. The numbers were dropping to the point to where, pretty soon, there was going to be nobody to process all these lambs unless there were more lambs.

So Carl and I did – well, he sort of was my advisor – but we did a study on what the slaughter capacity was and how many lambs it would take to maintain more than just one slaughter plant on the West Coast. And just the economics didn't work out, and now we're down to like one packing plant on the West Coast and the second one is in Denver. Well, the guy on the West Coast can certainly figure out what the freight is from here to Denver and that's the price they bid. There's just very little competition and I think that's one of things is why you don't see as many feeder lambs in the valley. It's sort of a vicious circle. But that is what I did in 1979.

GS: So in Klamath, you had demonstration plots and that was a way of outreach. Was there any other outreach activities or community involvement in the area?

RH: I think there were a number of things. One is, we worked really closely with the commodity groups – the hay growers, the grain growers, the sheep producers, the cattlemen, the potato growers. I think, if you look back in the history, which is a brief – my history – [laughs] Charlie Henderson was a dairy agent. He was sent to Klamath Falls, and that was back when everybody had ten cows or thirty cows or whatever. You screened the cream off and the cream went to the creamery. There were two cheese factories in Klamath Falls – Meadowbell and Crater Lake. And so somebody gathered up all of this cream and took it to the thing. Well, they were looking for a little more diversity and Charlie Henderson figured out that Klamath was a good place to grow potatoes. But the thing is, is that Charlie Henderson is not the guy that took the credit for it. Charlie Henderson went and found what you would call an early adopter or somebody that was willing to try something new. So he found somebody that would do that. And then it was like, "ok, so potatoes do grow here." So then the interest grew, but Charlie stepped in the background and somebody else could take the credit. That was not what we were about back then.

So we introduced potatoes. The second thing that I think was important was, after potatoes, it was all row irrigation, and Klamath is high – 4,100 feet. So we get late spring frost, we get summer frost, we get early fall frost. And row irrigated potatoes, if you got froze up you got set back and your yield went down. And the university through, I'm sure, contact with other universities, had figured out that if you can sprinkle irrigate, then the process of the water freezing actually doesn't go below thirty-two, so it doesn't freeze enough to kill the plant. Well, Extension sort of innovated that. The big

benefactor of that, I think, was J.W. Kerns, which is fine. But they sold sprinkler irrigation equipment. So if you talk to anybody, J.W. Kerns is the one that developed sprinkler irrigation for frost protection for potatoes, but it was really the university that handed it to J.W. Kerns. And that's just kind of how things happened back then; we weren't out front to take the credit, we just wanted to make sure that the best practices were adopted in the community.

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GS: So in the mid-'80s you worked on your Ph.D. at OSU. What you made you to decide to pursue your degree in that area?

RH: I had been with the university long enough – and I don't mean this derogatorily, but if you're a plumber, you're an apprentice, and you if get your union card, you're a full plumber. If you're working for the university, a Ph.D. is your union card. When I started, they didn't require a master's, it was just a bachelor's. And eventually it was a master's and now, if you look at a lot of the job descriptions that I see, they want a Ph.D. It was like, "you know, why not?"

The other incentive was I got the faculty rate. I paid \$11.00 an hour for graduate classes and I didn't realize really what that was until I was over at the Administration Building in a line, paying. So the guys in front of me were like \$1,500, \$2,300, \$1,800. I stepped up there and was like \$130 – this is a good deal!

GS: Definitely. So what were some of the logistics of pursuing your Ph.D. while you continued working in Klamath Falls?

RH: That certainly took a lot of giving by my family. The other part of it was, is I had taken that – I took a class from Carl O'Connor, an individual study, to do that lamb study. And then I had taken Manning Becker's farm management class in the summer, which just happened to be at – so Carl's was spring, Manning's was summer, or maybe Manning was winter, I'm not sure how it worked out. Anyway, I was talking to Jim Oldfield when we were doing some of the research in Klamath, and Jim said, "why don't you get your Ph.D.?" That was probably the other thing – he says, "you realize you're only thirty-six credits away and your thesis is like fifteen or eighteen or something? So really, you could finish this up," because Manning's I took for credit – why, I don't know – and Carl's I took for credit.

But the other one was that you had to have three consecutive quarters on campus. Well, I had two of them, so all I needed to do was go spring quarter. And I'm thinking, "oh, spring quarter. This is all right; I can do that. I can drive from Klamath up here Monday, go to the first class, because it doesn't start until 8:00." That was not uncommon at all, to drive to Corvallis for a four-hour meeting and then drive back home. You just did that. Going the other way is impossible to do, [laughs] particularly in the winter. Which is probably a plus if you're on the east side of the mountains, unless some administrator is watching this. [laughs] You never see them from October to April, which is fine, probably for both sides.

But anyway, so Jim says, "yeah, do this." So I go, "ok, I'll do that." So Jim was my major advisor. So we get the research laid out, we get the class things – what I can take and what I can't take. So it was like I was going to go Monday, Wednesday, Friday, I had Tuesday, Thursday off, and I'm thinking, "I can steelhead fish at least one of these two days and do the rest of it." Well, I'd signed up for a 400-series, which is a graduate class, and it was a beef nutrition class. And then Steve Davis – Jim Oldfield retired and Steve Davis came from Idaho – Steve looks at it and he says, "uh, you could teach this class." He said, "you need a nutrition class, but not this one." So I talked to Jim and said, "so, Steve thinks I need a different nutrition class than this one," I mean, I actually could have taught the class but it was core credits, that's what I was looking for. So Jim says, "well," there's a fellow that he knew that taught human nutrition over in Home Economics, the Food Nutrition part.

So I go over there and take the class, and I've got to tell you, I'm in this class – I have not been...that was probably in '80, when I took the sabbatical, and so I'm here on campus and it's like, I'm thinking, "I'm in a track meet and I'm still in the middle of the field warming up, and the starting gun just went off." I had sixteen hours and everybody else had like six, eight. I had a feeds and feeding class, so we had like ewes that were feeding and collecting the urine and the feces to do this metabolic thing with. Jim Leklem was the one that taught that human nutrition class, and pretty soon he figured out, "this guy's way over his head," because I had not had those pre-requisite classes that everybody else who was in there did, who are aggressively seeking a doctorate program. And they're all about getting an A and I'm about just getting through

the class. And I think what Jim finally, when he and I connected, is he was talking about some essential nutrient in some, I forget what it was.

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But anyway, so he lists all of these things that is in it and he says, "and halibut." Well, it was all like fruits and vegetables, and here's halibut. And he goes, "you're probably wondering why halibut's in there." And I'm going, "halibut." So I'm in the back of the room and starting to laugh, and everybody else is like, "halibut, halibut" and they're doing all of this [mimics serious thinking]. And I'm going, "it's – he put it in there for the halibut!" But like the H-E, halibut. [laughs] And I'm cracking up in the back, the only person in the class, I think, that got his joke. And he's looking at me and, just, he and I are laughing silently to each other. And everybody else in the class is just, "what does halibut, halibut?" They're going through everything, every nutrient that's in halibut, "why does it not match with these?" Well, it's for the halibut.

Anyway, I got a B. Whether I earned it or not, I'm not sure, but I tell you, that was a tough class. One of the essay questions that I remember was – and it was a three-hour class, Tuesday, Thursday; there went my steelhead fishing – so it's this three-hour class, so the test is after lunch. And the question was, "so for lunch today, you had a hamburger and french fries, and now you're taking this test. Tell me the metabolism of that hamburger and french friends, and the metabolic pathways that you are dealing with during the stress of this test." Oh my God. Well, I know all about six, is about all I could do. That was a really good class for me, eventually. Halibut is what I think got me through it.

GS: So, what was some of the research that you conducted as a Ph.D. student?

RH: It was oral supplementation of selenium to beef cattle. With the ones that were on the trial for the actual pasture variety stuff, and then we were feeding both – there was another graduate student from here who had worked with copper, so we fed the copper. They did that for two years and then mine was, it was like two years after that that we fed. So it was oral supplementation of selenium to beef cattle.

GS: Do you have any other memories of James Oldfield? Or interactions?

RH: Oh gosh, yeah. Jim probably – I mean, he was one of the guys that was influential on me. Jim is just a wonderful person; I couldn't say enough good about him. The other memorable thing was – and this is probably another, because you're within the university – I had statistics at Reno and just didn't get it. But about a third of the way through the course, it finally sunk in and clicked. And so then I did really well in statistics. But the statistics that we were doing for my Ph.D. were a little beyond what I could do, so I got somebody here on campus to help me with the statistics. Steve Davis wanted us to do statistics one way, but the guy who was a statistician – he was probably a full professor here – was saying, "this is why you need to do what you need to do." And I couldn't tell you why now, but I could then. So Jim Oldfield one day says, "Ron, the objective is not to teach Steve Davis statistics. The objective is to get him to sign your thesis."

"OK, Jim. Got it."

So just that kind of, I don't know if it's fatherly or elderly or whatever, but I think Jim Oldfield is just one of the very best people. I think he was respected by everybody in the state. I think he did a great job with the department. He went on to do other kinds of things; I think he was probably one of the leading people as far as the practical application of selenium in white muscle disease and as a supplementation. Through the American Society of Animal Science, he was part of them and he did a lot of kinds of things. He was really a great influence on me too.

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GS: So, heading back to Klamath Falls, how did getting your Ph.D affect your job? Did it affect your job?

RH: Yeah, I suppose we got off of that. What I did was drove up here Monday morning, drove home Friday afternoon, and stayed – the first part of it, I stayed with Manning Becker, the farm management guy. They just don't make them anymore. I mean, this whole generation of guys that I was the kid and they were the elders, you just don't find them anymore. So I stayed with Manning, Monday night, Tuesday night, Wednesday night, and Thursday night, and then went to class during the day. It was free board and room with Manning. Of course, the only meal I ate there was breakfast, Manning always cooked breakfast – bacon and eggs. That's what I ate every morning. [laughs] And I mean, Manning

was just a great guy. This was back when you actually had somebody from Corvallis who would come; he was known statewide and respected statewide also. The only, and I'm not saying this as a downside, but Manning liked brandy and Benedictine. And so when I got home from the library about 10:00 at night, I'm ready to go to bed. Manning's ready to have a couple of cocktails. And I learned real early, leave the olive in the cocktail, in the drink. And when you've got three – not olives, it was cherries, maraschino cherries – when you have three cherries in there, you're done. You've got to go to class tomorrow. So that was sort of this transition.

But I left Monday and didn't get home until Friday, but I was there for the weekend. And I tried to get everything that I was doing done here during the week so that I was home on the weekends. And it was for a quarter, which is do-able. That was the other thing that I liked both about Oregon State and about Cal-Poly; it was a quarter, not a semester. And somebody told me one time, they said, "really, this is a tough class like organic chemistry, you could stand on your head for a quarter. Semester, I don't know."

GS: So after getting your Ph.D., how did that affect your job?

RH: Directly, not at all. I was, I would say, very reserved about telling anybody that I had one. They didn't need to know that, I didn't need to tell them that. I had it. I had my card. The university, I think, was who that mattered to. The general public, I think, I'm not saying it wouldn't make a difference between how they looked at you, but it didn't make any difference at all to me. There's a lot of things, just by the exposure of going to graduate school, that you get to know how things work and how other things, which is another thing, a learning lesson. Randy Dovel was the forage guy, and later on we did some other stuff with selenium in fertilizer stuff. So in Animal Science, you number the plots 1-2-3-4-5, 6-7-8-9-10, left to right like you're reading. For some reason, Randy was 1-2-3-4-5, like columns. And my God, we spent hours trying to figure out the plot design until finally we said, "Randy, you design it." But it's just one of those little subtleties, the difference between two disciplines on how you label plots.

GS: So heading to 2001 and the water crisis down in Klamath-

RH: -oh yeah.

GS: What was your experience with that?

RH: [sighs] Who all is going to watch this interview? [laughs] You know, it was, in the end, my summation is somebody in the NOAA that does the ocean fisheries, the salmon, and somebody in the Fish and Wildlife service that does the salmon after they've left the ocean, got into this agreement and the Upper Basin got caught in the middle of that bureaucratic. And I have no hard evidence whatsoever, but I really think that was what the water shut-off always came about. It wasn't between the farmers and the Bureau, but that's where the sort of flashpoint was. I have to give credit to both parties because they had the bucket brigade down there and who knows how many thousands of people showed up, and national press. And I sort of think that the media would like to have a confrontation, and if they could just poke it here a little and poke it there a little, but that didn't happen in Klamath.

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We really did two things. There were some people on campus that we worked with about community development and community other kinds of things. One of the things that we did with Patty Case was we did these community meetings and we did them in like Tulelake, which is on the California side but it's still in the Klamath Basin. We did them in Merrill and we did them in Malin. And it was like, "ok, so you're not farming." And that, you've got the husband generally, that's the head of the household, that's the wage earner, and now he's unemployed, essentially. So what's he going to do? Because he got up in the morning and went and changed water and planted crops and cultivated and seeded and did all of those kinds of things, and made the hay and planted crops. And they're doing nothing. And the community, the whole economic flow of money, was different. So we did a lot of community work, not highly publicized, because I don't think that's what we were about and I don't think that's what the communities were about. And it's like, "ok, how do you deal with this? How do you hold a community together? What kind of things can you do?" I don't know if it's spaghetti feeds or community meetings or something to do that.

And that, I think, was the basic level of social intactness that we did, and a lot of help came from Oregon State University to do that – the what to do and how to do it. Which is, again, the application of research. The people here had done the research, they had the research data that said what works and what doesn't work, but they also had the application that, "here's a package that will work," that they had previously been doing work with the fishery people on the coast that were way ahead of us in this whole devastation thing, because as the salmon runs declined, the fishing declined. So they, you know, whether you're a fisherman or a farmer, it's the same kind of thing. If you don't fish, you're not the income earner for your family and if you don't farm, you aren't. That was one thing.

The second part was this pretty in depth study on what the economic impacts were. And I think, when it started out, nobody was like, "just pull a number out of the air," whether it's a billion or whatever it is. But the university really pulled together, across disciplines, to put that report together. And I think at the time, it was not received as well as what we had hoped it had, because the reality was not what the community wanted to hear. You know, the numbers weren't big enough, this wasn't that. But if you really read the report, it predicted pretty well what the devastation was going to be. And it wasn't just going to be for that year, it was going to be for future years. The Bureau of Reclamation and the federal government stepped in and paid farmers; they got a payment in lieu of production. The thing that the study pointed out is that money didn't flow the same as if you farmed, because if you're farming, you're buying fuel, you're breaking your tractor, you're getting parts, you're working with the local service people, you're buying tires, you're employing people to drive those. There's people that are in the packing sheds, there's people that are driving the trucks during the harvest, there's all of these other kinds of things – it flows through the economy differently.

There was a fellow that I knew, he was in one of the service clubs, and he ran a shoe repair shop. And he said, "my business has dried up." Nobody was getting their shoes repaired because they didn't need to get them repaired because they weren't working. I think we were criticized on some of the – I don't know if criticized...yeah, we were criticized – because one of the things in the study said that, in order to meet the objectives of a water kind of a thing, the Klamath Basin was going to have to idle 30,000 acres of farm ground. And nobody was ready to hear that then; that was too early for the message. And it was like, [makes grumbling noise] "blasphemy," so there was a big push back on that. But that's where we've come around to, eventually. That's what we're talking about now is setting aside, or not irrigating, 30,000 acres. And most of it is in what we would – if you're the whole Klamath Basin, we're the Upper Basin. But if you're in just the Upper Basin, which is essentially Tulelake, Klamath Falls, and Wood River Valley, Spring River, those communities, the ones above the lake are the upper, so that's the Williamson, the Wood, and the Sprague.

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And one of the parts of the report said that irrigated pasture – because the power rates were going to go from like five dollars an acre to fifty dollars an acre – well, they didn't really go to fifty, they went to more like sixty, seventy, eighty, and now they're touching a hundred. But if irrigated pasture rented cash for fifty dollars an acre, you could not spend fifty dollars an acre to sprinkle irrigate your pasture. So it makes sense that these that weren't previously flood irrigated, that had center pivots on it and other kinds of things, that's where the first level of what was not going to be farmed came from. Well, then the guys in Sprague River didn't like that because we were picking on Sprague River and general irrigators. But, if you look back, that's where we went since then. And I'm not saying that the study was right and they're wrong, I'm just saying that we were criticized because the study was done, the research, and it made the decision that this is where it's going to be, and the community wasn't ready to accept that.

What I've seen more recently is, is there's more sort of formal or informal requests for that information, because it is the only documented, you know, "here's something that's written," that has some references and some valid input into what the numbers are and all the other stuff. Dave Hill had called me – I forget exactly what the one was – but he says, "I was looking at that study," and he says, "there's some really good information in there." Well, this is how many years later now?

GS: Fifteen.

RH: Fifteen years later. And it's been the last five years and it's like, yeah, this study really means something. It's not just there gathering dust. That was a huge undertaking for the university and a lot of people contributed a lot of time that they carved out of something else that they weren't doing to do that. And it was a joint effort between us and the University of California - Davis, which was, that's bringing two other institutions together. But I think, again, our counterparts in

California were the same age we were. They were the same, "do the work, you're not out there to get the glory, you're out there to work for the community," and I think that's one of the reasons why it worked as well as it did.

GS: So going off of that, do you think the region is better prepared for continuing water problems?

RH: Up until the Klamath Basin Agreement fell apart... You know, I'm not sure. I think one of the – if we go back to the people on campus who were helping with the community, Philbrick, I think that's his name, last name. He had been down and was telling us, what he said was – and this was in relationship to another community thing that we were helping with – and he said, "if you have a preconceived objective or outcome, no methodology, just tell them up front. Don't invite them to a community meeting and pretend like you're gathering all of this input and then you've already decided what it is, because they'll figure that out, and then will fight you to the bitter end."

And Ray Williams and I were doing some stuff with water quality, but we got involved in another thing with the city of Bonanza. And Ray is, I think he's a weed control person in orchards; I'm an animal person. But we're doing this thing with communities and the Oregon somebody, they wanted Bonanza to form a sewer district. Well, if you look at the economics of Bonanza, they couldn't afford sixty-five dollars a month per household to support this, it was either a municipal water system or a sewer district. And so Ray and I worked with the mayor of Bonanza and some other key leaders out there, and went through the whole process. And Philbrick had told us you need to invite everybody, so the first meeting is in Bonanza High School little gym. There's 300 people in there and they are mad. They don't know who they're mad at, but Ray and I just happened to be the two people that they don't recognize in the meeting, so they were mad at us.

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Well, we get through the whole process and then we come back and have a second meeting. The second meeting, about thirty people show up to. So where's the other 270? Well, I ran into Stan Masten at the café out there a week or so later. Oh, I saw him before the meeting, and he says, "this better be a pretty good damn meeting, because I'm missing the division playoffs for baseball to come to the meeting." The thing that Dave Philbrick told us is that, "if they find somebody at the meeting that is there spokesperson, they won't come to the next one, because they can go to the coffee shop and get the whole Cliff notes in five minutes, and they can stay home and watch the baseball game." So then we're down to like thirty-five; the third meeting we're down to twelve; the fourth meeting we're down to the people that started the thing – the mayor of Bonanza and two of the city councilmen and a couple of community leaders. Well, we could have done the whole thing with that group, but it would not have worked. The 300 people would have been snipping at it from the beginning.

But the Klamath Basin group that went together could have learned that lesson, or somebody should have been able. But it was like, "no, we're going to limit who's coming, because there's all these other people that we don't want there." Let them come. You would have had I don't know how many people at the first one. It was chaos; I mean, people were mad. Well that's ok, because at the second meeting you would have had fewer, and by the time you got to the third meeting they would have had, I'm sure, within one member, the same group that they started out with. But you know, it was like "well, you're doing it in secret and you're doing this and you're doing that," so I think that's part of the whole opposition to the Klamath Basin Agreement. And eventually that unwound the thing and that's sad, because I don't know what the alternative of it is, and I don't think anybody else does either at this point.

One of the big issues was whether the dams were going to come out. Well, evidently PacifiCorp is not going to relicense them, so they're going to come out anyway. It's frustrating, because was lots and lots of work that went into that. And we, again, in the background, had done a whole bunch of community meetings just trying to get people together. It was like they were perceived to be the enemy; they're just another person that's living in the same community. We had a grant to do a little videotape with OIT's t.v. department, and we interviewed people on the Klamath River. Started at the headwaters of the Sprague River, the headwaters of the Wood River. I picked up people all the way down to the coast, and it was about a fifteen-minute video. And that was a really good experience for us, but the thing was, if you set down and watched that video, everybody had the same objectives. Everybody had something that they wanted that was very personal to them, but if you got everybody together, you could get it worked out.

But it just, you know, I think part of the reason is there were people that felt that they were left out – they weren't part of that 300 angry people in the little gym, that ended up with the very people that we started with, but they were all sort

of validated through the whole process. And they could come to any meeting they wanted to, but they would rather stay home and wouldn't you? What's the choice? Go to another three-hour meeting and see people draw stuff on sheets of paper and hang it up on the wall? How much fun is that? It's like watching paint dry. Stay home, watch the baseball game, go have coffee the next day and, in five minutes, you've got the whole summation. If you go twice you'll get two different summations and you can decide which one's right. Or the one you most agree with.

A huge learning experience. And I think that's just the diversity of the – the thing that's really rewarding about Extension. You're not just talking to people about beef cattle. I think that's one of the other things that's sort of a side note that's changed, is that whole group that came along that's about my age – it was following the Dean Frischknechts and the John Landers and the Jim Oldfields and the Guy Reynolds and all of those guys, the Manning Beckers, they were World War II era kind of guys. You know, Tom Brokaw's *The Greatest Nation*, or...

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GS: *Greatest Generation.*

RH: *Greatest Generation, yes, The Greatest Generation.* And those were the guys that sort of mentored us. But it was an appreciation for being part of the community, doing what we do. We weren't the ones that were out seeking the glory or the honor or anything else, we were there just to support the community.

GS: Would you be able to talk about your administrative work as superintendent and staff chairman of the Extension office, and director?

RH: Well, it's started out that I was just the staff chair, which really had the administrative responsibility. And I think when I first got the job, it was just Extension. It was more like making sure that people got their monthly reports done and their audience counts done and they got their annual report done and they got all of their other things. More of a coach thing than a supervisor. And then, over time, we saw a shift, because Extension moved from Extension to – we started out having an affiliation with a department on campus, but then that evolved into you were in the department and the department then...tenure was not, I didn't know what tenure was when I started. I got promoted from – I think I started as an assistant to an associate, and you just kind of put together this little three-ring binder thing with some of the stuff that you've done, and wrote a few little narratives and that was it, you got promoted. But by the time I was going from associate to full, it was a complicated, bureaucratic, frustrating kind of a thing to do that. And part of that was that we had moved from just doing Extension and the demonstration and working with the community to part of the university system. And really, we were the third branch. We were not teaching, we were not research, but then this scholarship was like research; peer-reviewed, published.

And I can understand why universities are driven to do that, because the more refereed publications you have, the more points you get for somebody that rates universities. So we then became, if there's 300 of us, we became people, if we published a paper a year, we got 300 more publications. But then it wasn't just enough if you published, then it became, "well, these are more prestigious than these," and it shifted. And the whole tenure process and sort of the coaching was then different, because the emphasis shifted from – Greg Thielsen was the guy that was in Bend and said, "just work with the community and they'll help you figure out what you want to do, and just do that and you're fine. That's what you're there to do." And then it became like, "you've got to do some research and it's got to be peer reviewed." So it's got to be the whole experimental design, and a couple of years, and this whole thing. And then I think that sort of shifted us away from where we were and back to – we did things like picked up the phone and somebody called your or whatever, visited, to we were then on the Internet. And people wanted it – first it was "can you fax it to me?" And then it was "well, can you email it to me?" And I'm thinking, "what are you going to do with it this afternoon?" I mean, it was like, "right now, we want it right now." And then it shifted to this research thing and I think we've kind of lost, in some ways, the connection back to the community, which is different.

The other thing that I think we've shifted away from, somewhat, and this may not be broadly there, but if somebody called wanting to know, "what's pasture renting for?" Well, back then it would be like fifteen or eighteen dollars in AUM, but it depends on where the herd is and how close is it to your place and are their corrals and are the fences good and who's going to make sure the cattle stay in and who's going to make sure somebody calls somebody if one gets sick or whatever, that kind of a thing. But there was also an opportunity there, it was like, "what are you doing with your grazing?"

Where's your place at?" And it's like, "ok, so here's a teachable moment." They wanted to know a question but there was an opportunity there to do more than just answer the question. And I think sometimes now, it's like you call and they go, "uh, I don't know. We don't do pasture rate stuff." Well, you didn't do pasture rate stuff, you didn't set the rate, you would gather the information from somebody else. But it was an opportunity to find somebody to do something else with.

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And I think we've sort of lost touch with that through this whole – this supervision kind of thing has changed from... And I think now, even like the branch station superintendents, they don't the tenure and they don't the promotion thing. And in fact, the salary raise is on campus now, so there's sort of this sense of community within a unit is like, now we're crops and we're here and we're there, but we're far enough away from campus that it can be ignored to some extent but I think it's still there. A big change, that is.

GS: While working in Extension, did you have any notable colleagues that you worked with?

RH: Oh gosh, yeah. Lots of them. Jay Carr, Mike Howell, lots of specialists on campus. Gee, if I started to name them, Mike Gamroth, of course Frischknecht and Landers and Jim Oldfield that I mentioned earlier, and Carl O'Connor. Oh jeez, lots of them. I can't think of his name, the ag engineer guy that would come out, Moore. I mean, he's somebody that would come down and tell people still how to put a corral together or build a barn or build a hay shed or whatever it was, that was back in the day. Dave Chamberlin in Burns, just lots of people. It was a small group and we would get together and eat. I mean, if you were livestock, you went to the Cattlemen's convention, so Extension had a little sort of cluster sub-meeting thing there at those. If you went to the Department of Ag meetings or some other commodity meetings, it was the same sort of thing. So there were lots of them. But that's a generation that's passed. I retired in 2007, so it's been a while. Things have changed, I'm sure.

GS: Before you retired, it looks like you were a president of the Oregon Agricultural Extension Association.

RH: Oh yeah, that was a fun deal.

GS: Do you have any memories about that?

RH: Probably the best one is we started a scholarship thing. We had an annual meeting here on campus and it was Kelvin Koong, I think, was the associate dean and, oh gosh, it was the dean at the time, they were at the thing. And it was like, "ok, so we're going to auction this off." Willie Riggs, that's in Klamath now, was there, and so Willie was an auctioneer, and Kelvin said something about, "I'll match whatever." And I had just cashed a travel check, so it was like I had a hundred dollars that was, you know, "what am I going to do with this? Where am I going to spend it?" So I said, "well here Kelvin, I'll give a hundred and you can match it," and he did. I think the formality of the whole thing was that we met once a year and had an annual meeting where we elected next year's officers.

GS: It looks like you are also associated with the Agricultural Research Foundation?

RH: Yeah, I'm on the board now which, I think, is a privilege. They try to give awards and it's to newer faculty. And in general, the intent is to give somebody funding to do the initial research to show that there's some promise, there's some promising outcomes of what they're trying to do, so that they can take this very small piece of research and then leverage into some kind of a bigger grant. And that's been fun. We review probably eighty proposals a year and fund maybe twenty. So it's competitive but it's fun and rewarding.

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GS: So you retired in 2007. What are some changes you've seen in the Klamath region since you've retired?

RH: The biggest one is water, irrigation; it's a struggle every year. The Bureau of Reclamation has had the set aside program and, of course, the KBRA was key to some other government programs that were going to come along. There was another one, I think it was the Klamath Water and Power, KWPA, and KWPA was funding that helped offset this increase in the electricity rates that we're faced with. Like I say, it was five dollars an acre to pump irrigate for, and now it's approaching a hundred dollars and acre. So that's a twentyfold-plus increase. And the price of the commodity has

not went up but that power bill comes. So KWPA, I think they're having their first wind-up meeting; if it's not already happened, it's going to happen in later March or early April, then that's gone. And the whole Basin agreement's unwound, and I think without that agreement and some kind of federal enabling legislation, is this whole thing that's been paying for the set asides. If you didn't use your irrigation and you used supplemental groundwater, then they offset the costs of the pumping for the groundwater and that supplemented the surface water. But this drought has just exacerbated that and there's not enough to go around. It's changing and it's going to change, permanently, the whole structure of agriculture in the Basin.

GS: You basically just answered my next question. I was going to ask you about challenges facing agriculture in the Klamath Basin. Are there any other ones?

RH: Well, frost is there but we've learned how to deal with that. Soils and altitude and distance to market. And specialization is the other thing. When I was there, there were maybe as many as twenty packing sheds, you know, fresh market potatoes. Just doesn't happen anymore. The grocers have consolidated; you don't have the local little independent grocer that you used to go to. And they would buy a load of potatoes once a month or whatever, half a load. And those are just gone. The buyer for Safeway wants to make one phone call and he's got his 150 loads of potatoes a day, or however many he gets, for the next six months. Of course, so you've got to be bigger, you've got to be a co-op or something to do those, and I think now we're down to like maybe four potato packing sheds in the Klamath Basin.

And that has resulted then that the people that are growing potatoes are bigger, the acreage has shrunk, the number of producers are fewer, but they're growing a lot more acres of potatoes, which is a high risk crop. There are a lot of things that can go wrong. Even if you get a frost that's below, I don't know how frost protection works, I'm not sure what is, maybe twenty-eight, the sprinkler irrigation doesn't even help. So it is a risky thing. But it's bigger machinery, bigger farmers, more acreage, and fewer of the smaller – you don't see people that are growing potatoes and some grain and some hay and some other whatever. And one of the things is the equipment costs so much. Say if you're into grain, a combine might be a quarter of a million dollars. Well, then you've got to pay for that by doing more than just forty acres. So now you're into 400 or 1,100 or 1,500 or however many acres it is to be able to pay for machinery. Potatoes is the same way. So you're not spreading your crop risk over a number of crops. If you're into grain and grain doesn't work – you don't have potatoes and some sheep and some cows and some hay and something else that sort of spreads out your risk – you're sort of all in.

The other thing that we're seeing is lots more contracts. I think probably well over half of the potatoes are under contract for chipping, and we used to be just fresh market. Now it's like chipping potatoes for like potato chips or french fries or whatever.

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The hay, you have to get bigger because bailers cost more and machinery costs more. We went from, when I was back in Burney, it was like we loaded hay by hand and put it in a barn by hand. And now you don't put hay in a barn, it's in a hay shed, it's all mechanized. And all of that stuff costs money so you're not raising – I don't know, we probably didn't put up 160 acres of hay at the most in the summer. But it took us from like late June to the first part of August to do that. And now it's like, some friends of ours down there are mostly hay and they're alfalfa hay, they start cutting now in June and they don't stop until they're done in late September/October. Because by the time they get the first of the first cutting done, it's time – they may get five days off and then they go to the second cutting. So it's more continuous, it's all summer long. I don't know that they're raising any grain now because yeah you can hire somebody to do the custom work, but they're going to tell you when they come. And you want your grain harvested when it's ready to harvest. So the timeliness is a big difference. So they're raising grain, they're focused on hay. And they've got, instead of one bailer, they've got four bailers and three windrowers. It's just more equipment that costs more, so you've got to be bigger. That's the other way that it's changed.

And I think our water base is going to change. The water thing is that there's too many leaders in the water. I really think – and the gal, I can't think of her name but she's with the Bureau of Reclamation, she said, "if we set down and work together, there's probably enough water for everybody's needs." But it's like we're fighting over the same water and the federal government, I think, is who has to step up. They gave the water to the Native Americans in the treaties for the Klamath and the Yuroks and Hoopas and all of the tribes up and down the Klamath. Then they gave the water to the

project irrigators. Then they gave the water to the endangered species, like the salmon is the primary one. Well, it's the same water they've given away three times, and essentially they gave it all to everybody. And now it's like, "well, you know, you guys have to work it out." Well, you created this. I mean, the federal government has actually created this and they need to step up and take care of it. And it's like, we're just a small community out west, we're not in the beltline of Washington, D.C., we're someplace else. And jeez, you look at, what's [Rep. Greg] Walden's – it's all eastern Oregon. That's states on the East Coast. We don't have that voice there, so we have to make lots of conciliatory kinds of things with people in Washington to get what we need. But it's never going to be the way it was.

GS: What are your thoughts on the future of the Land Grant mission?

RH: I think if you look at the size of the Land Grant institutions, I think our mission has changed from back when they were initially started, because the education level has – I'm saying not everybody even had an eighth-grade education when they started. Well jeez, when I was finishing, I was working with kids that were my kids' age that were in 4-H with them and went through high school, that now have bachelor's degrees and master's degrees, they're the people that are farming. Well, they know what they know but they know what they know when they graduated which now, some of the youngest ones that I know are coming on forty years old. Well, it's been twenty years since they were in school and somebody still needs to be out there looking at the latest technology and research and things that work and things that don't.

The big plus, and I think our niche still, is that we don't sell anything. You know, we're not fertilizer salesmen, we're not the seed salesmen, we're not the, what we call, "pixie dust" salesmen. You know, "you can buy this whatever it is and you can spread on your land and it does whatever it does," well, they're selling something. So if you're going to get your recommendation from the fertilizer person, my guess is they're probably going to recommend fertilizer. And that's not what our world was. Like I say, we didn't make recommendations, we gave them, I don't know if they were alternatives, but we gave them information to base their decision on. And I don't think that's going to change.

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It's going to be at a different level, it's going to be communicated and distributed differently than it was, it's going to be through web technology or something. It's going to be, "I want to know and I want to know now, because I'm doing by budget for next year, I'm planning for whatever. So I don't want to wait for the meeting that's going to be here next month, I want it today, and I want to be able to just look here and find it." That's the next step that I think we need to take, and I think the university is doing a pretty good job of that. I saw something the other day about how to select your shade tree or fruit tree or something, it was all online. Not that you need a fruit tree in Klamath, but I thought it was interesting that this whole new way that we retrieve information and gather information is going to change. And I think there are a lot of people that are recognizing that.

But the other thing is that you need somebody that is – the advantage that I see for the Extension part – is somebody that's in the community, that these people know, and it's like, "well, do I do this or this? And who do I trust to get the unbiased information from?" And I think that's still the role that the Extension component of the whole Land Grant university has, because Extension by themselves, they don't have the information, they don't have the research, and certainly we can't teach all of this. How many students are here now, 30,000?

GS: Including distance learning, yeah.

RH: Yeah, all of that. Yeah, distance learning. You can take a class and get a degree. Klamath Community College offers a course that you can transfer every credit that you learn at Klamath to Oregon State in – I'm not sure how many majors there are – but in Agriculture, and you're still home. Look at the difference between the cost of coming here and the cost of going to a community college. But you're earning the same credit that is going to transfer because it's a joint program. That's the big difference that I see that we're going to be making. And on the Extension side, somehow we've got to get there. But it's tough to do and we're competing with a lot of other sources of information.

GS: So what are your thoughts on the connection between OSU and Corvallis, and then Klamath Extension?

RH: Well, if we didn't have Corvallis, where would we get our information? If we go back to what we were talking about earlier about this whole water study thing, I don't have the economic expertise to do that or the ability to find and run the end plan that gives you the economic multiplier for the community, and if this happens this is what's going to happen, and those kinds of things. But the university does. So that's an important tie; we've got to have that connection between Corvallis and the Klamath Basin Research and Extension Center. You've got to have that connection and it's got to be a direct line connection. And I think it's still the county level is where you have those personal contacts with people so that they go, it's like, "where do I click to get the information that we want right now? What is a valid unbiased website?" Well personally, if I Google something, if it doesn't say dot-edu, it's like, don't go there. I don't care what it is. But if it has to do with agriculture or some other kind of thing, and it's not going to come up first because we don't advertise; it's not going to have a little star or a flag or whatever on it. But you just keep looking down and pretty soon it'll be either Florida, Wisconsin, Missouri, Nebraska, Washington, somebody. But it's going to be da-da-da dot e.d.u. And you go, "there's one that I can look at and it's not going to be selling me something."

And that's the connection at the local level is to keep, when you're clicking around, look for something that is not going to be selling you something. The same as a salesman at – you know, at Extension, when we went from telephones and writing letters to computers, I think about the guys, when they got the first Model-A, they were like, "I'm not going to do that thing because it scares horses." Then they got a telephone – I don't know which came first – and then it's like, "I'm not going to talk. I'm going out and put my foot on the rail fence and I'm going to talk to that farmer, face to face." Well, we don't do that anymore. And I think the next one is, I don't know where we're going to go, is it going to be YouTube kind of things that, if somebody wants to know, you go to the YouTube? Gee, I don't know. Home repair – if you do that lately, just go on the Internet, find a YouTube thing that says get this and this and this and take it apart like that and put it together. And it's like, "now where did this go? OK, look there."

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So the application is there, so it's like, "which fertilizer do I need?" We've got the database, we've still got the old Soil Conservation Service, which is now NRCS. Soil maps of the Klamath Basin, so you can do those layers. So if somebody wants to know, "well, where are you at?" Find them on a map here, click there, "that's your property. So here's your soil type, here's what it is." That's how I see this whole interface thing. Somebody needs to develop that so that he or she would have the database that they click and they know what their soil is, so then it's like, "ok, what fertilizer?" and then you click on this and it's not for eastern Oregon, it's for central Oregon, southern Oregon, Lake County, Klamath County, wherever it is. Because the crops and the soils and the whole thing changes. So you need somebody at the local level that's doing that kind of a thing both for this "click to find the information" thing and also for some kind of a personal contact, whether it's through a commodity organization meeting or an informational meeting or whatever. Back when, and I think they're still doing them, they're kind of these road show things, that you call them. So we'll get somebody with some name or something from another Land Grant university to come in, so you do one in like Ontario and then you go to maybe Baker and Burns and Lakeview. Those are killers. We've done those and it's like, "ok, so this is...where are we now? And which part of this talk and I giving and which haven't I given?" But that's that – you've got a personal contact with people. And we're still people, we're still humans, so we need that.

GS: So from your career in Extension are there any standout experiences that you'd like to talk about?

RH: Well, there's probably lots of them. The demonstration trials; I mean, when these guys look at them and go, "woo, yeah, why am I not doing that? Because it would obviously pay." Finally getting this selenium fertilizer thing through the state Department of Agriculture, that was pretty easy because we had the research and the practical application of it, and I think it took us about, I think there were three or four of us in the university and there was Katy in the Department of Agriculture and two of her guys. And after about forty-five minutes, it's like, "yeah, we don't have a problem with that." Yeah, it's a whatever, it's toxic material on the federal list, but it's like, "yeah, this is selenium and this is entirely different. Yes, it's approved for fertilizer." University-wide, we had spent a lot of effort on that, starting back with Muth and Oldfield and those guys way back when. They were mixing stuff in the lab, not a pharmacy or anything like that. But it was like, "this works all the way to here. The actual way to do it is to treat what the animals are eating and it will take care of your problem."

GS: Chris, do you have any questions to add?

CP: No, I think you did a really nice job, Geoff.

GS: Thanks.

CP: I'm sure I speak for you when I say thanks to Ron. This has been really good and I appreciate it a lot.

GS: Thanks very much.

RH: Oh, thank you guys. A good script to follow there.

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