

Ecosystem Services and Idaho's Farmers

Interview Twelve

I: All right, let's begin with a little bit of background information. Please tell us a little bit about how you got into the farming business.

R: I was living over in Tacoma Washington. I was born and raised here; but I was over there for three years. Then my uncle called and told me that he had bought three or four different farms that year. He said there is no way I am going to be able to stay ahead of this so can you come back and help me? I was kind of wanting to stay away from farming, at least the pipe moving part of it; but I decided to come back and I have been here since 1973. In the fall I came back and have been farming ever since.

I: And how long have you or your immediate family been farming in this area?

R: Well, my dad farmed when I was younger. He had some row crop and a dairy. I couldn't tell you what year he started. He quit farming and went into carpentry. I started in the fall of 1973.

I: What do you grow?

R: We grow potatoes, wheat, sugar beets, alfalfa, sometimes and a little safflower. That's about it.

I: And how many acres do you farm?

R: We are roughly just under 3,000 acres, give or take.

I: In what ways, if any, has urban expansion or any nearby construction affected you and your farm?

R: We really have not been affected by it. This area tends to stay the same size, doesn't go anywhere.

I: Do you have any current plans to sell or lease part of your farm in the future?

R: Well, I do plan to retire in the next few years, but kind of holding the land for John Doe Farms, which my son will be buying in my share. We don't have any plans to sell. We would like to acquire more land. It is very hard to come by. So we may buy.

I: Do you have any idea what you will do with your farm when you stop farming it yourself? Will go to your son?

R: Yes.

I: Just one son will take it over?

R: Well, there is three of us here in the partnership. My one partner has a son that is working. The other partner in the present does not have anyone, but there is potential. So there will be more than my son.

I: How important would it be to you that your farm remains an agricultural operation?

R: That's what we have written our landholding LLC up with, the idea of holding this ground for John Doe Farms, you know. Even my other children, I don't want them to inherit and then sell off their share. I'd like to keep it, you know.

I: So it would be important for you to for it to stay in farming?

Yes.

I: Have you implemented any conservation practices into your farming operation?

R: Well, we do, we strip till on beets, some of them. We have a problem with blow sand in different areas. Any field that has a big problem with blowing, we, for about the last, what, six years, we have been strip tilling. We are trying to decide whether it is worth all the extra worry. It's not easy. It is a ten-year learning curve, really, to do it right.

I: What is that meant to sort of conserve or improve?

R: Well, it saves, of course, the soil from blowing. If I plant a crop of beets and the soil starts blowing, those little seedlings are gone in ten minutes. Sometimes we have planted three and four times in spots where it really blows. It saves the soil and it also seems like it saves on water. The water infiltration is better. There are a lot of pluses and a lot of negatives, and everybody wants to tell you about the pluses, but they don't want tell you about the negatives. Everything you do in farming is a give and take, you know. You get this, you give up this.

I: What are some of those negatives?

R: It is very difficult to plant. We do everything with GPS; but even with GPS, when you go out there and make a furrow in the ground on each strip and then you are running a tractor in between those and it is really easy for it to slide off. So we have a lot of issues with trying to stay on the row. That is very important because we put our fertilizer down there and if you are not on the row the plant is going to miss the fertilizer. Weed control, everything changes up on you when you start doing conservation farming. Tillage takes care of a lot of weed problems. So you do have different weed issues.

I: Is that a shallower kind of tilling, strip tilling?

R: What you do is you leave all the stubble. We always plant behind wheat on our sugar beets. Most guys plant behind potatoes. We plant behind wheat and you leave standing stubble. Then

you go in and you just knock out one little strip about yea-wide, and that is where you plant your beets.

I: So you have little plants that are kind of protecting and keeping the soil down?

R: It sounds ideal. It is protecting it from blowing; but we have found that when you have frost in the spring that strip till , for some reason, gets hit worse. And I think the reason is because the yellow straw is kind of reflective of the heat; whereas, if you have a whole bare field, there is kind of a heat sink and it gets heated up more during the day. So we have had that issue.

I: What kind of pesticides and/or herbicides do you use on your farm?

R: I guess I should have told you before this interview that my specialty in this farm is beets. I take care of all the beet operation. So I don't know if I can address all the potato chemicals. I have a lot to do with the wheat too; but beets are mostly what. On the beets, we use Roundup. Did you say pesticides too?

I: Yes, herbicides, whatever.

R: The seed is treated with a chemical called Poncho Beta. It just takes care of. It is kind of a systemic. It takes care of some of the early pests that we have. It does not last very long. Then when we spray Roundup we tank-mix it with Mustang; which is an insecticide. It helps to take care of cutworm and beetle and some other stuff that's out there. Hopefully, we don't have to go in. If we get a real influx of leaf miner, then we will go in with Lorsban or some other chemical and take care of that. Most of the time, we don't have to. We don't use chemical unless we absolutely have to. It costs us money. It's not fun to handle. So as little as possible. On the potatoes there are more. I would have to defer to my brother to give specifics on that.

I: How do you make decisions about pesticide and herbicide use and application?

R: We consult with a consulting firm. They consult for irrigation and the crop fertility and also for insecticide/pesticides and herbicides. Everything is kind of on a field-by-field basis. You assess what your pests or problems may be and you figure out what you used last time and maybe you change-up on it. Try to keep away from weed resistance and stuff like that, chemical resistance. We pretty much defer to their expertise on that, our own experience.

I: So, the use of GE (genetically engineered – also sometimes referred to as GMO) seeds has been in the news a lot recently, but the coverage only rarely discusses how American farmers are being impacted – either positively or negatively – by this technology. Has the use of GE seeds affected you as a farmer, and if so, how?

R: You don't want to get me on that bandwagon?

I: Yep, we do.

R: In the sugar beets, of course, we are all Roundup Ready GMO. It has been tremendous. It just revolutionized. It took something that was extremely difficult to grow and made it a whole lot easier. We use a whole lot less chemical. It has just been fantastic. We used to go out and we would spray. You had to be so good at your timing. You had to watch and when the weeds were a certain size, the beets were a certain size, and then you gotta be so accurate in your chemical; because otherwise you'd hurt the beets or you wouldn't kill the weed. We'd spray four and five times; which is very difficult cause the weather around here does not cooperate with you. If you are expecting a frost in the next maybe two nights from now you don't want to go out and spray and put stress on it. The Roundup doesn't stress the beet. Just you spray it. If you have to wait cause of rain there is no panic. When it quits raining you go in and do it. I am really excited about the GMO technology. I understand that there is a lot of people that are worried about it; and there are a lot of people that are trying to make hay of it because anytime you restrict something you will find somebody else knows how to take advantage of the situation. To me, when they take that sugar and they refine it, they come up with pure sugar. There is nothing of genetic material in it. I can't see how that has any effect on the human consumption. That's my personal opinion. That may be different in other crops. I'm not an expert on, you know, GMO corn or anything like that. We do have a little GMO alfalfa, not a whole lot. I am amazed how many people think that we have GMO wheat, but we don't. It is just that they are going about it the long way trying to get the characteristics that we want and so they breed it in.

I: Takes longer to bring it out to the farmers and have it available?

R: Well, I think basically with GMO what you are doing is the same thing, just doing it a lot faster. If you can splice a gene, it will bring in certain characteristics that they are spending years trying to breed in. Maybe it works, maybe it doesn't. Maybe they gain this trait and lose that. So that's the way I see it. GMO, when they start doing the thing like in corn to get rid of the corn borer worm or something I don't know about that.

I: In general, you would say it has positively affected you?

R: In general, it is amazingly, yes. In fact, it is positive.

I: You would characterize your opinion in general of GMO crops as positive as well.

R: Yes. I think it is something that they need to watch; but everybody is looking for a scapegoat for whatever is wrong with them. Somebody comes along and says it is GMOs. The next guy says whatever.

I: Do you have a sense of who are the main groups that are opposing GMOs or where that opposition is coming from I guess?

R: I don't know. I think it is, for the general public, kind of a hysteria. But I can't pinpoint that somebody is gaining. I am not a conspiracy guy looking for a conspiracy.

I: It is probably a hard question to answer. I was curious if you had a sense. You mentioned sugar beets and alfalfa. Are you growing any other GMO seeds?

R: We have grown some safflower that is what they call GLA safflower; which is a safflower that has been genetically modified to have a high percentage of I think it is Omega 6. The source of omega 6 is, if I understand it, generally comes from something that is grown over in China. Trying to remember what it is. Anyway, it has a very low percentage of it in the plant; so it takes. This has something like 40% or something. It allows them to grow it a whole lot cheaper. We are not doing it this year. The company that sells it is, for some reason backed away from it last year. They are still learning how to grow it. We didn't have real good success with the crop; but they guarantee us a certain level of income, so they decided that that doesn't work too good unless they learn how to get a better yield out of it. They said they are still there but are backing off for a year.

I: So they are kind of subsidizing it while they are, or insuring it in the process of trying to grow the industry in this area?

R: Yes. They figure if you get 2,500 pounds of seed an acre then they do well, we do well. When we are down to 1,000 pounds, it is a different story. We are not going to stick out our necks and grow it unless they can guarantee us something. They were guaranteeing making it as good as growing wheat, and growing wheat is pretty good. It is not now so much.

I: Last year with all that rain; maybe it was nice to have a guarantee because the wheat got some rain on it.

R: Yes.

I: Turning now to the subject of environmental change, have you noticed any changes in the environmental conditions in your area that seem beyond normal variation from year to year?

R: You mean like weather or?

I: Any environmental conditions first that come to the top of your head and I will ask about some specific ones. I am just curious if anything, you know, just comes right to the top of your head?

R: Probably water is the thing that we worry about the most. We are so dependent on winters that have good snowpack. As water is becoming more and valuable commodity, we do our best to not waste it or to be efficient on our systems to not just let things leak. I am very aware of that as being a resource that is limited that we need to watch out for.

I: Have you noticed any changes like how much annual precipitation you are getting in this area?

R: Well, last fall and this spring, but what is normal? Nobody has really laid a chart in the last fifty, hundred, years and charted everything out and came up with the average and then how much above or below. I am sure somebody has done that. I haven't seen it. I am not one that is quick and jump and say that things are different. Both last fall in the grain harvest there was

more rain than usual and now this spring more rain than usual. But we forget. I remember four or five years ago we were getting rains like two inches. This was in early spring, two inches at a pop. There were lakes in our fields. Remember driving down the highway and you would see where there had been just kind of a localized shower and water was just running down the rows of the crop. I don't know if you remember seeing something like that. There just always seems to be something.

I: Have you noticed any persistent changes in the length of your growing season, or the first and last frost dates of the year?

R: It seems like the last few years. What I am trying to say is the first frost in the fall it seems like we have not had that quite as quickly; but sometimes I think the one in the spring is worse. It seems like we get frost after we shouldn't get it anymore. Then I am sensitive to that because I am a farmer and I got little beets out in the field. Every morning I get up, first thing I do is look at the thermometer. What in the world happened? It was warm and now it's cold.

I: Do you keep track of that, the frost dates or the temperatures or something like that throughout the season or do you just kind of adjust?

R: I don't have any real record of it. I have in my mind about when we usually get our last killing frost. Course that has a lot to do with when I plant my sugar beets. I don't know. I'm not jumping on the bandwagon saying that everything is changing. I believe myself that the climate has always gone up and down.

I: Have you noticed any persistent changes in average winter temperatures and average yearly snowfall?

R: It seems like we haven't gotten as much snow in the last few years. There again everybody forgets it seems like. We are always focused on right now. This doesn't seem normal. Man, it's way too hot. Man it's colder than it's ever been. Whatever. You forget, you know. Three, four, five years ago it might have been even worse. In general, it seems like we haven't gotten our winter moisture quite as much as. I keep looking for that good year where everything is replenished. Even that, you know, it changes all over the state. There is one watershed that will be doing well and another one that is not. It is very hard to pin that down and say, yeah, it's drier or whatever.

I: What about any new pests or rodents or anything, have you noticed anything like that?

R: This year lots of mice. There again we fight that all the time. It has a lot to do with the kind of spring you have and winter. We went into a winter here about three or four years ago. The mice were just thick. Then in January we got a big thaw and they were just drowned in their burrows. Come spring they were gone. That didn't happen this year. They are out there big time. Other than that, I don't really, can't say there is a big change in pests.

I: Many of us have heard about the drought affecting the western U.S. right now. Do you worry about water availability or maintaining your water rights?

R: I'm worried about California getting their hands on our water. All the stuff is going to go where the money is. Money dictates who gets what it seems like. Yes, we are thankful for the water we have here and would like to hang onto it. I know when those guys get thirsty down there, they are looking all over the place for water. Yet, it's a really strange deal. I was talking to the guy that lives right there in that Stockton area. It is just amazing to me. There are farmers there that can't get water and they are conserving and not watering everything. Then there are guys there that have prior water rights that are just wasting it. They got all they can use and more. It was interesting to me; because of the public perception and stuff, the way it is reported in the news. You don't always get the full story. I don't know that has to do with us here.

I: Are there any rivers that would be able to go from Idaho to California, watersheds that could get all the way down there?

R: Look how far they get their water from already. They are pulling it in from the Colorado River forever.

I: I guess it would require a building project.

R: Get it out of the Columbia or something to bring it down.

I: What kind of things do you think are missing from the media coverage?

R: I don't quite understand the question.

I: You kind of said the media doesn't necessarily get the full story.

R: They always report whatever is sensational and whatever is going to get everybody all hyped up or scared or whatever. That is the kind of stuff they report. You just find out when you talk to local people that there are two sides to every story. Oh, there is this horrible drought there. He was just telling us that Shasta Dam. All that water in Shasta Dam is for one purpose. That is the water goes down to the delta and they have to keep enough water coming there to keep the salt water from coming back up in there. Years ago they talked about building some kind of barrier to keep that from happening. There are cities along there that have to have a certain amount of water flowing into the ocean in order to keep that from their domestic supply. There is all kind of water there. It is just running out into the Pacific just to hold the Pacific back. That was basically the story that he was telling. It was kind of interesting.

I: Where and how do you receive your water?

R: We water probably half or better out of the canal company. The rest are deep wells.

I: If you have a certain amount of water allocated to you, about how much of that water do you usually use?

R: We have a real adequate supply if we get our full share. What happens is if the water supply is limited, then everybody's shares shrink. So in those kind of situations it can get tight. For the most part, if we get the water that we are supposed to, we are well covered.

I: One thing I've noticed driving around here is sometimes water gets happening right in the middle of the day. Do people think about evaporative loss. Is there a reason why people are watering in the middle of the day here?

R: Just on the typical sprinkler irrigated field you gotta run two sets a day in order to get across in five and a half days. That's the way all those are set up. You run from 6:00 in the evening until 4:00 in the morning. They change the pipe and you run from 6:00 until 4:00 in the afternoon. There is a tremendous difference. In fact, if you do it right, you change up when you start. If you are here during the day one time, you're there during the night the next time. Your efficiency drops off like maybe from 85% to 70% or less when it's hot during the day.

I: But it has to go all the way back and forth across the field, there's not really any choice?

R: If you just watered at night, it would be too long getting back. A typical wheat crop, when it is growing, is using .35, maybe even .40 of an inch a day. You figure that out. In seven days, even .30, you are 2 inches .10 inches. The typical system here will put on about .20 an hour. So in ten hours you put on 2 inches. You gotta be able to put that on in a week's time. We like to. With five and a half day rotation, we like to give the guys Sunday off. You have one set for a roll back time. So that works out seven days. That's the way we like to be. There is no way to do the night thing and not the day. It makes a difference.

I: Do you rely on bees to pollinate any of your crops?

R: We hope they are out there; but we don't have bees ourselves. We have a neighbor that has bees. We used to have some leaf cutter bees. We raised the seed crop; but we don't have anything now.

I: You don't need them to pollinate?

R: I don't know how much they're doing. What's out there. So far everything is growing.

I: Have you noticed any changes in the bee populations?

R: No. I couldn't say I have observed anything. I talk to my neighbor. He tells me one year, man, the bees are really doing well. Another year not doing well at all. I am aware there have been problems with bee populations dwindling. One thing that we have done is when we plant our beet seed that seed-treat that's on the seed is potentially something that could harm bees. We use a vacuum planter so it is sucking and its blowing that out into the air. So we have gone to a powder. It is a powder that you mix with the seed that just kind of holds the dust. Keeps it from leaving the seed and going out into the air. Just stuff like that. What they tell us is look if you want to keep these chemicals you better do everything you can to keep down any damage that they could do. We try to do that. It costs a little more, but.

I: Thinking specifically about changes to the climate, how concerned are you about climate change?

R: I feel, my personal opinion is that everyone of us should realize that we are a steward. But frankly I think the idea that we are changing the climate is giving ourselves more credit than we deserve. The forces of nature are huge. I realize that there are a lot of people in this world and the footprint is big there; but I still think that the idea, the things that they think they're going to do to change the climate are like nothing. I think we all just need to use things wisely and quit thinking, though, that we can go out there and put a tax on carbon or something and somehow make a difference. Somebody has just got something to gain by it the way I see it. That's just my personal opinion.

I: Do you think that any of the changes to the climate some people are talking about are caused by human activities?

R: Like what?

I: Human activities, all human activities, whether it be driving cars or industrial activity.

R: Frankly, I think most of the stuff they come up with is ridiculous. One volcano just totally eclipses everything that we do. Yet, the earth seems to be able to, things change for a bit, but everything equalizes back out. Having said that, I am not for just driving your smoky old car down the road burning oil and, you know, let it do what it will do. I am all for keeping that down. Just the panic and the idea that oh, we've got to do something. They have been predicting something cataclysmic is going to happen for years. If we don't do it by this time, then it's just going to be a total disaster. The seas are going to rise and all this stuff. A lot of it is just a bunch of hype, sorry.

I: No problem.

R: Personal opinion.

I: That's what we are wanting to hear.

I: For you, other than water, since we know that is extremely important, what is the most valuable natural resource for successful farming?

R: My land, ground. Every time I see it blowing away I get very disturbed. The wind can move so much soil it is just incredible. Just take it and dump it on the neighbors. We are pretty fussy about the soil. Erosion will do the same thing. The water and the soil. I don't know. That is the basics.

I: Have you changed any of your farming practices or decisions in recent years, such as the type of crops you are growing, when you plant or harvest your crops, how you manage pests, or other major changes, and if so, why?

R: We have hung onto a longer rotation. Most guys around here are on a three year rotation. For a long time, we did a five year rotation. But you realize you gotta compete with all these other people ground-rent wise and everything. If I raise potatoes and wheat and sugar beets. If I have a four year rotation, which we have, and it's got two years of wheat in it you have to figure out what you can pay rent on that particular crop. Wheat, of course, in recent years came way up so it was helpful; but back when wheat was really cheap that affected big time how much you could pay rent on your ground. It is difficult to do when your neighbor is rotating right back to potatoes; which is a big cash crop. Then he comes and he wants to rent the ground that you are renting from someone says I'll give ya much more. You say well how can you afford to do that. Oh, yeah, he is raising potatoes every third year or every other year. We feel like that is very detrimental to the ground to have too short of a rotation. So the rotation of wheat, potatoes, then wheat, then sugar beets is basically the way we rotate our ground.

I: What are the biggest challenges you see to farming in southeastern Idaho?

R: I don't know exactly what to say. The water thing is a concern when there is all this litigation going and the idea that they may shut you down if you have got a well that does not have older water rights. That sort of thing is a big concern on dry years. Whether we will get enough water from the canal company on the dry year is probably one of the biggest concerns for me. It has been very difficult in this area to get more ground. It seems like the push is always to expand and get bigger because you can farm more efficiently. So you try to get new ground. There is tremendous competition and people are paying a big price for ground. There are investors that come in. Since money is cheap, the interest rate is so low they can buy ground and get 5% return or better on it. So they come in and buy ground and we find ourselves kind of squeezed that way. I am probably forgetting a lot of things in the way of concerns. Always concerned with those land prices. It makes it extremely hard for my son to get started, machinery prices are astronomical.

I: How are these challenges different from what they were in the past, if they are different?

R: Over the period of time that I have farmed, I have seen. It seemed like farming was so laid back when I first started. If the crop wasn't just all that huge, well big deal. It seems now like your margins are so set that you better raise a good crop on every square inch of your ground or you start having a problem. The technology is the only thing that has really kept ahead of things because the commodity prices don't change that much, with the exception of wheat in the last. In 2008, the price of wheat went way, way up. Before that, we were looking at \$2 and \$3 wheat every year. The only way you could even make it pay was with the government payment. It was a necessary crop for rotation. You had to have it with potatoes. We were. It was just, you know, making a little money on it but not much at all. When the price of that came up, that took the pressure off big time. Yes, there is just the pressure. Our beet yields have come up from, since we started with the Roundup Ready beets they have come up from like 30 to 45 tons. That is what saves you, you know. Cause if it weren't for the technology and getting better crops, you'd be going backwards. It wouldn't cut the mustard what we were growing a few years back.

I: So the difference gets absorbed in machinery and power bills and things like that?

R: Yes, the machinery price, fuel prices, fertilizer prices. Of course, we are cheering when fuel prices go down; but it seems like sometimes when those things happen there is always something else. When oil was high, it seemed like wheat was high. So, you are going which way do I want it? One thing is off-setting another. I lost track of the question here.

I: We are just talking about challenges to farming and new technology helping maybe off-set some of the price changes and stuff.

R: It is just the constant, you know, everything squeezing the bottom line. So you are squeezing the crop to stay above it.

I: What is your favorite thing about farming in southeastern Idaho?

R: I like being out in the open air and being kind of independent in what I do. It is a place where you can put your own ideas in practice. You are watching everybody else and say that's a good idea I think I'll try that. See what he is doing there and I think it's a mistake. You have so much liberty to do your own thing. That's why farmers probably are very resentful when the government tries to control everything and tell you what you can do and what you can't do. We even feel it like from the sugar beet company. They want to control us. They come and tell us you need to do this. We are saying we started doing that ten years ago. Back off. Just because there is a grower here or grower there that doesn't do it the way they want then they start making rules. We are saying we are the innovators. We are the ones that actually push the envelope all the time. When you tell us what to do, all you're doing is your putting a lid on us. I understand there are some people that need to have a lid put on them sometimes. But there is a fine line between trying to dictate to people how to do something and turning people loose. I guarantee you that there isn't an equipment manufacturer around that can outdo the farmer as far as innovations and stuff. We pull new equipment in here and we start modifying it because they do stuff that is not specific for our area or whatever. We are an independent bunch.

I: Where do you go to get news about weather, regulations, or other farming-related information?

R: About weather?

I: What weather service do you use and where do you go to find new information about what is going on in the farming communities, new regulations.

R: I've got two different weather apps on my phone. If I don't like one I try the other. Neither one of them is usually right, so. Yes, we have access to so much technology. As far as the regulations and stuff, we usually know about that either through our crop consultant or through the fertilizer chemical dealers or I don't know what other sources.

I: Which regulatory agencies, such as the USDA or other government agencies, have you been in contact with in the last few years?

R: The USDA, we are always doing stuff with them.

I: Anyone else?

R: We try not to do business with the EPA.

I: Have you had any contact with the EPA in the last few years?

R: We are just happy if they stay out of our hair.

I: No officials have come by?

R: No. We are affected by regulations all the time, how we handle our fuel, storages and containment and all that. Fertilizer same thing. I am sure there are government agencies. I'm not just thinking about it right now. Probably my partner in there, John Doe, does all the bookwork, he is probably on top of, more than I am.

I: None of the contact has been negative? Have you had any problematic regulatory agency visits?

R: Not really. We like it out here in Aberdeen. It is just kind of, nobody knows we are here. They are finding us, but. People come from the city and they say man you are out here in the desert, nothing going on. Say yeah we like it that way.

I: Is there anything that the local, state, or federal government could do or provide for you to help you do your job?

R: Nothing is coming to mind right at the moment. Most of what I think is just stay out of our way.

I: What about other people or organizations in this area, can you think of anything they could do to help you farm?

R: Some of these questions, I probably should have had time to think about a little big. Just the top of my head.

I: Like any of the cooperatives for the different crops like potatoes and wheat?

R: Yes, well, the biggest problem is you know whether it be prices or anything else. The minute the government tries to, whether it be state or whatever, try to make things better they usually it is usually a one-size fits all, something that just doesn't work. It used to be if you didn't farm right you got eliminated. Now, you know, if you got subsidies and stuff keep you going when you probably ought to move on. Maybe you're not even thinking of that sort of thing.

I: Are you using aerial drones or unmanned aircraft systems at all for your farming operations?

R: Talked pretty extensively about it this spring and decided we'd wait a little bit. There was one system that was being marketed that sounded pretty good. It would be just kind of nice to be able to fly your fields and get a seamless picture of what is going on out there. They have some pretty neat technology now. For a while, nobody could really make it practical where a farmer could use it. They do have some systems now that you can get into for a decent amount of money. They will actually fly a field. The whole photograph can be seamed together almost while it is doing it. So when it is done you got it. You can go onto the next field. Yes, we are definitely interested. Just haven't made the move yet. You find out in one year's time you move so far that you kind of say I'm glad I didn't jump in last year.

I: It is like buying a computer. Every year you just might as well wait.

R: Exactly.

I: How are drones helping you understand the land you farm?

R: There is a lot going on in that field there that I don't know. When I found out is when I either get in the combine and combine it or I look at the maps after we get done and say wow what happened here. You can tell that so and so left the bird plugged all the way across the field. You can see it. A drone would be able to pick up irrigation pattern problems as well as fertility problems, pest problems. My son that farms here with us, he is pretty tech savvy. So I guess he is on the pushing end when it comes to drones and stuff like that.

I: Maybe one of these years.

R: He will be the one that has it.

I: Okay, before we finish here, I would just like to ask you a couple of brief demographic questions. Including yourself, how many people live in your household?

R: Right now it is just my wife and I. I have four kids and they are all out of the house. Three are married. One is not yet.

I: In the simplest terms, how would you describe your political views?

R: Conservative.

I: And what is your age?

R: I am 64, if I remember correctly, ha ha.

I: Finally, is there anything else you would like to share with us about farming in southeastern Idaho that we have missed?

R: No. I think I have probably said enough.

I: All right, thank you very much. We really appreciate the time you have taken to participate in this research. It helps us understand what issues you are facing and how steps could be taken to help you do your work, which is work we know benefits this community and others.

I: It is about 12:45 and I am going to stop the recording.