Welcome to the small farm podcast, a production of the small farms program at Iowa State University Extension and Outreach. This is Episode Six, where I interview Ray Hanson, Iowa State University Extension value added agriculture program manager, and talk about some of the ways you can save money and stay warm in your home this winter. I'm Laura Class, assistant of the small farms program, and we hope you enjoy the show. So Ray, we know there are a lot of things that can cause energy costs to rise in the winter and heating is a major factor. What are some of the things we can do to make our home retain heat well, and try to stay warm in the winter?

Sure, well, Laura, there's a lot of things you can do to winterize your home and save energy costs. And I always encourage people to look at the easiest things to do first, because there's a lot of easy, simple, low cost things you can do as well as really expensive things. So in terms of, you know, the easiest and the quickest, obviously, drafts are the biggest problem. So we always want to look at what we can do to eliminate or minimize drafts around doors around windows, cracks in the foundation, any place that you can feel cold air coming in is an area that generally easily or at least partially fixable.

Okay, great. So we kind of talked about you can find air leaks by finding some drafts, how should we go about fixing those?

Okay, sure, if it's around doors and windows, and the weather's still warm enough to do activities outside. So I want to start outside and try to caulk and seal those areas either around
the trim of the door, the trim of the windows, if it's an actual paneled window, you might want to actually use wood putty, to retighten the seals around the glass. If you can get more foam insulation blowing in between the House and the window, certainly want to do that, you may have to remove the trim to insert the insulation, then reapply the trim and insulate. You could also do plastic film on the outside, there's also film kits that you can do on the inside of the house too. And all of those always help reduce drafts. In fact, drafts around doors and windows can attribute almost 30% loss in energy expenses for the for the winner.

Laura Class 02:06
Wow, that's definitely something we want to get fixed!

Ray Hanson 02:09
Right! And relatively cheap to do unless you're going all the way to replacing the windows, which sometimes might be your best option too.

Laura Class 02:16
So in the winter, a furnace is a very important part of the home. In terms of upkeep and managing that furnace, how often should we be cleaning it changing my filters, things like that?

Ray Hanson 02:26
Sure. Well, it's always recommended to service and check the furnace by a professional at least once a year. But as far as changing the filters, what you want to do that monthly. And, you know, anytime that filter gets clogged or restricts airflow, it just makes the furnace work harder. And when it's working harder to blow air through. Obviously, you're using energy for that, you know the motor to run more. But also it restricts airflow. So even the warm air you're generating isn't moving and distributed through the house as efficiently,

Laura Class 02:55
Definitely going to add up in costs then if we don't take care of that. So there's always a possibility that the ducts are letting out air throughout our home. How can we check for and solve this problem?

Ray Hanson 03:05
Yeah, actually, as long as the ducts are exposed, you can see them that certainly a lot easier than if they're enclosed or you know, dry walled around. But a lot of loss through the ductwork can occur where the seams are, and certainly want to make sure that the duct tape which is actually aluminum tape, not duct tape, as its name for is in good condition, you know, that'll wear and separate over times, or sometimes it wasn't even taped at all. So if you can get to the
duct seams and add new aluminum tape, make sure that's good and in good working order, that's always a good thing to do. Ducts that go to maybe store rooms or garages or rooms that are in low use, want to make sure those are sealed tight and closed off. So that we're not putting heat into those rooms that we don't necessarily want to heat or heat to, you know, to a living temperature. So you want to close those and we're talking about making sure the duct cover is fastened tightly as well as the seams around the ducts.

Laura Class  04:03
Okay, so now moving outside the home, clogged gutters can cause a lot of problems with ice buildup and kind of create some ice damage. Do you have any suggestions about those throughout the winter?

Ray Hanson  04:12
Well, sure. You know, we want to make sure that any moisture we get either from you know that transitional rain when it's freezing or as the snow melts, can get away from the house. Now that doesn't necessarily cause a lot of additional energy costs, but it can certainly do a lot of damage to the not only the shingles, but also the roof decking underneath the shingles and so we want to eliminate that and get rid of that as quick as possible as well as even causing damage to the ducts. And there's certainly always a possibility of damage to the items below the house when that ice does let loose then and break it can cause damage to you know, windows, siding, people, furniture, anything like that too. So always want to make sure that there's good flow getting away from the house.

Laura Class  04:54
Okay, so speaking of the roof and things outside, are there things we can be doing just outside in general or to the rooftop to help decrease energy costs?

Ray Hanson  05:03
Well, certainly, you know, one of the things that I think about is if you have old fireplaces or chimneys, those can always be a heat loss center too. So if you're not using the chimneys at all, we want to make sure we get those sealed off you can, there's lots of different devices to seal on both at the top and the bottom chimney balloons, you know, door sealers, better improvements to the flue systems, those types of things, because that will leak hot air out. Any place that there's any kind of vent coming out, you want to make sure that those are adequately sealed and blackjacked around. Normally, you would think you'd see a leak associated with that. But sometimes you can still have air leaking, even though it's not leaking rainwater in, so it's always good to check out any place that there's a seam or a vent pipe or a chimney or anything protruding through the roof, make sure it's sealed and blackjacked down tightly. That's always important. And then at the lower level, too, you know, not on the roof. But on the foundation's, ceiling cracks, you know, that might occur between the block foundation or
between the footings in the house. You know, you may have cocked it five, six, ten years ago, but those things stretch and expanding and contract and dry out. It needs to be replaced on a regular basis or at least checked and repaired on a regular basis.

Laura Class  06:16
Do you have any other suggestions you'd like to add?

Ray Hanson  06:18
Sure, there's a lot of other things you can do. That're pretty low cost, steps or practices. One that always amazes me is how often people forget to reverse their ceiling fans. You know, in the winter, you can reverse that and pull the hot air that accumulates in the ceilings, especially if you have a vaulted ceiling or a high ceiling to pull that hot air away from the ceiling back down into the living space. Most ceiling fans just have that reversible switch, they can change that. And then in the summer, you want to, you know, reverse again to pull the air up away. Absolutely no cost involved with that. Programmable thermostats. Certainly no sense in heating your home in times that you're not there, maybe it's during the work day, maybe it's weekends or whatever you want to adjust those. And not always huge changes, you know, it costs a lot to replace, you know, 10 degrees of heat, but if you can drop it, three, four or five degrees while you're gone, and program that come back up in your living are back in that living space, that can certainly save you a lot of money over the course of four or five months of winter. Another one too, that's pretty cheap to do is just making sure that all of your exposed pipes and your water system that are heated are insulated coming away from the water heater. If you can touch a pipe and it feels warm, that's a pipe that probably should either have insulation wrap on it, or the foam pipe covers just to help keeping that water heater working more efficiently because they consume a lot of energy. If it's a water heater, located in situation where you can drain it and flush it out, get the sediment out of the bottom. Not only will it help with the life of the water heater, but it also will make it work more efficiently or help it work more efficiently. Which you know can save pennies, which can become dollars, which can become significant savings over the life of the water heater. So those are some of the things that I would recommend anybody to do because they aren't cost prohibitive.

Laura Class  08:13
Thanks Ray. This podcast will be up on our website www.extension.iastate.edu/smallfarms, along with our acreage living newsletter. While you are on our website. Don't forget to check out information about the first annual small farms conference which will be held on Saturday February 13, 2016 at Iowa State University. Thanks for listening.