

# Reduce heating costs by servicing your furnaces

A heating system can be considered the mechanical heart of a home.

In case you haven't noticed, this mechanical heart may have started working harder in the last few days. It is a system that encompasses furnace or baseboard heating units, ductwork, radiators or registers, chimney or flues and thermostat.

Servicing heating equipment before the start of each heating season could reduce fuel bills as much as 20% or more, and could prevent the discomfort and expense of equipment break-down during the upcoming winter heating season.

If the furnace is fired by oil or gas, have the maintenance contractor clean the furnace and flue outlets check the belt for tension and wear, oil the motor and fan bearings (if they are not sealed), change or clean the filters, check combustion and safety devices, and make other adjustments or tests recommended in the owner's manual.

People who are mechanically inclined and very careful, can complete many of these maintenance procedures themselves:

—Gas Furnaces: the pilot light should be checked for a clean, blue flame and the sensing unit cleaned.

—Filters: check furnace filters every two months during the heating season; clean or replace them as needed. Clean the fan blades of the air circulation system annually. Keep the area around the furnace housing free of dust, lint and litter.

—Trouble signals: odors, soot at the burner, black smoke rising from the chimney or surging water in a broiler gauge indicate malfunction or improper adjustment. Get professional assistance.

—Uneven heating: if one area of the home gets more heat than it needs, or if some rooms become hot before others are even warm, the heating system probably needs to be balanced. Have this done by a guiding service specialist.

—Zone heating: if a hot water baseboard heating system exists, consider adding thermostats, valves and piping to provide zone heating for several areas. This will allow better control of unused or low use areas and may cut costs by 25%.

—Furnace size: the blower on the furnace should run almost continuously on a very cold day. If not, the furnace may be too large. This is frequently the case if a home was insulated after the furnace was installed.

An oversized furnace or burner wastes fuel. Have the utility company or heating contractor test the system and offer advice if the size of the furnace burner can be reduced. If the furnace runs constantly on a cold day, yet the home does not warm up the thermostat setting, the furnace is either too small or not operating properly. Get professional help or advice.

—Heating ducts and piping: inspect heating ducts annually for leaks and repair them with a quality duct tape. Heating ducts and water or steam pipes that pass through unheated areas (attics, crawl spaces and basements) should be covered with duct insulation or unfaced R-11 insulating batts or blankets. If the ducts are used for air conditioning as well as heat, use faced insulation and place the vapor barrier on the outside to prevent condensation on the duct.

—Radiators and registers: dust on radiators, baseboard heating units or inducts acts as insulation and wastes heat. Vacuum regularly.

—Heat management: Concentrate

heat where you need it; living areas, bathroom and study areas. Lower temperatures in the kitchen, bedrooms and less active areas. If the home is equipped with zone heating (more than one thermostat), reduce the temperature in these areas.

Adjust hot air registers or the control louvers on hot-water baseboard systems to satisfy heating needs. If your registers are not adjustable, consider replacing them. Don't block air inlets and outlets, including radiators, with furniture, drapes, or clothing.

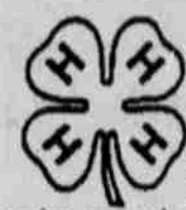
—Bled air: hot water system radiators should be bled annually as follows: open each radiator valve, hold cup under it, and keep it there until water comes out. Do not drain the water; you only need to remove the air, which inhibits water circulation.

—Chimneys and flues: Chimneys, flues, and flashing should be inspected each fall for loose bricks and mortar, cracked linings, and leaks. Prompt repairs should be made, because safety is of primary concern.



Information provided by:  
Warm Springs OSU Extension Office  
1110 Wasco Street  
553-3238

## The Clover speaks



Well, the 1992-93 4-H year is off to a good start. There have been four Leader Training sessions this year covering such

topics as: goal setting, leadership techniques, effective project meetings, and record bookkeeping. These workshops are open to community members so please feel free to join in one of the workshops or all workshops. The 4-H program would like to hear from you as community

members and parents as to what type of training you would like to participate in the 1993 4-H year. Please keep your eyes and ears open so you can plan to attend Camp Counselor training happenings in March of 1993.

4-H members please check with your project leader to see if you will be meeting during the month of December.

OSU Extension would like you to feel free to come by their office and look at all the project information available, there is something for everyone.

## Seal air leaks from attic to basement

If you read mysteries or watch them on TV you know that hidden passages in old castles often hold the key to the solution. It's much the same in your home. Once you find gateways to the hidden passages, you're on your way to solving winter drafts.

Here's the hint: look for openings inside your house that typical exterior caulking and weatherstripping won't seal. These are the most important gateways to your home's hidden passages. Start in the attic. Then go to the basement.

Leaks have many paths to follow once they get inside the wall or ceiling of a home. Therefore, it's important to seal openings so that air can't get into walls or ceilings. You'll find these cracks and holes around attic access, recessed lights, baseboards, window moldings and electrical outlets. Other leaks may be found behind built-in cabinets and storage closets, plumbing penetrations and wiring through floors and ceilings where masonry meets wood and plaster, and through interior partition walls.

David Brook, OSU Extension energy agent, says that sealing these air leaks from the inside is much more effective than exterior caulking. "A good time to seal these leaks is before you insulate your attic," he added.

Brook's publication EC 1286, "Finding and fixing Hidden Air Leaks," can be picked up at the Bend

Extension Office. The illustrated publication explains what causes air leaks, where to find them, and how to seal them.

### A tribal elder once shared the following story:

Every person, each with diverse background, abilities, talents and personalities, is placed in this world as part of the human race to nourish, strengthen and help others grow.

Look at the forest, See how tiny pine trees eventually give way to majestic pines, and how the alfalfa lives in harmony with the grass. That is why you are different from me.

Our differences are meant to be placed together like a jigsaw puzzle so the world can see a clear, perfect picture of harmony and peace.

From Don Addy  
Ft. Belknap Extension Service

## Prune filbert bread for holiday baking

- Simmer 1 cup prunes 1 cup water
- Reserve: 3/4 cup hot juice. Pit prunes and cut fine
- Mix together then cool: Prunes and reserved juice
- 1/4 cup shortening
- 1/2 cup sugar
- Add: 1 egg and beat well

- Stir together: 1 cup cake flour 3/4 cup all purpose flour 1 tsp. soda 3/4 tsp. salt 1/2 cup chopped filberts
- Combine liquid and dry ingredients. Bake in greased loaf pan in 350° oven for 40 to 45 minutes.

## Apple-sweet potato recipe, sounds yummy

- Apple-Sweet potato medley
- 1 lb. sweet potatoes, peeled and cubed
- 2/3 cup unsweetened apple juice or cider
- 2 tsp. cornstarch
- 1/4 tsp. ground cinnamon
- 1/8 tsp. ground nutmeg
- 2 medium apples, peeled, cored, and cubed
- Place sweet potato cubes in veg-

etable steamer over boiling water. Cover and steam until tender, about 6-7 minutes. While potatoes are cooking, peel, core, and chop apples. Transfer potatoes to a serving bowl and cover to keep warm.

In a medium sauce pan combine apple juice, cornstarch, cinnamon, and nutmeg. Cook over medium heat, stirring constantly, until thickened and bubbly, about 4 minutes. Stir in

chopped apple. Reduce heat, cover and simmer, stirring frequently, until apples are tender, about 10 minutes. Add apple mixture to sweet potatoes; top gently. Serves 6.

## Come check our new offices at the education building

## Stockman's Roundup



By Bob Pawelek  
OSU Extension Agent  
Livestock and Range

### Unfinished business.....

#### Went back to "home base"

Last week we bid "adios" to Joe Franchini, Extension Agent for 4-H, Ag and Administration. Joe was at Warm Springs for only a short time, but he made a positive impact on the way our O.S.U. Extension office is run.

Joe, who filled the position that was left vacant by Clay Penhollow, recently accepted an appointment with the New Mexico State University Extension Service. Joe and his family are now headed back to their own "home base" of San Juan County in the Four Corners area, where Joe was raised. He will be conducting the Extension 4-H Ag program at Aztec, New Mexico.

We fondly wish Joe Franchini all the best the future holds!

### Unique Marketing Concept

When we visited last, I discussed a concept called "Strategic Alliance", a program whereby a producer retains part ownership of his calves through slaughter, and with proper management, may realize an extra \$92-\$100 per head.

Continuing with our discussion of

marketing...while at the W.S.U. Beef Conference at Wenatchee, Washington last month, I had the pleasure of meeting Doc and Connie Hatfield of Brothers, Oregon.

Many may know the Hatfields by reputation, but few are aware of their ranch cooperative marketing strategy. Their story may bring one to ask, "now why didn't I think of that?"

In 1986, Doc and Connie organized a group of 14 cow-calf ranchers representing 23 ranch families all over Oregon. The goal developed by these ranchers is to profitably market a quality beef product desired by the consumer, while keeping every possible bit of independence.

The cooperative collectively runs about 14,000 mama cows under the name Oregon Country Beef.

Each individual rancher in this cooperative retains ownership of his respective cattle all the way to sale of the product to "end-users", that is, to retailers in the Pacific Northwest and to a restaurateur operating 800 restaurants in Japan.

A shared vision and a well-managed operation are the selling points for Oregon Country Beef.

"The finished product," Doc says, "is built on the concept of a modest portion size with less waste fat than the current industry average." Average carcass results taken from 3,030 head of cattle killed last year indicated Oregon Cattle Beef scored nearly 40% higher than the national average in terms of Yield Grades 1 and 2.

In terms of dollars, these particular ranchers earned an extra \$149.00 per head, since their markets pay a premium for leaner beef products.

"It has been incredibly difficult to accomplish this result," Doc says, "but our group feels the future of the cow-calf business lies in producing what the consumer needs. Thoughtful, caring management of land and cattle is a responsibility we take se-

riously."

### Horses in winter condition

Do you know how much hay your horse can eat in a day? Do you know how much he should eat, especially with winter coming on? How good is the hay you are feeding?

To properly answer these questions, it is advisable to take an inventory of your hay supply now, for both pounds and quality. We must also look at the age and sex of the animal, as well as how he earns his keep.

We determine hay quality on the basis of pounds of hay, not bales. The most practical approach is to weigh a number of.. randomly sampled bales of hay. Use a bathroom scale if you have to, and if you are able to sneak it out of the house without your spouse seeing you.

Let's say you weighed 10 bales of hay and their total weight was 550 pounds. The average bale of hay then weighs 55 pounds. If you have 300 bales of this hay, you would have 16,500 pounds of hay on hand.

A mature horse is normally fed about 1.5 - 1.75 pounds of hay per 100 pounds of body weight. A 1200 pound horse will eat 18 pounds of hay daily at the rate of 1.5 pounds per 100 pounds of body weight.

300 bales x 55 lbs = 16,500 lbs on hand

1200 lb horse x 1.5 lbs/100 lbs body weight = 18 lbs/day

With a 150 day winter feeding period, a 1200 lb horse will consume 2700-3150 lbs of hay. Therefore, the 16,500 pounds of hay would feed 5 big horses with some 13 bales left out of the 300.

3150 lbs of hay x 5 horses = 15,750 lbs of hay

16,500 lbs on hand - 15,750 lbs fed = 750 lbs left

And don't forget to bring the scale back in the house.

Determining hay quality

Now that we've determined how many pounds we are feeding, our next step is to determine the quality of that hay. The quality differs with each cutting, and you are at an advantage if you are certain of which cutting your bales were taken. If you're not sure, test these following characteristics.

1.) Is it leafy? Lots of leaf in relation to soft, thin stem is an indicator of good quality hay.

2.) Is it green? A freshly opened bale should have a bright green hue.

3.) Is it clean? Grab a handful from the center of the bale. Observe for weed seed heads. Shake it. Good hay should be free of mold and dust.

Horses, as with cattle, use up more energy trying to digest coarse, low quality hay - energy which could otherwise be utilized as body heat in cold weather. Coarse hay with big stems and very few leaves is less digestible and is more likely to cause colic. In other words, cheap hay may cost less, but in the long run it's useless and maybe even dangerous.

What classes of horses are you feeding? The amount of hay fed should be in order of age and performance: weanlings, yearlings, broodmares in the first 90 days of lactating, horses at high levels of performance and nonbreeding stallions.

Mature, barren broodmares and geldings can be kept in good condition by feeding only a maintenance ration of hay and grain. Such horses can actually lose some weight without it being a problem, if they are healthy and in good condition at the start of winter.

If you do find your hay supply decreasing much more rapidly than expected, you may feed extra grain or commercial feed and reduce the amount of hay fed. High fiber grains add bulk to the ration. Oats are 30 percent hulls (bulk) while barley is

15 percent hulls. Make any changes in your feeding program slowly and gradually.

Feed trace mineral salt free choice.

It provides minerals and encourages water intake. Winter is the primary season for impaction, which is a type of colic, caused by low water intake and poor feed.

Deworm horses now if you haven't

## Calving School

Warm Springs OSU Extension office will be holding a calving school for interested producers. It will be held on Saturday, February 13, 1993 at the Norstar Cattle Company near Willowdale.

This school will be a hands on learning experience designed to teach the novice and expert. The class will be limited to ten students. Registrations will be taken on a first received first enrolled basis. There will be a fee of \$25.00 payable at the time of registration.

Topics include: Emphasis: Hands-on experience.

Morning discussions include: Third-trimester management and nutrition; Sire selection based on data from records (EPD); Health programs pre-breeding to third trimester; The Birthing function - identifying membranes and fluids; calving equipment and it's proper use; Handling abnormal presentations (Dystocia, pulling and proper assistance).

Noon: bring a sack lunch.

Afternoon discussions will be: Post-calving management; Special handling of first calving heifers; Health programs-third trimester/following calving; Calving barn facilities, chutes, etc.; Getting them bred back on schedule.

NOTE: We will stop classroom presentations whenever a heifer starts to calve. Discussions will be held on emergency situations as they arise. Come prepared for any kind of weather.

OSU Calving School Preregistration form  
February 13, 1993  
Norstar Cattle Company, Willowdale

Name: \_\_\_\_\_  
Address: \_\_\_\_\_ City/Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ (home) \_\_\_\_\_ (business)

Registration Fee: \$30.00 per person  
Make check payable to Rockin' 4-H Club  
Total amount enclosed \$ \_\_\_\_\_ Warm Springs Extension Service, P.O. Box 430, Warm Springs, Oregon 97761  
Return registration form and check no later than February 5, 1993 to the above address.