

Advances move irrigation forward

By **Bradley J. Younker**
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Center-pivot technology has made great advances in recent years to increase irrigation efficiencies. From monitoring center pivots using cell phones, to using moisture reading sensors in the field to determine irrigation scheduling, irrigation technology has come to the forefront in the world of precision agriculture. Another advance in center-pivot technology has been the introduction to Variable Rate Irrigation (VRI).

Variable Rate Irrigation technology works by applying water at a variable rate along the center pivot rather than one uniform rate along the entire length of the system. The technology uses Global Positioning System (GPS) and Geographic Information System (GIS) technology to prescribe a specific amount of water for certain areas of the field. This is done with the combination of the two systems information sent to a "node" or control panel to run sets or "banks" of nozzles. Variable Rate Irrigation can apply no water to certain nozzles and as much as 200 percent of the normal application rate to other nozzles by opening and closing individual nozzles and speeding up or slowing down the pivot.

This variable rate technology has many uses for applying water at differing rates to wet areas, different soil types, and overlapping pivots, just to name a few. Another use is applying wastewater from feed yards to cropland for the nutrients in the wastewater.

However, there is an issue when applying wastewater within 100 feet of the Environmental Protection Agency's (EPA) definition of a conduit to surface water. The Agency's rule states that Confined Animal Feeding Operations (CAFOs) may not apply manure, litter, or process water closer than 100 feet to any down gradient surface waters, open tile intake structures, sinkholes, agricultural wellheads, or other conduits to surface waters.

This becomes a problem when

Confined Animal Feeding Operation operators are trying to export wastewater to export fields and there is a "conduit to surface water" crossing the middle of the export field. Without the capability to cross the conduit with the center pivot, the operators are limited to applying wastewater on smaller areas, which in turn causes export fields to become "hot" with nutrients. With the variable rate technology and the ability to turn sets of nozzles off, the center-pivot system would be allowed to cross the "conduit to surface water" and apply wastewater to the rest of the field and still maintain the 100 foot setback area. This in turn, increases the available land to apply wastewater on.

For more information and assistance with the planning and installation of a Variable Rate Irrigation system, please contact your local Natural Resources Conservation Service (NRCS) office or conservation district office located at your local county Department of Agriculture Service Center. To learn more about Natural Resources Conservation Service, visit the Kansas NRCS Web site at www.ks.nrcs.usda.gov.



WITH KELLER POND dredged the shore on the east side now allows for easier access. Even with many anglers showing up for the Cheyenne County Wildlife's annual fishing contest, plenty of room was available for everyone.

Herald staff photo by Casey McCormick

Carbon monoxide poisoning a danger during cold months spent indoors

Protect you and your family against carbon monoxide (CO) poisoning.

Fireplaces, wood stoves and portable heaters and generators are often used when power out-

ages occur. These and other appliances produce carbon monoxide, which can be fatal if people are exposed to high levels even for a brief time. CO cannot be seen or smelled and can kill in minutes.

Tips to avoid CO poisoning include:

- Never run a generator or any petroleum-fueled (kerosene, propane, gasoline) engine or appliance inside a basement, garage or other en-

closed structure, even if the doors or windows are open, unless the equipment is professionally installed and vented.

- Keep vents and flues free of debris, especially if winds are high. Flying debris can block ventilation lines.

- Never run a motor vehicle, generator or any gasoline-powered engine outside an open window, door or vent where exhaust can vent into an enclosed area.

- Regularly check and properly maintain fuel-burning appliances, especially when in use.

Carefully monitor household members for signs of CO poisoning. Exposure to CO can cause loss of consciousness and death. The most common symptoms of CO poisoning are headache, dizziness, weakness, nausea, vomiting, chest pain and confusion. People who are sleeping or who have been drinking alcohol can die from CO poisoning before ever having symptoms.

Anyone who suspects symptoms of CO poisoning should go outside and seek fresh air immediately. If a person has collapsed or is not breathing, call 9-1-1 for emergency medical assistance immediately from a safe location.

Moments With Mila



By **Mila Bandel**
County Health Nurse

bel really mean no fat? The Food and Drug Administration has strict guidelines on how these food label terms can be used.

Here are some of the most common claims seen on food packages and what they mean:

- Low calorie: Less than 40 calories.
- Low cholesterol: Less than 20 mg of cholesterol and 2 gm or less of saturated fat per serving.
- Reduced: 25 percent less of the specified nutrient or calories than the usual product.
- Good source of: Provides at least 10 percent of the Daily Value of a particular vitamin or nutrient per serving.
- Calorie free: Less than five calories per serving.

- Fat free/sugar free: less than 1/2 gram of fat or sugar per serving.

- Low sodium: less than 140 mg of sodium per serving.

- High in: Provides 20 percent or more of the Daily Value of a specified nutrient per serving.

- High fiber: Five or more grams of fiber per serving.

- Lean (meat, poultry, seafood): Ten grams of fat or less, 4 1/2 grams of saturated fat and less than 95 mg cholesterol per 3-ounce serving.

- Light: 1/3 fewer calories or 1/2 the fat of the usual food.

- Healthy (individual food item): Low fat, low saturated fat, less than 480 mg sodium, less than 95 mg cholesterol and

at least 10 percent of the Daily Value of vitamins A and C, iron, protein, calcium and fiber. The Federal Drug Administration also sets standards for health-related claims on food labels to help consumers identify foods that are rich in nutrients and may help to reduce their risk for certain diseases. For example, health claims may highlight the link between calcium and osteoporosis, fiber and calcium, heart disease and fat or high blood pressure and sodium.

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This section is packed full of information on hospitals, physicians and medical services available in the area