

natural resources at home

Wesch. Actually in a recent snow storm the windbreak held the snow, keeping the six foot snow drifts there instead of in the yard.

While both Mr. and Mrs. Wesch are retired they stay very active. Over the years the couple has rescued several animals. They are both also involved in the Congregational Church in McCook.

Mrs. Wesch said she is a career volunteer for hospice and respite out of Nebraska.

Mr. Wesch serves on the Amusement Authority, Oberlin-Decatur County Economic Development Corp. and the Decatur Community Educational Foundation.

Mr. Wesch has two sons and Mrs. Wesch has one son and one grandson.

The couple said they plan to attend the conservation banquet.



A STRIP OF GRASS stood under ice on a foggy Kansas day. The grass strip is just one of six that Jim and Pam Wesch planted in the fields near their home.

Technology advances increase irrigation

By **BRADLEY J. YOUNKER**

Agricultural Engineer

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.

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. Variable Rate Irrigation uses Global Positioning System and Geographic Information System technology

to prescribe a specific amount of water for certain areas of the field. This is done with the combination of global positioning system and geographic information system 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.

Variable rate irrigation 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 feedyards 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 definition of a conduit to surface water. The agency's rule states that Confined Animal Feeding Operations 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, confined animal feeding operators are limited to applying wastewater on smaller areas, which in turn causes export fields to become "hot" with nutrients. With variable rate irrigation

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 office or conservation district office located at your local county United States Department of Agriculture Service Center. To learn more about the Natural Resources Conservation Service, visit the web site at www.ks.nrcs.usda.gov.



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