

# Corn study proves timing irrigation can increase yields

When summer is here, there are lots of things to be done, from planting to harvesting and everything in between.

Some chores don't always get done on time. For some things, a delay of a week is no problem. For others, a week can make all the difference — the difference between making a good profit or not.

Timing irrigation is one of those things. This was addressed in a long-term study established at the North Central Kansas Experiment Field near Scandia. The site was a Crete silt loam soil in a corn-soybean rotation and was furrow irrigated.

Over the early course of the study, the irrigation treatments were modified, but generally the irrigation timings were: no irrigation, tasseling, tasseling plus one week after tasseling, tasseling plus two weeks after tasseling, and at 40 or 60 percent soil moisture depletion. About 3 inches of water were applied at each irrigation. Information from the first three years of this study, when treatments were slightly different than in later years, indicated that corn yields from initiating irrigation before tasseling (10-leaf stage, tasseling emergence, one week and two weeks after tasseling) were virtually the same as when irrigation was initiated at tasseling (tasseling, one week and two weeks after tasseling).

However, there was a 32 percent yield reduction when irrigation was started one week after tasseling as compared to irrigation starting at tasseling (89 bushels per acre vs 130). Initiating irrigation

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two weeks after tasseling reduced yields by 57 percent compared to starting irrigation at tasseling (56 vs 130).

Irrigating when the upper 36 inches of the soil profile reached 40 percent soil-moisture depletion resulted in yields similar to initiating irrigation at tasseling (135 vs 130), but this increased the number of irrigations through the growing season, whereas waiting until 60 percent soil-moisture depletion resulted in average yields slightly lower than initiating irrigation at tasseling (120 vs 130).

Information from the next three years of this study, with the treatments modified slightly, indicated the average yield from one irrigation at tasseling was 91 percent of the 40 percent soil-moisture depletion treatment (134 vs 146). The corn yield from irrigating one week after tasseling was similar to the 40 percent soil-moisture depletion treatment (141 bushels per acre vs 146). Yield of the 60 percent soil-moisture depletion treatment was 21 percent lower than the 40 percent soil-moisture depletion treatment (116 vs 146).

Over the next 11 years, the average corn yield for only one irrigation at tasseling was 83 percent of the soil-moisture depletion

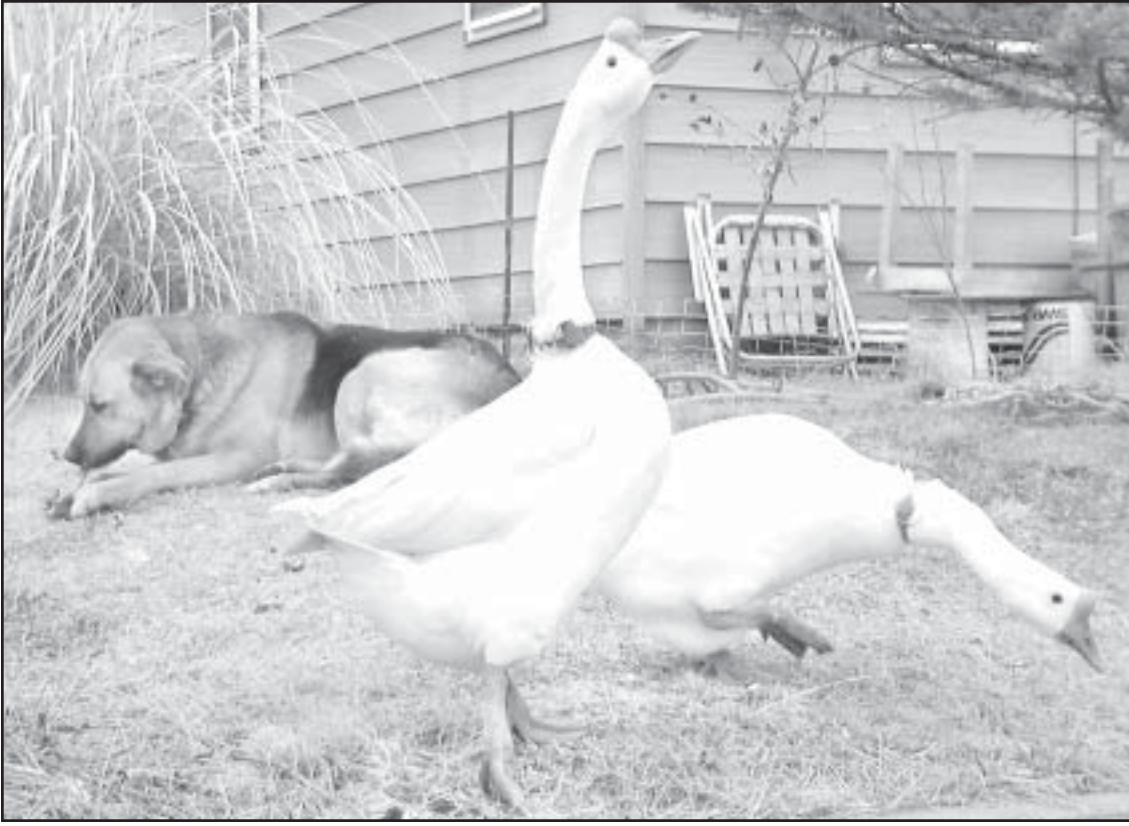
treatment, which was 50 percent depletion of the top 36 inches for three years and 65 percent depletion of the top 18 inches of the profile for eight years (142 bushels per acre vs 172).

The yield for corn where irrigation treatment was initiated at tasseling and one week later was 93 percent of the soil-moisture treatment (160 vs 172). Yield where irrigation began at tasseling plus one week, and two weeks after tasseling, was similar to the soil-moisture depletion treatment (168 vs 172). The average yield for the no-irrigation treatment was 65.

So, what is the bottom line? Obviously, irrigation increases corn yields, but if a limited water supply is a problem, scheduling irrigation at tasseling plus one, and two weeks after tasseling, would be essential for maximizing yield with the water available.

The time of peak water use for corn is that 14-day period from silking to shortly after the blister kernel stage, when average water use is about 0.30 inches per day. If water could be applied at tasseling and again one and two weeks after tasseling, then water would be available at pollination and kernel development, the most critical time to avoid water stress in corn.

*Brian Olson is Kansas State University extension agronomist for Decatur, Gove, Norton, Sheridan, and Trego counties. E-mail bolson@oznet.ksu.edu if you have any questions or would like to see a newspaper article on a specific crop production topic. For more information, contact the county extension office, 877-5755.*



Sparky the dog appears unconcerned as his two feathered friends, geese Tommy, with his neck stretched upward, and Greta keep an eye on the yard of their owners Deb and Bryan Keiswetter. The three are often seen taking walks together and are unaware of their obvious differences.

— Telegram photo by Carolyn Plotts

## JENNINGS NEWS

By LOUISE CRESSLER

During the night Saturday we received rain. By 8:30 a.m. Sunday morning it had started to snow. Only eight people braved the elements to attend church Sunday morning.

Tuesday Study Club met Jan. 25 at the home of Rachel Carter with Kathy Nauer as co-host. Those present were Naomi Carter, Ruth Chance, Wilma Mader, Joan McKenna, Helen Muirhead, Helen Rhodes, Neoma Tacha, Vendla Tacha, Rachel Carter and Kathy Nauer. A lesson was given by Trenda Watts, Multi-County extension agent, on the many benefits of eating fruits and vegetables.

United Methodist Women met Feb. 2 at the church. Those present were Vendla Tacha, Marguerite Bailey, Naomi Carter, Helen Rhodes, Rachel Carter, Betty Krebs and Louise Cressler. Rachel gave the program, "Prayer—Women in Prayer". Betty Krebs gave Quiet Moments. Marguerite and Vendla served refreshments. The group will be serving lunch to pastors of the Hays District at the "First Church" meeting Feb. 28 at the Jennings Church.

Jennings City Council met Feb. 3 with Mayor Bob Jones, councilmen Don Bolt, Stann Hartzog, Bill Gawith and Louise Cressler, City Clerk Sue Long present. Rick Foster was absent. The council discussed concerns of the city only having the one well that can be used for drinking water. Funding is being looked into for drilling of a new well. New padlocks have been purchased and installed on several buildings. The grant application for funds to renovate Community Hall was delivered to Lo-

## LYLE NEWS

By DEANNA SUMNER

Wednesday Kathy Van Meter and Joyce Sumner went to Garden City with a carload of clothes for the Mexican-American Mission. Friday afternoon Rex Cozad's burial was at the Lyle Cemetery and following was a gathering of family and friends at the Community Building.

Friday evening Toots Magers and June Jolly went to Norcat and played cards.

Kathy Van Meter went to Kearney on Friday for a visit to the orthopedic doctor. She has a torn rotary cuff and afterward her appointment she went to Gibbon, Neb., and visited overnight at Steve and Julia Van Meters.

gan by the City Clerk. Maintenance list included: landfill road repair, repainting the street signs and cleaning of the curbs.

Frances Bader will be taking appointments to fill out income tax forms. She will be at the Hoxie Library Wednesdays, 1-3 p.m., and at the Jennings Bank. For appointments call (785) 678-2659. She will take appointments for shut-ins.

Those winning card games at the Senior Center during the month of January were Alice Mizer, Jan. 1; Vendla Tacha, Jan. 8; Eleanor Morel, Jan. 22; and Louise

Cressler, Jan. 29.

Mildred Tacha returned home from the Oberlin Hospital Friday. She is feeling better. Her son John of Lawrence visited her over the weekend.

Mary Smith and daughter Emily Bolen, Sharon Springs, were last weekend visitors of Rachel and William Carter and Naomi Carter. Mary is a sister to Rachel and Naomi.

Allen Carter, Overland Park, had a pacemaker implanted Tuesday. He returned home on Thursday and can go back to his teaching job Monday.

### FARM MACHINERY & EQUIPMENT AUCTION

**WEDNESDAY FEB. 23, 2005 @ 9:30 AM, CST**

**SELLERS: GANO FARMS PARTNERSHIP**

**AUCTION LOCATION:** The auction will be conducted at the Gano Farms headquarters. From the US 24/283 junction in Hill City, go 10 miles South to County Rd G. 3 miles West to County Rd 230 Ave. 1 1/2 miles South to the farmsite. **SIGNS WILL BE POSTED!**

**TRACTORS & SKID STEER:**

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- New Holland L-778 Skid Steer

**COMBINES:** Serviced & winterized by Tri-County Impl.

- 96 JD 9600 w/96 JD 930 platform — ALWAYS SHEDDED
- 90 JD 9500 w/95 JD 925 platform — ALWAYS SHEDDED

**PLATFORMS:**

- 96 JD 843 8-row Corn Head
- 95 Klass 8-row Corn Head
- 2) 853A Row Heads

**TRUCKS:**

- 75 C65 Chevy TS
- 73 C65 Chevy Tag Axle Truck
- 57 6400 Chevy w/B&H
- 90 Dodge 4x4 Power Ram LE.
- Yamaha 4-wheeler, 2WD

**TRAILERS:**

- 85 Hillsboro 8'x24' GN tandem
- PK Header Trailer, 6T capacity
- Meade Header Trailer

**FERTILIZER EQUIPMENT:**•2) 1000 gal nurse trailers• 1000 gal nurse tank•Skiles 6000 gal tank•Ace Sprayer •500 gal nurse tank

**GRAIN CART:**

- 98 Orthman 1096

**FARM EQUIPMENT:**

- Sunflower 1440-35 Disc
- Sunflower 3060-42 Followking
- 3) JD 9400 Hoe Drills•JD 1750 MaxEmerge Conservation 8-row Planter

**FARM EQUIPMENT CONT:**

- Richardson 35', 7 section Blade Plow
- Crippen 400 bu Seed Cleaner
- Palmer 600 gal fuel wagon
- Bushhog 705 14' rotary mowers
- 3pt Bale Fork
- 3pt Cultivator
- Kent Cultivator w/harrows
- 8' 3pt Box Scraper
- JD Model 200 32' Bale Elevator
- FK 5x5 Blade Plow
- Groundhog 14' Speedmover
- Kan-Am 14' Blade
- Malsam 2-way Terracer
- Buffalo 8-row Stalk Chopper
- Bessler 20' pull-type Subsoiler
- Straw spreader for 9500 combine
- Hyd drill fill auger
- Grain spreader
- 2) 22' RO tarps
- Drill fill auger
- NEW planter & combine parts
- Hyd post hole digger
- 4-section drag harrow
- Orthman tractor front 3pt attachment and MORE—

**SHOP & MISC EQUIPMENT TOO NUMEROUS TO LIST!!**

GUEST CONSIGNOR — RUDER FARMS

- 02 JD 1590 No-Till Drill
- 3) '97 JD 9400 Hoe Drills
- Degelman 14' manual angle & 12' hyd angle Dozers
- ATV 110 35' sprayer
- AL Hay Fluffer
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## Bulletin Board Business and Professional Directory

Your Guide to Services Available in Northwest Kansas

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<p><b>Auto Glass Repair</b></p> <p><b>NOVUS</b> AUTO GLASS REPAIR &amp; REPLACEMENT Frank and Pauline Kaiser—Owners P.O. Box 93 Long Island, KS 67447 <b>888-247-5153</b> CALL MOBILE, WE COME TO YOU <small>Insurance usually waives deductible on repairs</small></p>	<p><b>Hot Opportunity</b></p> <p><b>LISTEN UP</b></p> <p>Wouldn't Your Ad Look Great Here—Call 877-3361</p>
<p><b>Construction</b></p> <p><b>OVERLEASE CONSTRUCTION</b> 785-877-2115 410 South Street <small>Remodeling • Additions • Custom Cabinets</small> Call Greg Overlease for all your carpentry needs</p> <p style="text-align: center;"><b>Wouldn't Your Ad Look Great Here! Call 877-3361</b></p>	

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