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## Irrigation System Uniformity Evaluation #1

Test Conducted: May 19, 2009

**System:** This test was conducted on a 7 tower system with a corner arm, boom and end gun. The system was facing south at the start of the test and faced southwest at the end of the test. Percent timer setting was at 40% with an intended application rate of 0.5 inches.

**Staff:** Mike Censke, Irrigation Technician; - St. Joseph County Conservation District.

**Conditions:** Sunny skies, Temperature in the mid 70's; Winds out of the southwest 5 to 10 mph

**Findings:** Overall system uniformity was 61%, which is below the minimum 85% as required by EQIP standards. The following system malfunctions were observed:

- 2 pivot leaks were observed
- Span #1: Sprinkler #1 – weak output
- Span #2: Sprinkler # 6, 8, 10, 12 & 14 – weak output  
Sprinkler # 11 – Missing sprinkler head
- Span #3: Sprinkler # 2, 4, 6, 12 & 18 – Weak output
- Span #4: Sprinklers #16 – Weak output
- Span #5: Sprinkler # 4 – Non-functional  
Sprinkler #10 – Weak output  
Tower #5 – Flange leak.
- Span #6: Sprinkler #2 – Weak output  
Sprinkler #16 – Non-functional
- Corner Arm: Sprinkler #2 – Non-functional  
(Corner arm has weak output overall – See graph)
- Endgun: Non-rotating

**NOTE:** Output varied greatly from sprinkler to sprinkler across entire system.

**Runoff:** No runoff or ponding was observed. Ground cover consisted of 100% bare ground.

**Recommendations:** (Please note these are only recommendations based on our observations and data interpretation. You are advised to see your local dealer for technical advice).

***- Repair pivot leaks***

***-Repair and/or replace weak and non-functioning sprinklers as listed above, or invest in new sprinkler package.***

***- Address low output within corner arm.***

***- Repair endgun***

Following these recommendations may increase your system's efficiency to the desired 85%, which will conserve water usage as well as energy costs. An efficient system also minimizes soil erosion and nutrient loss due to leaching. If you have any questions, please contact the St. Joseph County Conservation District at 269-467-6336 ext. 5. Thank you for the help and the opportunity to work with this system.