Presentation to:
WATER FOR 2060 ADVISORY COUNCIL

by Fred Fischer
Hooker, OK
Corn Harvest
My boys Ethan and Braden with our new combine in 2011
TECHNOLOGY ON THE FARM

• We don’t farm like Grandpa used to.
• IRRIGATED FARMING TECHNOLOGIES
  – Underground Drip
  – Center Pivot Sprinkler
  – GPS integration
  – Variable Rate Technology
  – The Web
UNDERGROUND DRIP TECHNOLOGY
DRIP INSTALLATION
18” Below Surface
5’ Between Tapes
Emitters are spaced 16” apart along tape
SPRINKLER TECHNOLOGY
TECHNOLOGY GAPS
Mechanical Failures
YIELD MAP FROM 1 COMBINE
Corn Yield by Management Zone

Grower: Fischer & Fischer
Farm: Fischer & Fischer
Field: Terrace Section (7-5-16)
Area: 580.08 ac
Mgmt Zone: Crn pivot and Drip Split

Dry Yield - Corn - 2013
- 35.71 - 124.95 (43.02 ac)
- 124.98 - 193.48 (67.94 ac)
- 193.49 - 243.75 (101.11 ac)
- 243.75 - 279.26 (134.67 ac)
- 279.26 - 350 (138.85 ac)

<table>
<thead>
<tr>
<th>Legend</th>
<th>Management Zone</th>
<th>Avg Yield</th>
<th>Min</th>
<th>Max</th>
<th>Avg Moisture</th>
<th>Total Bushels</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>4</td>
<td>257.65</td>
<td>35.88</td>
<td>350.00</td>
<td>16.89 %</td>
<td>2,785.76</td>
<td>10.81</td>
</tr>
<tr>
<td>Green</td>
<td>1</td>
<td>254.64</td>
<td>36.59</td>
<td>350.00</td>
<td>18.33 %</td>
<td>6,357.49</td>
<td>24.97</td>
</tr>
<tr>
<td>Purple</td>
<td>3</td>
<td>253.96</td>
<td>36.25</td>
<td>350.00</td>
<td>18.48 %</td>
<td>997.14</td>
<td>3.93</td>
</tr>
<tr>
<td>Orange</td>
<td>2</td>
<td>231.86</td>
<td>35.71</td>
<td>350.00</td>
<td>22.55 %</td>
<td>103,379.31</td>
<td>445.87</td>
</tr>
<tr>
<td>All</td>
<td></td>
<td>233.78</td>
<td>35.71</td>
<td>350.00</td>
<td>19.98 %</td>
<td>113,521.88</td>
<td>485.58</td>
</tr>
</tbody>
</table>
VRI TECHNOLOGY
(variable rate irrigation)
TELEMETRY TECHNOLOGY

- Web Based
- Monitoring
- Alarms Sent
To create a new group, simply drag a unit to the **New Group** section at the bottom of list view. If you have a lot of units and do not want to drag each one, press the End key on your keyboard to skip straight to the bottom of the page.

**Field Commander Summaries**

**Start Date**: 01/01/2014 00:00

**Stop Date**: 02/15/2014 23:59

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**Group 1**

- **Beer** (Serial: 33259)
  - Power: OFF
  - Dir: IDLE
  - Angle: 45°
  - Speed: 0%
  - Pressure: 0 psi
  - EG Table: Table 1
  - Spd Table: 100 pct
  - Time: 12/20/13 18:01:59

- **Black cnr** (Serial: 31326)
  - Power: IDLE
  - Dir: IDLE
  - Angle: 358°
  - Speed: 0%
  - Pressure: 0 psi
  - EG Table: Table 1
  - Spd Table: 100 pct
  - Time: 02/15/14 10:40:43

- **Elliot** (Serial: 30413)
  - Power: OFF
  - Dir: IDLE
  - Angle: 346°
  - Speed: 0%
  - Pressure: 0 psi
  - EG Table: Always Off
  - Spd Table: Table 3
  - Time: 12/17/13 16:10:44

- **Dorothys** (Serial: 30279)
  - Power: OFF
  - Dir: IDLE
  - Angle: 147°
  - Speed: 0%
  - Pressure: 217 psi
  - EG Table: Table 1
  - Spd Table: Table 1
  - Time: 01/28/14 09:35:13

- **Grandmas** (Serial: 30809)
  - Power: ON
  - Dir: REV
  - Angle: 354°
  - Speed: 100%
  - Pressure: 0 psi
  - EG Table: Table 1
  - Spd Table: 100 pct
  - Time: 02/15/14 10:43:51

- **Granmas Cnr** (Serial: 30857)
  - Power: OFF
  - Dir: IDLE
  - Angle: 19°
  - Speed: 0%
  - Pressure: 0 psi
  - EG Table: Table 1
  - Spd Table: 1°
  - Time: 11/28/11 09:11:56

- **Gravel Pit** (Serial: 427443)
  - Power: IDLE
  - Dir: IDLE
  - Angle: 345°
  - Speed: 0%
  - Pressure: 0 psi
  - EG Table: Table 1
  - Spd Table: 100 pct
  - Time: 02/15/14 10:19:54

- **Hamilton Cnr** (Serial: 44690)
  - Power: IDLE
  - Dir: IDLE
  - Angle: 0°
  - Speed: 0%
  - Pressure: N/A
  - EG Table: Table 1
  - Spd Table: Table 3
  - Time: 02/15/14 10:42:59

- **Lake** (Serial: 44207)
  - Power: IDLE
  - Dir: IDLE
  - Angle: 115°
  - Speed: 0%
  - Pressure: 0 psi
  - EG Table: Table 1
  - Spd Table: 100 pct
  - Time: 02/15/14 10:43:51

- **Midway** (Serial: 30285)
  - Power: IDLE
  - Dir: IDLE
  - Angle: 348°
  - Speed: 0%
  - Pressure: 0 psi
  - EG Table: Table 1
  - Spd Table: Table 3
  - Time: 02/15/14 10:43:51

- **Murdock** (Serial: 32314)
  - Power: IDLE
  - Dir: IDLE
  - Angle: 100°
  - Speed: 0%
  - Pressure: 9 psi
  - EG Table: Always Off
  - Spd Table: 100 pct
  - Time: 02/15/14 10:43:51

- **Orvals** (Serial: 30524)
  - Power: IDLE
  - Dir: IDLE
  - Angle: 5°
  - Speed: 0%
  - Pressure: 9 psi
  - EG Table: Always Off
  - Spd Table: 100 pct
  - Time: 02/15/14 10:43:51
INCINTIVE NEEDS

• NEW EFFICIENT APPLICATION METHODS
  – May include drip, center pivot sprinklers, new nozzle packages and variable rate irrigation
  – I don’t think it would include tail-water recovery systems -- sprinklers would be much better use of resources.
INCINTIVE NEEDS

• MONITORING EQUIPMENT

• NEW TECHNOLOGY

• REMEMBER – one size does not fit all
WATER SAVING IDEAS

• Genetic Engineering of Varieties to use less water

• Crop Insurance Release
  – When the crop is failed insurance companies should release the requirement to continue caring (watering) of the crop.

• Install A Hot Water Circulating Pump In Houses
  – Alleviating the waste of running water till it gets hot.
PLEASE STOP BY FOR AN INFORMATIVE AND EDUCATIONAL TOUR
The Honorable T.W. Shannon