

Presentation to:
WATER FOR 2060 ADVISORY
COUNCIL

by Fred Fischer
Hooker, OK



Corn Planting



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





RdF

FRd

Mies3rd

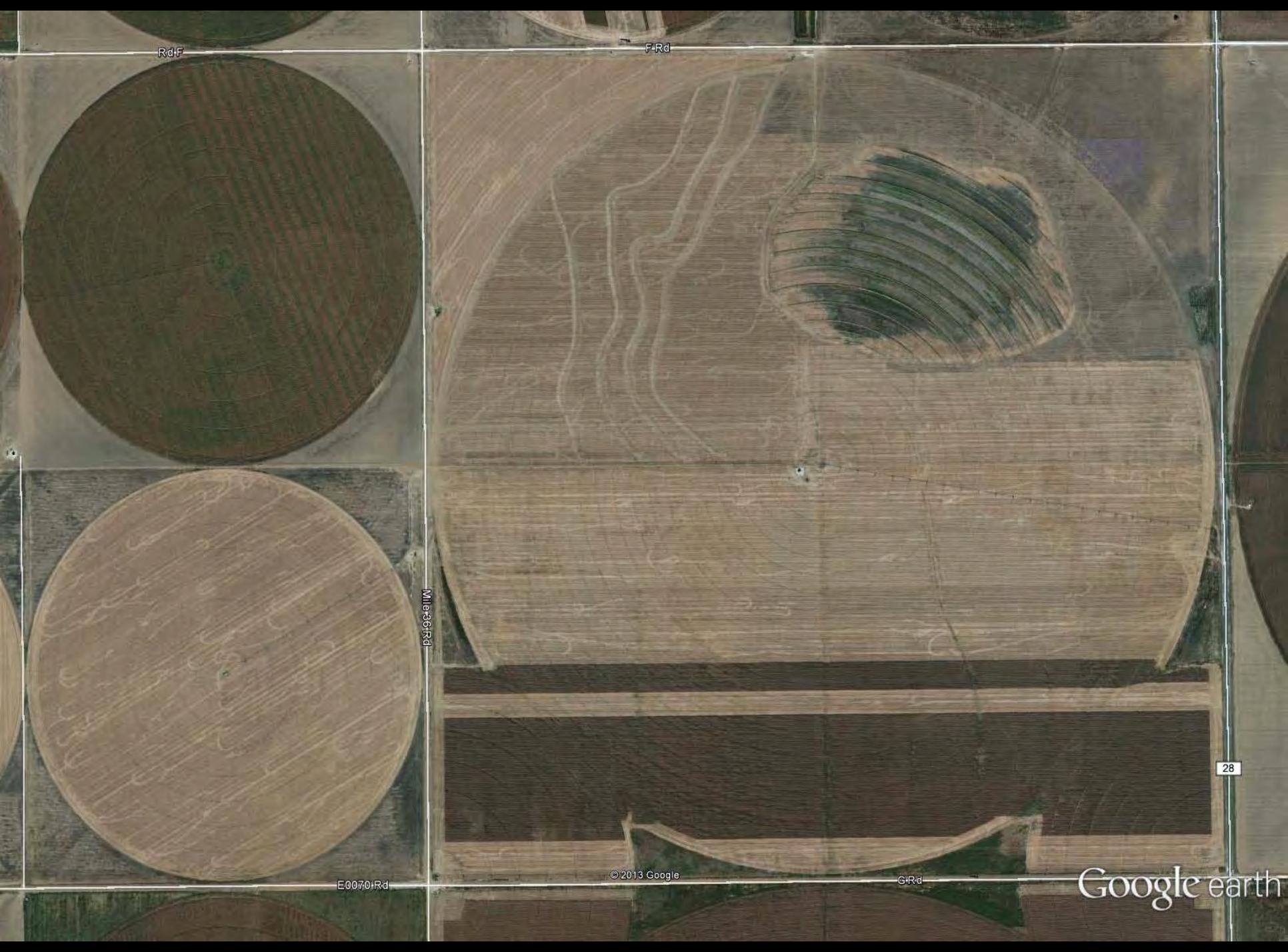
E0070Rd

© 2013 Google

GRd

28

Google earth



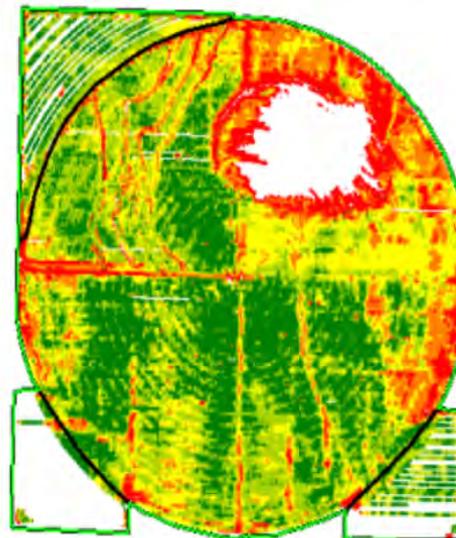
YIELD MAP FROM 1 COMBINE



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)

Legend	Management Zone	Avg	Dry Yield		Avg Moisture	Total Bushels	Acres
			Min	Max			
	4	257.65	35.88	350.00	16.89 %	2,785.76	10.81
	1	254.64	36.59	350.00	18.33 %	6,357.49	24.97
	3	253.96	36.25	350.00	18.48 %	997.14	3.93
	2	231.86	35.71	350.00	22.55 %	103,379.31	445.87
	All	233.78	35.71	350.00	19.98 %	113,521.88	485.58



RdF

FRd

Miesfeld

VRI TECHNOLOGY (variable rate irrigation)



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Google earth

1991

Imagery Date: 10/6/2013 36°55'03.35" N 101°22'04.76" W elev 3122 ft eye alt 5640 ft





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Google earth

1991

Imagery Date: 10/6/2013 36°55'03.35" N 101°22'04.76" W elev 3122 ft eye alt 5640 ft





TELEMETRY TECHNOLOGY

- Web Based
- Monitoring
- Alarms Sent



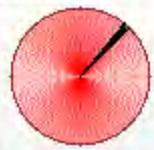
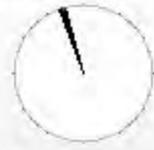
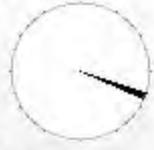
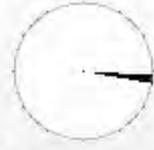
To create a new group, simply drag a unit to the **New Group** section at the bottom of list view. If you have a lot of units and do not want to scroll (to the unit) press the **End** key on your keyboard to skip straight to the bottom of the page.

Field Commander Summaries

Start Date / / : Stop Date / / :

Group 1

|

<p>FC Beer Serial: 33259</p> <p>Power: OFF Dir: IDLE Angle: 45° Speed: 0% Pressure: 0 psi</p> <p>EG Table: Table 1 Spd Table: 100 pct</p> <p>12/20/13 18:01:59</p> 	<p>FC Black cnr Serial: 31326</p> <p>Power: IDLE Dir: IDLE Angle: 358° Speed: 0% Pressure: 0 psi</p> <p>EG Table: Table 1 Spd Table: 100 pct</p> <p>02/15/14 10:40:43</p> 	<p>FC Elliot Serial: 30413</p> <p>Power: OFF Dir: IDLE Angle: 346° Speed: 0% Pressure: 0 psi</p> <p>EG Table: Always Off Spd Table: Table 3</p> <p>12/17/13 16:10:44</p> 	<p>FC Dorothys Serial: 30279</p> <p>Power: OFF Dir: IDLE Angle: 147° Speed: 0% Pressure: 217 psi</p> <p>EG Table: Table 1 Spd Table: Table 1</p> <p>01/28/14 09:35:1</p> 
<p>FC Grandmas Serial: 30809</p> <p>Power: ON Dir: REV Angle: 354° Speed: 100% Pressure: 0 psi</p> <p>EG Table: Table 1 Spd Table: 100 pct</p> <p>02/15/14 10:43:51</p> 	<p>FC Granmas Cnr Serial: 30857</p> <p>Power: OFF Dir: IDLE Angle: 19° Speed: 0% Pressure: 0 psi</p> <p>EG Table: Table 1 Spd Table: 1"</p> <p>11/28/11 09:11:56</p> 	<p>FC Gravel Pit Serial: 42743</p> <p>Power: IDLE Dir: IDLE Angle: 345° Speed: 0% Pressure: 0 psi</p> <p>EG Table: Table 1 Spd Table: 100%</p> <p>02/15/14 10:19:54</p> 	<p>FC Hamilton Cnr Serial: 44690</p> <p>Power: IDLE Dir: IDLE Angle: 0° Speed: 0% Pressure: N/A</p> <p>EG Table: Table 1 Spd Table: Table 3</p> <p>02/15/14 10:42:5</p> 
<p>FC Lake Serial: 44207</p> <p>Power: IDLE Dir: IDLE Angle: 115° Speed: 0% Pressure: 0 psi</p> <p>EG Table: Table 1 Spd Table: 100 pct</p> 	<p>FC Midway Serial: 30285</p> <p>Power: IDLE Dir: IDLE Angle: 348° Speed: 0% Pressure: 0 psi</p> <p>EG Table: Table 1 Spd Table: Table 3</p> 	<p>FC Murdock Serial: 32314</p> <p>Power: IDLE Dir: IDLE Angle: 100° Speed: 0% Pressure: 0 psi</p> <p>EG Table: Table 1 Spd Table: 100 pct</p> 	<p>FC Orvals Serial: 30524</p> <p>Power: IDLE Dir: IDLE Angle: 5° Speed: 0% Pressure: 9 psi</p> <p>EG Table: Always Off Spd Table: 100 pct</p> 

Click to View All Units

Gravel Pit (42743) Version: 29 (AC, Pro, Verizon)



344° 100% 0psi

WAAS 16 4.21

Pivot Info

Serial: 42743 Version: 29
 Status: ON/FWD/344/EndGun: OFF
 Last Reading: 02/15/14 10:19:33 AM
 Current Cycle: 0 day 0 hr 0 min
 Complete Revolution Time: 14 hours 20 minutes
 Remaining Revolution Time: 2 minutes
 Estimated Acre Inches Applied: 0 in

[Refresh](#)

Last 2 Commands		Active Commands	
Command	Sent At	Ack	Last Note
Start	02/15/14 10:19:06	Yes	
Stop	11/14/13 23:23:53	Yes	

Timed Commands	
Command	Trigger Time

Timed Commands

Notes

Unit Page Setup

Readings | CMD History

CMD
Chart
Config
Field Info
Readings
Report
CMD History

Start
Options

Stop
Options

Speed
VRI

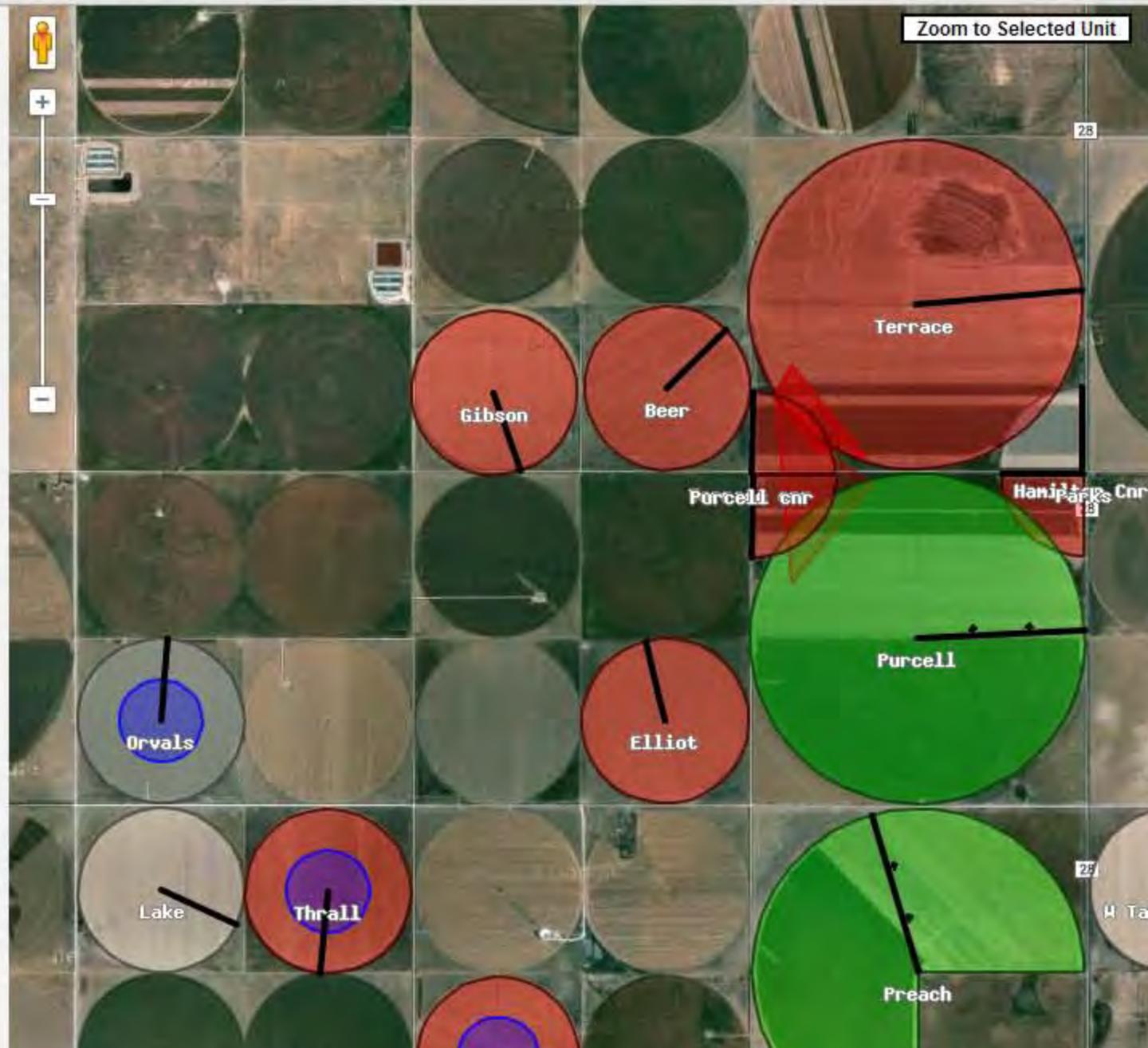
End Gun
Table

Direction
Table

Request
Reading

Group 1

- Beer
- Black cnr
- Elliot
- Dorothys
- Gibson
- Grandmas
- Granmas Cnr
- Gravel Pit
- Hamilton Cnr
- Judd
- Lake
- Midway
- Murdock
- Orvals
- Parks
- Preach
- Preach Cnr
- Purcell
- Purcell cnr
- Rayburn
- Stout
- Stout Cnr
- E Tantlinger
- W Tantlinger
- Terrace
- Terrace cnr
- Thrall



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

