



Delta Plastics

Increase profitably with irrigation efficiency



February 2018

H₂O Initiative – Reduce Irrigation Water by 20% by 2020

Arkansas Soybean Promotion Board

Tri State Soybean Forum

Delta F.A.R.M.

Delta Council

The Nature Conservancy

Arkansas Farm Bureau

*Mid-South Soybean Board
(AR/LA/TX/MO/MS)*

Arkansas Soybean Association

Arkansas Rice Federation

Natural Soybean and Grain Alliance

*Arkansas Association
of Conservation Districts*

Louisiana Cotton and Grain

*Arkansas Corn and Grain Sorghum
Promotion Board*

United Sorghum Checkoff Program

Agricultural Council of Arkansas

AgHeritage Farm Credit Services

*Mississippi Natural Resource
Conservation Service*

*Arkansas Natural Resource
Conservation Service*

Arkansas Game and Fish Commission

Delta Wildlife

*Arkansas Natural
Resources Commission*

Mississippi State University

*University of Arkansas
Division of Agriculture*

Arkansas Agriculture Department

*Louisiana State University (LSU)
AgCenter*

Join the Delta Plastics H₂O Initiative by contacting
Matt Lindsey at mlindsey@deltaplastics.com 501.490.0395.

www.deltaplastics.com





The image shows a screenshot of the website www.H2OInitiative.com. The website features a green header with the H2O Initiative logo and navigation links for "CALL US TOLL-FREE: (800) 277-9172", "NEWS", and "CONTACT US". The main content area has a background image of a green field under a blue sky with clouds, with the text "View Our Tools to Help Conserve Water in the Mississippi Delta". Below this, four orange callout boxes point to specific tools: "Pipe Planner", "Soil Moisture Sensor", "Surge Valve", and "MIRI/AWD".

Pipe Planner



Soil Moisture Sensor



Surge Valve



MIRI/AWD





IRRIGATION BY THE NUMBERS

\$10

Farmers can save \$10 per acre with soil moisture sensors.

47%

Farmers can cut water use by almost half using a combination of Pipe Planner, surge valves and soil-moisture sensors.

\$12–14

At \$3 per acre inch, farmers can expect a cost saving of \$12 to \$14 per acre with Pipe Planner.

Source: Mississippi State University Extension Irrigation Specialist Jason Krutz

<http://irrigation.mssoy.org/>

Before:

- They used 15" poly pipe EVERYWHERE.
- Center of field with two runs
- 70 barrels on their farm
- Corn 200bu/ac
- Beans 60 bu/ac

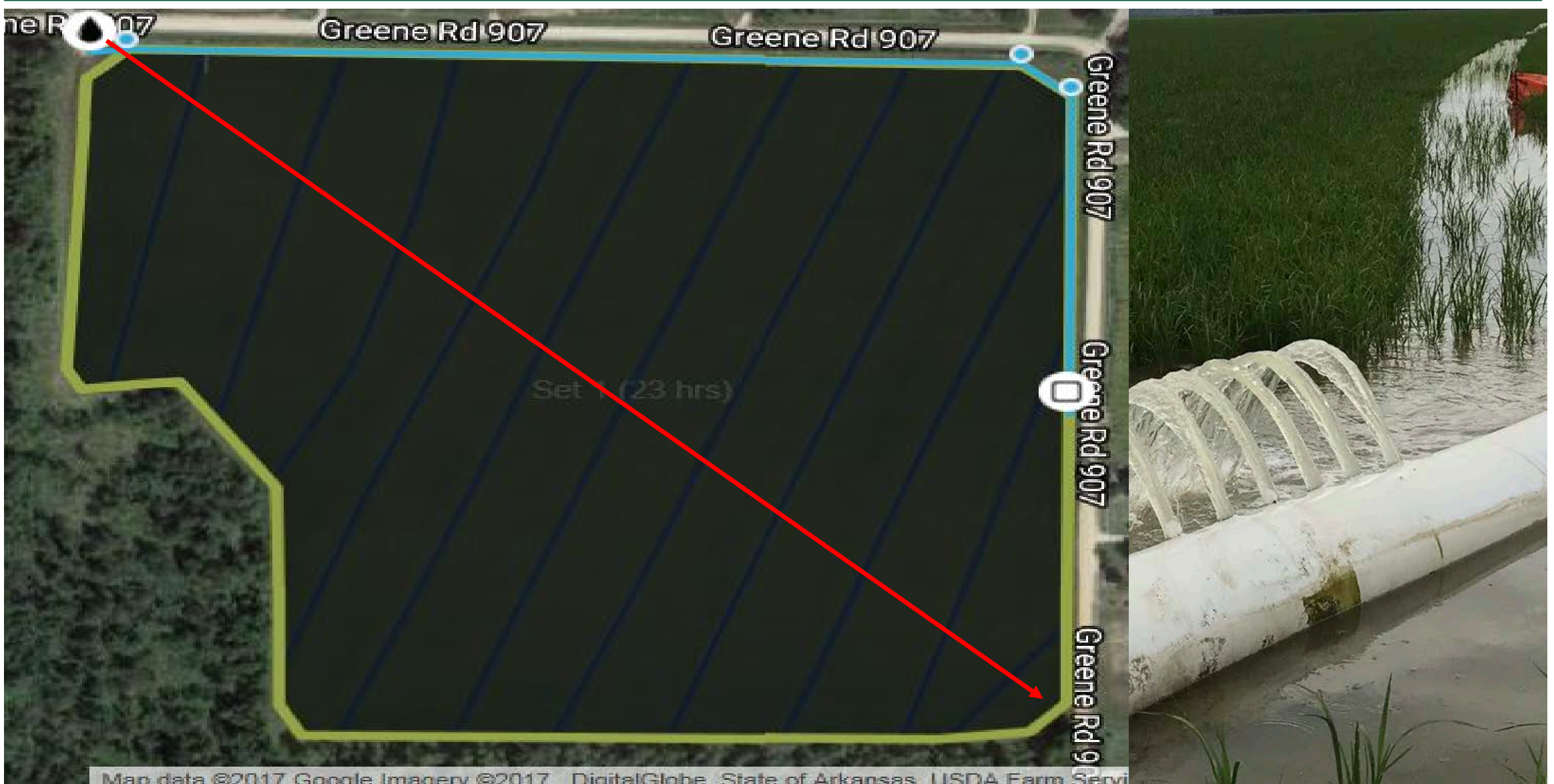
• After:

- 10" on a quarter of their farm.
\$1,760 savings
- Center of the field with hole on both side of one pipe.
\$1,228 savings.
- 30 barrels
- Cutting water time 3-4 hrs
- \$2988 total savings.
- Corn 219 Bu/ac
- Beans 71 Bu/ac



Delta Plastics

Donnie Reddmann, Cross County, AR



Map data ©2017 Google, Imagery ©2017 DigitalGlobe, State of Arkansas, USDA Farm Servi

Pipe Planner Webinar Schedule-March 2018

<u>Date</u>	<u>Time</u>	<u>Location</u>
3-5-2018	9am-11am * 2pm-4pm	Online
3-8-2018	9am-11am * 2pm-4pm	Online
3-13-2018	9am-11am * 2pm-4pm	Online
3-15-2018	9am-11am * 2pm-4pm	Online
3-27-2018	9am-11am * 2pm-4pm	Online
3-29-2018	9am-11am * 2pm-4pm	Online

To Sign up for future webinars email: pipeplanner@deltaplastics.com

Irrigation Application Efficiency



Pipe Planner

Type/Size of Polytubing

Size/Quantity of holes

Application efficiency

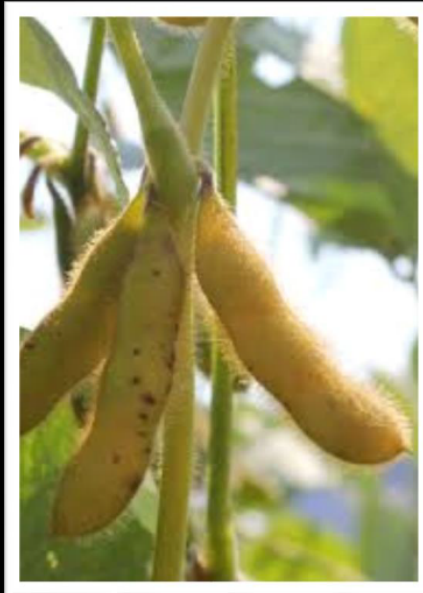
\$10/Acre savings

*Slide Credit Wilks Wood, MSU



RISER

On-Farm Evaluations: Soybean



	Yield	Water Use	WUI	Return
	---Bu/acre---	---Acre-in---	--Bu/acre-in--	----\$----
Producer	69.3	11.5	7.2	543
Riser	68.6	9.1	9.8	556
P-value	0.6703	0.0198	0.0194	0.5376

N = 20 farms Mississippi and Arkansas

7% of the population exceeded permitted value, 18 acre-in/yr

79% population applied more irrigation water than RISER

21% population applied less water than RISER

\$13/acre



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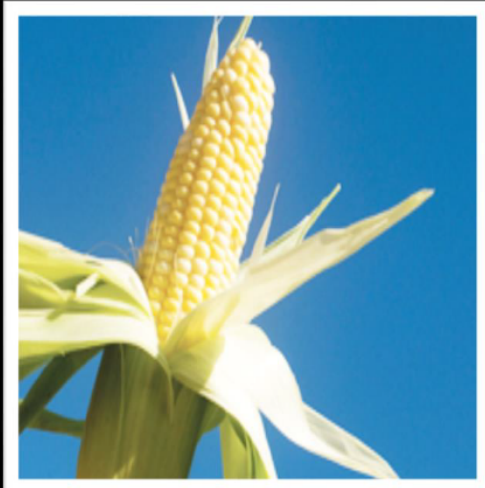


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RISER

On-Farm Evaluations: Corn



	Yield	Water Use	WUI	Profitability
	---Bu/acre---	---Acre-in---	--Bu/acre-in--	-----\$-----
Producer	220	9.4	28.8	682
RISER	227	5.5	44.7	709
P-value	0.0926	0.0011	0.0100	0.0560

N = 16 farms

7% population exceeded permitted value, 18 acre-in/year

86% population applied more water than RISER

14% population applied less water than RISER

\$27/acre



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Summary Data: Rice



	Yield	Water Use	WUI	Profitability
	-Bu/acre-	-Acre-in-	-Bu/acre-in-	-----\$-----
Conventional	165 a	34.3 a	4.8 c	500 b
MSI	168 a	28.7 b	5.8 b	526 a
MSI-AWD	166 a	23.4 c	7.1 a	530 a

N = 18 farms
 Conventional exceeded permitted value 45%
 Side inlet exceeded 26%
 Alternate wetting and drying exceeded 6%

\$26/acre



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The screenshot shows the website www.H2OInitiative.com with a navigation bar containing the Delta Plastics logo, the text "H2O INITIATIVE", and contact information: "CALL US TOLL-FREE: (800) 277-9172", "NEWS", and "CONTACT US". The main banner features a landscape image with the text "View Our Tools to Help Conserve Water in the Mississippi Delta". Below the banner are four orange callout boxes with arrows pointing to specific content:

- Pipe Planner**: Points to a screenshot of the "PIPE PLANNER" web application interface, which includes a sidebar with "Field" and "Pipe Layout" sections and a main map area.
- Soil Moisture Sensor**: Points to a circular diagram showing a plant's root system in the soil with several vertical sensors inserted into the ground.
- Surge Valve**: Points to a photograph of a white plastic surge valve with a control box on top.
- MIRI/AWD**: Points to a photograph of a long, white, flexible irrigation pipe laid out in a field.