USING RETROSPECTIVE POST DATA FROM QUALTRICS April 2020

This document shows how to export retrospective post data from Qualtrics and use it to create the same summary table numbers seen in results produced by Organizational Development for scan forms.

Visualizing the End Product

• The goal is to take the output for retrospective post items from the default report in Qualtrics and reproduce the two summary tables below in Excel. Organizational Development provides these tables as a matter of standard procedure for any scan form with retrospective post items.

	Program Content	Mean Before	Mean After	Percent Change
1	Current Water Supply and Demand in Texas	2.14	3.64	50.0%
2	Identifying problems with irrigation system performance	3.00	3.64	21.3%
3	Conducting an irrigation catch can test	2.29	3.71	47.3%
4	Calculating precipitation rate	2.50	3.64	38.0%
5	Determining turf water requirements using ETo	2.36	3.50	38.0%
6	Creating an irrigation Schedule	2.64	3.57	31.0%
7	Resources and Tools for Irrigation Scheduling	2.50	3.64	38.0%

Table: % at Good/Excellent, Pct Who Increased Understanding													
	Program Content	Pct. at Good or Excellent Before the Program	Pct. at Good or Excellent After the Program	Pct. Point Difference (After vs. Before)	Pct. With Any Increase in Understanding								
1	Current Water Supply and Demand in Texas	28.6%	100.0%	71.4									
2	Identifying problems with irrigation system performance	78.6%	100.0%	21.4									
3	Conducting an irrigation catch can test	50.0%	92.9%	42.9									
4	Calculating precipitation rate	50.0%	92.9%	42.9									
5	Determining turf water requirements using ETo	50.0%	92.9%	42.9									
6	Creating an irrigation Schedule	50.0%	92.9%	42.9									
7	Resources and Tools for Irrigation Scheduling	42.9%	100.0%	57.1									

The Retrospective Post

• Below is a retrospective post question built in Qualtrics. It has the standard BEFORE and AFTER columns with the four-point scale for level of understanding. This question was part of survey at the conclusion of an online program on irrigation practices. It has seven items related to the program content.

GRILIFE EXTENSIO	N									
Your views on the qua important. Please take activity. For each topic listed b program and then <u>AF</u>	lity a a fer below <u>TER</u> t	nd wm , plo	effec linut ease prog	tivenes es to tel indicat ram.	sofi Ilusa eyou	Exte abor Ir le	ensio ut yo vel o	on progra our expension of unders	ams are extremely rience with this standing <u>BEFORE</u> t	he
	BEF	ORE 1	THE PF	ROGRAM	AFT	ER T	HE PR	OGRAM		
	Poor									
	1.001	Fair	Good	Excellent	Poor	Fair	Good	Excellent		
Current Water Supply and Demand in Texas	0	Fair	Good	Excellent	Poor	Fair	Good	Excellent		
Current Water Supply and Demand in Texas Identifying problems with irrigation system performance	0	O	Good O	Excellent O O	Poor O	Fair O	Good	Excellent O		
Current Water Supply and Demand in Texas Identifying problems with irrigation system performance Conducting an irrigation catch can test	0	Fair O O O	Good () () () ()	Excellent O O O	Poor O O O	Fair 〇 〇 〇	Good	Excellent O O O		
Current Water Supply and Demand in Texas Identifying problems with irrigation system performance Conducting an irrigation catch can test Calculating precipitation rate	0	Fair O O O O O	Good () () () () () () () () () ()	Excellent O O O O O	Poor 0 0 0 0	Fair O O O O	Good () () () () ()	Excellent O O O O		
Current Water Supply and Demand in Texas Identifying problems with irrigation system performance Conducting an irrigation catch can test Calculating precipitation rate Determining turf water requirements using ETo	0 0 0 0	Fair O O O O O O O	Good 0 0 0 0 0 0	Excellent C C C C C C C	Poor 0 0 0 0 0 0	Fair 0 0 0 0 0	Good 0 0 0 0	Excellent O O O O O O O		
Current Water Supply and Demand in Texas Identifying problems with irrigation system performance Conducting an irrigation catch can test Calculating precipitation rate Determining turf water requirements using ETo Creating an irrigation Schedule	0 0 0 0 0	Fair O O O O O O O O O O O O O O	Good 0 0 0 0 0 0 0 0	Excellent C C C C C C C C C C C C C	Poor 0 0 0 0 0 0 0	Fair 0 0 0 0 0 0 0	Good 0 0 0 0 0 0 0	Excellent		

Default Report in Qualtrics

• The default report in Qualtrics produces a chart and tables. The chart (below) is cluttered with all seven items and difficult to interpret. It is not usable.



The tables, on the other hand, contains the pieces of information needed to generate summary table numbers (example below for BEFORE). This same table is produced by Qualtrics for both the BEFORE and AFTER portions of the retrospective post for each item. Note it contains the mean value for each item along with the frequency and percent for each point on the scale (Poor, Fair, Good, Excellent).

# Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1 Current Water Supply and Demand In Texas	3.00	4.00	3.64	0.48	0.23	14
2 Identifying problems with irrigation system performance	3.00	4.00	3.64	0.48	0.23	14
3 Conducting an irrigation catch can test	2.00	4.00	3.71	0.59	0.35	14
4 Calculating precipitation rate	2.00	4.00	3.64	0.61	0.37	14
5 Determining turf water requirements using ETo	2.00	4.00	3.50	0.63	0.39	14
6 Creating an irrigation Schedule	2.00	4.00	3.57	0.62	0.39	14
7 Resources and Tools for Irrigation Scheduling	3.00	4.00	3.64	0.48	0.23	14
# Field	Poor	Fair	Good	B	ccellent	Total
1 Current Water Supply and Demand in Texas	0.00% 0	0.00% 0	35.71% 5	6	4.29% 9	14
2 Identifying problems with irrigation system performance	0.00% 0	0.00% 0	35.71% 5	6	4.29% 9	14
3 Conducting an irrigation catch can test	0.00% 0	7.14% 1	14.29% 2	7	8.57% 11	14
4 Calculating precipitation rate	0.00% 0	7.1.4% 1	21.43% 3	7	1.4396 10	14
5 Determining turf water requirements using ETo	0.00% 0	7.14% 1	35.71% 5	5	7.14% 8	14
6 Creating an irrigation Schedule	0.00% 0	7.14% 1	28.57% 4	6	4.29% 9	14
7 Resources and Tools for Irrigation Scheduling	0.00% 0 Shaviar ayun 1 7 of 7	0.00% 0	35.71% 5	6	4.29% 9	14

Export Retrospective Post of the Default Report

 Export just the retrospective post items to CSV format.
 While in the default report, <u>click on</u> "Share Report" and <u>select</u> "CSV (Comma Separated)."/



This brings up the "Export Report" interface. <u>Click on</u> "Select All" which actually deselects all the check boxes. Then <u>click on</u> just the two retrospective post items. <u>Click on</u> Export Pages.

Expo	rt Report	:						
PDF	Word	PowerPoint	CSV					
Q Searc	h Pages							
Sel	ect All							SELECTED: 2
Q1: importar	#1 - Your view It. Please I	vs on the quali BEFORE THE	ty and effe PROGRAM	ctiveness o	f Extensi	on program	s are ex	tremely
Q1: importar	#2 - Your view it. Please /	vs on the quali AFTER THE Pf	ty and effe ROGRAM	ctiveness o	f Extensi	on program	s are ex	tremely
Q3	- Overall, hov	v satisfied are	you with th	is activity?				
Q4	- 2. How satis	sfied are you v	ith the CO	NTENT asp	ects of th	e activity?		
Q5 may incl	- Do you anti ude increased	cipate an ecor I revenue, red	omic bene uced costs	fit as a res , and/or av	ult of atte oiding fut	nding this a ure costs).	activity?	(Note: this
Q6	- Would you i	recommended	this activit	y to others	?			
Q7 know mo	- Your though pre about, etc	nts on the prog .).	ram (what	you liked n	nost, like	l least, topi	cs you v	want to
Q8	- 12. You are.							
						Cancel	Exp	oort Pages

This exports the retrospective post tables to your Downloads folder in CSV format, which is usable by Excel.

Download Previous Exp	ports			
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• Open the .csv file in Excel. Note it has the relevant tables from Qualtrics <u>for all seven items</u> on both the BEFORE and AFTER columns (see below). Now, it is just a matter of using Excel to produce the summary table numbers.

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4																	_			-	
5	Q1#1 - Y	our v	iews on	the quality a	and effe	ectiveness of	Ext	ensior	n prog	grams a	re ex	tremely in	npor	tant. P	lease B	EFORE TH	PROGRAM	/			
6	#	Fie	ld							Minii	mum	Maximum	Mea	an	Std Deviat	Variance	Count				
7	_	1 Cu	rrent Wa	iter Supply a	and Den	nand in Texa	S	-			1	3	-	2.14	0.64	0.41	. 14				
8		2 Ide	entifying	problems v	vith irrig	gation syster	n pe	rtorm	ance		2	4	-	3	0.65	0.43	14				
9		3 Co	nducting	an irrigatio	n catch	can test					1	3	-	2.29	0.8	0.63	14				
10		4 Cal	iculating	precipitatio	on rate						1	4	-	2.5	0.91	0.82	14				
12	-	5 De	terminir acting on	ig turi water	chodulo	ements usin	BEIG)			1	4	-	2.30	0.89	0.8	14				
12		7 80	sources	and Tools fo	r Irrigat	= ion Scheduli	nσ				1	4		2.04	0.82	0.6	14				
14		7 NC.	sources		i inigat	Ion Schedun	18				-		$ \subseteq $	2.5	0.02	0.00	, 14				
15	#	Qu	estion							Poor			Fair			Good		Excellent		Total	
16		1 Cu	rrent Wa	iter Supply a	and Dem	nand in Texa	s			14	.29%	2	5	7.14%	8	28.57%	4	0.00%	0		14
17		2 Ide	entifying	problems v	vith irrig	ation syster	n pe	rform	ance	0	.00%	0	2	1.43%	3	57.14%	8	21.43%	3		14
18		3 Co	nducting	an irrigatio	n catch	can test				21	.43%	3	2	8.57%	4	50.00%	5 7	0.00%	0		14
19		4 Cal	culating	precipitatio	on rate					14	.29%	2	3	5.71%	5	35.71%	5 5	14.29%	2		14
20		5 De	terminir	ng turf wate	r require	ements usin	g ET o	c		21	.43%	3	2	8.57%	4	42.86%	6	7.14%	1		14
21		6 Cre	eating an	irrigation S	chedule	2				7	.14%	1	4	2.86%	6	28.57%	6 4	21.43%	3		14
22		7 Re	sources	and Tools fo	or Irrigat	ion Schedul	ing			7	.14%	1	5	0.00%	7	28.57%	4	14.29%	2		14
23																					
24	Q1#2 - Y	our v	iews on	the quality a	and effe	ectiveness of	Ext	ensior	n prog	grams a	re ex	tremely in	npor	tant. P	lease A	FTER THE	PROGRAM				
25	#	Fie	ld							Minii	mum	Maximum	Me	an	Std Deviat	Variance	Count				
26		1 Cu	rrent Wa	iter Supply a	and Dem	nand in Texa	s				3	4	-	3.64	0.48	0.23	14				
27	-	2 Ide	entitying	problems v	vith irrig	gation syster	n pe	rtorm	ance		3	4		3.64	0.48	0.23	14				
28	-	3 CO	naucting	an migatio	n catch	can test					2	4	-	3./1	0.59	0.35	14				
29		s Do	terminir	precipitation	n rate	aments usin	a 67.	0			2	4		2 5	0.01	0.37	14				
21	-	5 De	anting on	ig turi water	chedule	ements usin	BEI	,			2	4	⊢	2 57	0.03	0.35	14				
32		7 Ref	sources	and Tools fo	r Irrigat	- ion Scheduli	nσ				3	4		3 64	0.02	0.03	14				
33													\sim	0.04	0.40	0.20	14				
34	#	Qu	estion							Poor			Fair		(Good		Excellent	1	Total	
35		1 Cu	rrent Wa	iter Supply a	and Dem	nand in Texa	s			0	.00%	0		0.00%	6	35.71%	5	64.29%	9		14
36		2 Ide	entifying	problems v	vith irrig	gation syster	n pe	rform	ance	0	.00%	0		0.00%		35.71%	5	64.29%	9		14
37		3 Co	nducting	an irrigatio	n catch	can test				0	.00%	0		7.14%	4	14.29%	2	78.57%	11		14
38		4 Cal	culating	precipitatio	on rate					0	.00%	0		7.14%	1	21.43%	3	71.43%	10		14
39		5 De	terminir	ng turf wate	r require	ements usin	g ET o	þ		0	.00%	0		7.14%	1	35.71%	5	57.14%	8		14
40		6 Cre	eating an	irrigation S	chedule	2				0	.00%	0		7.14%	4	28.57%	i 4	64.29%	9		14
41		7 Re	sources	and Tools fo	or Irrigat	ion Schedul	ng			0	.00%	0		0.00%	d	35.71%	5	64.29%	9		14

Using Excel to Produce Summary Table Numbers

• First, calculate the percent change in means. Remember, percent change for a scale item has a different formula than the traditional calculation of percent change. The formula is (after mean – before mean) / 3 (for a fourpoint scale). Out to the right, <u>on the same column as the first retrospective post item</u>, enter the calculation. The after mean (cell E26 - blue square below) – the before mean (cell E7 – red square below) / 3.

		1								<u> </u>	
Q1#1 - Your views on the quality and effectiveness of Extension prog	rams are ex	tremely in	nportant. F	Please B	EFORE THE	PROGRAM	1			\mathbf{X}	
# Field	Minimum	Maximum	Mean	Std Deviat	Variance	Count				<u> </u>	Percent Change in Means
1 Current Water Supply and Demand in Texas	1	3	2.14	0.64	0.41	14					+(E26-E7)/3
2 Identifying problems with irrigation system performance	2	4	3.00	0.65	0.43	14					
3 Conducting an irrigation catch can test	1	3	2.29	0.8	0.63	14					
4 Calculating precipitation rate	1	4	2.50	0.91	0.82	14					
5 Determining turf water requirements using ETo	1	4	2.36	0.89	0.8	14					
6 Creating an irrigation Schedule	1	4	2.64	0.89	0.8	14					
7 Resources and Tools for Irrigation Scheduling	1	4	2.50	0.82	0.68	14					
# Question	Poor		Fair		Good		Excellent		Total		
1 Current Water Supply and Demand in Texas	14.29%	2	57.14%	8	28.57%	4	0.00%	0	14		
2 Identifying problems with irrigation system performance	0.00%	0	21.43%	3	57.14%	8	21.43%	3	14		
3 Conducting an irrigation catch can test	21.43%	3	28.57%	4	50.00%	7	0.00%	0	14		
4 Calculating precipitation rate	14.29%	2	35.71%	5	35.71%	5	14.29%	2	14		
5 Determining turf water requirements using ETo	21.43%	3	28.57%	4	42.86%	6	7.14%	1	14		
6 Creating an irrigation Schedule	7.14%	1	42.86%	6	28.57%	4	21.43%	3	14		
7 Resources and Tools for Irrigation Scheduling	7.14%	1	50.00%	7	28.57%	4	14.29%	2	14		
Q1#2 - Your views on the quality and effectiveness of Extension prog	rams are ex	tremely in	nportant. F	Please A	FTER THE	PROGRAM					
# Field	Minimum	Maximum	Mean	Std Deviat	Variance	Count					
1 Current Water Supply and Demand in Texas	3	4	3.64	0.48	0.23	14					
2 Identifying problems with irrigation system performance	3	4	3.64	0.48	0.23	14					
3 Conducting an irrigation catch can test	2	4	3.71	0.59	0.35	14					
4 Calculating precipitation rate	2	4	3.64	0.61	0.37	14					
5 Determining turf water requirements using ETo	2	4	3.50	0.63	0.39	14					
6 Creating an irrigation Schedule	2	4	3.57	0.62	0.39	14					
7 Resources and Tools for Irrigation Scheduling	3	4	3.64	0.48	0.23	14					

For the first item, the percent change is 0.50. Format to be a percent with one decimal so it appears as 50.0%. Then simply copy that calculation to the other six items (see below). You now have the percent change in means for all seven retrospective post items.

Percent C	hange in Me	eans
50.0%		
21.3%		
47.3%		
38.0%		
38.0%		
31.0%		
38.0%		

Second, calculate the percentage of respondents at the top two levels of understanding (Good or Excellent) –
before and after the program – for each of the seven retrospective post items. Again, out to the right <u>on the
same column as the first item</u>, enter the calculation. The "good" percentage (cell G16 - blue square below) + the
"excellent" percentage (cell I16 – red square below).

						\rightarrow			
	Good		Excellent		Total		% at Good	or Exceller	ıt
8	28.57%	4	0.00%	0	14		+G16+I16		
3	57.14%	8	21.43%	3	14				
4	50.00%	7	0.00%	0	14				
5	35.71%	5	14.29%	2	14				
4	42.86%	6	7.14%	1	14				
6	28.57%	4	21.43%	3	14				
7	28.57%	4	14.29%	2	14				

For the first items, the combined percentage is 28.57% (since the percentage at Excellent was 0). Then copy the calculation to the other BEFORE items.

-															
A	В	С	D	E	F	G	н	1	J	к	L	М	N	0	P
										$\mathbf{\Lambda}$					
Q1#1 -	Your views on the quality and effectiveness of Extension prog	rams are ext	remely im	portant. P	lease BE	FORE THE	E PROGRAM	1							
#	Field	Minimum	Maximum	Mean	Std Deviat	Variance	Count						Percent Ch	ange in Me	ans
	1 Current Water Supply and Demand in Texas	1	3	2.14	0.64	0.41	14						50.0%		
	2 Identifying problems with irrigation system performance	2	4	3	0.65	0.43	14				\mathbf{N}		21.3%		
	3 Conducting an irrigation catch can test	1	3	2.29	0.8	0.63	14						47.3%		
	4 Calculating precipitation rate	1	4	2.5	0.91	0.82	14						38.0%		
	5 Determining turf water requirements using ETo	1	4	2.36	0.89	0.8	14				\		38.0%		
	6 Creating an irrigation Schedule	1	4	2.64	0.89	0.8	14						31.0%		
	7 Resources and Tools for Irrigation Scheduling	1	4	2.5	0.82	0.68	14					\mathbf{N}	38.0%		
#	Question	Poor		Fair		Good		Excellent	Т	otal			% at Good	or Exceller	t (Before)
	1 Current Water Supply and Demand in Texas	14.29%	2	57.14%	8	28.57%	4	0.00%	0	14		<u> </u>	28.57%		(,
	2 Identifying problems with irrigation system performance	0.00%	0	21.43%	3	57.14%	8	21.43%	3	14			78.57%		
	3 Conducting an irrigation catch can test	21 43%	3	28 57%	4	50.00%	7	0.00%	0	14			50.00%		
	4 Calculating precipitation rate	14 29%	2	35 71%	5	35 71%	5	14 29%	2	14			50.00%		
	5 Determining furf water requirements using FTo	21.43%	- 3	28 57%	4	42.86%	6	7.14%	1	14			50.00%		
	6 Creating an irrigation Schedule	7 14%	1	42.86%	. 6	28 57%	4	21.43%	2	14			50.00%		
	7 Resources and Tools for Irrigation Scheduling	7 14%	1	50.00%	7	28 57%	4	14 29%	2	14			42.86%		
	, hesources and roots for imgation benedating	712470	-	50.0070		20.0770		14.2070	~	14			42.0070		
01#2 -	Your views on the quality and effectiveness of Extension prog	rams are ext	remely im	portant. P	lease Al	FTER THE	PROGRAM								
#	Field	Minimum	Maximum	Mean	Std Deviat	Variance	Count								
	1 Current Water Supply and Demand in Texas	3	4	3.64	0.48	0.23	14								
	2 Identifying problems with irrigation system performance	3	4	3.64	0.48	0.23	14								
	3 Conducting an irrigation catch can test	2	4	3 71	0.59	0.35	14								
	4 Calculating precipitation rate	2	4	3 64	0.61	0.37	14								
	5 Determining furf water requirements using FTo	2	4	3.5	0.63	0.39	14								
	6 Creating an irrigation Schedule	2	4	3 57	0.62	0.39	14								
	7 Resources and Tools for Irrigation Scheduling	3	4	3.64	0.48	0.23	14								
	Quarties	Deer		E a la		0		Currelline t		- 4 - 1			N at Card		
#	Question	Poor		Fair		G000		Excellent	1	otal			% at Good	or exceller	it (After)
	1 Current Water Supply and Demand in Texas	0.00%	0	0.00%	0	35.71%	5	64.29%	9	14			100.00%		
	2 Identifying problems with irrigation system performance	0.00%	0	0.00%	0	35.71%	5	64.29%	9	14			100.00%		
	3 Conducting an irrigation catch can test	0.00%	0	7.14%	1	14.29%	2	/8.5/%	11	14			92.86%		
	4 Calculating precipitation rate	0.00%	0	7.14%	1	21.43%	3	/1.43%	10	14			92.86%		
	5 Determining turf water requirements using ETo	0.00%	0	7.14%	1	35.71%	5	57.14%	8	14		-	92.85%		
	6 Creating an irrigation Schedule	0.00%	0	7.14%	1	28.57%	4	64.29%	9	14	~		92.86%		
	7 Resources and Tools for Irrigation Scheduling	0.00%	0	0.00%	0	35.71%	5	64.29%	9	14			100.00%		

Then copy the same calculation to the AFTER items.

• At this point, you can move cells in the spreadsheet to better resemble a table. Here the BEFORE and AFTER means were copied from the original table to the left of the "Percent Change in Means" calculation.

			Mean	Mean			
			Before	After	Percent Char	nge in Mea	ans
Current Water Supply and Dema	and in Texas		2.14	3.64	50.0%		
Identifying problems with irriga	tion system	performance	3.00	3.64	21.3%		
Conducting an irrigation catch ca	an test		2.29	3.71	47.3%		
Calculating precipitation rate			2.50	3.64	38.0%		
Determining turf water requirer	ments using I	ETo	2.36	3.50	38.0%		
Creating an irrigation Schedule			2.64	3.57	31.0%		
Resources and Tools for Irrigation	on Scheduling	g	2.50	3.64	38.0%		
			% at Good o	r Excellent			
Current Water Supply and Dema	and in Texas		Before	After	Pct. Point Di	fference	
Identifying problems with irriga	tion system	performance	28.6%	100.0%	71.4		
Conducting an irrigation catch ca	an test		78.6%	100.0%	21.4		
Calculating precipitation rate			50.0%	92.9%	42.9		
Determining turf water requirer	ments using I	ETo	50.0%	92.9%	42.9		
Creating an irrigation Schedule			50.0%	92.9%	42.9		
Resources and Tools for Irrigation	on Scheduling	g	50.0%	92.9%	42.9		
			42.9%	100.0%	57.1		

Do the same for the percentage of respondents at "good" or "excellent." Move cells so the BEFORE and AFTER columns are next to each other. Then do the final calculation – the Pct. Point Difference which is simply the difference between the two percentages (After – Before) * 100. Multiply by 100 prepares the resulting calculation for formatting from a percentage to a number.

Format the result to be a number with one decimal place.

- The calculations are complete. Save your spreadsheet! You now have all the numbers that go into the same summary table typically produced by Organizational Development – with one exception – Percent of Respondents with Any Increase in Understanding. This calculation is not possible with the export of the report. It requires exporting the raw data and doing record-level calculations, which is beyond the scope of this help guide.
- The next page shows the summary numbers in the Excel spreadsheet vs. the summary numbers produced by Organizational Development using SPSS.

% at Good or Excellent Before After Pct. Point Difference 28.6% 100.0% +(T17-S17)*100



		1	Mean	Mean			7
		1	Before	After	Percent Change in Me		ans
Current Water Supply and Demand in	Texas		2.14	3.64	50.0%		
Identifying problems with irrigation s	stem performance		3.00	3.64	21.3%		
Conducting an irrigation catch can test	:		2.29	3.71	47.3%		
Calculating precipitation rate			2.50	3.64	38.0%		
Determining turf water requirements	using ETo	/	2.36	3.50	38.0%		
Creating an irrigation Schedule			2.64	3.57	31.0%		
Resources and Tools for Irrigation Sch	eduling		2.50	3.64	38.0%		1
		1	% at Good o	r Excellent			
Current Water Supply and Demand in	Texas	1	Before	After	Pct. Point Di	fference	
Identifying problems with irrigation s	stem performance		28.6%	100.0%	71.4		
Conducting an irrigation catch can test			78.6%	100.0%	21.4		
Calculating precipitation rate			50.0%	92.9%	42.9		
Determining turf water requirements	using ETc		50.0%	92.9%	42.9		
Creating an irrigation Schedule			50.0%	92.9%	42.9		
Resources and Tools for Irrigation Sch	eduling		50.0%	92.9%	42.9		
			42.9%	100.0%	57.1		

	Program Content	Mean Before	Mean After	Percent Change
1	Current Water Supply and Demand in Texas	2.14	3.64	50.09
2	Identifying problems with irrigation system performance	3.00	3.64	21.39
3	Conducting an irrigation catch can test	2.29	3.71	47.39
4	Calculating precipitation rate	2.50	3.64	38.09
5	Determining turf water requirements using ETo	2.36	3.50	38.09
6	Creating an irrigation Schedule	2.64	3.57	31.09
7	Resources and Tools for Irrigation Scheduling	2.50	3.64	38.09

%	Table: % at Good/Excellent, Rct Who Increased Understanding					
	- Program Content	Pct. at Good or Excellent Before the Program	Pct. at Good or Excellent After the Program	Pct. Point Difference (After vs. Before)	Pct. With Any Increase in Understanding	
1	Current Water Supply and Demand in Texas	28.6%	100.0%	71.4		
2	Identifying problems with irrigation system performance	78.6%	100.0%	21.4		
3	Conducting an irrigation catch can test	50.0%	92.9%	42.9		
4	Calculating precipitation rate	50.0%	92.9%	42.9		
5	Determining turf water requirements using ETo	50.0%	92.9%	42.9		
6	Creating an irrigation Schedule	50.0%	92.9%	42.9		
7	Resources and Tools for Irrigation Scheduling	42.9%	100.0%	57.1		

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