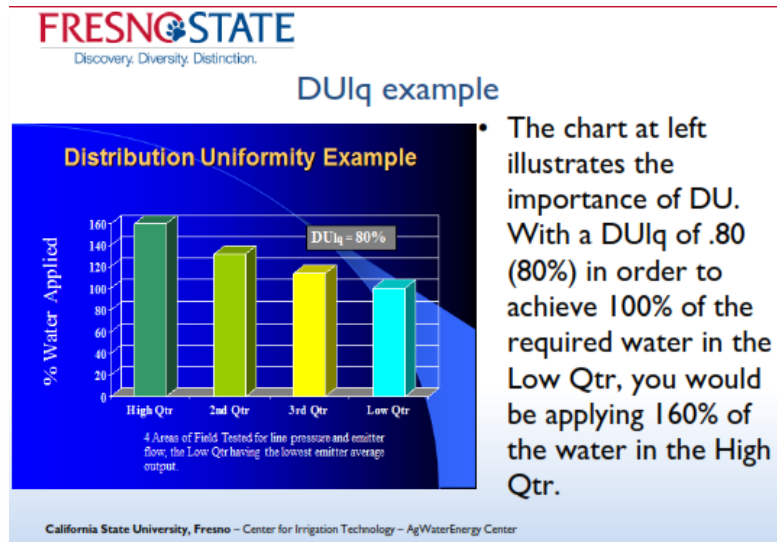




IrriGreen CIT Test Shows 40% Water Savings

Today’s irrigation systems are based on decades old mechanical technology where multiple heads are installed on along the edges of a zone and spray water inward for head-to-head coverage. These systems dependent on overlapping arcs to completely cover a zone uniformly making angles and curves extremely difficult to cover properly and waste significant water.



Their overlapping arcs waste water because of the “75/25” paradigm: **75% of every zone receives too much water to ensure the remaining 25% the zone gets enough water** as illustrated by this Center for Irrigation Technology slide.

In addition to overlapping, **10-15% more water is commonly wasted due to overspray** outside the zone shape landing on sidewalks and buildings.

In 2014, Dr. Brian Horgan, turf grass specialist at the University of Minnesota, made this conclusion after comparing IrriGreen with mechanical sprinklers: **“The Catch Can method is not a suitable assessment of the IrriGreen system’s wetting ability and uniformity.”**

The IrriGreen Genius Sprinkler was tested by the Center for Irrigation Technology (CIT), Fresno State, in against mechanical sprinklers. CIT designed rectangular, square and circular shaped test plots and installed best-in-class mechanical sprinklers for each test using 6-9 mechanical sprinklers versus 1 IrriGreen sprinkler. CIT measured soil moisture (SMS) and catch can volume before and after each watering event as well as the gallons used for each test.

The IrriGreen system used 42.2% less water on a 30’ x 60’ rectangle.

For the 30’ x 60’ rectangular test plot, **go to the CIT Study, Table 1, columns CIT-2 and IRRG-2.** 6 Hunter I-20 heads used 492 gallons to achieve a 11.4% increase in soil moisture. A single IrriGreen head used 284 gallons to achieve a 11.0% increase in soil moisture.

The IrriGreen system used 36.7% less water on a 30’ circle.

For the 30’ circle test plot, **go to the CIT Study, Table1, rows CIT-6 and IRRG-6.** 8 Hunter Pro Adjustable sprays used 240 gallons to achieve a 9.6% increase in soil moisture. A single IrriGreen head used 152 gallons to achieve a 9.6% increase in soil moisture.

Note: There was an SMS probe failure during the 30’ x 30’ square test plot measurements as noted in the report.

How does IrriGreen save water?



IrriGreen multi-stream nozzle applies water evenly everywhere in any shape zone using software to calculate the surface area every 0.8 degrees of rotation. Software digitally controls the rotational speed and valve opening to deliver an equal amount of precipitation everywhere within the zone shape.

There are 14 different size/volume streams of water designed to delivering a uniform amount of water from the head to the edge of the zone. Smaller streams spray close to the head and stream sizes increase proportionally as the distance from the head increases. Water movement in the soil fills in the small gaps between the streams, much like a like drip irrigation.

The IrriGreen system evenly applies 0.05 inches of water per rotation. Users select how many inches of water per watering event (in increments of 0.05") and software calculates run times and inserts the time into the watering schedule. This precise application of water eliminates overwatering due to inaccurate calculation of application rate in mechanical systems.

In conclusion, IrriGreen digital sprinkler system eliminates water waste due to overwatering, overspray, and application rate inaccuracy.

REPORT TO: Jeffrey Woodson
IrriGreen, Inc.

FROM: Tim Jacobsen, Field Research Manager
Edward Norum, Agricultural Engineer
Center for Irrigation Technology

DATE: September 23, 2016

SUBJECT: Final report on tests conducted on IrriGreen Genius® sprinkler,
May-August, 2016

Introduction

IrriGreen has developed a unique sprinkler that waters one geographic area with a single programmable sprinkler. The IrriGreen Genius® sprinkler has 14 nozzles in the sprinkler head that can vary the water discharge to fit the geographical area it is programmed to water.

Objective

The Center for Irrigation Technology (CIT) in Fresno, California contracted to conduct a number of sprinkler distribution tests as directed by IrriGreen personnel. The specifics of the individual tests are as defined in the contract deliverables. The testing work began with 30 ft x 60 ft rectangular tests to determine that the equipment was operational. Testing also included two Smart Water Application Technologies (SWAT) configurations: a 30 ft diameter circle test and a 30 ft x 30 ft square test.

Field Testing Design and Procedures

The field testing was conducted on the Center for Irrigation Technology turf plots located on the University Agricultural Laboratory (UAL) at Fresno State between May-August 2016.

Plots #1 and #2 in the turf plot research facility were selected to evaluate the performance of the IrriGreen Genius® sprinkler. The plots were de-sodded and trenched for the installation of the IrriGreen Genius® sprinkler on April 8-9, 2016. Electrical infrastructure to support IrriGreen Genius® controllers was installed at that time.

One IrriGreen Genius® sprinkler was installed in the middle of plot #1 located 15 ft from the east and west edges and 30 ft from the north and south edges. Simultaneously, PVC was installed to conduct tests. Seven Hunter Pro Adjustable sprinklers were installed to conduct the 30 ft diameter circle SWAT test. Nine Hunter MP Rotators were installed to conduct the 30 ft x 30 ft square SWAT test. Six Hunter I-20s were installed to conduct the 30 ft x 60 ft rectangular test.

On April 14-15, 2016, Plots #1 and #2 were re-sodded with tall fescue turf grass, a perennial grass used in Fresno landscaping. The plots were grown out for five weeks in preparation for a May test start date. The standard booster pump at the pump station was replaced with a high pressure pump to provide the 65 psi static pressure recommended by IrriGreen.

Testing began on May 24, 2016. No usable data was obtained as a result of multiple problems, including pressure and flow meter issues. A pump was installed, along with a sophisticated controller, to achieve the required pressure. A pressure-regulating valve was installed at the plot to maintain consistent pressure.

Testing resumed on July 9, 2016 and was completed on August 5, 2016. The extended testing period was necessary to accommodate wind and soil moisture issues. Soil moisture was recorded with a Spectrum Technologies Field Scout, model TDR 300 equipped with 4.7-in. probes. Soil moisture was recorded as a percent of volumetric water content (VWC%) on the same grid pattern used to place the precipitation catchments and was measured before, immediately after and three hours after the conclusion of each test (reference Drawing No. 1499-2 for rain gauge and SMS reading). The probes required frequent inspection and adjustment to maintain consistent soil moisture readings. One of the probes cracked during the IrriGreen Genius® SWAT square test resulting in abnormally low readings. The test was repeated on August 5, 2016 with new probes.

Severe soil settling with elevated soil moisture occurred on the north edge of Plot #1 and required relocating the IrriGreen Genius® sprinkler to Plot #2 for the duration of the trial. The SWAT evaluation area of Plot #1 was not affected and Plot #1 continued to be utilized for the Hunter tests.

Precipitation catchments from the Irrigation Technology Center at Texas A&M were used in the SWAT testing and the 30 ft x 60 ft rectangular area tests. These catchments were installed at turf level with approximately 0.5 in. of the catchment extending above the level of the turf (see Figure 1). The catchments were installed on a 6 ft x 6 ft grid for the 30 ft x 60 ft rectangular area tests and on a 3 ft x 3 ft grid for the SWAT circle and square tests as prescribed in the SWAT testing protocol.

Data was recorded on data sheets in the field then transferred to spreadsheets. Data included readings from the catchments and soil moisture sensors. The data sheets are included in the appendix.



Figure 1. Catchments as installed on turf Plot #2 with the IrriGreen Genius® sprinkler

Table 1 provides a summary of the test runs. As reported in Table 1:

- CIT-1.** For the 30 x 60 ft rectangular test on Hunter I-20 rotors evaluated using catch cans, the application efficiency was 80.7% and the distribution uniformity was 71.4% (Appendix A-2).
- IRRG-1.** For the 30 x 60 ft rectangular test on the IrriGreen Genius® evaluated using catch cans, the application efficiency was 54.1% and the distribution uniformity was 43.0% (Appendix A-5).
- CIT-2.** For the 30 x 60 ft rectangular test on Hunter I-20 rotors evaluated using soil moisture sensors, the application efficiency was 69.8% and the distribution uniformity was 37.1% (Appendix A-3).
- IRRG-2.** For the 30 x 60 ft rectangular test on the IrriGreen Genius® evaluated using soil moisture sensors, the application efficiency was 65.1% and the distribution uniformity was 55.0% (Appendix A-6).
- CIT-3.** For the SWAT 30 x 30 ft square test on Hunter MP Rotators evaluated using catch cans, the application efficiency was 80.5% and the distribution uniformity was 73.8% (Appendix A-8).
- IRRG-3.** For the SWAT 30 x 30 ft square test on the IrriGreen Genius® evaluated using catch cans, the application efficiency was 57.7% and the distribution uniformity was 44.5% (Appendix A-11).

-
- CIT-4.** For the SWAT 30 x 30 ft square test on Hunter MP Rotators evaluated using soil moisture sensors, the application efficiency was 9.8% and the distribution uniformity was 2.3% (Appendix A-9).
- IRRG-4.** For the SWAT 30 x 30 ft square test on the IrriGreen Genius® evaluated using soil moisture sensors, the application efficiency was 41.9% and the distribution uniformity was 26.2% (Appendix A-12).
- CIT-5.** For the SWAT 30 ft diameter circular test on Hunter Pro Adjustable evaluated using catch cans, the application efficiency was 57.8% and the distribution uniformity was 47.6% (Appendix A-14).
- IRRG-5.** For the SWAT 30 ft diameter circular test on the IrriGreen Genius® evaluated using catch cans, the application efficiency was 32.5% and the distribution uniformity was 17.0% (Appendix A-17).
- CIT-6.** For the SWAT 30 ft diameter circular test on Hunter Pro Adjustable evaluated using soil moisture sensors, the application efficiency was 60.5% and the distribution uniformity was 42.7% (Appendix A-15).
- IRRG-6.** For the SWAT 30 ft diameter circular test on the IrriGreen Genius® evaluated using soil moisture sensors, the application efficiency was 60.2% and the distribution uniformity was 43.0% (Appendix A-18).

NOTE: This test report shall not be reproduced, except in full, without written approval of the Center for Irrigation Technology director.

Table 1. Summary of test runs for CIT and Irrigreen Genius® irrigation systems (IRRG)

| TEST # | TEST DATE | MFG | SYSTEM | SPEC | PLOT # | PLOT SIZE ft X ft | PLOT SHAPE | ADE-QUACY (%) | INSTR | PRES psi | GAL | AVE APP RATE | EFF APP RATE | OVER-SPRAY LOSS (%) | PATTERN LOSS (%) | APP EFF (%) | DU (%) |
|--------|-----------|-----------|---------------------------------|--------------------|--------|----------------------|----------------|---------------|------------|----------|-----|---------------------------|--------------------------|---------------------|------------------|-------------|--------|
| CIT-1 | 7/11 | Hunter | sprinklers | 1-20 2.0 nozzle | 1 | 30 X 60 | rectangle | 75 | catch cans | 40 | 497 | 0.470 in./hr | 0.411 in./hr | N/A | 19.3 | 80.7 | 71.4 |
| CIT-2 | 7/11 | Hunter | sprinklers | 1-20 2.0 nozzle | 1 | 30 X 60 | rectangle | 75 | SMS | 40 | 497 | 11.413 delta VWC, % | 9.496 delta VWC, % | N/A | 30.2 | 69.8 | 37.1 |
| IRRG-1 | 7/9 | IrriGreen | Genius® digital sprinkler | Model # 400101 | 1 | 30 X 60 | rectangle | 75 | catch cans | 65 | 284 | 0.304 in./hr | 0.194 in./hr | N/A | 45.9 | 54.1 | 43.0 |
| IRRG-2 | 7/9 | IrriGreen | Genius® digital sprinkler | Model # 400101 | 1 | 30 X 60 | rectangle | 75 | SMS | 65 | 284 | 11.029 delta VWC% | 7.890 delta VWC% | N/A | 34.9 | 65.1 | 55.0 |
| CIT-3 | 7/28 | Hunter | sprinklers | MP rotators | 1 | 30 X 30 | square SWAT | 75 | catch cans | 40 | 223 | 0.509 in./hr | 0.441 in./hr | 2.5 | 17.4 | 80.5 | 73.8 |
| CIT-4* | 7/28 | Hunter | sprinklers | MP rotators | 1 | 30 X 30 | square SWAT | 75 | SMS | 40 | 223 | 6.977 delta VWC% | 1.435 delta VWC% | 12.7 | 88.7 | 9.8 | 2.3 |
| IRRG-3 | 8/5 | IrriGreen | Genius® digital sprinkler | Model # 400101 | 2 | 30 X 30 | square SWAT | 75 | catch cans | 65 | 139 | 0.332 in./hr | 0.217 in./hr | 0 | 42.3 | 57.7 | 44.5 |
| IRRG-4 | 8/5 | IrriGreen | Genius® digital sprinkler | Model # 400101 | 2 | 30 X 30 | square SWAT | 75 | SMS | 65 | 139 | 9.8 delta VWC% | 5.4 delta VWC% | 1.3 | 57.6 | 41.9 | 26.2 |
| CIT-5 | 7/29 | Hunter | sprinklers | Pro adjustable | 1 | 30 diam | circle SWAT | 75 | catch cans | 40 | 240 | 1.462 in./hr | 1.053 in./hr | 10.7 | 35.2 | 57.8 | 47.6 |
| CIT-6 | 7/29 | Hunter | sprinklers | Pro adjustable | 1 | 30 diam | circle SWAT | 75 | SMS | 40 | 240 | 9.608 delta VWC% | 7.263 delta VWC% | 8.3 | 34.0 | 60.5 | 42.7 |
| IRRG-5 | 7/26 | IrriGreen | Genius® digital sprinkler | Model # 400101 | 2 | 30 diam | circle SWAT | 75 | catch cans | 65 | 152 | 0.255 in./hr | 0.140 in./hr | 0 | 67.5 | 32.5 | 17.0 |
| IRRG-6 | 7/26 | IrriGreen | Genius® digital sprinkler | Model # 400101 | 2 | 30 diam | circle SWAT | 75 | SMS | 65 | 152 | 9.599 delta VWC% | 7.280 delta VWC% | 8.9 | 33.9 | 60.2 | 43.0 |

* When using the soil moisture sensor, a reading anomaly occurred on run CIT-4. The readings show a few negative values for the Delta VWC reading. For purposes of the analysis, when this occurred the negative value was replaced by zero. For future testing, multiple replicate runs should be conducted to determine variability in soil moisture sensor readings and soil consistency.

APPENDIX

| TEST | DESCRIPTION |
|---|---|
| Hunter I20 30 ft x 60 ft rectangle | Figure A-1 Field Data Sheet 7/11/16 Figure A-2 CIT-1. Catch Can Evaluation Figure A-3 CIT-2. SMS Evaluation |
| IrriGreen Genius® 30 ft x 60 ft rectangle | Figure A-4 Field Data Sheet 7/9/16 Figure A-5 IRRG-1. Catch Can Evaluation Figure A-6 IRRG-2. SMS Evaluation |
| Hunter MP Rotator SWAT 30 ft x 30 ft square | Figure A-7 Field Data Sheet 7/28/16 Figure A-8 CIT-3. Catch Can Evaluation Figure A-9 CIT-4. SMS Evaluation * |
| IrriGreen Genius® SWAT 30 ft x 30 ft square | Figure A-10 Field Data Sheet 8/5/16 Figure A-11 IRRG-3. Catch Can Evaluation Figure A-12 IRRG-4. SMS Evaluation |
| Hunter Pro Adjustable SWAT 30 ft diameter circle | Figure A-13 Field Data Sheet 7/29/16 Figure A-14 CIT-5. Catch Can Evaluation Figure A-15 CIT-6. SMS Evaluation |
| IrriGreen Genius® SWAT 30 ft diameter circle | Figure A-16 Field Data Sheet 7/26 Figure A-17 IRRG-5. Catch Can Evaluation Figure A-18 IRRG-6. SMS Evaluation |

* **NOTE:** When using the soil moisture sensor, a reading anomaly occurred on run CIT-4. The readings show a few negative values for the Delta VWC reading. For purposes of the analysis, when this occurred the negative value was replaced by zero. For future testing, multiple replicate runs should be conducted to determine variability in soil moisture sensor readings and soil consistency.

A-1. Hunter I-20 Rotors 30 x 60 Rectangle Field Data Sheet

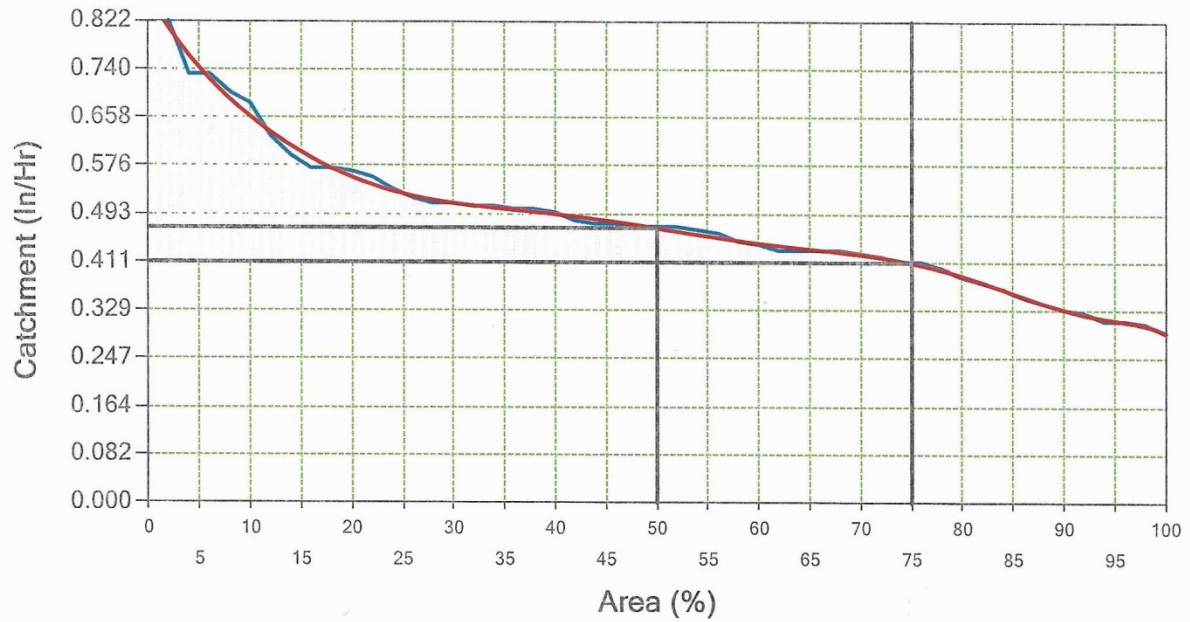
Title: Hunter I-20 30' x 60' Data Plot #1
 Date: 11-Jul-16
 Dimension: 30' x 60'
 Before VWC Ave: 33.3
 After VWC Ave: 44.8
 3 Hr VWC Ave: 46.7

CIT Meter Reading
 Before 9784
 After 10281
 Gal Used 497

Time
 Pressure 40 psi
 Duration 58 minutes

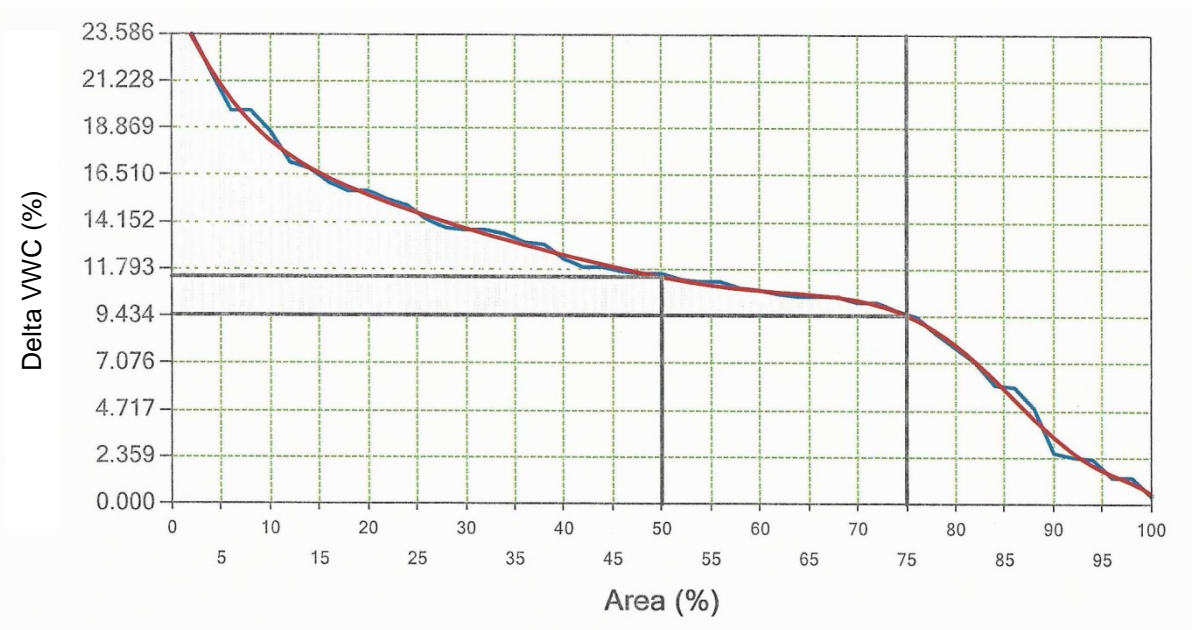
| | Row | | | | | | | | | |
|-------------|------|------|------|------|------|------|------|------|------|------|
| Observation | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Before VWC | 37.3 | 33.7 | 23.2 | 20.7 | 22.5 | 29.7 | 17.8 | 24.6 | 22.5 | 26.1 |
| After VWC | 60.1 | 36.2 | 25.4 | 26.4 | 35.8 | 34.4 | 28.6 | 35.8 | 41.6 | 45.2 |
| Delta VWC | 22.8 | 2.5 | 2.2 | 5.7 | 13.3 | 4.7 | 10.8 | 11.2 | 19.1 | 19.1 |
| 3 Hour VWC | 66.2 | 46.4 | 36.9 | 27.4 | 35.8 | 38 | 32.6 | 36.9 | 38 | 43.8 |
| Volume (CC) | 140 | 86 | 61 | 65 | 94 | 92 | 66 | 58 | 86 | 136 |
| Before VWC | 39.5 | 35.1 | 33.7 | 26.8 | 33 | 28.6 | 28.6 | 30.8 | 29 | 30.8 |
| After VWC | 60.4 | 53.2 | 45.2 | 43.1 | 43.8 | 42.4 | 40.5 | 43.4 | 45.6 | 46 |
| Delta VWC | 20.9 | 18.1 | 11.5 | 16.3 | 10.8 | 13.8 | 11.9 | 12.6 | 16.6 | 15.2 |
| 3 Hour VWC | 61.2 | 50.7 | 52 | 43.1 | 43.8 | 39.1 | 41.6 | 45.6 | 45.6 | 41.6 |
| Volume (CC) | 125 | 100 | 93 | 84 | 75 | 70 | 82 | 92 | 99 | 101 |
| Before VWC | 53.2 | 46.3 | 34.4 | 34 | 34.4 | 31.1 | 28.3 | 31.9 | 29.7 | 25.7 |
| After VWC | 55.7 | 53.9 | 47.4 | 47.1 | 47.4 | 40.9 | 43.1 | 43.4 | 36.6 | 41.3 |
| Delta VWC | 2.5 | 7.6 | 13 | 13.1 | 13 | 9.8 | 14.8 | 11.5 | 6.9 | 15.6 |
| 3 Hour VWC | 61 | 56.8 | 48.1 | 46 | 49.2 | 46.7 | 42 | 42.4 | 36.9 | 39.1 |
| Volume (CC) | 77 | 164 | 101 | 95 | 62 | 62 | 94 | 102 | 102 | 86 |
| Before VWC | 41.6 | 41.6 | 36.9 | 34 | 33 | 25.7 | 32.6 | 37.3 | 37.3 | 37.3 |
| After VWC | 51.8 | 52.5 | 51.4 | 43.1 | 46.3 | 36.9 | 42 | 47.4 | 47.8 | 48.5 |
| Delta VWC | 10.2 | 10.9 | 14.5 | 9.1 | 13.3 | 11.2 | 9.4 | 10.1 | 10.5 | 11.2 |
| 3 Hour VWC | 54.6 | 53.9 | 53.2 | 40.9 | 38.4 | 38 | 51.8 | 50.7 | 52.5 | 52.1 |
| Volume (CC) | 104 | 114 | 104 | 94 | 68 | 73 | 89 | 100 | 114 | 111 |
| Before VWC | 58 | 48.5 | 45.2 | 38.4 | 32.6 | 28.6 | 36.2 | 28.6 | 36.2 | 31.5 |
| After VWC | 68.4 | 57.8 | 55 | 48.5 | 38.4 | 41.3 | 40.2 | 43.8 | 46.3 | 44.9 |
| Delta VWC | 10.4 | 9.3 | 9.8 | 10.1 | 5.8 | 12.7 | 4 | 15.2 | 10.1 | 13.4 |
| 3 Hour VWC | 67.4 | 62.2 | 60.1 | 49.9 | 46.7 | 41.6 | 46 | 42.7 | 49.9 | 46.7 |
| Volume (CC) | 146 | 113 | 95 | 85 | 88 | 96 | 86 | 80 | 107 | 146 |

A-2. Hunter I-20 Rotors 30 x 60 Rectangle Catch Can Evaluation



| | |
|-------------------------------------|---|
| Pressure (psi): | 40.0 |
| Flow Rate (gpm): | 8.56 |
| Spacing (ft): | 30.0 x 60.0 |
| Area: | Rectangle |
| Avg Application Rate (In/Hr): | 0.470 |
| Effective Application Rate (In/Hr): | 0.411 (75%) |
| Overspray: | 0.0% |
| Pattern Loss: | 19.3% |
| Application Efficiency: | 80.7% |
| Distribution Uniformity: | 71.4% |
| Notes: | Project 1499(Irrg/15) July 11, 2016 Test conducted on turf plot no. 1 |

A-3. Hunter I-20 Rotors 30 x 60 Rectangle SMS Evaluation



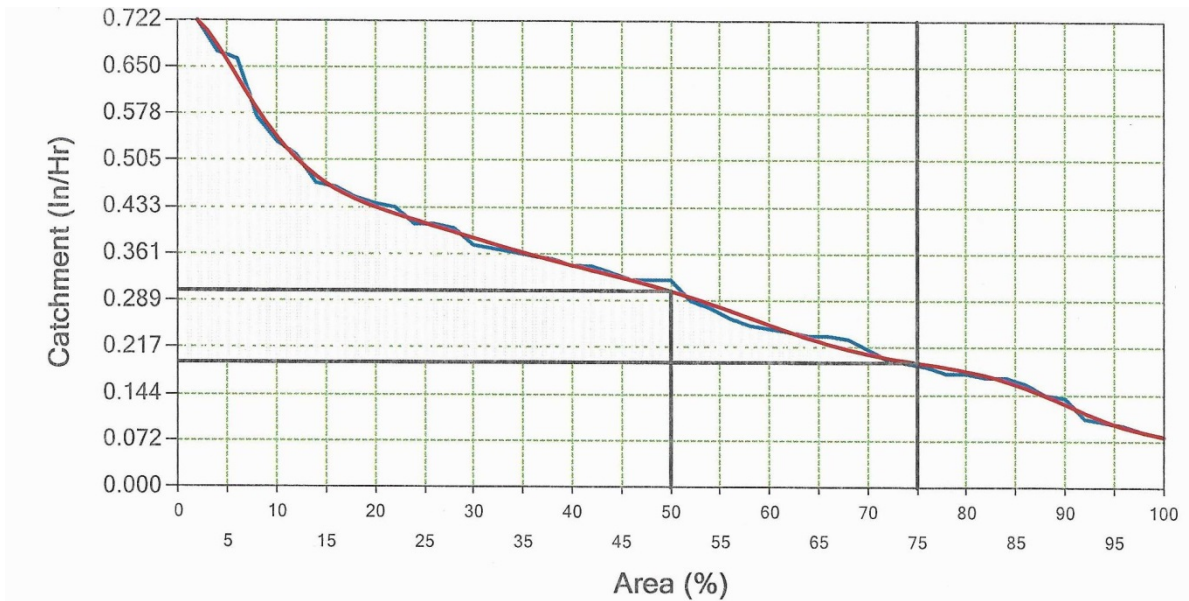
| | |
|--------------------------|---|
| Pressure (psi): | 40.0 |
| Flow Rate (gpm): | 8.56 |
| Spacing (ft): | 30.0 x 60.0 |
| Area: | Rectangle |
| Average Delta VWC (%): | 11.413 |
| Effective Delta VWC (%): | 9.496 (75%) |
| Overspray: | 0.0% |
| Pattern Loss: | 30.2% |
| Application Efficiency: | 69.8% |
| Distribution Uniformity: | 37.1% |
| Notes: | Project 1499(Irrg/15) July 11, 2016 Test conducted on turf plot no. 1 |

A-4. IrriGreen Genius® 30 x 60 Rectangle Field Data Sheet

| | | |
|--------------------------------------|-------------------|---------------------|
| Title: Genius 30' x 60' data Plot #1 | CIT Meter Reading | Time 8:00 AM |
| Date: 9-Jul-16 | Before 211496 | Pressure 65 psi |
| Dimension: 30' x 60' | After 211780 | Duration 43 minutes |
| Before VWC Ave: 36.2 | Gal Used 284 | |
| After VWC Ave: 47.2 | | |
| 3 Hr VWC Ave: 45.7 | | |

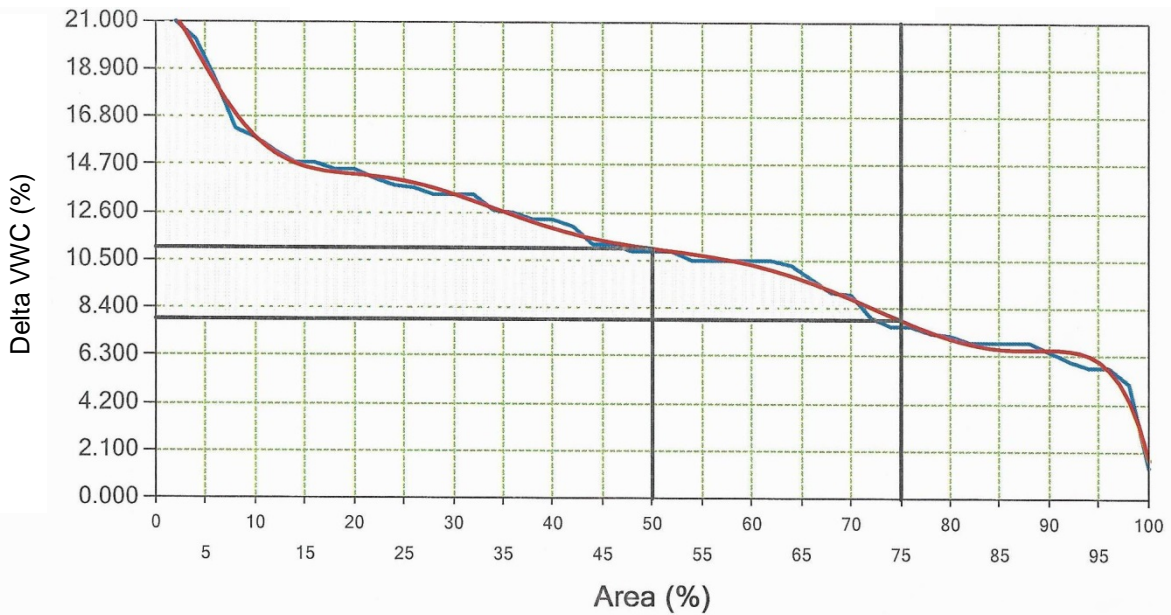
| Observation | Row | | | | | | | | | |
|-------------|------|------|------|------|------|------|------|------|------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Before VWC | 46 | 39.1 | 35.8 | 27.2 | 26.8 | 23.2 | 20.7 | 32.6 | 31.1 | 37.3 |
| After VWC | 60.8 | 52.8 | 43.4 | 33.3 | 41.3 | 39.1 | 27.2 | 47.9 | 36.9 | 38.7 |
| Delta VWC | 14.8 | 13.7 | 7.6 | 6.1 | 14.5 | 15.9 | 6.5 | 15.3 | 5.8 | 1.4 |
| 3 Hour VWC | 60.1 | 47.8 | 40.9 | 42.7 | 36.2 | 38.7 | 31.5 | 38.4 | 35.8 | 40.9 |
| Volume (CC) | 30 | 76 | 19 | 15 | 43 | 45 | 64 | 66 | 46 | 70 |
| Before VWC | 41.6 | 36.2 | 38 | 26.8 | 27.2 | 33.3 | 27.5 | 38.7 | 35.1 | 40.5 |
| After VWC | 48.5 | 46.7 | 51.4 | 39.5 | 47.4 | 43.8 | 43.8 | 52.5 | 40.9 | 47.8 |
| Delta VWC | 6.9 | 10.5 | 13.4 | 12.7 | 20.2 | 10.5 | 16.3 | 13.8 | 5.8 | 7.3 |
| 3 Hour VWC | 53.6 | 47.1 | 46 | 35.8 | 44.9 | 40.9 | 43.6 | 45.6 | 42.4 | 45.2 |
| Volume (CC) | 54 | 100 | 107 | 60 | 18 | 124 | 67 | 126 | 87 | 44 |
| Before VWC | 53.2 | 38.7 | 35.1 | 35.1 | 39.5 | 36.9 | 33.7 | 31.9 | 21.7 | 32.2 |
| After VWC | 63.7 | 51 | 56.1 | 45.6 | 50.7 | 51 | 48.5 | 42.4 | 35.1 | 41.3 |
| Delta VWC | 10.5 | 12.3 | 21 | 10.5 | 11.2 | 14.1 | 14.8 | 10.5 | 13.4 | 9.1 |
| 3 Hour VWC | 63.7 | 50.7 | 47.4 | 44.9 | 50.5 | 46.3 | 44.9 | 42 | 34.7 | 39.5 |
| Volume (CC) | 40 | 96 | 88 | 64 | 26 | 82 | 84 | 135 | 81 | 44 |
| Before VWC | 48.9 | 46.3 | 34 | 33.3 | 38 | 33 | 32.6 | 42 | 41.6 | 37.3 |
| After VWC | 56.1 | 53.2 | 47.4 | 45.6 | 48.1 | 42 | 51 | 47.1 | 49.2 | 49.9 |
| Delta VWC | 7.2 | 6.9 | 13.4 | 12.3 | 10.1 | 9 | 18.4 | 5.1 | 7.6 | 12.6 |
| 3 Hour VWC | 60.1 | 54.3 | 47.4 | 45.2 | 43.4 | 40.5 | 44.9 | 47.1 | 47.8 | 43.8 |
| Volume (CC) | 36 | 76 | 60 | 49 | 69 | 27 | 60 | 68 | 33 | 52 |
| Before VWC | 55.4 | 49.9 | 52.8 | 42.4 | 29.3 | 27.2 | 40.5 | 34 | 40.5 | 26.8 |
| After VWC | 66.3 | 56.8 | 67.3 | 52.1 | 36.2 | 38.1 | 48.5 | 46 | 51.4 | 38 |
| Delta VWC | 10.9 | 6.9 | 14.5 | 9.7 | 6.9 | 10.9 | 8 | 12 | 10.9 | 11.2 |
| 3 Hour VWC | 60.7 | 56.8 | 63.3 | 51.8 | 35.1 | 37.3 | 44.2 | 45.6 | 47.8 | 43.4 |
| Volume (CC) | 20 | 75 | 47 | 36 | 37 | 16 | 33 | 32 | 62 | 32 |

A-5. IrriGreen Genius® 30 x 60 Rectangle Catch Can Evaluation



| | |
|-------------------------------------|--|
| Pressure (psi): | 65.0 |
| Flow Rate (gpm): | 6.60 |
| Spacing (ft): | 30.0 x 60.0 |
| Area: | Rectangle |
| Avg Application Rate (In/Hr): | 0.304 |
| Effective Application Rate (In/Hr): | 0.194 (75%) |
| Overspray: | 0.0% |
| Pattern Loss: | 45.9% |
| Application Efficiency: | 54.1% |
| Distribution Uniformity: | 43.0% |
| Notes: | Project 1499(Irrg/15) July 9, 2016 Test conducted on turf plot no. 1 |

A-6. IrriGreen Genius® 30 x 60 Rectangle SMS Evaluation



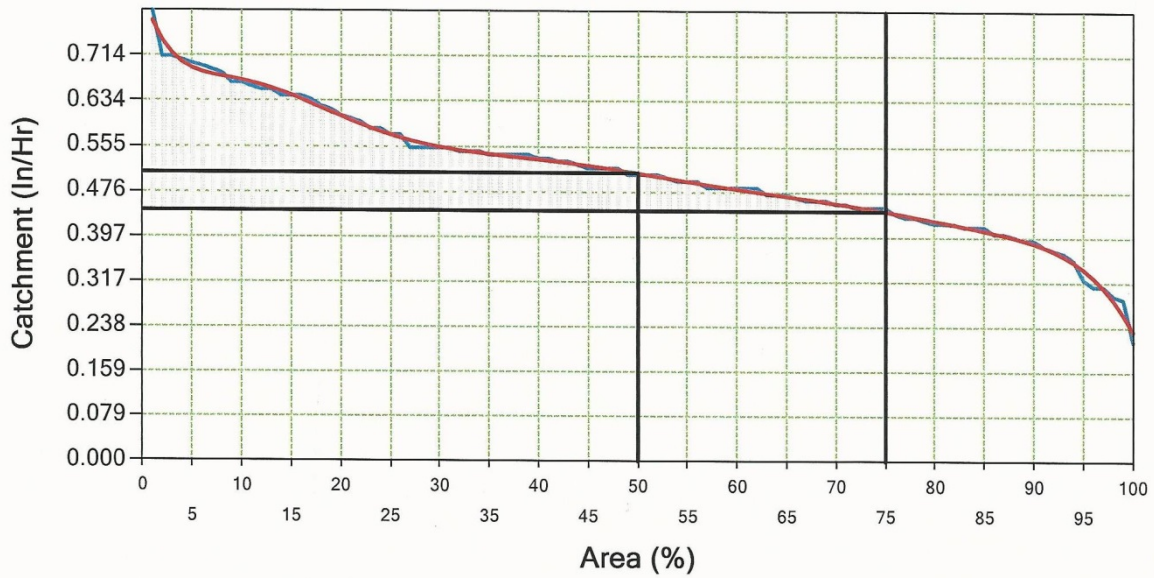
| | |
|--------------------------|--|
| Pressure (psi): | 65.0 |
| Flow Rate (gpm): | 6.60 |
| Spacing (ft): | 30.0 x 60.0 |
| Area: | Rectangle |
| Average Delta VWC (%): | 11.029 |
| Effective Delta VWC (%): | 7.890 (75%) |
| Overspray: | 0.0% |
| Pattern Loss: | 34.9% |
| Application Efficiency: | 65.1% |
| Distribution Uniformity: | 55.0% |
| Notes: | Project 1499(Irrg/15) July 9, 2016 Test conducted on turf plot no. 1 |

A-7. Hunter MP Rotator SWAT 30 x 30 Square Field Data Sheet

| | | |
|--|-------------------|-------------------------|
| Title: Hunter Rotator Square SWAT Test Plot #1 | CIT Meter Reading | Time: 8:00 AM |
| Date: 28-Jul-16 | Before: 12339 | Pressure: 40 psi |
| Dimension: 30' x 30' | After: 12562 | Run Time: 40 minutes |
| Before VWC Ave: 33.5 | Gal Used: 223 | Application: " |
| After VWC Ave: 37.7 | | Wind from SW |
| 3 Hr VWC Ave: 37.3 | | 106° F air temp at noon |

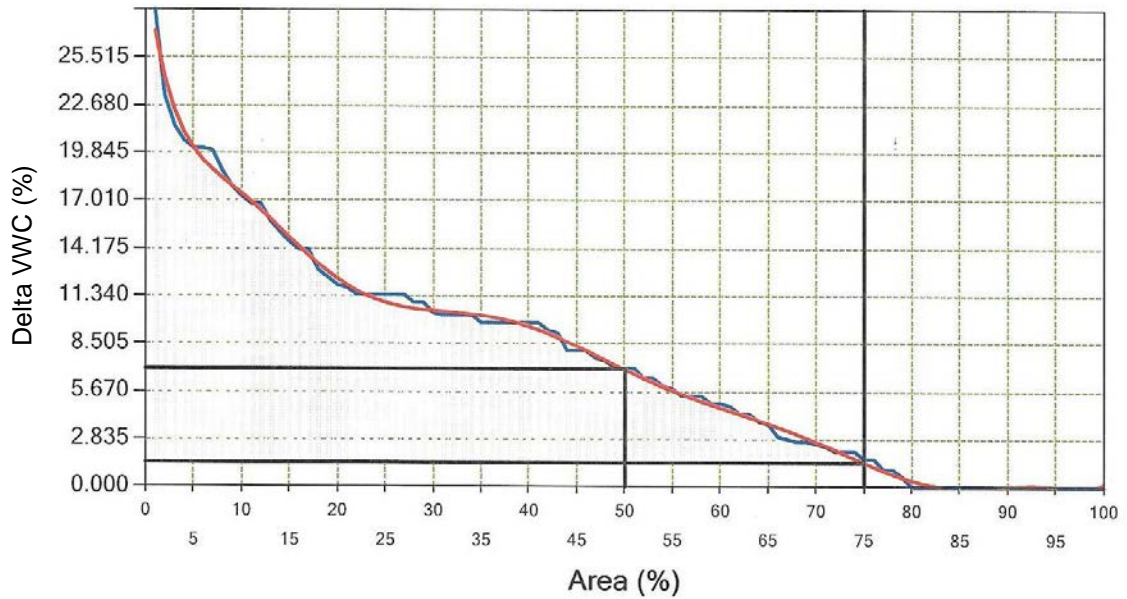
| Observation | Row | | | | | | | | | | | | | |
|-------------|------|------|------|------|------|------|------|------|------|------|-------|------|-----|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | |
| Before VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| After VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Delta VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| 3 Hour VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Volume (CC) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Before VWC | 17 | 13.8 | 18.1 | 26.4 | 27.2 | 29.7 | 27.9 | 26.7 | 22.5 | 24.3 | 26.1 | 31.1 | | 24.3 |
| After VWC | 15.6 | 14.2 | 18.9 | 29 | 25.4 | 29.7 | 23.9 | 23.2 | 22.5 | 27.2 | 22.5 | 30.8 | | 23.7 |
| Delta VWC | -1.4 | 0.4 | 0.8 | 2.6 | -1.8 | 0 | -4 | -3.5 | 0 | 2.9 | -3.6 | -0.3 | | 0.0 |
| 3 Hour VWC | 30.4 | 19.2 | 14.9 | 24.6 | 19.2 | 34 | 30.1 | 29.7 | 20 | 29.3 | 26.1 | 33.7 | | 24.7 |
| Volume (CC) | 20 | 87 | 69 | 80 | 70 | 73 | 95 | 56 | 90 | 76 | 66 | 0 | | |
| Before VWC | 14.2 | 22.5 | 25.4 | 26.8 | 30.1 | 30.4 | 23.9 | 38.6 | 37.3 | 35.1 | 34.4 | 34 | | 30.5 |
| After VWC | 21.4 | 23.6 | 30.8 | 31.1 | 33.7 | 25.7 | 23.9 | 33 | 38.7 | 38.4 | 36.9 | 46.3 | | 31.6 |
| Delta VWC | 7.2 | 1.1 | 5.4 | 4.3 | 3.6 | -4.7 | 0 | -5.6 | 1.4 | 3.3 | 2.5 | 12.3 | | 1.1 |
| 3 Hour VWC | 23.6 | 27.9 | 31 | 34 | 34 | 25.7 | 29 | 26.8 | 36.6 | 40.5 | 29.3 | 38 | | 31.5 |
| Volume (CC) | 10 | 115 | 84 | 92 | 73 | 75 | 74 | 78 | 95 | 70 | 37 | 0 | | |
| Before VWC | 17.4 | 23.9 | 30.1 | 28 | 27.2 | 21.9 | 25.4 | 24.4 | 35.8 | 33.7 | 35.5 | 38 | | 28.6 |
| After VWC | 27.5 | 34 | 37.7 | 36.6 | 32.6 | 23.9 | 31.9 | 36.9 | 37.7 | 40.2 | 37.3 | 36.9 | | 34.9 |
| Delta VWC | 10.1 | 10.1 | 7.6 | 8.6 | 5.4 | 2 | 6.5 | 12.5 | 1.9 | 6.5 | 1.8 | -1.1 | | 6.3 |
| 3 Hour VWC | 25 | 21.7 | 32.2 | 36.9 | 30.8 | 29 | 29 | 39.8 | 38.7 | 42.7 | 40.9 | 36.2 | | 34.2 |
| Volume (CC) | 5 | 122 | 138 | 105 | 84 | 78 | 96 | 114 | 109 | 80 | 54 | 0 | | |
| Before VWC | 13.1 | 33.3 | 30.1 | 22.2 | 25.7 | 39 | 39.7 | 38 | 37.3 | 34.8 | 38 | 45.2 | | 33.8 |
| After VWC | 27.9 | 30.8 | 36.2 | 35.5 | 30.7 | 30.8 | 33.3 | 41.3 | 42.4 | 39.5 | 44.2 | 44.2 | | 36.5 |
| Delta VWC | 14.8 | -2.5 | 6.1 | 13.3 | 5 | -8.2 | -6.4 | 3.3 | 5.1 | 4.7 | 6.2 | -1 | | 2.7 |
| 3 Hour VWC | 15.2 | 30.8 | 24.6 | 35.1 | 26.8 | 27.5 | 34 | 43.1 | 38 | 37.3 | 41.3 | 38 | | 33.9 |
| Volume (CC) | 10 | 94 | 112 | 124 | 84 | 96 | 116 | 121 | 91 | 78 | 65 | 0 | | |
| Before VWC | 16.7 | 28.3 | 29.7 | 36.6 | 30.4 | 39.1 | 38 | 34.4 | 36.6 | 34.4 | 38.4 | 39.1 | | 34.6 |
| After VWC | 18.9 | 24.3 | 30.4 | 30.3 | 34 | 46 | 38 | 40.9 | 44.2 | 42.7 | 44.9 | 39.8 | | 37.6 |
| Delta VWC | 2.2 | -4 | 0.7 | -6.3 | 3.6 | 6.9 | 0 | 6.5 | 7.6 | 8.3 | 6.5 | 0.7 | | 3.0 |
| 3 Hour VWC | 21.7 | 27.9 | 34.8 | 32.2 | 33 | 48.1 | 41.6 | 45.6 | 46 | 44.5 | 42.4 | 40.3 | | 39.6 |
| Volume (CC) | 7 | 96 | 84 | 96 | 88 | 88 | 111 | 102 | 88 | 79 | 72 | 0 | | |
| Before VWC | 23.2 | 26.1 | 34.4 | 37.7 | 41.3 | 33.7 | 34.8 | 42.7 | 33 | 36.2 | 37.7 | 38.7 | | 35.8 |
| After VWC | 32.6 | 33.7 | 31.9 | 39.1 | 48.1 | 41.6 | 41.6 | 44.5 | 44.2 | 40.2 | 42 | 37.7 | | 40.7 |
| Delta VWC | 9.4 | 7.6 | -2.5 | 1.4 | 6.8 | 7.9 | 6.8 | 1.8 | 11.2 | 4 | 4.3 | -1 | | 4.9 |
| 3 Hour VWC | 31.1 | 30.3 | 40.1 | 47.4 | 42 | 43.8 | 26 | 38.4 | 48 | 40.9 | 36.9 | 34 | | 39.4 |
| Volume (CC) | 12 | 90 | 72 | 79 | 73 | 62 | 72 | 90 | 94 | 86 | 51 | 0 | | |
| Before VWC | 22.1 | 23.6 | 37.2 | 35.8 | 40.5 | 35.5 | 38.4 | 38.7 | 36.9 | 40.2 | 35.5 | 35.8 | | 36.2 |
| After VWC | 27.5 | 33 | 45.2 | 49.2 | 48.1 | 46.7 | 45.2 | 45.2 | 46.3 | 46.7 | 39.1 | 34 | | 44.5 |
| Delta VWC | 5.4 | 9.4 | 8 | 13.4 | 7.6 | 11.2 | 6.8 | 6.5 | 9.4 | 6.5 | 3.6 | -1.8 | | 8.2 |
| 3 Hour VWC | 31.1 | 30.3 | 40.1 | 47.4 | 42 | 43.8 | 26 | 38.4 | 48 | 40.9 | 36.9 | 34 | | 39.4 |
| Volume (CC) | 44 | 86 | 82 | 100 | 84 | 80 | 100 | 86 | 78 | 84 | 50 | 0 | | |
| Before VWC | 34 | 36.8 | 36.2 | 36.6 | 39.8 | 39.8 | 36.2 | 41.3 | 39.8 | 34.4 | 35.5 | 37.3 | | 37.6 |
| After VWC | 33.3 | 38.4 | 40.9 | 48.1 | 44.5 | 47.1 | 48.1 | 45.2 | 40.5 | 42 | 43.1 | 36.6 | | 43.8 |
| Delta VWC | -0.7 | 1.6 | 4.7 | 11.5 | 4.7 | 7.3 | 11.9 | 3.9 | 0.7 | 7.6 | 7.6 | -0.7 | | 6.2 |
| 3 Hour VWC | 29.7 | 35.1 | 40.9 | 47 | 46.7 | 47.8 | 46.7 | 42.7 | 38 | 40.5 | 36.3 | 34.8 | | 42.2 |
| Volume (CC) | 52 | 94 | 112 | 120 | 81 | 92 | 106 | 108 | 102 | 82 | 54 | 0 | | |
| Before VWC | 28.6 | 27.5 | 26.1 | 41.3 | 38.7 | 43.1 | 40.9 | 44.2 | 40.2 | 42.4 | 43.1 | 37.3 | | 38.8 |
| After VWC | 30.4 | 34 | 36.6 | 41.3 | 52.8 | 49.9 | 54.6 | 47.4 | 41.3 | 37.3 | 32.2 | 35.1 | | 42.7 |
| Delta VWC | 1.8 | 6.5 | 10.5 | 0 | 14.1 | 6.8 | 13.7 | 3.2 | 1.1 | -5.1 | -10.9 | -2.2 | | 4.0 |
| 3 Hour VWC | 40.9 | 38.7 | 42 | 46.7 | 44.6 | 50.7 | 43.8 | 47.8 | 47.4 | 43.8 | 38.4 | 35.1 | | 44.4 |
| Volume (CC) | 55 | 123 | 124 | 93 | 82 | 94 | 116 | 114 | 93 | 90 | 64 | 0 | | |
| Before VWC | 33.3 | 32.6 | 35.8 | 40.9 | 35.5 | 38.7 | 36.9 | 36.6 | 39.5 | 26.8 | 25.4 | 25.7 | | 34.9 |
| After VWC | 26.4 | 28.3 | 38.7 | 36.9 | 45.2 | 46 | 50.3 | 42 | 40.9 | 43.8 | 40.9 | 34.8 | | 41.3 |
| Delta VWC | -6.9 | -4.3 | 2.9 | -4 | 9.7 | 7.3 | 13.4 | 5.4 | 1.4 | 17 | 15.5 | 9.1 | | 6.4 |
| 3 Hour VWC | 27.2 | 35.5 | 39.8 | 39.8 | 42 | 44.9 | 50.7 | 47.1 | 42.7 | 45.2 | 46 | 29 | | 43.4 |
| Volume (CC) | 15 | 119 | 112 | 94 | 95 | 88 | 104 | 96 | 75 | 68 | 68 | 0 | | |
| Before VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| After VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Delta VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| 3 Hour VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Volume (CC) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

A-8. Hunter MP Rotator SWAT 30 x 30 Square Catch Can Evaluation



| | |
|-------------------------------------|---|
| Pressure (psi): | 40.0 |
| Flow Rate (gpm): | 5.57 |
| Spacing (ft): | 30.0 x 30.0 |
| Area: | Square |
| Avg Application Rate (In/Hr): | 0.509 |
| Effective Application Rate (In/Hr): | 0.441 (75%) |
| Overspray: | 2.5% |
| Pattern Loss: | 17.4% |
| Application Efficiency: | 80.5% |
| Distribution Uniformity: | 73.8% |
| Notes: | Project 1499(Irrg/15) July 28, 2016 Test conducted on turf plot no. 1 |

A-9. Hunter MP Rotator SWAT 30 x 30 Square SMS Evaluation



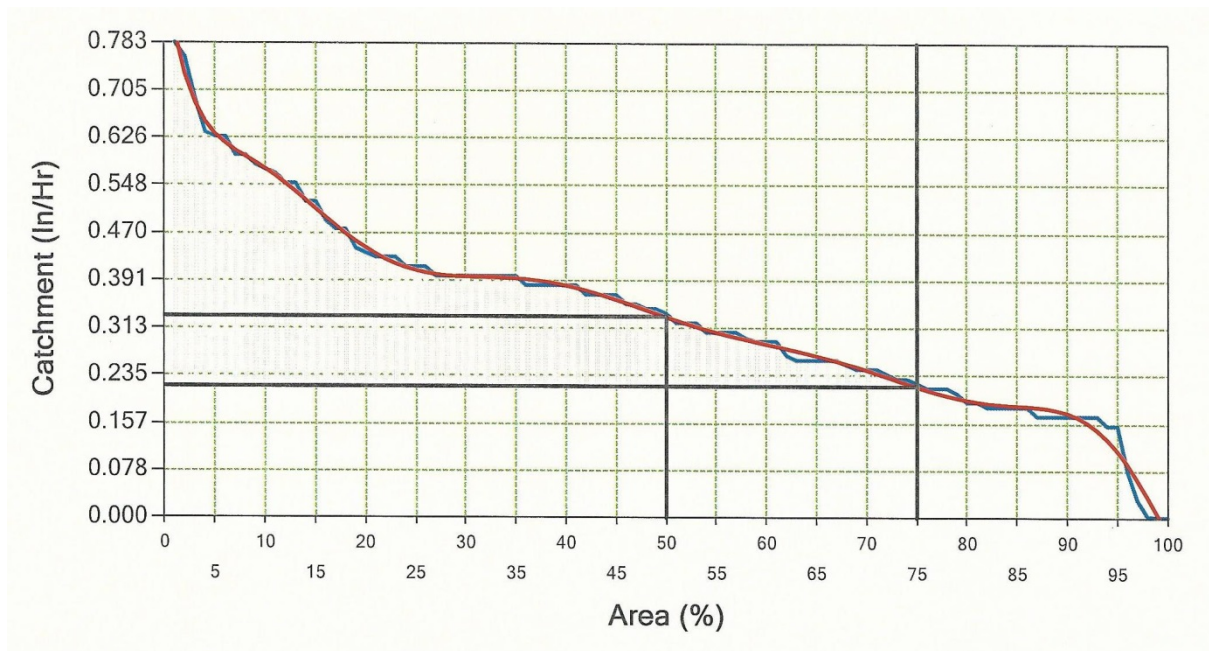
| | |
|--------------------------|---|
| Pressure (psi): | 40.0 |
| Flow Rate (gpm): | 5.57 |
| Spacing (ft): | 30.0 x 30.0 |
| Area: | Square |
| Average Delta VWC (%): | 6.977 |
| Effective Delta VWC (%): | 1.435 (75%) |
| Overspray: | 12.7% |
| Pattern Loss: | 88.7% |
| Application Efficiency: | 9.8% |
| Distribution Uniformity: | 2.3% |
| Notes: | Project 1499(Irrg/15) July 28, 2016 Test conducted on turf plot no. 1 |

A-10. IrriGreen Genius® SWAT 30 x 30 Square Field Data Sheet

| | | |
|--|-------------------|---------------------|
| Title: Genius Square SWAT Test Plot #2 | CIT Meter Reading | Time 6:15 AM |
| Date: 5-Aug-16 | Before 213457 | Pressure 65 |
| Dimension: 30' x 30' | After 213596 | Run Time 30 minutes |
| Before VWC Ave: 39.3 | Gal Used 139 | Rotations 7 |
| After VWC Ave: 44.5 | | Application " |
| 3 Hr VWC Ave: 40.9 | | Application rate |

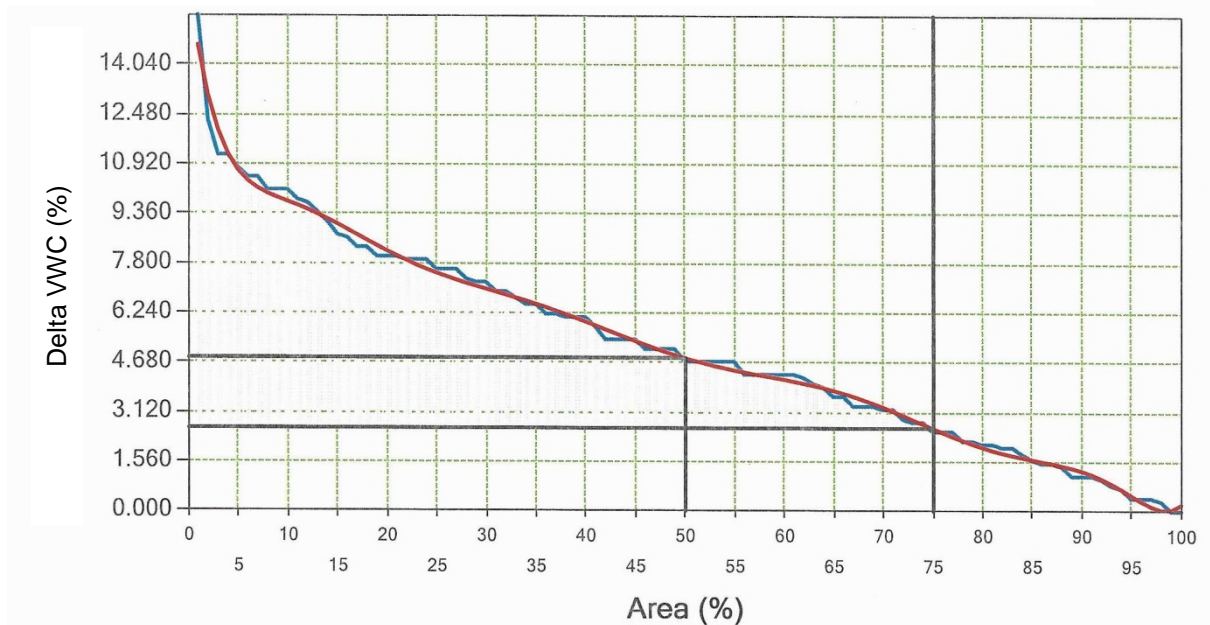
| Observation | Row | | | | | | | | | | | | Average | |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|---------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | |
| Before VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| After VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Delta VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| 3 Hour VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Volume (CC) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Before VWC | 42 | 39.1 | 36.6 | 37.3 | 38.7 | 40.2 | 39.1 | 34 | 35.5 | 34.8 | 34 | 36.2 | | 36.9 |
| After VWC | 38.7 | 39.1 | 45.2 | 42.7 | 40.9 | 42.2 | 45.2 | 43.1 | 38.7 | 36.8 | 36.2 | 35.1 | | 41.0 |
| Delta VWC | -3.3 | 0 | 8.6 | 5.4 | 2.2 | 2 | 6.1 | 9.1 | 3.2 | 2 | 2.2 | -1.1 | | 4.1 |
| 3 Hour VWC | 33.7 | 34.4 | 39.5 | 40.9 | 41.6 | 39.5 | 43.1 | 39.8 | 40.2 | 36.6 | 36.9 | 31.1 | | 39.3 |
| Volume (CC) | 0 | 4 | 62 | 32 | 40 | 24 | 68 | 33 | 28 | 34 | 29 | 0 | | |
| Before VWC | 41.6 | 42.4 | 46 | 42 | 42.7 | 44.3 | 41.3 | 40.5 | 40.5 | 43.8 | 40.9 | 34 | | 42.4 |
| After VWC | 39.8 | 42.7 | 48.9 | 50.7 | 48.5 | 51 | 51.8 | 47.8 | 48.5 | 48.1 | 48.5 | 36.9 | | 48.7 |
| Delta VWC | -1.8 | 0.3 | 2.9 | 8.7 | 5.8 | 6.7 | 10.5 | 7.3 | 8 | 4.3 | 7.6 | 2.9 | | 6.2 |
| 3 Hour VWC | 34 | 43.8 | 46 | 47.1 | 48.5 | 48.5 | 47.4 | 43.1 | 43.8 | 44.2 | 41.3 | 37.3 | | 45.4 |
| Volume (CC) | 0 | 24 | 52 | 58 | 78 | 58 | 46 | 56 | 54 | 20 | 99 | 0 | | |
| Before VWC | 44.9 | 40.2 | 42.4 | 48.1 | 40.2 | 41.6 | 39.8 | 33.7 | 37.3 | 39.8 | 36.6 | 35.5 | | 40.0 |
| After VWC | 42.4 | 46.7 | 48.5 | 51.4 | 48.1 | 46.7 | 40.9 | 43.8 | 40.5 | 49.6 | 47.8 | 36.6 | | 46.4 |
| Delta VWC | -2.5 | 6.5 | 6.1 | 3.3 | 7.9 | 5.1 | 1.1 | 10.1 | 3.2 | 9.8 | 11.2 | 1.1 | | 6.4 |
| 3 Hour VWC | 36.9 | 40.9 | 49.2 | 48.9 | 42.4 | 44.2 | 41.3 | 39.5 | 40.2 | 45.2 | 40.5 | 34 | | 43.2 |
| Volume (CC) | 0 | 22 | 50 | 52 | 30 | 24 | 72 | 22 | 34 | 52 | 64 | 0 | | |
| Before VWC | 42.4 | 46.3 | 40.2 | 40.5 | 39.1 | 40.5 | 35.5 | 37.3 | 34.4 | 36.9 | 39.5 | 39.1 | | 39.0 |
| After VWC | 40.9 | 47.4 | 48.1 | 46.7 | 49.2 | 48.1 | 42.7 | 45.2 | 44.9 | 44.9 | 40.5 | 38.4 | | 45.8 |
| Delta VWC | -1.5 | 1.1 | 7.9 | 6.2 | 10.1 | 7.6 | 7.2 | 7.9 | 10.5 | 8 | 1 | -0.7 | | 6.8 |
| 3 Hour VWC | 38 | 41.3 | 42 | 40.5 | 46.7 | 43.8 | 38.4 | 41.6 | 40.9 | 42 | 40.5 | 33.3 | | 41.8 |
| Volume (CC) | 0 | 78 | 45 | 22 | 31 | 20 | 46 | 40 | 25 | 54 | 38 | 0 | | |
| Before VWC | 39.1 | 40.5 | 40.2 | 42 | 42.4 | 42.4 | 40.9 | 38.4 | 35.5 | 39.1 | 37.7 | 39.5 | | 39.9 |
| After VWC | 39.8 | 40.9 | 44.5 | 47.4 | 46.7 | 43.1 | 44.2 | 43.8 | 43.8 | 41.6 | 44.9 | 38.6 | | 44.1 |
| Delta VWC | 0.7 | 0.4 | 4.3 | 5.4 | 4.3 | 0.7 | 3.3 | 5.4 | 8.3 | 2.5 | 7.2 | -0.9 | | 4.2 |
| 3 Hour VWC | 37.7 | 38 | 44.9 | 47.4 | 40.5 | 44.5 | 42.4 | 41.6 | 37.3 | 41.3 | 40.5 | 35.8 | | 41.8 |
| Volume (CC) | 0 | 22 | 48 | 35 | 30 | 50 | 102 | 38 | 90 | 48 | 34 | 0 | | |
| Before VWC | 39.5 | 36.2 | 36.6 | 34.8 | 40.2 | 41.6 | 39.8 | 42.4 | 41.3 | 38 | 42.7 | 36.6 | | 39.4 |
| After VWC | 38.4 | 44.5 | 52.2 | 47.1 | 41.6 | 46.3 | 40.9 | 44.9 | 37.3 | 42.7 | 44.5 | 38.7 | | 44.2 |
| Delta VWC | -1.1 | 8.3 | 15.6 | 12.3 | 1.4 | 4.7 | 1.1 | 2.5 | -4 | 4.7 | 1.8 | 2.1 | | 4.8 |
| 3 Hour VWC | 36.9 | 38.4 | 38.4 | 41.3 | 38.7 | 43.8 | 39.8 | 35.5 | 34.4 | 39.1 | 38 | 33.7 | | 38.7 |
| Volume (CC) | 0 | 38 | 50 | 52 | 10 | 2.5 | 82 | 22 | 34 | 42 | 22 | 0 | | |
| Before VWC | 42.4 | 38.4 | 37.7 | 39.1 | 39.8 | 40.2 | 39.8 | 37.7 | 39.8 | 37.3 | 39.5 | 44.2 | | 38.9 |
| After VWC | 39.8 | 42.7 | 40.5 | 43.8 | 43.1 | 43.8 | 41.3 | 47.4 | 40.2 | 47.4 | 43.8 | 43.8 | | 43.4 |
| Delta VWC | -2.6 | 4.3 | 2.8 | 4.7 | 3.3 | 3.6 | 1.5 | 9.7 | 0.4 | 10.1 | 4.3 | -0.4 | | 4.5 |
| 3 Hour VWC | 36.9 | 36.6 | 37.3 | 39.1 | 40.5 | 35.8 | 39.8 | 46 | 39.8 | 42 | 40.2 | 36.2 | | 39.7 |
| Volume (CC) | 0 | 22 | 38 | 83 | 50 | 24 | 50 | 92 | 52 | 34 | 42 | 0 | | |
| Before VWC | 45.2 | 40.5 | 39.1 | 41.3 | 40.5 | 44.5 | 45.2 | 42 | 39.1 | 38.4 | 39.1 | 43.8 | | 41.0 |
| After VWC | 44.2 | 40.9 | 44.2 | 45.2 | 46.7 | 48.7 | 46.8 | 44.5 | 46.7 | 43.8 | 45.2 | 40.5 | | 45.3 |
| Delta VWC | -1 | 0.4 | 5.1 | 3.9 | 6.2 | 4.2 | 1.6 | 2.5 | 7.6 | 5.4 | 6.1 | -3.3 | | 4.3 |
| 3 Hour VWC | 34.4 | 38.4 | 39.8 | 42.4 | 37.7 | 42.4 | 41.6 | 38.4 | 41.3 | 40.5 | 41.6 | 38.4 | | 40.4 |
| Volume (CC) | 0 | 24 | 52 | 32 | 48 | 44 | 28 | 28 | 56 | 62 | 75 | 0 | | |
| Before VWC | 41.3 | 38.7 | 38 | 41.6 | 40.9 | 40.9 | 39.5 | 35.5 | 40.5 | 39.5 | 38.4 | 39.8 | | 39.4 |
| After VWC | 35.8 | 42.7 | 43.1 | 48.5 | 47.4 | 44.5 | 44.2 | 46.7 | 45.6 | 44.2 | 42.7 | 38.4 | | 45.0 |
| Delta VWC | -5.5 | 4 | 5.1 | 6.9 | 6.5 | 3.6 | 4.7 | 11.2 | 5.1 | 4.7 | 4.3 | -1.4 | | 5.6 |
| 3 Hour VWC | 33.3 | 38.4 | 39.1 | 40.5 | 44.2 | 42.4 | 39.1 | 42 | 37.3 | 31.6 | 38.4 | 34.8 | | 39.3 |
| Volume (CC) | 0 | 36 | 28 | 48 | 52 | 76 | 48 | 52 | 50 | 68 | 57 | 0 | | |
| Before VWC | 40.2 | 34.4 | 31.9 | 34.4 | 36.2 | 38 | 36.9 | 36.2 | 37.7 | 38.7 | 34 | 34.8 | | 35.8 |
| After VWC | 38.6 | 42.4 | 42.7 | 43.8 | 40.9 | 44.9 | 39 | 39 | 39.8 | 39.5 | 35.5 | 33.3 | | 40.8 |
| Delta VWC | -1.6 | 8 | 10.8 | 9.4 | 4.7 | 6.9 | 2.1 | 2.8 | 2.1 | 0.8 | 1.5 | -1.5 | | 4.9 |
| 3 Hour VWC | 40.5 | 44.2 | 40.5 | 44.2 | 43.1 | 40.2 | 34 | 35.1 | 33.3 | 38.4 | 37.3 | 31.9 | | 39.0 |
| Volume (CC) | 0 | 56 | 82 | 74 | 72 | 42 | 40 | 46 | 32 | 52 | 40 | 0 | | |
| Before VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | | |
| After VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | | |
| Delta VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | | |
| 3 Hour VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | | |
| Volume (CC) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |

A-11. IrriGreen Genius® SWAT 30 x 30 Square Catch Can Evaluation



| | |
|-------------------------------------|--|
| Pressure (psi): | 65.0 |
| Flow Rate (gpm): | 4.63 |
| Spacing (ft): | 30.0 x 30.0 |
| Area: | Square |
| Avg Application Rate (In/Hr): | 0.332 |
| Effective Application Rate (In/Hr): | 0.217 (75%) |
| Overspray: | 0.0% |
| Pattern Loss: | 42.3% |
| Application Efficiency: | 57.7% |
| Distribution Uniformity: | 44.5% |
| Notes: | Project 1499(Irrg/15) August 5, 2016 Test conducted on turf plot no. 2 |

A-12. IrriGreen Genius® SWAT 30 x 30 Square SMS Evaluation



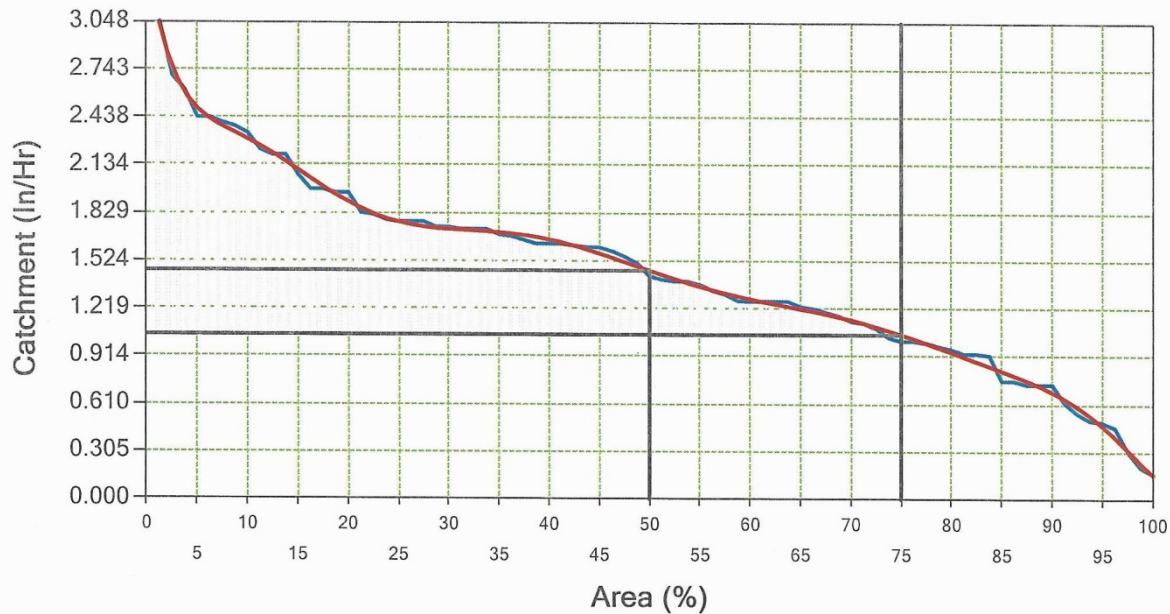
| | |
|--------------------------|--|
| Pressure (psi): | 65.0 |
| Flow Rate (gpm): | 4.63 |
| Spacing (ft): | 30.0 x 30.0 |
| Area: | Square |
| Average Delta VWC (%): | 4.828 |
| Effective Delta VWC (%): | 2.615 (75%) |
| Overspray: | 1.3% |
| Pattern Loss: | 58.7% |
| Application Efficiency: | 40.7% |
| Distribution Uniformity: | 25.1% |
| Notes: | Project 1499(Irrg/15) August 5, 2016 Test conducted on turf plot no. 2 |

A-13. Hunter Pro Adjustable SWAT 30 ft Diameter Circle Field Data Sheet

| | | |
|--|-------------------|----------------------|
| Title: Hunter Pro Adj Circle SWAT Test Plot #1 | CIT Meter Reading | Time: 6:29 AM |
| Date: 29-Jul-16 | #3 | Pressure: 40 |
| Dimension: 30' x 30' | pro adjustable | Run Time: 20 minutes |
| Before VWC Ave: 29.8 | circular | Application: " |
| After VWC Ave: 47.8 | Gal Used: 240 | |
| 3 Hr VWC Ave: 45.6 | | |

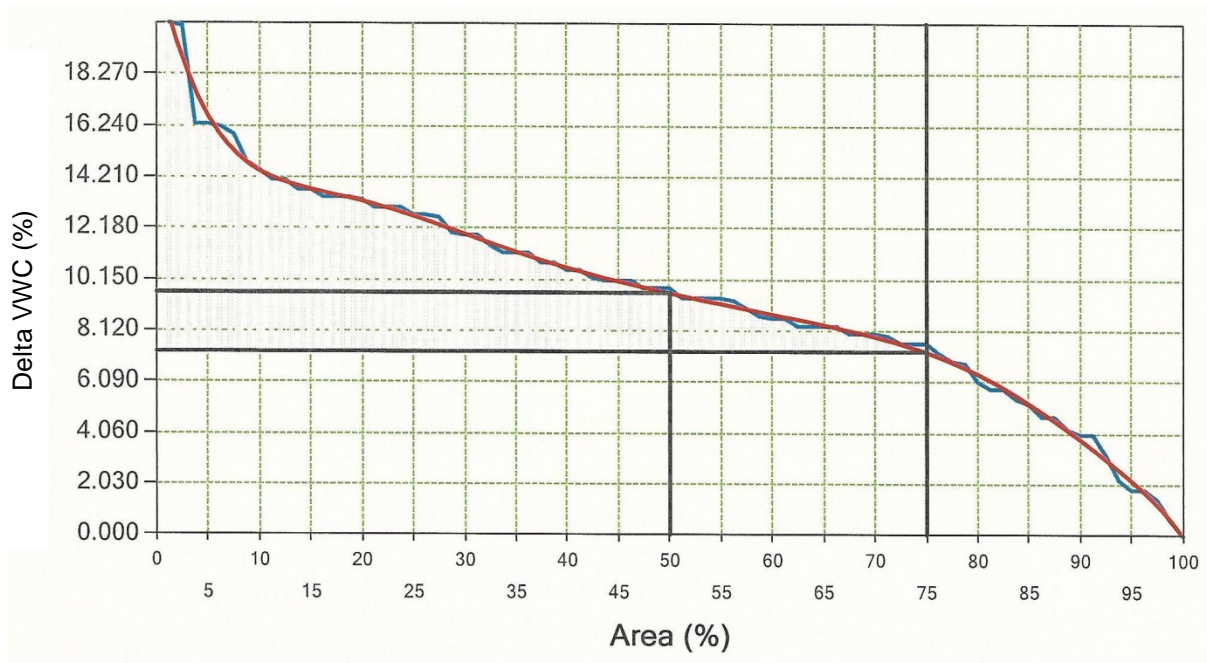
| Observation | Row | | | | | | | | | | | | Average | |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|---------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | |
| Before VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| After VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Delta VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| 3 Hour VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| Volume (CC) | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Before VWC | N/A | 16.2 | 11.6 | 23.7 | 24 | 14.7 | 13.5 | 14.7 | 12.8 | 12.2 | 12.6 | 16.5 | | 16.7 |
| After VWC | N/A | 23.6 | 23.8 | 45.6 | 34.4 | 30.1 | 30.4 | 38.7 | 30.8 | 26.1 | 23.2 | 26.4 | | 33.4 |
| Delta VWC | N/A | 7.4 | 12.2 | 21.9 | 10.4 | 15.4 | 16.9 | 24 | 18 | 13.9 | 10.6 | 9.9 | | 16.7 |
| 3 Hour VWC | N/A | 22.5 | 17.8 | 42.7 | 36.2 | 27.9 | 29.7 | 36.9 | 25.7 | 23.6 | 24.3 | 30.1 | | 32.7 |
| Volume (CC) | 0 | 0 | 0 | 134 | 66 | 27 | 43 | 142 | 61 | 5 | 2 | 0 | | |
| Before VWC | N/A | 12 | 25 | 28.2 | 24 | 18.4 | 14.5 | 27.6 | 30.2 | 23 | 24.6 | 28.9 | | 23.9 |
| After VWC | N/A | 24.3 | 49.3 | 50.3 | 43.1 | 34.4 | 29.3 | 47.8 | 53.6 | 47.8 | 45.6 | 44.5 | | 44.5 |
| Delta VWC | N/A | 12.3 | 24.3 | 22.1 | 19.1 | 16 | 14.8 | 20.2 | 23.4 | 24.8 | 21 | 15.6 | | 20.6 |
| 3 Hour VWC | N/A | 22.5 | 39.8 | 44.9 | 41.6 | 34 | 31.1 | 43.8 | 44.2 | 45.2 | 38.2 | 48.9 | | 40.6 |
| Volume (CC) | 0 | 23 | 99 | 146 | 110 | 80 | 64 | 154 | 212 | 194 | 93 | 4 | | |
| Before VWC | N/A | 25.6 | 29.5 | 32.2 | 27.6 | 26.9 | 24.6 | 33.8 | 32.8 | 32.8 | 32.2 | 34.4 | | 30.0 |
| After VWC | N/A | 36.9 | 47.1 | 51.4 | 48.1 | 46 | 44.9 | 51.4 | 51.8 | 52.3 | 51 | 50.7 | | 49.1 |
| Delta VWC | N/A | 11.3 | 17.6 | 19.2 | 20.5 | 19.1 | 20.3 | 17.6 | 19 | 19.5 | 18.8 | 16.3 | | 19.1 |
| 3 Hour VWC | N/A | 35.8 | 42.4 | 46 | 44.5 | 44.5 | 46.7 | 46.7 | 48.1 | 48.1 | 47.1 | 48.1 | | 45.9 |
| Volume (CC) | 0 | 39 | 81 | 90 | 147 | 141 | 140 | 159 | 203 | 209 | 141 | 13 | | |
| Before VWC | N/A | 28.2 | 22 | 27.3 | 26.3 | 27.3 | 31.5 | 37.7 | 37.1 | 35.7 | 34.1 | 31.6 | | 30.7 |
| After VWC | N/A | 43.1 | 41.6 | 50.7 | 50.3 | 48.1 | 51.8 | 57.2 | 53.2 | 54.6 | 53.9 | 52.1 | | 50.5 |
| Delta VWC | N/A | 14.9 | 19.6 | 23.4 | 24 | 20.8 | 20.3 | 19.5 | 16.1 | 18.9 | 19.8 | 20.5 | | 19.7 |
| 3 Hour VWC | N/A | 42.4 | 44.2 | 40.2 | 42.4 | 45.2 | 49.9 | 46.7 | 49.9 | 51.4 | 51 | 51 | | 46.3 |
| Volume (CC) | 0 | 48 | 87 | 191 | 191 | 142 | 116 | 150 | 170 | 212 | 227 | 14 | | |
| Before VWC | N/A | 22.7 | 22.4 | 27.3 | 25.9 | 32.2 | 29.9 | 33.8 | 35.1 | 34.1 | 33.8 | 37.1 | | 29.7 |
| After VWC | N/A | 42 | 44.5 | 46.7 | 44.9 | 45.6 | 49.6 | 51 | 52.1 | 52.1 | 51.8 | 53.2 | | 48.0 |
| Delta VWC | N/A | 19.3 | 22.1 | 19.4 | 19 | 13.4 | 19.7 | 17.2 | 17 | 18 | 18 | 16.1 | | 18.3 |
| 3 Hour VWC | N/A | 40.5 | 41.3 | 46.3 | 42.4 | 48.1 | 44.5 | 48.1 | 48.1 | 48.5 | 48.9 | 50.3 | | 45.7 |
| Volume (CC) | 0 | 110 | 121 | 172 | 110 | 88 | 64 | 119 | 171 | 180 | 235 | 85 | | |
| Before VWC | N/A | 26.6 | 21.4 | 30.2 | 35.1 | 29.9 | 30.8 | 33.1 | 33.8 | 33.8 | 35.4 | 34.4 | | 31.0 |
| After VWC | N/A | 44.5 | 42.4 | 48.9 | 51.4 | 50.7 | 49.9 | 53.2 | 52.8 | 52.1 | 52.1 | 52.5 | | 49.8 |
| Delta VWC | N/A | 17.9 | 21 | 18.7 | 16.3 | 20.8 | 19.1 | 20.1 | 19 | 18.3 | 16.7 | 18.1 | | 18.8 |
| 3 Hour VWC | N/A | 42.4 | 39.8 | 42.4 | 51.8 | 50.3 | 48.5 | 48.9 | 47.4 | 46.7 | 50.3 | 47.8 | | 46.9 |
| Volume (CC) | 0 | 140 | 121 | 107 | 144 | 54 | 40 | 110 | 158 | 207 | 265 | 150 | | |
| Before VWC | N/A | 21.4 | 29.2 | 37.1 | 34.1 | 34.8 | 35.1 | 33.8 | 35.1 | 34.1 | 37.7 | 24.6 | | 33.2 |
| After VWC | N/A | 39.5 | 47.8 | 53.6 | 51.8 | 51.8 | 52.1 | 52.1 | 49.9 | 51 | 49.2 | 37.7 | | 49.9 |
| Delta VWC | N/A | 18.1 | 18.6 | 16.5 | 17.7 | 17 | 17 | 18.3 | 14.8 | 16.9 | 11.5 | 13.1 | | 16.6 |
| 3 Hour VWC | N/A | 41.3 | 44.2 | 46.3 | 51 | 50.3 | 50.3 | 45.6 | 49.6 | 49.2 | 48.1 | 37.7 | | 47.6 |
| Volume (CC) | 3 | 83 | 110 | 110 | 114 | 106 | 95 | 154 | 142 | 107 | 88 | 23 | | |
| Before VWC | 20.1 | 28.6 | 28.6 | 36.4 | 36.1 | 38.7 | 35.1 | 35.1 | 34.1 | 37.7 | 31.8 | 33.5 | | 35.2 |
| After VWC | 30.1 | 41.6 | 51.8 | 51.4 | 51.8 | 52.8 | 50.3 | 52.5 | 50.7 | 49.6 | 43.1 | 42.7 | | 51.4 |
| Delta VWC | 10 | 13 | 23.2 | 15 | 15.7 | 14.1 | 15.2 | 17.4 | 16.6 | 11.9 | 11.3 | 9.2 | | 16.1 |
| 3 Hour VWC | 23 | 42.7 | 43.8 | 51.8 | 50.7 | 52.1 | 51 | 50.3 | 51.4 | 48.5 | 41.6 | 42.4 | | 50.0 |
| Volume (CC) | 8 | 21 | 66 | 105 | 151 | 150 | 142 | 154 | 151 | 104 | 56 | 0 | | |
| Before VWC | 21.4 | 20.7 | 24.6 | 31.2 | 36.4 | 34.4 | 36.1 | 35.5 | 33.1 | 31.5 | 30.5 | 27.6 | | 32.9 |
| After VWC | 26.8 | 34.8 | 39.8 | 53.6 | 54.6 | 52.5 | 51.8 | 53.2 | 52.1 | 50.7 | 46.3 | 38.4 | | 51.0 |
| Delta VWC | 5.4 | 14.1 | 15.2 | 22.4 | 18.2 | 18.1 | 15.7 | 17.7 | 19 | 19.2 | 15.8 | 10.8 | | 18.2 |
| 3 Hour VWC | 29.7 | 38 | 40.9 | 52.1 | 53.6 | 51.8 | 53.2 | 54.6 | 50.3 | 50.7 | 46.3 | 34.8 | | 50.9 |
| Volume (CC) | 0 | 4 | 64 | 98 | 155 | 131 | 122 | 135 | 150 | 138 | 73 | 0 | | |
| Before VWC | 12.9 | 18.1 | 23 | 32.8 | 35.4 | 34.8 | 36.1 | 33.5 | 29.9 | 31.8 | 23 | 16.8 | | 35.0 |
| After VWC | 23.2 | 27.5 | 32.6 | 46.7 | 49.9 | 50.3 | 52.5 | 48.9 | 48.1 | 51.4 | 34.8 | 32.6 | | 50.4 |
| Delta VWC | 10.3 | 9.4 | 9.6 | 13.9 | 14.5 | 15.5 | 16.4 | 15.4 | 18.2 | 19.6 | 11.8 | 15.8 | | 15.5 |
| 3 Hour VWC | 22.7 | 23.1 | 25.2 | 44.5 | 51.4 | 48.1 | 49.2 | 51.4 | 42.7 | 45.2 | 31.9 | 24.3 | | 50.0 |
| Volume (CC) | 0 | 0 | 0 | 102 | 124 | 81 | 44 | 85 | 74 | 0 | 0 | 0 | | |
| Before VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | | |
| After VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | | |
| Delta VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | | |
| 3 Hour VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | | |
| Volume (CC) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |

A-14. Hunter Pro Adjustable SWAT 30 ft Diameter Circle Catch Can Evaluation



| | |
|-------------------------------------|---|
| Pressure (psi): | 40.0 |
| Flow Rate (gpm): | 12.00 |
| Spacing (ft): | 30.0 diameter |
| Area: | Circular |
| Avg Application Rate (In/Hr): | 1.462 |
| Effective Application Rate (In/Hr): | 1.053 (75%) |
| Overspray: | 10.7% |
| Pattern Loss: | 35.2% |
| Application Efficiency: | 57.8% |
| Distribution Uniformity: | 47.6% |
| Notes: | Project 1499(Irrg/15) July 29, 2016 Test conducted on turf plot no. 1 |

A-15. Hunter Pro Adjustable SWAT 30 ft Diameter Circle SMS Evaluation



| | |
|--------------------------|---|
| Pressure (psi): | 40.0 |
| Flow Rate (gpm): | 12.00 |
| Spacing (ft): | 30.0 diameter |
| Area: | Circular |
| Average Delta VWC (%): | 9.608 |
| Effective Delta VWC (%): | 7.263 (75%) |
| Overspray: | 8.3% |
| Pattern Loss: | 34.0% |
| Application Efficiency: | 60.5% |
| Distribution Uniformity: | 42.7% |
| Notes: | Project 1499(Irrg/15) July 29, 2016 Test conducted on turf plot no. 1 |

A-16. IrriGreen Genius® SWAT 30 ft Diameter Circle Field Data Sheet

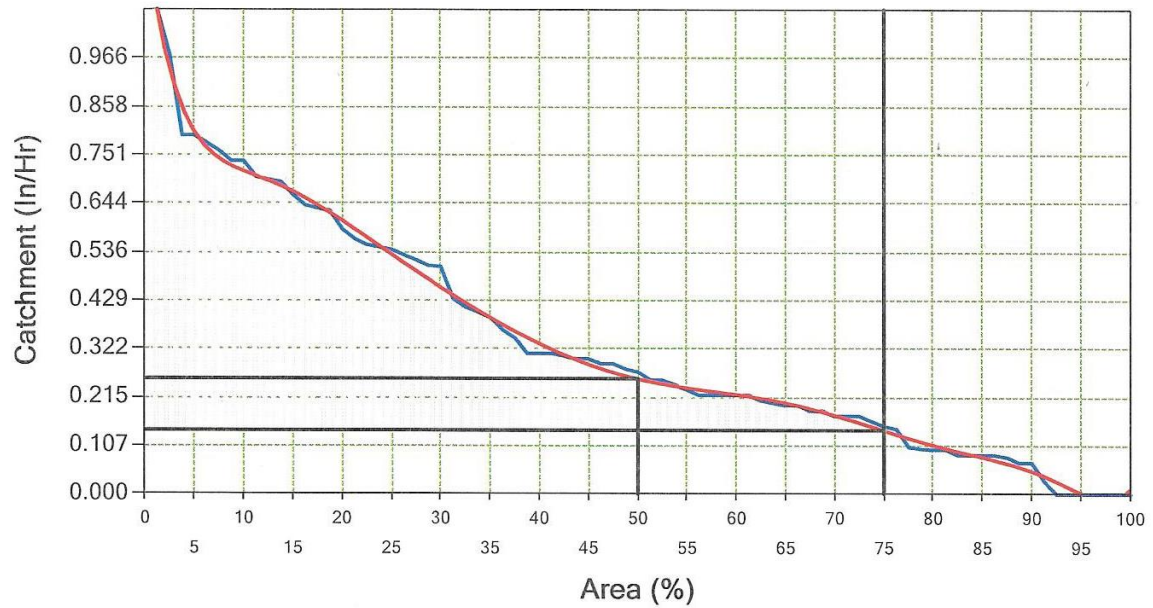
Title: Genius Circle SWAT Test Plot #2
 Date: 26-Jul-16
 Dimension: 30' x 30'
 Before VWC Ave: 31.7
 After VWC Ave: 41.2
 3 Hr VWC Ave: 38.3

CIT Meter Reading
 Before 213305
 After 213457
 Gal Used 152

Time 6:04 AM
 Pressure 65
 Run Time 40 minutes
 Rotations 8
 Application "

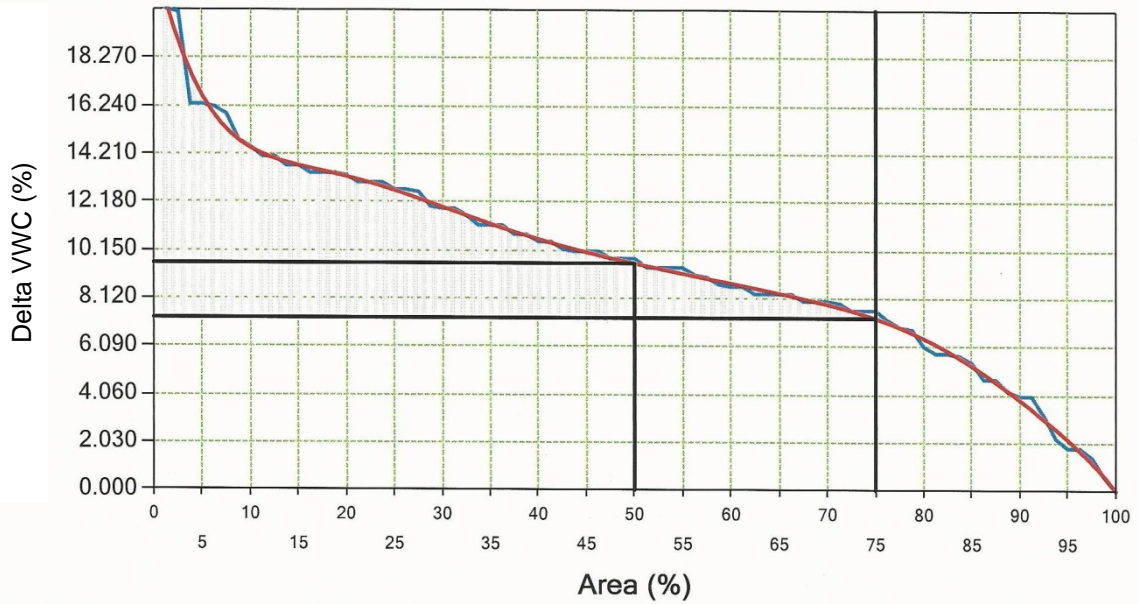
| | Row | | | | | | | | | | | |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Observation | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Before VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| After VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Delta VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 3 Hour VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Volume (CC) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Before VWC | 20.7 | 30.8 | 31.9 | 34.4 | 38 | 35.1 | 35.8 | 27.2 | 27.9 | 29.3 | 26.8 | 29 |
| After VWC | 33 | 31.1 | 34 | 38.4 | 46.7 | 45.2 | 44.9 | 41.3 | 25 | 28.6 | 27.9 | 27.5 |
| Delta VWC | 12.3 | 0.3 | 2.1 | 4 | 8.7 | 10.1 | 9.1 | 14.1 | -2.9 | -0.7 | 1.1 | -1.5 |
| 3 Hour VWC | 32.6 | 26.8 | 28.3 | 32.2 | 41.6 | 38.4 | 42.4 | 27.5 | 16.7 | 22.5 | 17.4 | 26.4 |
| Volume (CC) | 0 | 0 | 0 | 0 | 0 | 15 | 44 | 0 | 0 | 0 | 0 | 0 |
| Before VWC | 33.3 | 35.8 | 38.7 | 38.4 | 41.3 | 37.7 | 34.8 | 25 | 32.2 | 35.1 | 33 | 30.1 |
| After VWC | 28.6 | 32.2 | 44.5 | 49.6 | 47.1 | 47.8 | 44.9 | 34.8 | 39.8 | 44.5 | 34 | 31.9 |
| Delta VWC | -4.7 | -3.6 | 5.8 | 11.2 | 5.8 | 10.1 | 10.1 | 9.8 | 7.6 | 9.4 | 1 | 1.8 |
| 3 Hour VWC | 34.4 | 36.6 | 47.1 | 45.2 | 46 | 47.8 | 40.2 | 34.8 | 40.9 | 36.6 | 34.9 | 29.7 |
| Volume (CC) | 0 | 0 | 17 | 38 | 88 | 53 | 30 | 92 | 135 | 0 | 0 | 0 |
| Before VWC | 39.5 | 35.5 | 39.5 | 43.8 | 35.1 | 35.8 | 32.2 | 21.1 | 30.8 | 35.1 | 34 | 31.9 |
| After VWC | 33.3 | 30.8 | 47.8 | 52.1 | 42.7 | 46 | 45.2 | 26.8 | 37.7 | 39.8 | 33.7 | 35.1 |
| Delta VWC | -6.2 | -4.7 | 8.3 | 8.3 | 7.6 | 10.2 | 13 | 5.7 | 6.9 | 4.7 | -0.3 | 3.2 |
| 3 Hour VWC | 32.2 | 28.9 | 45.2 | 40.2 | 34 | 38 | 36.2 | 19.9 | 32.2 | 34 | 29 | 30.8 |
| Volume (CC) | 0 | 0 | 63 | 34 | 15 | 12 | 17 | 120 | 52 | 50 | 0 | 0 |
| Before VWC | 41.3 | 39.5 | 37.7 | 39.1 | 36.9 | 34.4 | 29.3 | 29 | 26.8 | 27.5 | 27.9 | 27.6 |
| After VWC | 40.9 | 47.1 | 44.5 | 43.1 | 44.9 | 42.7 | 43.8 | 33.2 | 28.6 | 39.5 | 40.9 | 29 |
| Delta VWC | -0.4 | 7.6 | 6.8 | 4 | 8 | 8.3 | 14.5 | 4.2 | 1.8 | 12 | 13 | 1.4 |
| 3 Hour VWC | 39.5 | 45.2 | 40.5 | 45.2 | 44.5 | 39.1 | 40.9 | 27.9 | 29 | 31.9 | 36.2 | 31.9 |
| Volume (CC) | 0 | 36 | 32 | 12 | 50 | 169 | 128 | 70 | 32 | 68 | 0 | 0 |
| Before VWC | 24.6 | 32.2 | 33 | 38.4 | 34 | 31.9 | 33 | 27.9 | 25 | 27.5 | 29 | 27.5 |
| After VWC | 27.9 | 40.5 | 38.4 | 39 | 38.7 | 45.2 | 44.9 | 42.7 | 37.7 | 37.3 | 42.7 | 31.1 |
| Delta VWC | 3.3 | 8.3 | 5.4 | 0.6 | 4.7 | 13.3 | 11.9 | 14.8 | 12.7 | 9.8 | 13.7 | 3.6 |
| 3 Hour VWC | 30.1 | 44.5 | 41.3 | 43.1 | 40.5 | 43.1 | 39.5 | 42 | 34 | 38.7 | 38.7 | 29.7 |
| Volume (CC) | 0 | 111 | 94 | 15 | 30 | 54 | 272 | 174 | 25 | 36 | 127 | 0 |
| Before VWC | 27.2 | 33 | 25.4 | 27.2 | 32.6 | 30.4 | 27.5 | 33.7 | 31.1 | 25 | 27.9 | 23.6 |
| After VWC | 30.1 | 41.6 | 36.6 | 38.4 | 43.1 | 43.8 | 43.8 | 37.7 | 39.1 | 37.7 | 43.8 | 27.9 |
| Delta VWC | 2.9 | 8.6 | 11.2 | 11.2 | 10.5 | 13.4 | 16.3 | 4 | 8 | 12.7 | 15.9 | 4.3 |
| 3 Hour VWC | 33 | 39.8 | 38.9 | 34.4 | 44.9 | 44.5 | 40.9 | 36.2 | 36.9 | 34 | 39.8 | 24.6 |
| Volume (CC) | 0 | 128 | 121 | 42 | 38 | 34 | 132 | 52 | 47 | 30 | 95 | 0 |
| Before VWC | 29.3 | 33 | 28.3 | 32.6 | 34 | 28.3 | 26.4 | 30.1 | 23.9 | 35.5 | 29.3 | 30.8 |
| After VWC | 32.6 | 40.2 | 39.1 | 34.8 | 45.6 | 39.1 | 36.9 | 50.3 | 33.3 | 36.9 | 42.7 | 33.3 |
| Delta VWC | 3.3 | 7.2 | 10.8 | 2.2 | 11.6 | 10.8 | 10.5 | 20.2 | 9.4 | 1.4 | 13.4 | 2.5 |
| 3 Hour VWC | 28.6 | 38 | 38 | 36.6 | 38.7 | 38.4 | 38.7 | 38.4 | 32.6 | 29.3 | 38.7 | 28.6 |
| Volume (CC) | 0 | 5 | 38 | 109 | 138 | 115 | 48 | 138 | 26 | 72 | 96 | 0 |
| Before VWC | 30.8 | 29.3 | 23.2 | 23.2 | 28.6 | 24.3 | 33 | 30.8 | 30.1 | 27.5 | 28.3 | 26.1 |
| After VWC | 28.6 | 33.7 | 39.5 | 36.9 | 41.6 | 40.5 | 40.9 | 42.7 | 42.7 | 35.5 | 30.4 | 24.6 |
| Delta VWC | -2.2 | 4.4 | 16.3 | 13.7 | 13 | 16.2 | 7.9 | 11.9 | 12.6 | 8 | 2.1 | -1.5 |
| 3 Hour VWC | 31.9 | 30.9 | 38.4 | 37.7 | 37.3 | 39.8 | 39.8 | 44.2 | 38.7 | 33.7 | 27.9 | 21.4 |
| Volume (CC) | 0 | 0 | 75 | 110 | 102 | 30 | 88 | 15 | 60 | 44 | 0 | 0 |
| Before VWC | 27.9 | 26.1 | 24.3 | 22.1 | 33.7 | 34 | 32.2 | 27.9 | 33.7 | 26.1 | 20.3 | 24.3 |
| After VWC | 31.1 | 30.8 | 33.3 | 42.4 | 39.8 | 43.8 | 41.6 | 42 | 36.9 | 39.5 | 22.1 | 21 |
| Delta VWC | 3.2 | 4.7 | 9 | 20.3 | 6.1 | 9.8 | 9.4 | 14.1 | 3.2 | 13.4 | 1.8 | -3.3 |
| 3 Hour VWC | 28.6 | 30.8 | 38 | 36.6 | 42.7 | 40.2 | 42.7 | 37.7 | 36.9 | 23.9 | 23.9 | 22.4 |
| Volume (CC) | 0 | 0 | 0 | 54 | 38 | 28 | 38 | 90 | 40 | 54 | 0 | 0 |
| Before VWC | 18.5 | 23.9 | 20.3 | 38.4 | 45.6 | 37.7 | 34.4 | 32.2 | 26.1 | 14.9 | 16 | 12 |
| After VWC | 20.9 | 21 | 26.1 | 39.8 | 55 | 46.3 | 36.2 | 27.9 | 27.2 | 13.4 | 13.8 | 13.1 |
| Delta VWC | 2.4 | -2.9 | 5.8 | 1.4 | 9.4 | 8.6 | 1.8 | -4.3 | 1.1 | -1.5 | -2.2 | 1.1 |
| 3 Hour VWC | 24.3 | 24.6 | 26.1 | 34 | 38.9 | 39.6 | 36.6 | 29.3 | 23.2 | 13 | 13.4 | 13.4 |
| Volume (CC) | 0 | 0 | 0 | 0 | 0 | 14 | 18 | 0 | 0 | 0 | 0 | 0 |
| Before VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| After VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Delta VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| 3 Hour VWC | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Volume (CC) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

A-17. IrriGreen Genius® SWAT 30 ft Diameter Circle Catch Can Evaluation



| | |
|-------------------------------------|---|
| Pressure (psi): | 65.0 |
| Flow Rate (gpm): | 3.8 |
| Spacing (ft): | 30.0 diameter |
| Area: | Circular |
| Avg Application Rate (In/Hr): | 0.255 |
| Effective Application Rate (In/Hr): | 0.140 (75%) |
| Overspray: | 0.0% |
| Pattern Loss: | 67.5% |
| Application Efficiency: | 32.5% |
| Distribution Uniformity: | 17.0% |
| Notes: | Project 1499(Irrg/15) July 26, 2016 Test conducted on turf plot no. 2 |

A-18. IrriGreen Genius® SWAT 30 ft Diameter Circle SMS Evaluation



| | |
|--------------------------|---|
| Pressure (psi): | 65.0 |
| Flow Rate (gpm): | 3.8 |
| Spacing (ft): | 30.0 diameter |
| Area: | Circular |
| Average Delta VWC (%): | 9.599 |
| Effective Delta VWC (%): | 7.820 (75%) |
| Overspray: | 8.9% |
| Pattern Loss: | 33.9% |
| Application Efficiency: | 60.2% |
| Distribution Uniformity: | 43.0% |
| Notes: | Project 1499(Irrg/15) July 26, 2016 Test conducted on turf plot no. 2 |