Tri-Basin Irrigator

Volume 17, Issue 6 *August 3, 2017*

Program Information

EQIP & CSP:

EQIP – PROJECTED SIGN-UP DEADLINE FOR 2018 FUNDS WILL BE MID-OCTOBER 2017.

CSP – WE ARE CURRENTLY CONTRACTING 2017 PRE-APPROVED APPLICATIONS.

NSWCP: NSWCP FUNDS ARE ONLY AVAILABLE FOR FLOW METERS AND SOIL MOISTURE SENSORS AT THIS TIME.

ENERGY EFFICIENCY GRANT: SIGNUP DEADLINE FOR 2018 FUNDS WILL BE OCTOBER 31, 2017. FOR MORE INFORMATION CONTACT KELLEY AT RURAL DEVELOPMENT AT THE KEARNEY USDA SERVICE CENTER AT 308-237-3118, EXT. 4 OR AT 308-455-9837.

Calendar of Events

AUG 7: CNPPID BOARD OF DIRECTORS MEETING - 9 AM

AUG 8: TBNRD BOARD MEETING AT KEARNEY COUNTY FAIRGROUNDS -1:30 PM

AUG 8-11: SOYBEAN MANAGEMENT FIELD DAYS. GOTO HTTP://ARDC.UNL.EDU/SOYDAYS FOR MORE INFO. SEE ALSO EXTENSION ARTICLE ON PAGE 3.

When to Irrigate with 92% Moisture?

Attached is a chart showing we are averaging 92% moisture across the NRD as of July 31st. Of course, each field is different based on rainfall and irrigation amounts. However, if your current soil moisture levels are at 92%, how do you know when to start irrigating? First you must know how much moisture is in a full soil profile (100%). To do this, you must first know the soil type for your field. For example, a Holdrege Silt Loam soil will hold 2.3 inches per foot. That equates to 6.9 inches in a 3 foot profile.

If you plan to start irrigating a Holdrege Silt Loam soil at a 65% moisture level and you currently have 92% moisture, then you are wanting to utilize 27% moisture (92% - 65%). Using 27% moisture at a three foot depth means you will utilize 1.86 inches prior to irrigation (6.9 inches * 0.27 = 1.86 inches to be used). Keep track of your daily crop water use (ET). You can keep track of daily crop water use at any of the websites or phone number provided on page 3 of this newsletter under the ET Information Sites section. Once daily ET's add up to 1.86 inches, it's time to irrigate provided no rain has been added to the soil. Effective rain amounts would need to be subtracted.

This method of scheduling irrigations is called the checkbook method. You need to know your starting point before you can add and subtract inputs and outputs. Also, scheduling irrigations to a 3 foot depth allows you to utilize more soil moisture that is available to the crop (less irrigating, more money). Soil moisture sensors can provide you with both, your starting point and moisture levels to 3 feet. In using this method, it is always recommended to check the soil moisture levels throughout the year and to make adjustments as necessary. Kinda like your monthly bank statement.

Curtis's Column

USDA United States Department of Agriculture Natural Resources Conservation Service

Current Moisture Levels on Corn!!!

A lot of you have received some good rains recently. Where are we at across the TBNRD moisture wise? On average, it appears we are at 92% moisture.

Where do we go from here? We have passed the peak water use demand corn stage for the year so we are on the down hill side. Even though a lot of corn maturing is left, we need to start thinking about where we want to end the year and work towards that. From 2011 through 2016 at a 4-foot depth across the Tri-Basin NRD, we averaged ending the year at 73% moisture. We would like to get to 40% but that is difficult to do.

So what do we do? We need to start somewhere. With that, I have set a goal of getting to 65% by years end at a 4-foot depth. See attached chart (black line). The other colors represent various depths. The chart also shows the year ending average from 2011-2016. This chart basically shows average moisture levels across the NRD as of July 31st and gives us a target to reach the goal of 65% at years end.

If we across the NRD can get a year end average of 65% every year, then we will have room at the end of the year to take in an additional 0.72 inches of additional moisture in the off-season. This means cleaner water for drinking due to less leaching of nitrates into the groundwater. That means more money in your pocket from less pumping and reduced nitrogen losses. It could also mean less regulations in the future. Just imagine if we could save a little more.

Soil Health Series: Available Water Capacity (AWC)

Available Water Capacity is the amount of water available for a plant that a soil can hold. It's the amount of water between field capacity (100% moisture) and permanent wilting point (0% moisture). Holdrege Silt Loam soil will hold 2.3 inches of moisture per foot of depth. Valentine Loamy Sands will hold 1.1 inches per foot.

For irrigation purposes, one does not want to use more than 50% of the AWC or crops will start stressing. To end the crop season, one can use up to 60% of the AWC to a 4 foot depth. Drying it down at seasons end to the best of our ability will allow room for free off-season moisture to replenish the profile while preventing leaching of valuable nitrogen into the groundwater.

Excellent soil health with excellent structure, aggregate stability, infiltration, etc. can maximize the amount of moisture the soil can hold. This moisture is then available to the crops. Compaction can significantly reduce the amount of AWC the soil can hold due to destroyed pore spaces and creating a layer preventing water to move into the deeper depths of the profile. The end result is poor root penetration combined with very little AWC. That means a lot more irrigation, which means more money leaving the pocket.

Conservation practices that can increase the AWC of a soil are crop rotations, no-till, and cover crops. The biggest factor of course is the texture of a soil and its physical makeup. A sand just doesn't have the credentials to hold as much water as a clay soil. But conservation practices can help each soil type do a better job.

Attached is a Soil Quality Indicator sheet for more info.

CNPPID Notes

Central's drone:

Central's DJI Phantom 4 Pro drone was deployed for an agronomic purpose for the first time in July to address a question of crop health in a particular field. Central's drone pilot is Luke Ritz; a Central land administrator working out of the Gothenburg office. He was assisted on the flight by Dalton Refior, a third-year summer intern and Andrew Yantzie, a first year intern for the Tri-Basin NRD.

The drone has a 20-megapixel camera on board for still shots or video that offers excellent resolution for field work. In this case, the still shots were used and stitched together for us by DroneDeploy out of San Francisco, CA to produce geo-referenced 2D, plant health and elevation map assessments.

Pre-flight, a geo-referenced outline of this particular field was generated in Google Earth and sent to Luke as a .kmz file. From there, Luke determined a best flight path and uploaded those coordinates to the drone. Best altitude for the job and flight time were determined and the request for air time on a preferred date was communicated to the local airport.

Commercial use of the drones is new. Line of sight is required for the flights that are regulated by the Federal Aviation Administration. In this flight, an intervening tree line around a farmstead divided the field; the interns used radios to stay in contact with the pilot and became the other sets of eyes needed to complete the flight.

There will be many uses for drones in the future of ag management and they will likely become commonplace in the not too distant future. Line of sight contact will continue to be critical in ag to avoid obstacles; in particular crop dusting planes, unless new technology makes that concern a non-issue.

Tri-Basin NRD News

New NeRAIN Website Launched:

The Nebraska Department of Natural Resources (NDNR) has redesigned the NeRAIN Website! The new site is more user-friendly, with weather data readily accessible. The new website address is: *https://nednr.nebraska.gov/nerain*.

NeRAIN is a cooperative program sponsored by NDNR; Community Collaborative Rain, Hail & Snow Network; Nebraska Environmental Trust; Weather Ready Nation; and the Nebraska Association of Natural Resources Districts. Weather data from across the state is compiled on this website, where it can be used for daily decision-making by agricultural producers, industry leaders, homeowners, utility providers, insurance professionals, natural resources managers, and educators. On the website, there are maps and records of precipitation amounts based on county or natural resources district, as well as data focused on precipitation or temperature.

Tri-Basin NRD welcomes new volunteers to record rain gauge readings at their home, farms, or place of business as part of NeRAIN. Selected volunteers will receive a free National Weather Service rain gauge furnished by TBNRD. If you are interested in participating in the volunteer rain gauge reader program, please contact Esther Smith, TBNRD NeRAIN Coordinator, by email at *esmith@tribasinnrd.org* or by phone at 1-877-995-6688.

Nebraska Extension Extras

Soybean Mgt Field Day – North Platte – Aug. 8th:

Nebraska Extension Soybean Management Field Days are scheduled for four locations across the state (Aug. 8-11). Our UNL West Central site will be at the West Central Research & Extension Center (402 W. State Farm Road – North Platte, NE) on **Tues., Aug. 8** beginning at **9:00 a.m**. & ending at 2:30 p.m.

Free registration is available the day of the event. Featured topics will include: New soybean herbicides; Marketing; Maturity groups & traits; Early season stress effects; and Irrigation research. For more information visit: *http://ardc.unl.edu/soydays.*

Late Season Corn Fertilization:

Six critical nutrients are the focus of most corn fertility studies: nitrogen (N); phosphorus (P); potassium (K); sulfur (S); zinc (Zn); and boron (B). At tasseling, the corn crop generally has taken up 73% of needed nitrogen and 85% of its needed potassium. In contrast, about half of the phosphorus and sulfur corn plant uptake will occur after the corn tasseling (VT/R1) stage. The zinc and boron micronutrients are favored by shorter intense periods of intake compared to the other four nutrients; but plant usage rate of Zn and B plateaus at the tasselling stage. Then, usage remains relatively constant similar to phosphorus and sulfur. Peak boron uptake usually pegs around the corn dent (R5) stage.

During the post-tassel corn phase, plants will cease rapid growth for one week and then focus on ear development for two more weeks. As ear development begins, nutrient uptake slows as the plant shifts from producing leaves to producing grain. Then, between two and five weeks after pollination (roughly blister to full milk/dent kernel development stages), kernel fill proceeds rapidly until nutrient update is completed. At this time the root system will begin to senesce and die off as the lower leaves also die back.

Late-season corn nitrogen application University studies have demonstrated that corn can recover from significant nitrogen deficiency stress with side-dress nitrogen applications as late as V13 to V15 (prior to tasseling). This research further suggests that when nitrogen deficiency occurs due to saturated soils and ponding of fields, the resulting corn stands are often also compromised due to root damaged by the excessive soil moisture. Under these challenging conditions, corn may not respond as strongly to late applied nitrogen. Consequently, late-season nitrogen applications to severely nitrogen deficient corn should be limited to no more than 50 pounds of nitrogen per acre.

Our Nebraska Extension NebGuide, "Chlorophyll Meter to Improve N Management," (G1632) for crop canopy sensors nitrogen management is useful for late season fertility decision. For those without sensors, walk through suspect fields and examine lower leaves for nitrogen deficiency visual signs such as yellowing lower leaves from the tip to the stalk in a V-shaped pattern. Through tasseling, the entire corn plant should be green.

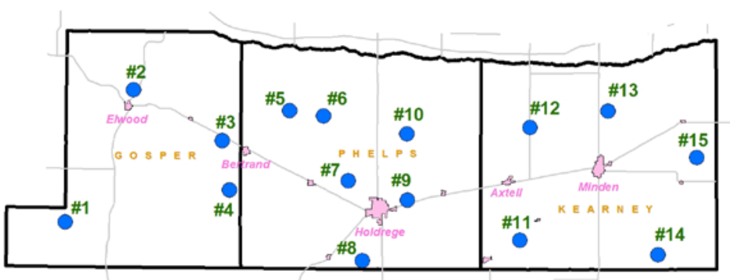
Although nitrogen can be applied at any time, corn nitrogen uptake reaches just over 70% of the total nitrogen by R1 (pollination) for normal growing corn. If it is nitrogen deficient, partial remediation is possible, and application is not further delayed. After the R1 corn stage, nitrogen in the leaves moves to the grain, so some yellowing of the bottom leaves is normal. However, if all plant corn leaves stays green until physiological maturity (black layer kernel stage), this is likely a sign that the field was over fertilized.

NAWMN Crop ET Information

Additional Information and other ET resources can be found at websites listed under "ET Information Sites" below.

Inches of Crop Water Use (ET) = Evaporation x Kc

	July 17 – July 23		July 24 – July 30	
Site	Evaporation	Rain	Evaporation	Rain
1	1.90	2.37	1.60	0.75
2	1.80	1.35	1.40	1.18
3	1.40	0.79	1.10	0.69
4	1.80	1.40	1.30	0.50
5	1.60	1.70	1.30	0.70
6	1.50	1.20	1.10	0.40
7	1.70	1.85	1.40	1.20
8	1.80	2.50	1.40	1.22
9	1.60	3.30	1.20	1.50
10	2.10	1.50	1.60	0.85
11	1.70	4.24	1.30	0.99
12	1.50	1.77	1.40	0.87
13	1.90	1.35	1.30	0.98
14	1.80	4.50	1.30	0.60
15	2.00	1.15	1.30	1.42



2017 Map of NAWMN Sites across the Tri-Basin NRD.

Crop Coefficients (Kc)

Corn Stage	Kc	Soybeans Stage	Kc
2 leaf	0.10	Cotyledon (VC)	0.10
4 leaf	0.18	1st Node (V1)	0.20
6 leaf	0.35	2nd Node (V2)	0.40
8 leaf	0.51	3rd Node (V3)	0.60
10 leaf	0.69	Beg. Bloom (R1)	0.90
12 leaf	0.88	Full Bloom (R2)	1.00
14 leaf	1.01	Beg. Pod (R3)	1.10
16 leaf	1.10	Full Pod (R4)	1.10
Silk – Beg. Dent	1.10	Beg. Seed (R5)	1.10
¼ Milk Line	1.04	Full Seed (R6)	1.10
Full Dent (½ Milk)	0.98	Yellow Leaf (R6.5)	1.00
¾ Milk Line	0.79	Beg. Mat. (R7)	0.90
Black Layer	0.60	Full Mat. (R8)	0.20
Full Maturity	0.10	Mature	0.10

Crop Stage Information

Corn (R1-Silking to R4-Dough stage): Stress at milk stage, although not as severe as at silking, can still have a profound effect on yield. One can start taking advantage of subsoil moisture in the three foot zone and eventually utilizing some in the four foot zone prior to Black Layer.

Avg. daily water use from July 24 – July 30 was 0.17"-0.25".

Soybeans (R3-Beg Pod to R5-Beg Seed stage): Demand for water and nutrients is large throughout the rapid seed filling period. Environmental stress from now til shortly after R6 (Full Seed) needs to be avoided. Roots should be taking water from the three foot depth.

Avg. daily water use from July 24 – July 30 was 0.17"-0.25".

July 24-July 30 (15 of 15 NAWMN sites reporting): Average weekly rainfall was 0.92 (range 0.40 to 1.50). Average weekly ET for corn was 1.49 and for soybeans was 1.36.

ET Information Sites

NAWMN Sites:

- http://www.cnppid.com/news-info/weatheret-data/nebraska-agricultural-water-management-network/
- https://nawmn.unl.edu/ETdata/DataMap

CropWatch: http://cropwatch.unl.edu/gdd-etdata

CNPPID: http://www.cnppid.com/news-info/weatheret-data/

Water Use Hotline: 1-800-993-2507

Corn Stage		DESCRIPTION
R2	Blister	The kernels are white on the outside and resemble a blister in shape. The cob should be close to, if not, at full size by R2. The silks are beginning to dry out and darken in color.
R3	Milk	The kernels display a yellow color on the outside. Inner fluid is milky white. Silks are brown and dry or becoming dry.
R4	Dough	Most kernels contain semi-solid, pasty material.

Soybean Stage		DESCRIPTION
R4	Full Pod	At least one pod of 3/4" length is present at any one of the four upper most main stem nodes that have fully developed leaves.
R5	Beginning Seed	At least one pod containing small seeds is present at one of the four uppermost main stem nodes that have fully developed leaves. Holding a pod up to the bright sky can aide in seeing the developing seeds in the pod.

Lake and River Levels

CNPPID Reservoir Elevation and Platte River Flow data listed below and other locations can be found on CNPPID's website at http://cnppid.com/wp-content/uploads/2016/06/lakeRiverData.html.

	August 3, 2017, 8:00 AM	1 Year Ago
Capacity of Lake McConaughy	76.8%	NA
Inflows to Lake McConaughy	1212 cfs	1513 cfs
Flows on the North Platte at North Platte	1689 cfs	1308 cfs
Flows on the South Platte at North Platte	180 cfs	265 cfs
Flows on the Platte at Overton	1650 cfs	724 cfs

Without forgiveness life is governed by…an endless cycle of resentment and retaliation.
- Roberto Assagioli

Websites of Interest

Soil Health:
www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/

Climate	agclimatenebraska.weebly.com
SAM Registration	www.sam.gov
NRCS Nebraska	www.ne.nrcs.usda.gov
Central Irrigation District	www.cnppid.com
TBNRD Home Page	www.tribasinnrd.org/
Farm Service Agency	www.fsa.usda.gov
UNL Cropwatch	cropwatch.unl.edu
UNL Extension	extensionpubs.unl.edu/
K-State SDI Website	www.ksre.ksu.edu/sdi
No-till On The Plains	www.notill.org

Rainfall

Rainfall amounts listed below and other locations come from NeRAIN which can be found at website https://nednr.nebraska.gov/NeRain/Maps/maps.

Location:	July 20 – Aug 2	May 1 – Aug 2
Arapahoe 6.9 NW:	1.37	11.81
Bertrand 6.1 mi. SE:	0.51	8.71
Funk 4.1 mi. NNE:	1.34	12.50
Minden 0.855 mi. W:	1.04	14.29
Minden 8.8 mi. ESE:	1.28	13.41

Average Rain for May-July in Holdrege = 11.32 Inches

****** If you wish to receive this newsletter via e-mail, or have any questions, comments or ideas, feel free to contact Curtis Scheele at the NRCS office in Holdrege or you can email him at curtis.scheele@ne.usda.gov. ******

USDA - Natural Resources Conservation Service

1609 Burlington Street
PO Box 798
Holdrege, NE 68949-0798
308-995-6121, Ext. 3

309 Smith Street
PO Box 41
Elwood, NE 68937-0041
308-785-3307, Ext. 3

1005 South Brown Street
Minden, NE 68959-2601
308-832-1895, Ext. 3

Central Nebraska Public Power & Irrigation District

415 Lincoln Street
PO Box 740
Holdrege, NE 68949
308-995-8601

Tri-Basin Natural Resources District

1723 Burlington Street
Holdrege, NE 68949
308-955-6688

Nebraska Extension

1308 2nd Street
Holdrege, NE 68949
308-995-4222

PO Box 146
Elwood, NE 68937
308-785-2390

424 North Colorado
PO Box 31
Minden, NE 68959
308-832-0645

Soil Quality Indicators

Available Water Capacity

Available water capacity is the maximum amount of plant available water a soil can provide. It is an indicator of a soil's ability to retain water and make it sufficiently available for plant use.

Available water capacityis the water held in soil between its *field capacity* and *permanent wilting point*. *Field capacity* is the water remaining in a soil after it has been thoroughly saturated and allowed to drain freely, usually for one to two days. *Permanent wilting point* is the moisture content of a soil at which plants wilt and fail to recover when supplied with sufficient moisture. Water capacity is usually expressed as a volume fraction or percentage, or as a depth (in or cm).

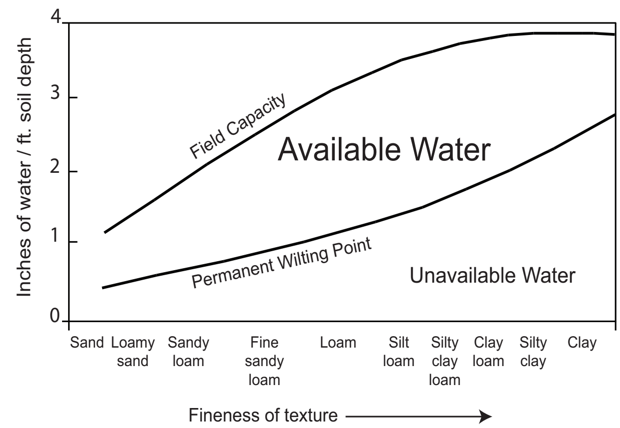


Figure 1. General relationship between soil moisture and texture. Ohio Agronomy Guide, 14th edition, Bulletin 472-05

Factors Affecting

Inherent - Available water capacity is affected by soil texture, presence and abundance of rock fragments, and soil depth and layers.

Available water capacity increases with increasingly fine textured soil, from sands to loams and silt loams. Coarse textured soils have lower field capacity since they are high in large pores subject to free drainage. Fine textured soils have a greater occurrence of small pores that hold water against free drainage, resulting in a comparatively higher field capacity. However, in comparison to well-aggregated loam and silt loam soils, the available water capacity of predominantly clay soils tends to be lower since these soils have an increased permanent wilting point (see Figure 1).

Rock fragments reduce available water capacity of soil proportionate to their volume, unless the rocks are porous. Soil depth and root restricting layers affect total available water capacity since they can limit the volume of soil available for root growth. (Restrictive layers may be naturally occurring or a result of management activities.) Plant rooting characteristics must be considered for a practical understanding of the effects of soil depth and restrictive layers on water available for plant growth. A restrictive layer at 20 inches might have little consequence on the water requirements of a shallow-rooted crop. However, this layer might severely limit the volume of soil a deep-rooted crop can explore for moisture.

Dynamic - Available water capacity is affected by organic matter, compaction, and salt concentration of the soil.

Organic matter increases a soil's ability to hold water, both directly and indirectly. When a soil is at field capacity, organic matter has a higher water holding capacity than a similar volume of mineral soil. While the water held by organic matter at the permanent wilting point is also higher, overall, an increase in organic matter increases a soil's ability to store water available for plant use. Indirectly, organic matter improves soil structure and aggregate stability, resulting in increased pore size and volume. These soil quality improvements result in increased infiltration, movement of water through the soil, and available water capacity (see Figure 2).

Compaction reduces available water capacity through its adverse affects on both field capacity and permanent wilting point. Compaction reduces total pore volume, consequently reducing water storage when the soil is at field capacity. Compaction also crushes large soil pores into much smaller micropores. Since micropores hold water more tightly than larger pores, more water is held in soil at its permanent wilting point.

Salts in soil water result from fertilizer application or naturally occurring compounds. Salt concentration increases as soil water decreases. For soils high in soluble salts, moisture stress results when plants cannot uptake water across an unfavorable salt concentration gradient. Soils with high salt concentration tend to have reduced available water capacity because more water is retained at the permanent wilting point than if water was held by physical factors alone. These effects are most pronounced in soils in dry regions where salts accumulate because of irrigation or natural processes.

Relationship to Soil Function

Soil is a major storage reservoir for water. In areas where rain falls daily and supplies the soil with as much or more water than is removed by plants, available water capacity may be of little importance. However, in areas where plants remove more water than is supplied by precipitation, the amount of water held by the soil may be critical. Water held in the soil may be necessary to sustain plants between rainfall or irrigation events. By holding water for future use, soil buffers the plant – root environment against periods of water deficit.

Available water capacity is used to develop water budgets, predict droughtiness, design and operate irrigation systems, design drainage systems, protect water resources, and predict yields.

Problems with Poor Function

Lack of available water reduces root and plant growth, and it can lead to plant death if sufficient moisture is not provided before a plant permanently wilts. A soil's ability to function for water storage also influences runoff and nutrient leaching.

Agricultural land management practices that lead to poor available water capacity include those that prevent accumulation of soil organic matter and/or result in soil compaction and reduced pore volume and size:

- Conventional tillage operations,
- Low residue crop rotations, and burning, burying, harvesting, or otherwise removing plant residues,
- Heavy equipment traffic on wet soils, and
- Grazing systems that allow development of livestock loafing areas and livestock trails.

As natural areas are permanently converted to homes, roads, and parking areas, the overall amount of water that can be stored in the soil is reduced. This leads to higher total runoff, increased pressure on storm water drainage systems, a higher likelihood of flooding, and generally poorer water quality in streams and lakes.

Improving Available Water Capacity

Farmers can grow high residue crops, perennial sod and cover crops, reduce soil disturbing activities, and manage

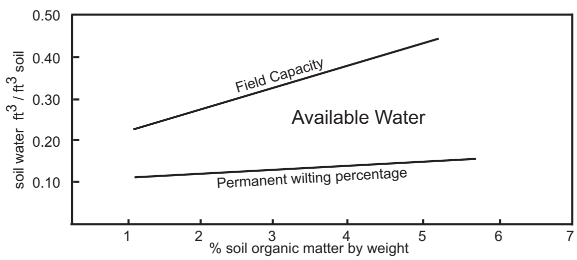


Figure 2. Effect of increasing organic matter on available water capacity of silt loam soils. Adapted from Hudson, SWCS, 1994.

residue to protect and increase soil organic matter to make improvements in a soil's available water capacity. When feasible, tillage, harvest, and other farming operations requiring heavy equipment can be avoided when the soil is wet to minimize compaction; and compacted layers can be ripped to break them and expand the depth of the soil available for root growth.

For soil high in soluble salts, management activities that maintain salts below the root zone can be used. These include irrigation to leach salts below the root zone and practices that promote infiltration, reduce evaporation, minimize disturbance, manage residue, and prevent mixing of salt-laden lower soil layers with surface layers.

Conservation practices resulting in available water capacity favorable to soil function include:

- Conservation Crop Rotation
- Cover Crop
- Prescribed Grazing
- Residue and Tillage Management
- Salinity and Sodic Soil Management

Developers can incorporate the use of permeable parking areas, green roofs, and other practices that minimize the impact of development on soil water storage.

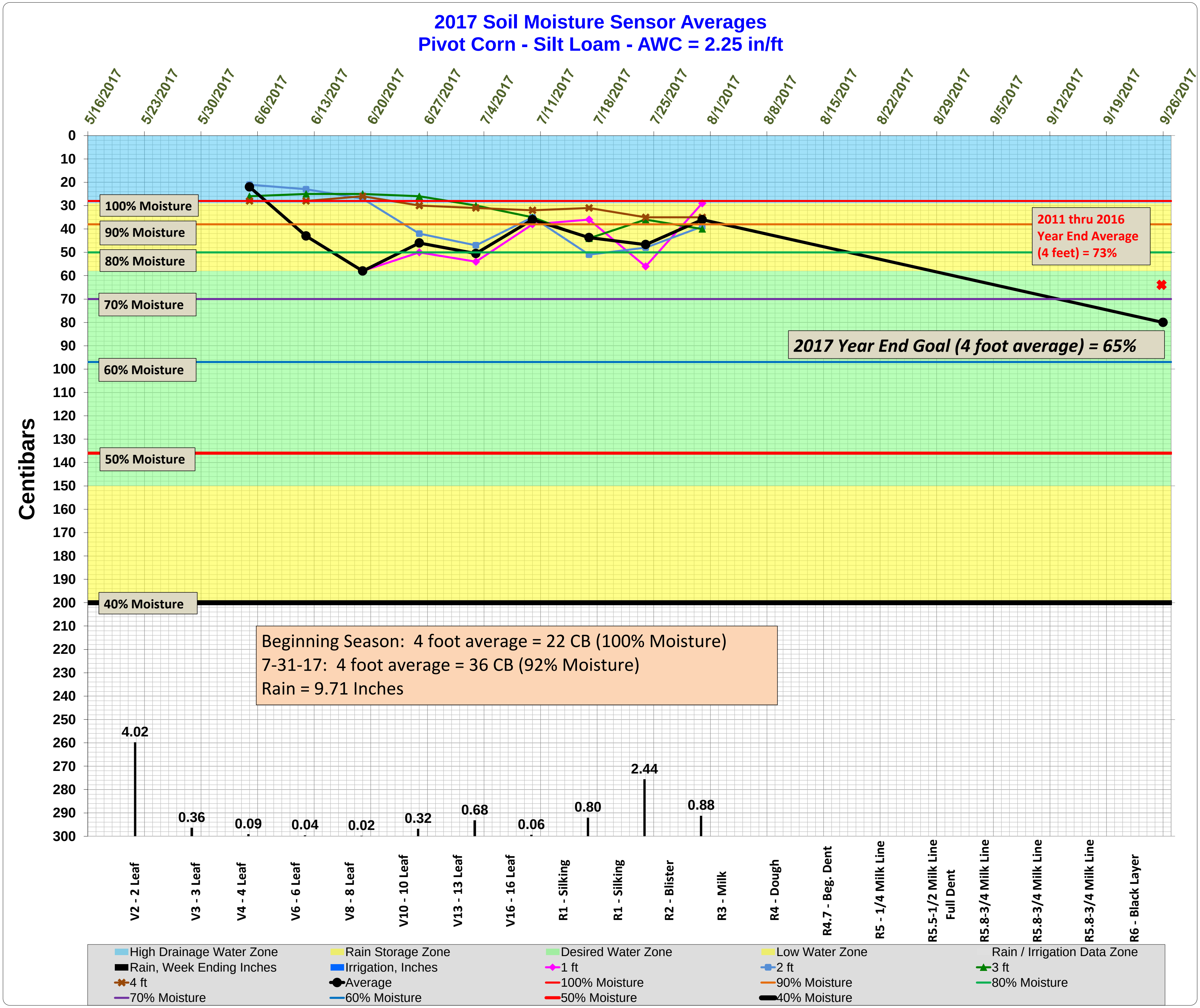
Measuring Available Water Capacity

Reference: U.S. Department of Agriculture, Natural Resources Conservation Service, 2005. National Soil Survey Handbook, title 430-VI. Soil Properties and Qualities (Part 618), Available Water Capacity (618.05). Online at: http://soils.usda.gov/technical/handbook/

Specialized equipment, shortcuts, tips:

Determination of permanent wilting point moisture content requires a pressure membrane apparatus.

Time needed: One to two days is required for free drainage and to allow soil to reach field capacity.



2017 Soil Moisture Sensor Averages
Pivot Corn - Silt Loam - AWC = 2.25 in/ft
5/16/2017
5/23/2017
5/30/2017
6/6/2017
6/13/2017
6/20/2017
6/27/2017
7/4/2017
7/11/2017
7/18/2017
7/25/2017
8/1/2017
8/8/2017
8/15/2017
8/22/2017
8/29/2017
9/5/2017
9/12/2017
9/19/2017
9/26/2017
Centibars
100% Moisture
90% Moisture
80% Moisture
70% Moisture
60% Moisture
50% Moisture
40% Moisture
2011 thru 2016 Year End Average (4 feet) = 73%
2017 Year End Goal (4 foot average) = 65%
Beginning Season: 4 foot average = 22 CB (100% Moisture)
7-31-17: 4 foot average = 36 CB (92% Moisture)
Rain = 9.71 Inches
4.02
0.36
0.09
0.04
0.02
0.32
0.68
0.06
0.80
2.44
0.88
V2 - 2 Leaf
V3 - 3 Leaf
V4 - 4 Leaf
V6 - 6 Leaf
V8 - 8 Leaf
V10 - 10 Leaf
V13 - 13 Leaf
V16 - 16 Leaf
R1 - Silking
R1 - Silking
R2 - Blister
R3 - Milk
R4 - Dough
R4.7 - Beg. Dent
R5 - 1/4 Milk Line
R5.5-1/2 Milk Line Full Dent
R5.8-3/4 Milk Line
R5.8-3/4 Milk Line
R5.8-3/4 Milk Line
R6 - Black Layer
High Drainage Water Zone
Rain Storage Zone
Desired Water Zone
Low Water Zone
Rain / Irrigation Data Zone
Rain, Week Ending Inches
Irrigation, Inches
1 ft
2 ft
3 ft
4 ft
Average
100% Moisture
90% Moisture
80% Moisture
70% Moisture
60% Moisture
50% Moisture
40% Moisture