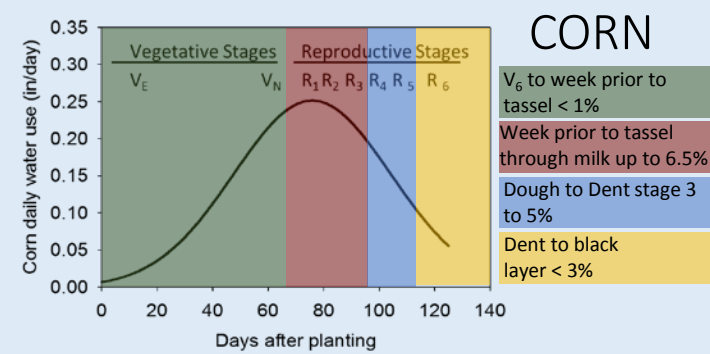
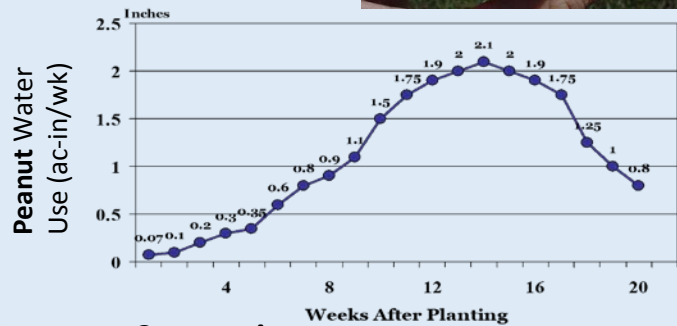


# CORN



You can use the milk-line development to estimate when the crop will reach physiological maturity. The milk-line progression through the entire kernels lasts about 20 days or slightly longer. Alternatively, each quarter of the kernel fills starch over 5-6 days. Therefore, if your milk-line has progressed one-quarter of the way through the kernel, you have about 15 more days to maturity. The formula used to calculate this example is:  $(20d - (20d \times 25\% \text{ milk line})) = 15 \text{ days to maturity}$ .

**RICE AWD** – Full flood must be maintained for 14-21 d after initial flood, then AWD begins. Also, a full flood from 0 to 100% heading is recommended.



## Sensor Preconditioning:

1. Place sensors into 1-2 inches of water for 30 mins, remove and let dry for 12 hrs.
2. Repeat Step 1.
3. Repeat Step 1.
4. Submerge sensors overnight prior to installation and install WET.

## Acres per sensor package:

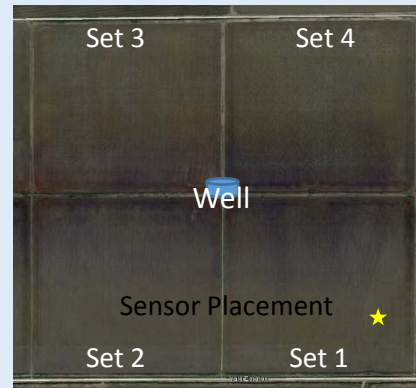
1. Well capacity
2. Economics
3. Soil Type
4. Crop
5. Planting Date

## Sensor Installation:

1. Using a soil testing probe, excavate holes to the desired sensor depths.
2. Add soil from field and water to a container to make a thick, soupy mixture (slurry).
3. Pour a small amount into excavated hole.
4. Add a uniform layer of slurry to moisture sensor, and place in hole to desired depth.
5. Move sensor up and down slightly to ensure contact of sensor and slurry is uniform to soil in field.

## Sensor Placement in field:

1. Pick location with representative stand
2. Representative yield potential
3. Lower 1/3<sup>rd</sup> of field
4. Avoid traffic rows
5. Minimize crop damage during installation

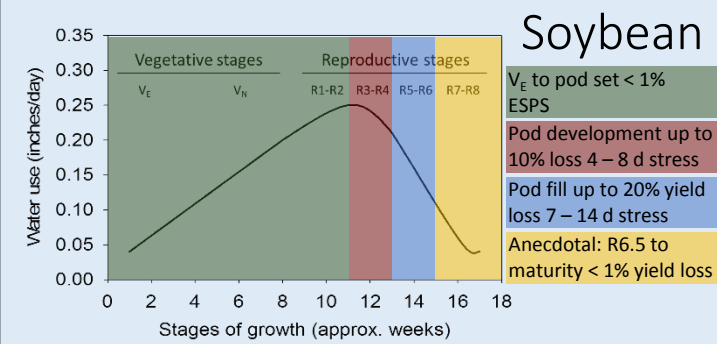


## Sensor Averages:

| Rooting Depth              | Sensor Depth (in) | Sensor Reading (cb) | Factor | Value |
|----------------------------|-------------------|---------------------|--------|-------|
| ↑                          | 6                 | 50                  | x 50%  | = 25  |
|                            | 12                | 40                  | x 50%  | = 20  |
| ↓                          | 24                | 0                   |        |       |
|                            | 36                | 0                   |        |       |
| Average Soil Moisture (cb) |                   |                     |        | 45    |

| Rooting Depth              | Sensor Depth (in) | Sensor Reading (cb) | Factor | Value |
|----------------------------|-------------------|---------------------|--------|-------|
| ↑                          | 6                 | 80                  | x 25%  | = 20  |
|                            | 12                | 75                  | x 25%  | = 19  |
| ↓                          | 24                | 40                  | x 50%  | = 20  |
|                            | 36                | 0                   |        |       |
| Average Soil Moisture (cb) |                   |                     |        | 59    |

| Rooting Depth              | Sensor Depth (in) | Sensor Reading (cb) | Factor | Value |
|----------------------------|-------------------|---------------------|--------|-------|
| ↑                          | 6                 | 95                  | x 17%  | = 16  |
|                            | 12                | 80                  | x 17%  | = 13  |
| ↓                          | 24                | 50                  | x 33%  | = 17  |
|                            | 36                | 30                  | x 33%  | = 10  |
| Average Soil Moisture (cb) |                   |                     |        | 56    |



## Soybean Late Reproductive Growth Stages:

- R5.5 – Pods contain soybeans which fill half space inside pod cavity
- R6 – Soybeans completely fill inside of pod cavity
- R6.5 – Pod and pod wall beginning to change color. Soybeans inside the pod are separating from the protective membrane within the pod
- R7 – Pod mature in color

## Soybean Termination:

Calculated average from the rooting zone should read < 60.

To terminate at R6 with measurements recorded from an Aquaterr M-350: Meter should read in the light green area for your soil type

To terminate at R6.5 with measurements recorded from Watermark type sensors: Calculated average from the rooting zone should read < 100

To terminate at R6.5 with measurements recorded from an Aquaterr M-350: Meter should read in the orange area for your soil type

## Sensor placement on furrow:

Clay soil- Sensor should be placed as close to top of bed as possible, without damaging crop

Sealing soil / SL- Sensors should be placed on the edge of the bed, as close to the furrow as possible without placing in the furrow.

## Common Conversions

- 450 GPM = 1 acre inch / hr or 1 cubic foot per second (cfs)
- 1 gallon = 8.33 pounds
- 1 cubic foot = 7.48 gallons = 62.4 pounds
- 1 acre-inch = 27,154 gallons = 1 acre flooded 1" deep
- 1 acre-foot = 12 acre-in. = 43,560 ft<sup>3</sup> = 325,900 gallons
- 1 gallon = 3.785 liters = 0.003785 cubic meters
- 1 cubic meter = 1000 liters = 264.2 gallons
- 1 psi = 2.31 feet of vertical elevation change for water.
- 1 atmosphere = 14.7 psi = 33.95 feet of water
- 1 inch of mercury = 1.13 feet of water