

Conversion Tables for Automatic Soil Moisture Monitors

These tables convert the readings in centibars (cB) on automatic soil moisture monitors to inches of available water. Note that the tables are specific to soil type, crop root depth, and sensor depth. These tables are for deep rooted crops, such as alfalfa, with sensors buried at 12", 24", and 40".

How to Use These Tables:

1. Look at the moisture level displayed on the screen, which will give a value in centibars (cB). Go down the left column of the table to the range in which that meter reading falls, and read across to the number under the "Sensor #1" heading. This number is the amount of available water in the 0-15" depth. Record this number.
2. Repeat this process for each sensor.
3. Now, add up the inches of available water for each sensor. This is the total water in the soil profile that is available to the crop. Adjust for rocks by reducing the total amount of water by the percentage of rocks in the soil. For example, if the soil contains 10% rock, reduce the total water by 10%.
4. Divide this total by the current daily evapotranspiration (crop water use) value. This will be the number of days before the crop runs out of water. In other words, you should be **done** irrigating by this time.

Sandy Soils

This chart applies to DEEP rooted crops, such as alfalfa.

These numbers apply only to rock-free soils and must be adjusted for rock content.

If the Reading (in centibars, cB) on the Soil Moisture Monitor is 9	Sensor # 1 at 12" (Represents moisture content of the 0-15" depth)	Sensor #2 at 24" (Represents moisture content of the 15-30" depth)	Sensor #3 at 48" (Represents moisture content of the 30-48" depth)
10cB or Less	You have 1.0" of water in the 0-15" depth	You have 1.0" of water in the 15-30" depth	You have 1.2" of water in the 30-48" depth
11-30 cB	.75"	.75"	.9"
31-50 cB	.45"	.45"	.55"
51-65 cB	.2"	.2"	.2"
>65 cB	You have no water left.	You have no water left.	You have no water left.

Sandy Loam Soils

This chart applies to DEEP rooted crops, such as alfalfa.

These numbers apply only to rock-free soils and must be adjusted for rock content.

If the Reading (in centibars, cB) in the Upper Right Corner of the Soil Moisture Monitor is 9	Sensor # 1 at 12" (Represents moisture content of the 0-15" depth)	Sensor #2 at 24" (Represents moisture content of the 15-30" depth)	Sensor #3 at 48" (Represents moisture content of the 30-48" depth)
10cB or Less	You have 1.75" of water in the 0-15" depth.	You have 1.75" of water in the 15-30" depth.	You have 2.1" of water in the 30-48" depth.
11-20 cB	1.55"	1.55"	1.9"
21-30 cB	1.3"	1.3"	1.6"
31-40 cB	1.05"	1.05"	1.3"
41-50 cB	.75"	.75"	.9"
51-60 cB	.5"	.5"	.6"
61-70 cB	.25"	.25"	.3"
71 cB or More	You have no water left.	You have no water left.	You have no water left.

Silt Loam/Clay Loam Soils

****This chart applies to deep rooted crops, such as alfalfa.****

****These numbers apply only to rock-free soils and must be adjusted for rock content.****

If the Reading (in centibars, cB) in the Upper Right Corner of the Soil Moisture Monitor is 9	Sensor # 1 at 12" (Represents moisture content of the 0-15" depth)	Sensor #2 at 24" (Represents moisture content of the 15-30" depth)	Sensor #3 at 48" (Represents moisture content of the 30-48" depth)
10cB or Less	You have 2.4" of water in the 0-15" depth.	You have 2.4" of water in the 15-30" depth.	You have 2.85" of water in the 30-48" depth.
11-20 cB	2.05"	2.05"	2.5"
21-30 cB	1.8"	1.8"	2.2"
31-40 cB	1.5"	1.5"	1.8"
41-50 cB	1.25"	1.25"	1.5"
51-60 cB	1.0"	1.0"	1.2"
61-70 cB	.7"	.7"	.85"
71-80 cB	.45"	.45"	.53"
81-85 cB	.2"	.2"	.25"
86 cB or More	You have no water left.	You have no water left.	You have no water left.

Loam Soils

This chart applies to DEEP rooted crops, such as alfalfa.

These numbers apply only to rock-free soils and must be adjusted for rock content.

If the Reading (in centibars, cB) in the Upper Right Corner of the Soil Moisture Monitor is 9	Sensor # 1 at 12" (Represents moisture content of the 0-15" depth)	Sensor #2 at 24" (Represents moisture content of the 15-30" depth)	Sensor #3 at 48" (Represents moisture content of the 30-48" depth)
10cB or Less	You have 2.25" of water in the 0-15" depth.	You have 2.25" of water in the 15-30" depth.	You have 2.7" of water in the 30-48" depth.
11-20 cB	2.0"	2.0"	2.4"
21-30 cB	1.65"	1.65"	1.95"
31-40 cB	1.4"	1.4"	1.65"
41-50 cB	1.15"	1.15"	1.35"
51-60 cB	.75"	.75"	.9"
61-70 cB	.5"	.5"	.6"
71-75 cB	.25"	.25"	.3"
76 cB or More	You have no water left.	You have no water left.	You have no water left.

Clay Soils

This chart applies to DEEP rooted crops, such as alfalfa.

These numbers apply only to rock-free soils and must be adjusted for rock content.

If the Reading (in centibars, cB) in the Upper Right Corner of the Soil Moisture Monitor is 9	Sensor # 1 at 12" (Represents moisture content of the 0-15" depth)	Sensor #2 at 24" (Represents moisture content of the 15-30" depth)	Sensor #3 at 48" (Represents moisture content of the 30-48" depth)
10cB or Less	You have 2.6" of water in the 0-15" depth.	You have 2.6" of water in the 15-30" depth.	You have 3.15" of water in the 30-48" depth.
11-20 cB	2.4"	2.4"	1.9"
21-30 cB	2.05"	2.05"	2.85"
31-40 cB	1.8"	1.8"	2.2"
41-50 cB	1.5"	1.5"	1.8"
51-60 cB	1.25"	1.25"	1.5"
61-70 cB	.95"	.95"	1.15"
71-80 cB	.70"	.70"	.85"
81-90	.38"	.38"	.45"
91-95cB	.2"	.2"	.25"
96 cB or More	You have no water left.	You have no water left.	You have no water left.

Gumbo Soils

This chart applies to DEEP rooted crops, such as alfalfa.

These numbers apply only to rock-free soils and must be adjusted for rock content.

If the Reading (in centibars, cB) in the Upper Right Corner of the Soil Moisture Monitor is 9	Sensor # 1 at 12" (Represents moisture content of the 0-15" depth)	Sensor #2 at 24" (Represents moisture content of the 15-30" depth)	Sensor #3 at 48" (Represents moisture content of the 30-48" depth)
10cB or Less	You have 1.55" of water in the 0-15" depth.	You have 1.55" of water in the 15-30" depth.	You have 1.9" of water in the 30-48" depth.
11-20 cB	1.4"	1.4"	1.65"
21-30 cB	1.25"	1.25"	1.5"
31-40 cB	1.15"	1.15"	1.35"
41-50 cB	.95"	.95"	1.15"
51-60 cB	.75"	.75"	.9"
61-70 cB	.55"	.55"	.7"
71-80 cB	.4"	.4"	.45"
81-90	.25"	.25"	.3"
91-95cB	.15"	.15"	.15"
96 cB or More	You have no water left.	You have no water left.	You have no water left.