

John Adams Water Lesson

Let's talk about water today. First we will talk about how much water we get from precipitation here in Albuquerque and then we will talk about how we can effectively use water to take care of your orchard.

What is precipitation?

Rain, melted snow, sleet in inches

ACTIVITY--GUESS how many inches of precipitation do you think the following cities get annually (in a year)?

Santa Fe	14
Las Vegas	18
La Cruces	8.9
East Mountains	20
Farmington	8.6
Albuquerque	9.5

What is the national average?

39.17 inches

ACTIVITY-

2 kids demonstrate what they think 9.5 inches looks like with string

2 kids demonstrate what 39 inches look like with string

compare the two, what do you notice? 9 is a bout $\frac{1}{4}$ of 40

But here in Albuquerque do we get this 9 inches of water all at once?

So when do we get it?

Spring	1.68 inches
Summer	3.74 inches
Fall	2.67 inches
Winter	1.36 inches

ACTIVITY- let's talk about summer rain. **What does 3.74 inches of water look like in dirt?**

Dump water in jar with dirt –

observe how far the water sinks down
What do we learn from this?

So what do these average precipitation rates tell us about about NM?

We live in a high desert
We get far less precipitation than many parts of the country
Even within NM we have lots of variability

So you might hear the word drought on the radio, what does DROUGHT mean?

There are lots of scientific definitions of drought BUT here is an easy to understand one:

""**Drought** is a condition of moisture deficit sufficient to have an *adverse effect* on vegetation, animals, and man over a sizeable area."

What might these adverse effects be?

Brainstorm **ACTIVITY**

How is NM doing now?

PASS OUT DROUGHT MAP TO LOOK AT

http://droughtmonitor.unl.edu/data/pdfs/20150421/20150421_usdm.pdf

One effect of the drought right now in in Albuquerque is that as of April 1 we are on water restrictions Restriction #1) between April 1- Nov 1 we are not allowed to use sprinklers between 11am-7pm

WHY NOT?

Because wind make evaporation happen faster and therefore LESS of the water goes in the soil and MORE of it is lost to the air

Restriction #2) you can only water your yard 2 days per week in April and May and 3 days per week June- August

If you break these rules you can be fined.

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We provide them extra water them but we need to do this with the least waste as possible

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Let's think about the orchard, how can we efficiently water it?

1. Water day or night?
NIGHT (less evaporation from wind and heat and this is when trees like to refill their water stores)
2. Water at the base of tree or at the edge of the canopy?
EDGE (remember last lesson)
3. Water to 2 inches deep or 12 inches deep?
DEEPLY so entire top foot of soil is wet
4. Leave the soil bare or cover it?
Cover the soil with 2-4 inches of mulch-
Demonstrate by covering soil in jar with mulch
WHY? With mulch we lose less water to evaporation