**PAESTA Podcast Series--You Asked, We Answered!**

**Episode 43 -- How much water does it really take to grow almonds?**

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Hello, on today’s episode of the PAESTA Podcast Series, we’ll be talking about whether almonds really take too much water to be worth growing, especially during a water shortage. This is a common misconception that we hopefully can clear up. The almond industry brings in an astounding 11 billion dollars annually since the popularity of almonds has gone up over the past couple years because of almonds’ many health benefits. California supplies about 80% of the United States almonds, and dedicates 10%, or 80 million gallons, of its state’s water to grow the nut. To grow one almond requires 1.1 gallons of water, and to grow a pound takes 1,900 gal/ lb[1]. The crazy thing about that is that walnuts, hazelnuts, pistachios, and cashews all use roughly the same amount of water to grow as well, but it is the almond which is in such high demand at this time. Currently, California is in the midst of a 5 year drought that has everyone looking at the nut industry to blame. Because people are buying more almonds and nuts in general, farmers are shifting towards growing more of them, which can lead to pointing the blame at them for the water crisis in California. And because of the drought, the price per pound of almonds has gone way up to $6 a pound, as opposed to $2 a pound back in 2010 [2]. This gives farmers even more incentive to grow them, even with the water crisis going on.

Recently, a group of farmers were invited to talk on NPR about California’s drought and they had an interesting take on the situation. One farmer said that almonds really aren't any more thirsty than any of his other crops and shook his head when hearing that one almonds takes a gallon to produce. This same farmer then goes on to say that they've reduced the amount of water almonds require by 33% [3]. Another farmer then adds that almond trees require 10% of California's water supply and thinks that it “is a lot to devote to just one crop” but that they are working on reducing that number.

The LA Times wrote an article about growing almonds and they also had a different take on them by saying it isn’t as big of a problem as people are making it out to be. It states that although almonds trees use a lot of water to grow, these trees can be ground up and used as biomass fuel for cogeneration plants, essentially helping make electricity. It also says that almond farmers are working to reduce the amount of water that each plant consumes with techniques like drip irrigation. Farmers in this article also defend the almond by saying, “People need to understand that everything you eat takes water”. This same farmer goes on to say that "Now, we're feeling like a scapegoat for over 30 years of water mismanagement in this state” because of how much criticism her farm and other almond farmers are taking. This article concludes with a great point that “ the water it takes to grow any vegetable, fruit or nut is a mere fraction of what is required to raise animal protein” and goes on to say “It takes more than 106 gallons of water, experts say, to produce one ounce of beef”, so just imagine how much water a whole herd of cattle would use![4]

So to answer the question, “How much water does it really take to grow almonds?,” I can conclude that the answer is widely debated between farmers and the media. On one hand, farmers believe that they don't use substantially the amount of water that the media thinks they do. Farmers all over agree that although almonds use a more than an average amount of water, they want the public to remember that all crops use water to grow. They also completely disagree that one almond takes 1.1 gallons of water to grow and are appalled to think people would believe that. On the other hand, there are countless articles that stand behind the findings of almonds and other nuts using too much water. If I had to chose who to believe, I would stick with the farmers since they are dealing with the almonds first hand, and not the media, who may have never stepped foot on an almond farm or any farm for that matter. Thank you for joining me on today’s episode of the PAESTA Podcast Series.

(This audio file was recorded by Susan Kogon on November 10th, 2016)

**Works Cited**

[1]Boehrer, K. (2014, October 13). Which Of Your Favorite Foods Are Hiding A Massive Water Footprint? Retrieved September 8, 2016

[2]Severson, K. (2016, August 2). Demand and Price Rise For Organic Almonds. *The New York Times*, p. 3.

[3] Greene, D. (2015, April 16). How Almonds Became A Scapegoat For California’s Drought. *Morning Edition [NPR] (USA)*.

[4] Abcarian, R. (2015, 16). Almonds, the demons of drought? Frustrated growers tell another story - LA Times. Retrieved September 16, 2016