

Podcast for July 29<sup>th</sup>, 2020

**Hello! This is Laura McDermott, and today I'd like to talk to you about the importance of Irrigation in Berry Production**

Due to the uneven amount of precipitation that we get during our crops critical growth periods, irrigation is a must.

Precipitation in eastern NY averages about 40 inches each year. Approximately 1/3 of that will run off the land into streams leaving about 26 inches to infiltrate into the soil where it can be used by plants.

Uneven precipitation, like we are having this summer, can cause plant stress during critical growth periods, which will impact crop productivity and produce quality. That's why farmers growing horticultural crops use irrigation - Primarily to minimize plant stress. We all know that Stressed plants have more insect and disease pressure, the quality of the crop is poorer, the fruit won't size well, the storage quality is poor etc. but perhaps the biggest problem is that overall fruit production is really diminished. In a year when we have very strong demand – poor production is a lost opportunity!

This year we are growing crops in a drought. And although there is certain truth to the old Farmer saying that 'A dry year will scare you to death, but a wet year will starve you to death', it's a much better plan to have a reliable and appropriate irrigation system in place before death by fright or starvation descends.

From the berry crop stand-point you need enough water at certain crucial times

<i>Table 1. Berry Crops Seasonal Water Requirements</i>		
<i>Small Fruit</i>	<i>Water needed/week</i>	<i>Critical period(s) for irrigation</i>
<i>Raspberries</i>	<i>1"</i>	<i>bloom and as berries are sizing before first picking</i>
<i>Blackberries</i>	<i>1-2"</i>	<i>bloom and as berries are sizing before first picking</i>
<i>Strawberries</i>	<i>1-2"</i>	<i>at planting, during runner formation, during flowerbud formation before harvest begins, and at renovation</i>
<i>Blueberries</i>	<i>1-2"</i>	<i>berry swell to end of harvest and at bud formation for next year's crop (late July and August)</i>

Many farmers are concerned about their continued ability to get water to crops. Ponds and streams are drying up everywhere. Even in soil types that have great water holding capacity, the rainfall has been so slight that irrigation is necessary. This makes system efficiency even more important.

Trickle or drip irrigation, applies water to only the soil so less water is lost to evaporation. Under typical operating conditions, trickle systems are about 95 percent efficient, while sprinkler systems are only about 70 percent efficient.

Other advantages to trickle include: adaptability for fertigation, reduced disease problems, low energy requirement because of the low pump pressures required, and higher degree of automation resulting in relatively low labor requirements. Some disadvantages are blocked emitters and broken lines and connectors caused by machinery operations or freezes. Trickle and drip systems are not suitable for frost protection. These systems are also very versatile and can be used with a wide variety of crops. Capital costs range widely from \$200 to \$2,500 per acre.

For more in depth information about choosing an irrigation system, please refer to the [Pennsylvania State University Ag Alternatives fact sheet titled: Irrigation for Fruit and Vegetable Production](#) – there is a hyper link provided in the text of this podcast segment.