



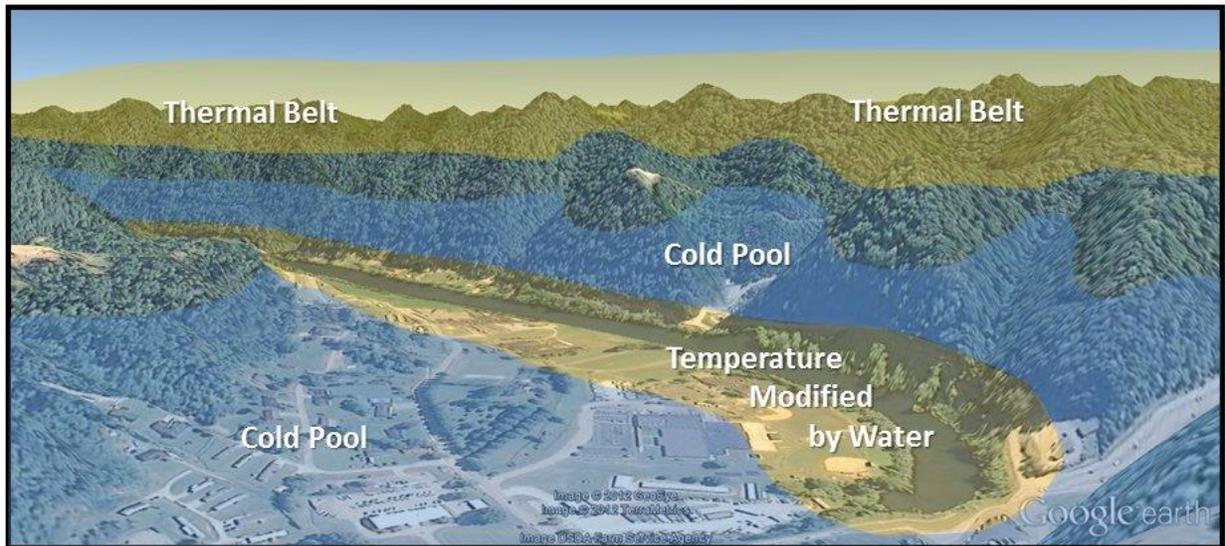
The Variability of the First Fall Freeze

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With the turning of the calendar to the month of October, Mother Nature typically responds with cooler temperatures and more pleasant weather compared to the heat and humidity of summer. With the cooler temperatures at night, most locations across Kentucky will likely see their first freezing temperatures during the month of October, putting an end to the growing season. However, where you live - and the elevation at which you live - can have a significant impact on when you see those first freezing temperatures of the fall.

Many locations in Kentucky typically see their first freeze during the last week of October. However, rural areas in valleys away from bodies of water can see this occur a week earlier, while locations on ridge tops or near large bodies of water can see this first freeze occur up to a week later, into early November. You may wonder why this variability occurs?



As shown in the illustration above, cold air is heavy and tends to drain into the lower elevation valleys and hollows on clear, calm nights. As this happens, warmer air rises and typically forms what's known as the thermal belt. This thermal belt can keep the ridgetops several degrees warmer than the valleys. In fact, in the extreme terrain of eastern Kentucky, ridgetop locations can quite often be 10 to 20 degrees warmer than the valleys below on calm and clear mornings. Water also holds heat longer and so larger bodies of water such as lakes and rivers can moderate the temperatures for nearby locations.

So, while it's pretty much inevitable that our gardens will succumb to the cold at some point during the month, the location of your garden in relation to elevation and proximity to bodies of water can make a big difference in how long those last tomatoes and peppers linger on the vines.