



## The Ticks' Threat to Farmers

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If you have ever gone camping or hiking or just out in nature in general, you or someone you know may have had an encounter with a tick at some point in your life. They can be fickle bugs, hard to spot, prevent, and remove and they are known to be the carriers for specific pathogens that can lead to at least fifteen different types of diseases in humans. Ticks pose a problem to many agricultural employees. They are widely distributed around the world and they thrive in warm, humid climates that are also ideal for farmers and their crops. Feeding on the blood of other animals, both livestock and humans have been known to come to harm by these vectors of disease.

Major tick-borne diseases include Lyme Disease, Q Fever, Colorado Tick Fever, Tularemia, Tick-Borne Relapsing Fever, Babesiosis, Ehrlichiosis, and Tick-Borne Meningoencephalitis.<sup>1</sup> Common symptoms of diseases that may have been caused by a tick include things such as a fever, the chills, a headache, body aches, fatigue, skin rashes, and nausea. Symptoms usually begin developing within a few weeks after the bite. Although these diseases are usually easily treated by antibiotics, it may be difficult to diagnose initially. If possible, try to save the tick after it is removed so that you can bring it in and medical professionals can send it in for testing to see what exactly you may have been infected with. If a tick bite goes unaddressed, what started out as a small bite can spiral out of control and develop into a serious disease that has long term consequences.<sup>2</sup> So make sure that you go and see your healthcare provider at the first sign of any of these symptoms after having been bitten by a tick.

There are a couple different ways that one can go about avoiding ticks that have proven to be incredibly effective. One thing you can do is use repellants that contain 20-30% DEET on exposed skin and garments. This method lasts up to several hours and is almost 100% effective if used properly. Another method one can use is to buy products that contain about 5% permethrin in them and spray them on your clothes. When used on clothing, it remains active through several washes and is very effective at combating ticks. If you are going to use this method though, make sure you either cover all exposed skin and tuck pants into boots and sleeves into gloves or make sure to spray yourself down with DEET as well. Permethrin only applies to clothing while leaving the skin still exposed. Other tricks you

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<sup>1</sup> <http://www.cdc.gov/ticks/diseases/>

<sup>2</sup> <http://www.cdc.gov/ticks/symptoms.html>

can utilize when going out into areas that may have a heavy tick population are things like avoiding woody or bushy areas that have tall grass or high amounts of leaf litter.<sup>3</sup> Also, you are a lot less likely to encounter ticks if you stay towards the middle of trails and rows of crops. When entering a field or crop, find a field entrance instead of crossing through a ditch or tree line. Make sure to keep these entrances clear of vegetation so ticks won't accumulate near the entrances.<sup>4</sup>

If the above prevention methods fail and you still do end up with a tick bite, there are a few different ways one can go about removing a tick from their body. The most effective way is to freeze it off. You can do this by using a medical wart remover freeze or something similar. If this way of removal is not an option, then one can use a common pair of household tweezers to remove the tick. When doing this, make sure to grasp the tick as close as possible to the skin and detach it by using a steady, even pressure and applying an upwards force. Make sure to not jerk, twist, or crush the tick as this may leave the mouthpiece still attached to the skin and could also cause the tick to regurgitate infective fluids into the wound. If this does happen, try to remove the mouthpiece with a pair of clean tweezers. If you can't get it, it is ok to leave the mouthpiece alone and to let the skin heal. After removal of the tick, it is important to thoroughly sanitize the bite area with either rubbing alcohol or soap and water. If the tick is still alive after removal you can wrap it in tape, secure it in a plastic bag or sealed container, or flush it down the toilet (although this is not recommended if you are planning on keeping it for later to run tests on).<sup>5</sup> Never squeeze a tick between your fingers or smash it. This could cause the spread of those harmful pathogens.

Ticks are abundant in nature and the threat of tick-borne illness should not deter any sort of outdoor activity. Although they are a common nuisance to many agricultural employees they do not pose a threat to crops. Just make sure to check for ticks after being outdoors, remove any that latch on as quickly as possible (with one of the methods suggested above) and save in case symptoms arise. If in a couple weeks a rash or fever does develop, go to your healthcare provider and tell them that you got bit by a tick, where you got bit, and the area you most likely acquired the tick. If dealt with in a timely manner, your risk for long term tick-borne illness will be greatly diminished.

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<sup>3</sup> [http://www.cdc.gov/ticks/avoid/on\\_people.html](http://www.cdc.gov/ticks/avoid/on_people.html)

<sup>4</sup> [http://msue.anr.msu.edu/news/crop\\_scouting\\_andticks](http://msue.anr.msu.edu/news/crop_scouting_andticks)

<sup>5</sup> <http://www.webmd.com/first-aid/tc/how-to-remove-a-tick-overview?page=2>