

PHYSICAL METHODS TO CONTROL TICK BURDEN IN HUMAN AND ANIMALS

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ABSTRACT

Ticks are parasites that can practically be present in cracks in your walls or floor. These blood-sucking parasites are not only a nuisance but can cause other conditions like haemoparasites. To keep your animals healthy and free from ticks, it is important to take measures to control tick infestation. In this article, we will explore how we control ticks by physical methods. if you have a tick infestation at your farm you can read this article to learn about the methods you can use to control ticks.

Introduction:

Ticks are the cause of serious trouble for animals. These biting parasites feed on the blood of mammals and reptiles and cause diseases like Lyme disease, Babesia, Theileria, and tick-borne encephalitis. Ticks have zoonotic importance also (1). Tick infestation is a big problem in many regions, especially warm areas. These parasites are present in cracks in woods, rocks, and shrubby areas. Ticks are parasites that can survive in dark damp areas and make problems for animals, like lime Complaints cause back fatigue, pain, and long-term neurological issues if left untreated. This makes it necessary to take steps to control tick infestation and protect animals. In this comprehensive article, we explore physical methods to control ticks, to minimize the threats of tick-born diseases (2). By understanding the nature of tick infestation and taking necessary prevention, you can protect your animals. Before you control ticks, it is necessary to know the life cycle of ticks. They go through a four-stage life cycle egg, larva, pupa, and adult. These are ectoparasites means that they live outside of their host body. They suck blood from animals and mate with males either by getting off the body or on the body, and after that come down from the body and lay eggs. These are particularly active during warm and rainfall conditions (3)

Creating a tick-safe zone around your home:

Creating a tick-safe zone around your farm is central to preventing tick infestations and securing the health of your animals. By adopting measures, you can significantly reduce the threat of ticks entering your living space and farm. Start by maintaining a well-docked field and keeping the leaves around your home cut. Tick proliferation is best in high grasslands, bushes, and splint waste. So regular pruning and removal of dead plants will exclude their preferred caching sites. Clearing down any debris, similar to woodpiles or splint piles, will also discourage ticks from settling near your farm (5). To further strengthen your tick-safe zone, consider treating your yard with friendly control products. They can be applied to areas where ticks are likely to be found, such as along the hedge lines, under the bushes, and in shade spots. Always follow the instructions on the product. Creating a tick-safe zone around your farm is an insightful way to reduce the risk of cracks and protect the well-being of your animals. With a combination of landscaping methods, physical walls, and targeted crack control styles, you can enjoy a safe, tick-

3. Tips for protection against ticks:

When it comes to protecting yourself from ticks, it's important to take the necessary precautions to avoid potential infections. Then there are some helpful tips for protection against ticks

- 1. Wear appropriate clothing When venturing into wooded or high grassy areas, it is important to wear appropriate clothing. Long-sleeved shirts are optional, long pants tucked into socks, and non-restrictive footwear. This creates a barrier that makes it harder for the ticks to pierce your skin (7).
- 2. Use an insect repellent and apply an effective insect repellent to exposed skin and clothing. Look for products that contain DDT or picaridin, as these seem to be highly effective against ticks. Always follow the manufacturer's instructions and re-apply as needed (8).
- 3. Check your tracksuits and skin regularly after spending time outside, check your body thoroughly. Pay close attention to areas like the crown, behind the chin, under the arms, around the middle, and between the legs of animals. Palpitations are often small and fluent enough to go unnoticed, so pay close attention during your physical examination.
- 4. Remove Ticks Promptly If you notice a tick on your skin, it's important to remove it promptly to reduce the risk of transmitting different tick-borne diseases. Use sloped aluminum carbon-coated tweezers to grasp the tick from

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closer to the surface of the skin. Gently pull out with steady pressure, icing as you remove the entire tick, including the head. Avoid crushing or twisting the tick body, as this may leave the mouth part in the skin (9).

- 5. Censors and dry clothing After spending time in break-in areas, it's important to take precautions with your clothing. Toss your clothes in the tattoo on high heat for at least 10 blinks to kill any ticks that may be present. Also, wash them in hot water to ensure complete cleanliness.
- By following these tips to protect against ticks, you can significantly reduce the risk of mouth ulcers and infections.

Effective styles for crack junking:

Removing ticks instantly and duly is essential to minimize the threat of complaint transmission and help further infestation. Then are some tried and true styles for effectively removing ticks (10)

- 1. Tweezers One of the most generally used tools for tick junking is a brace of fine-sloped tweezers. Grasp the crack as close to the skin as possible and gently pull overhead with steady pressure. Avoid wringing or jerking movements as this may break the tick's mouthparts to break off and remain bedded in the skin.
- 2. Tick junking: There are technical tick junking tools available in the market, similar to tick hooks or tick ladles. These tools are designed to securely grasp the tick and allow for easy removal without squeezing or crushing the crack's body.
- 3. Tick junking cards Tick junking cards are compact, portmanteau-sized tools that have a small notch. These cards are used by sliding the notch along the skin, encircling the tick, and also lifting it gently without squeezing.
- **4. Vaseline or petroleum jelly:** Applying a thin subcaste of petroleum jelly or Vaseline around the tick's body can occasionally suffocate and incapacitate it. Once the tick is paralyzed, it can be fluently removed using tweezers.

Conclusion:

Ticks are a serious issue and cause serious health problems for animals as well as for human beings, so there is an utmost need to control ticks. By following the above methods one can protect himself and his animals from ticks. To increase the production of animals it is necessary to control ticks as they can be affecting production due to their blood-sucking character. Physical methods are the easiest and best solution for tick control.

References

- Rajput ZI, Hu SH, Chen WJ, Arijo AG, Xiao CW. Importance of ticks and their chemical and immunological control in livestock. Journal of Zhejiang University Science B. 2006 Nov;7(11):912-21.
- [2] de la Fuente J, Contreras M. Tick vaccines; current status and future directions. Expert review of vaccines. 2015 Oct 3;14(10):1367-76.
- Estrada-Peña A. Climate, niche, ticks, and models: what they are and how we should interpret them. Parasitology Research. 2008 Dec103:87-95.
 Gray JS, Estrada-Peña A, Vial L, Sonnshine DE, Roe RM. Ecology of nidicolous ticks. The
- biology of ticks. 2013 Dec:39-60. Schofield CJ, Briceño-León R, Kolstrup N, Webb DJ, White GB. THE ROLE OF HOUSE
- DESIGN IN LIMITING VECTOR-BORNE. Appropriate technology in vector control. 1990:187.
- Stafford KC. Tick management handbook: an integrated guide for homeowners, pest control operators, and public health officials for the prevention of tick-associated disease.

 Miller NJ, Rainone EE, Dyer MC, González ML, Mather TN. Tick bite protection with permethrin-treated summer-weight clothing. Journal of medical entomology. 2011 Mar 1:48(2):327-33.
- Benelli G, Pavela R, Canale A, Mehlhorn H. Tick repellents and acaricides of botanical origin: a green roadmap to control tick-borne diseases. Parasitology Research. 2016 Jul 115:2545-60. Gammons M, Salam G. Tick removal. American family physician. 2002 Aug 15;66(4):643-5.
- Ibrahium SM, Aboelhadid SM, Wahba AA, Farghali AA, Miller RJ, Abdel-Baki AA, Al-Quraishy S. Preparation of geranium oil formulations effective for control of phenotypic resistant cattle tick Rhipicephalus annulatus. Scientific Reports. 20.