THEILERIA ORIENTALIS IKEDA

Reported treatment options in cattle

Focused literature summary for veterinary professionals

PURPOSE: This document summarizes published and reported interventions; it is not a treatment recommendation, prescribing protocol, or representation of NJDA's policies or recommendations.

Background and U.S. regulatory status

Bovine theileriosis can cause hemolytic anemia, with disease severity varying considerably among infected cattle. Available treatment information comes from experimental studies, small field studies, case reports, and government veterinary guidance. **As of August 2026, there are no FDA-approved animal drugs to treat or prevent bovine theileriosis in the United States** [1]. Although some treatments may improve clinical signs, they have not been shown to reliably eliminate infection, and recovered cattle may remain infected carriers. [2–5].

Reported approaches and findings

Intervention	Findings and limitations
Supportive care; transfusion	Supportive care includes minimizing stress, providing easy access to food, water, and shelter, and monitoring anemia. Severely anemic cattle may benefit from blood transfusions, depending on individual circumstances. These measures help manage clinical signs, but do not eliminate the infection [7–9].
Buparvaquone (BPQ)	A U.S. study involving 12 subclinically infected calves found that BPQ temporarily reduced parasitemia, but all treated animals remained infected [2]. An Indian study of 30 clinically infected cattle reported improvement, particularly with BPQ combined with oxytetracycline. However, no infection was not eliminated, and effectiveness specifically against the Ikeda genotype was not established [4].
Toltrazuril	An Australian study involving 30 Friesian calves found that toltrazuril did not prevent Ikeda infection following experimental tick exposure. Parasitemia, packed cell volume (PCV), and body weight did not consistently differ between treated and untreated calved through day 64 [5].
Oxytetracycline, imidocarb, tulathromycin	Australian research found that none of these drugs eliminated established Ikeda parasitemia [3]. Field reports describe mixed responses to oxytetracycline and imidocarb, but neither has demonstrated reliable clearance of infection [7,8]. Antibiotics may help manage concurrent bacterial infections, but have not been shown to eliminate Theileria.
Ceftiofur + imidocarb; other agents	A Georgia case report documented clinical improvement following ceftiofur and imidocarb treatment, although cattle remained PCR-positive seven months later. The report could not establish whether improvement was directly related to treatment [6]. Other medications, including primaquine, halofuginone, diminazene have been discussed in the literature, but evidence supporting their effectiveness against Ikeda remains limited [10].

Key Takeaway: A reduction in parasitemia or resolution of anemia does not necessarily indicate that the infection have been eliminated. Long-term PCR monitoring is important when evaluating treatment effectiveness [2–4].

Evidence gaps and clinical interpretation

None of the treatments reviewed have been shown to reliably eliminate *T. orientalis* Ikeda in cattle. Comparing studies is challenging because they differ in parasite genotype, stages of infection, treatment protocols, study size, and how treatment success was measured (clinical improvement, PCR results, or both) [2–6,10]. Results from studies involving *T. annulata* or *T. parva* should not be assumed to apply to *T. orientalis* Ikeda.

Food-animal Drug regulations are an important consideration when evaluating treatment options. Buparvaquone is not FDA-approved in the United States, and the FDA had reported drug residues in certain cattle muscle and liver tissues at or beyond 300 days [1]. Extra-label-use regulations do not automatically permit the use of unapproved animal drugs. Veterinarians should carefully consider a drug's legal status, food safety concerns, and applicable withdrawal times before use [1,11].

Of note, in July 2026, Medgene announced the first commercially available U.S. vaccine targeting *T. orientalis* Ikeda in cattle. The recombinant vaccine is administered as two-dose series approximately four weeks apart and requires a veterinary prescription. It is authorized under the USDA's prescription platform biologics regulatory pathway, which does not require demonstration of efficacy for each new antigen formulation. Protective efficacy, including reduction of clinical disease, parasitemia, or persistent infection have not been established [12, 13].

Selected references and linked source documents

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