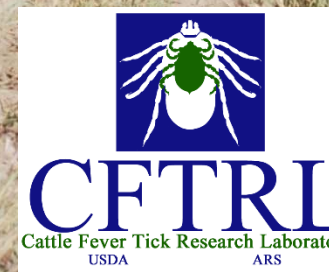


**UTILITY OF A LONG-ACTING FORMULATION
OF MOXIDECTIN FOR THE CATTLE FEVER TICK
ERADICATION PROGRAM**



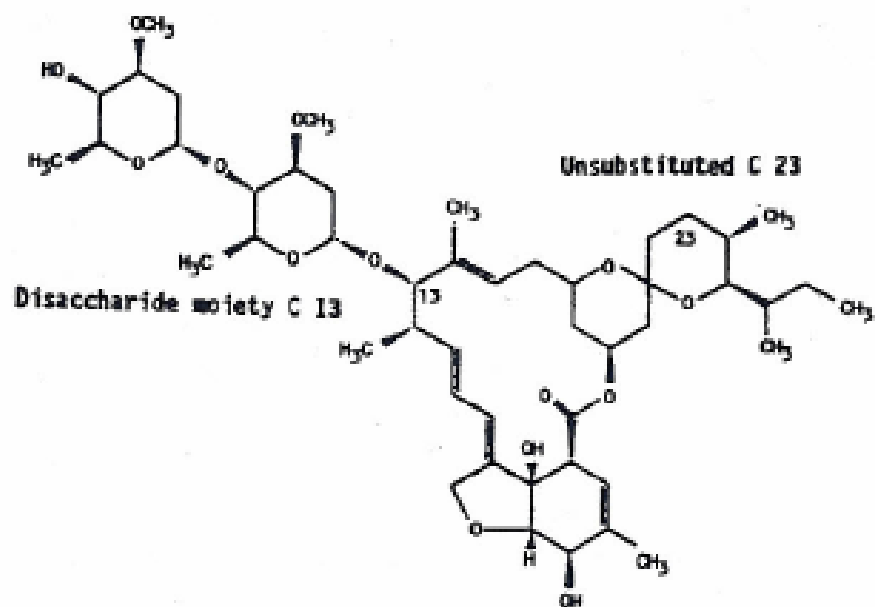


Figure 1. Chemical structure of ivermectin

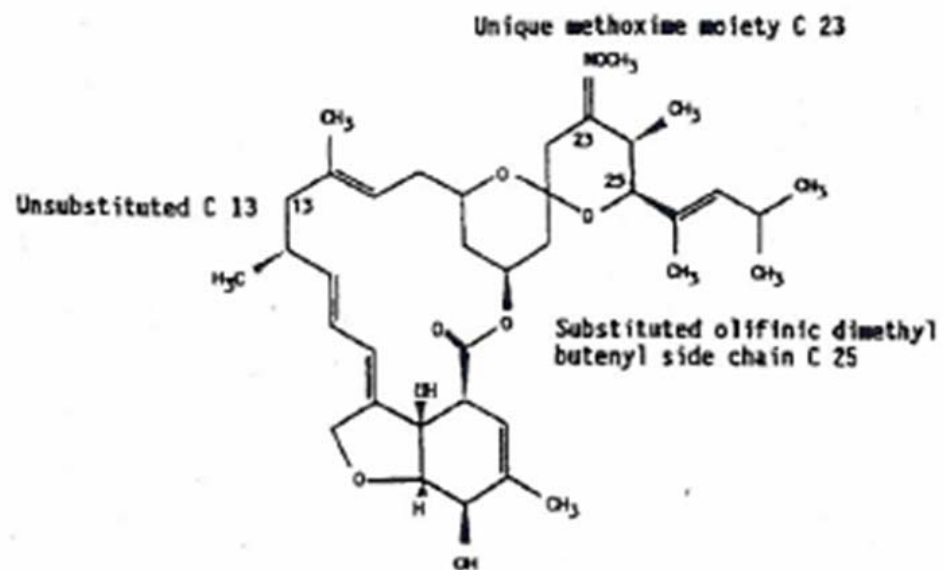


Figure 2. Chemical structure of moxidectin

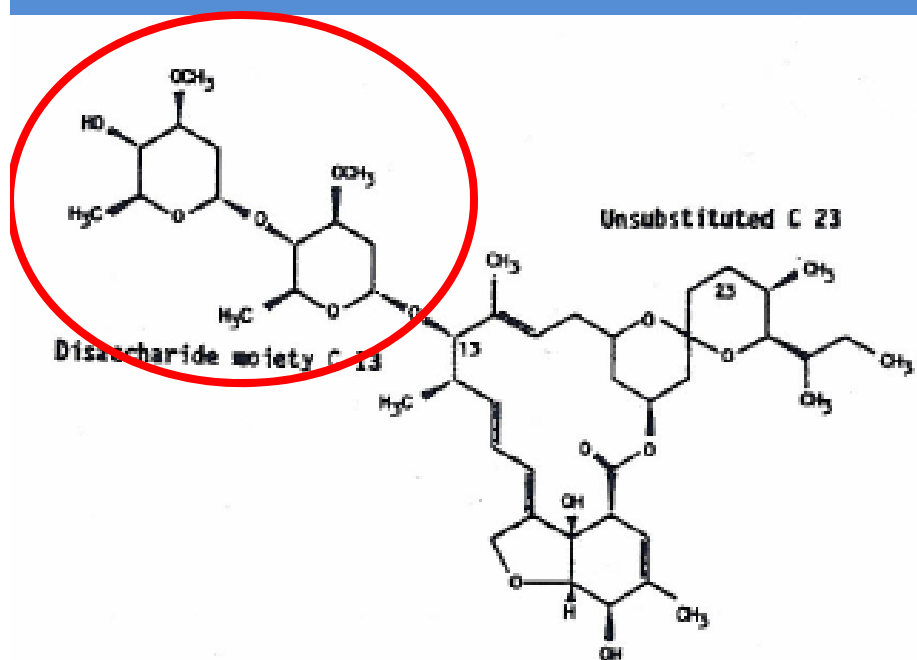


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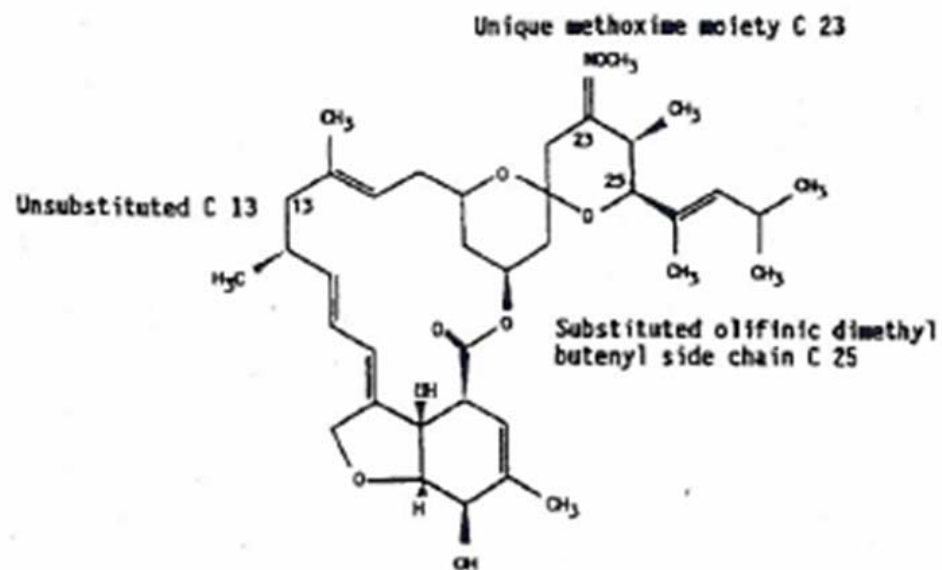


Figure 2. Chemical structure of moxidectin

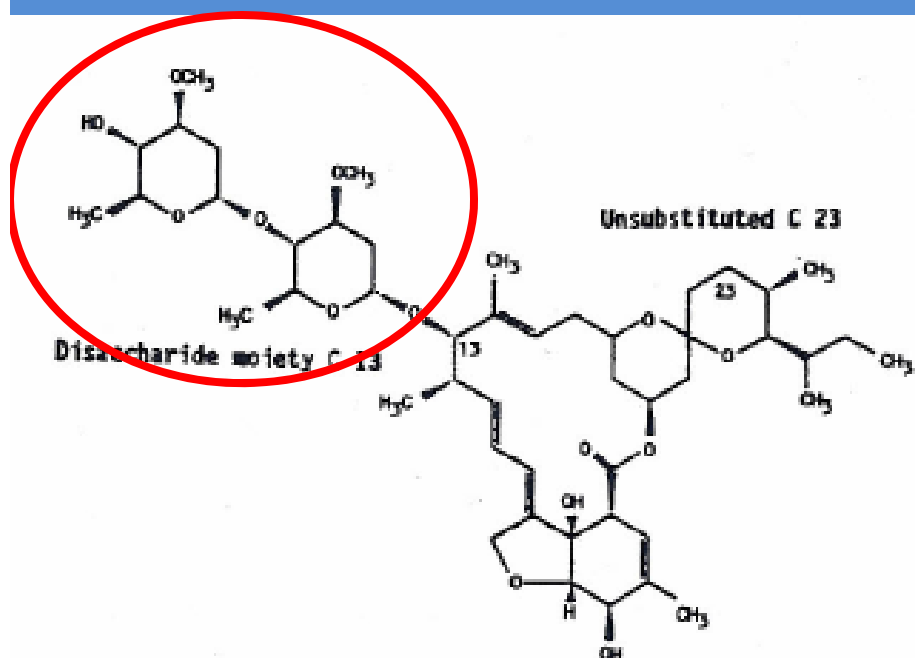


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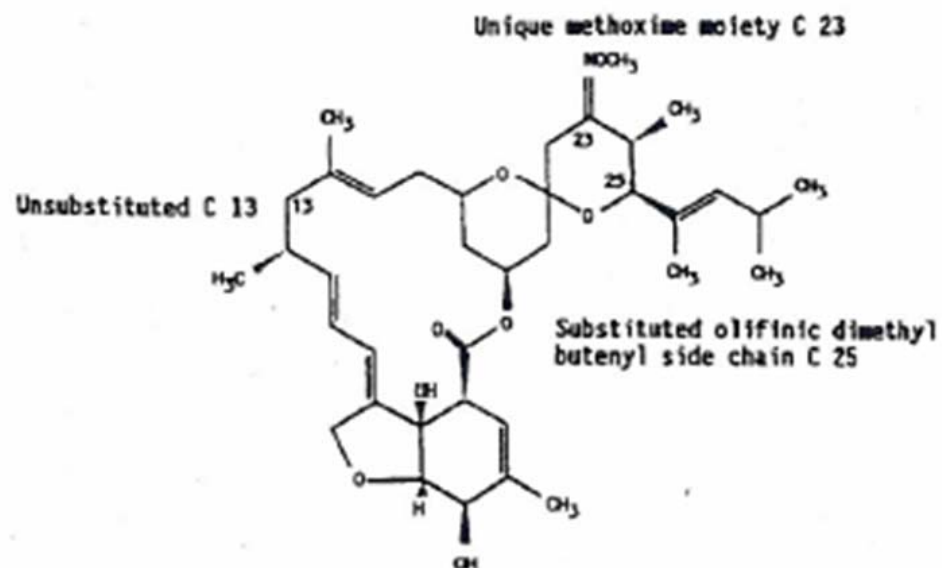


Figure 2. Chemical structure of moxidectin

UNSWEET AVERMECTIN

NADA 141-189, Approved by FDA



ProHeart® 6

(moxidectin)

Sustained Release Injectable for Dogs



NADA 141-189, Approved by FDA



ProHeart[®] 6 (moxidectin)

Sustained Release Injectable for Dogs

Approved in USA
for Canines 2001

Also approved in 9
other countries
Including Canada
& Australia



**HEARTWORM
HEART**

NADA 141-189, Approved by FDA



ProHeart® 6 (moxidectin)

Sustained Release Injectable for Dogs

Approved in USA
for Canines 2001

Also approved in 9
other countries
Including Canada
& Australia

Protects for 6 months

(ProHeart -12
For One Year)



**HEARTWORM
HEART**



ELSEVIER

Veterinary Parasitology 99 (2001) 155–168

veterinary
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www.elsevier.com/locate/vetpar

A comparison of the development and survival of the dung beetle, *Onthophagus taurus* (Schreb.) when fed on the faeces of cattle treated with pour-on formulations of eprinomectin or moxidectin

K.G. Wardhaugh^{a,*}, B.C. Longstaff^a, R. Morton^b

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FORT DODGE

Contenido Neto: 1 frasco de 50 mL



REGISTERED ORGANIC

Petition for Evaluation of Moxidectin for Inclusion on the National List of Substances Allowed in Organic Production and Handling

Fort Dodge Animal Health hereby submits this petition for inclusion of moxidectin on the National List as a Synthetic substance allowed for use in organic livestock production. The required information, as stipulated in the Federal Register, Volume 65, No. 135 dated July 13, 2000, pp43259 – 43261, immediately follows.

1. Breeder stock, when used prior to the last third of gestation, but not during lactation of progeny that are to be sold, labeled, or represented as organically produced; and,
2. Dairy stock, when used a minimum of 90 days prior to the production of milk or milk products that are to be sold, labeled, or represented as organic

Experimental and Applied Acarology (2005) **35**: 117–129

DOI: 10.1007/s10493-004-2046-9

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Therapeutic and persistent efficacy of a single injection treatment of ivermectin and moxidectin against *Boophilus microplus* (Acari: Ixodidae) on infested cattle[☆]

RONALD B. DAVEY^{1,*}, J. ALLEN MILLER², JOHN E. GEORGE² and ROBERT J. MILLER¹

¹USDA, ARS, SPA, Cattle Fever Tick Research Laboratory, 22675 N. Moorefield Road, Edinburg, TX 78541, USA; ²USDA, ARS, SPA, Knippling-Bushland U.S. Livestock Insects Research Laboratory, 2700 Fredricksburg Road, Kerrville, TX 78028, USA; *Author for correspondence (e-mail: Ronald.B.Davey@aphis.usda.gov)

200 µg/Kg

Post-treatment larval infestation (week)	Control of the IF (%)		Analysis between treatments at each weekly interval	Analysis within treatments at each weekly interval
	Ivermectin	Moxidectin		
1	82.4 ± 22.1	92.4 ± 8.7	*	a
2	23.3 ± 38.3	79.8 ± 17.2	*	b
3	12.5 ± 15.7	43.8 ± 30.1	*	bc
4	0.0 ± 0.0	19.5 ± 29.9	*	c

VECTOR CONTROL, PEST MANAGEMENT, RESISTANCE, REPELLENTS

Efficacy and Blood Sera Analysis of a Long-Acting Formulation of Moxidectin Against *Rhipicephalus (Boophilus) microplus* (Acari: Ixodidae) on Treated Cattle

RONALD B. DAVEY,^{1,2} J. MATHEWS POUND,³ JEROME A. KLAVONS,³
KIMBERLY H. LOHMEYER,³ JEANNE M. FREEMAN,³ ADALBERTO A. PEREZ DE LEON,³
AND ROBERT J. MILLER¹

J. Med. Entomol. 48(2): 314–321 (2011); DOI: 10.1603/ME10154

1mg/Kg

318

JOURNAL OF MEDICAL ENTOMOLOGY

Vol. 48, no. 2

Table 2. Mean \pm SE tick number per calf, female weight, egg mass weight, IF, and percentage control of *Rhipicephalus (Boophilus) microplus* recovered from untreated and treated cattle infested at 19, 12, and 5 d before a single subcutaneous injection of a LA moxidectin formulation at 1 mg/kg body weight

Treatment	No. ticks per calf	Female weight (mg)	Egg mass weight (mg)	IF	% control
Untreated	1,768 \pm 365a	263 \pm 6a	101 \pm 4a	196.738 \pm 47.483a	—
Treated	27 \pm 8b	44 \pm 6b	3 \pm 2b	0.036 \pm 0.036b	>99.9 \pm 0.0

Means tested by Mann-Whitney rank sum test; means within the same column followed by a different letter are significantly different ($P < 0.05$). Number of ticks per calf, $T = 57.0$; $df = 6, 6$; $P = 0.002$; female weight, $T = 1651.0$; $df = 54, 161$; $P < 0.001$; egg mass weight, $T = 1780$; $df = 54, 161$; $P < 0.001$; IF, $T = 57.0$; $df = 6, 6$; $P = 0.002$.

1mg/Kg

318

JOURNAL OF MEDICAL ENTOMOLOGY

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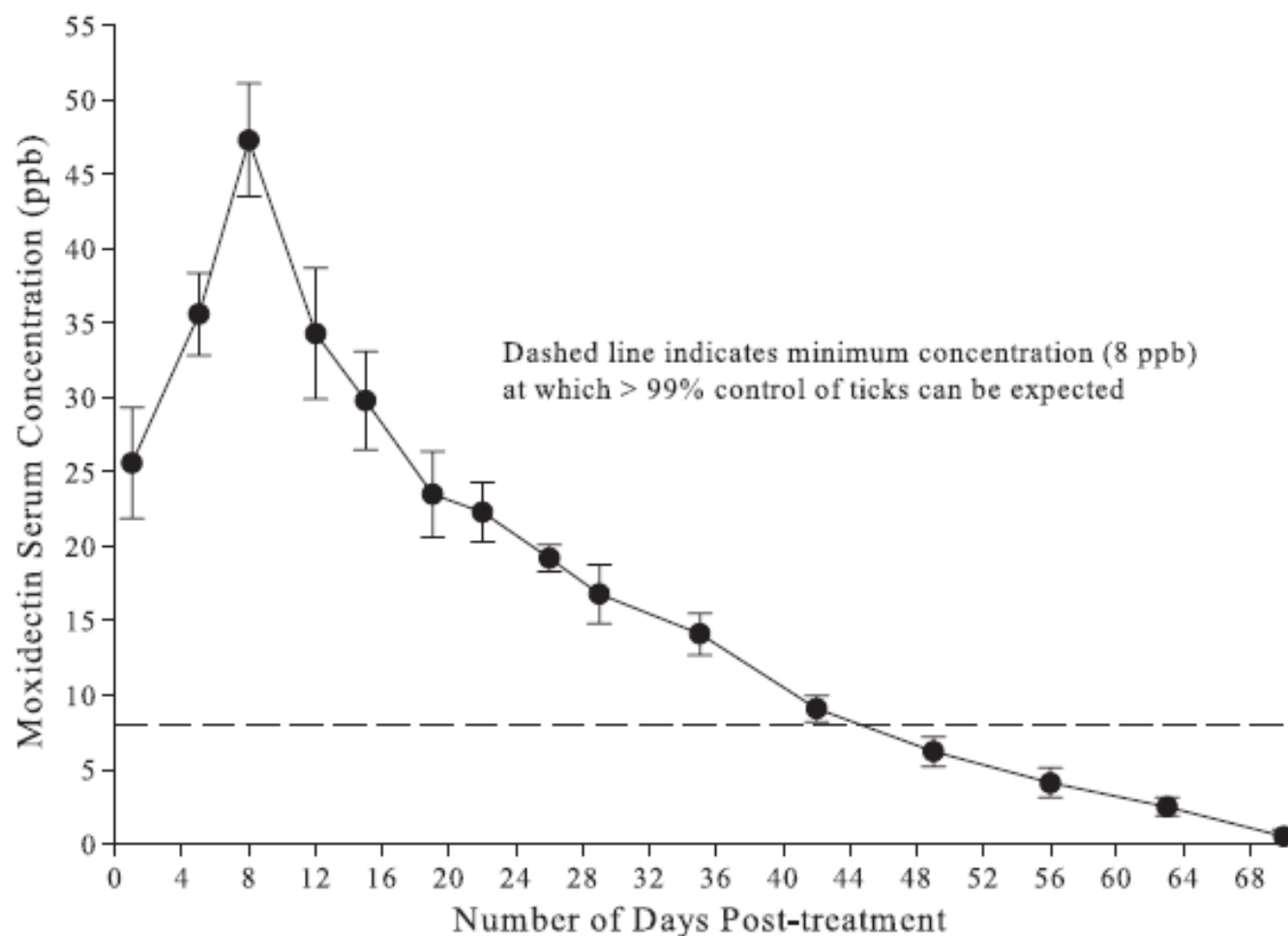


Fig. 1. Mean \pm SE concentration of moxidectin in serum of cattle treated with a single subcutaneous injection of a LA formulation of moxidectin at 1 mg/kg body weight.

**USDA Cattle Fever Tick facility in south Texas, a buffle grass pasture with
A thorny legume overstory. Typical tamaulipan scrubland.**





**White Tailed Deer
Share the pasture**

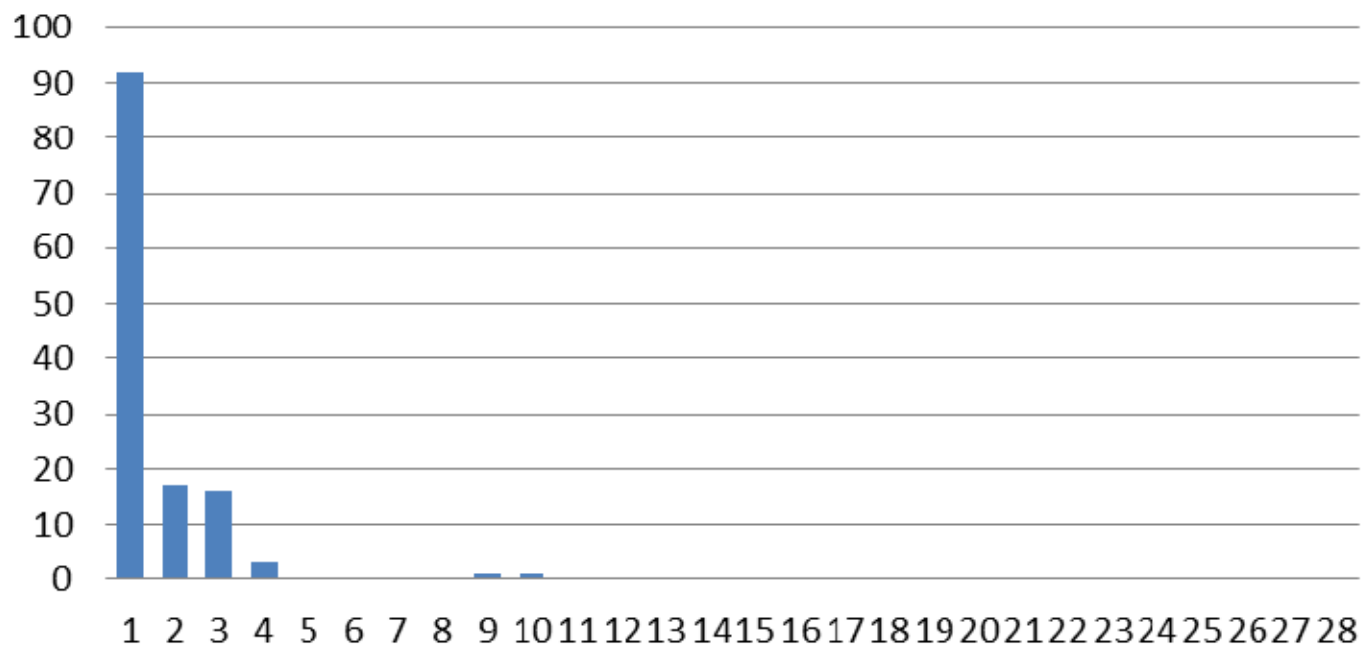
During the test the cattle were scratched weekly to provide a baseline for the tick population



Cattle in treatment were bled weekly to document lethal dose (HPLC)



Adult Ticks Treatment 2013



JUNE



AUG

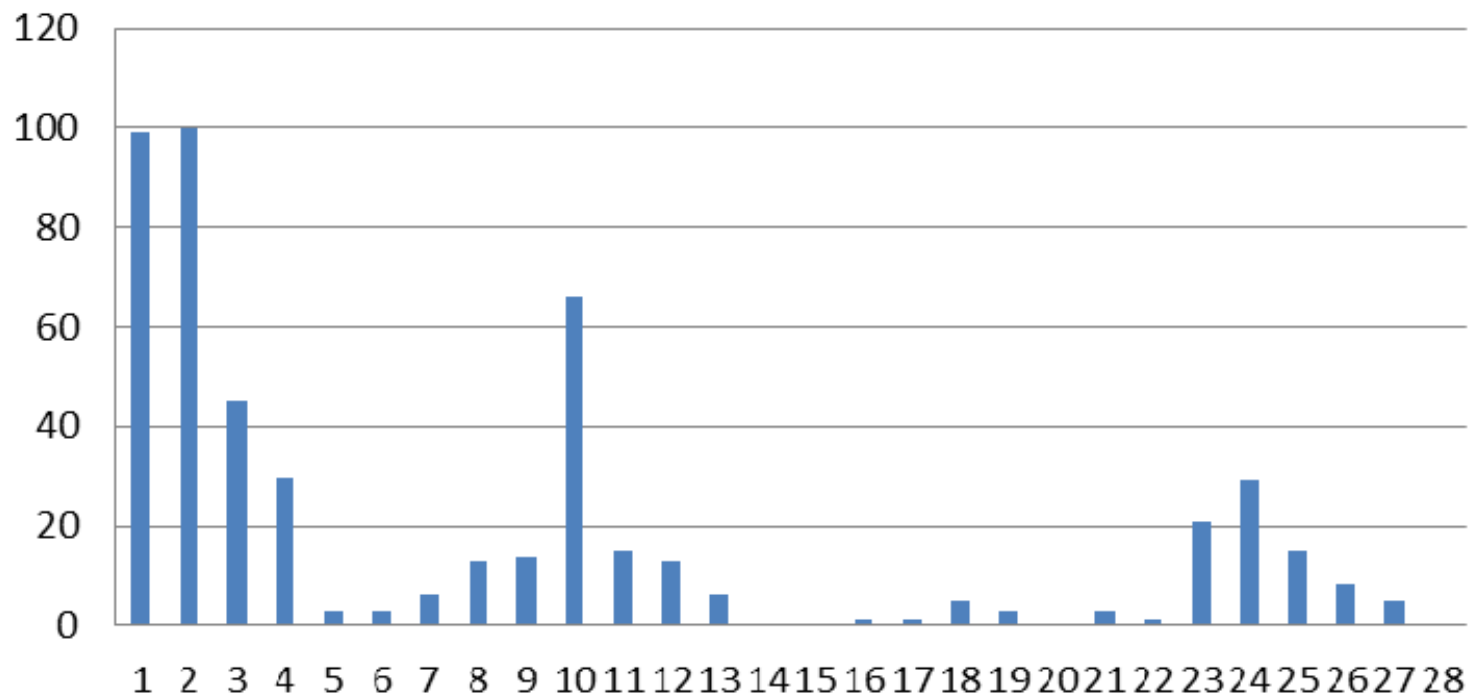


OCT



DEC

Adult Ticks Control 2013



Number of adult fever ticks on Control animals (n=5)

Week 1 = June day of first treatment

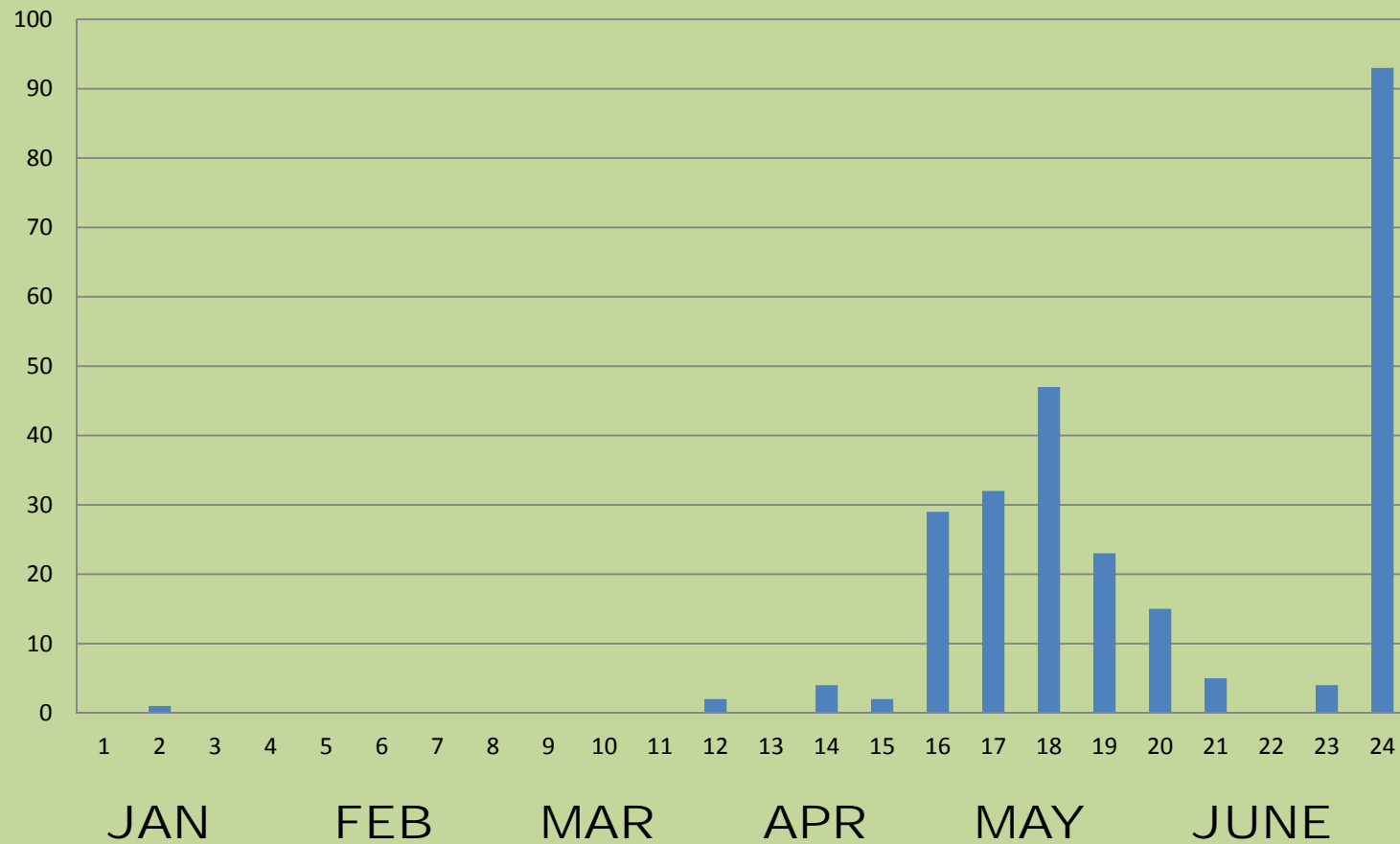
JUNE

AUG

OCT

DEC

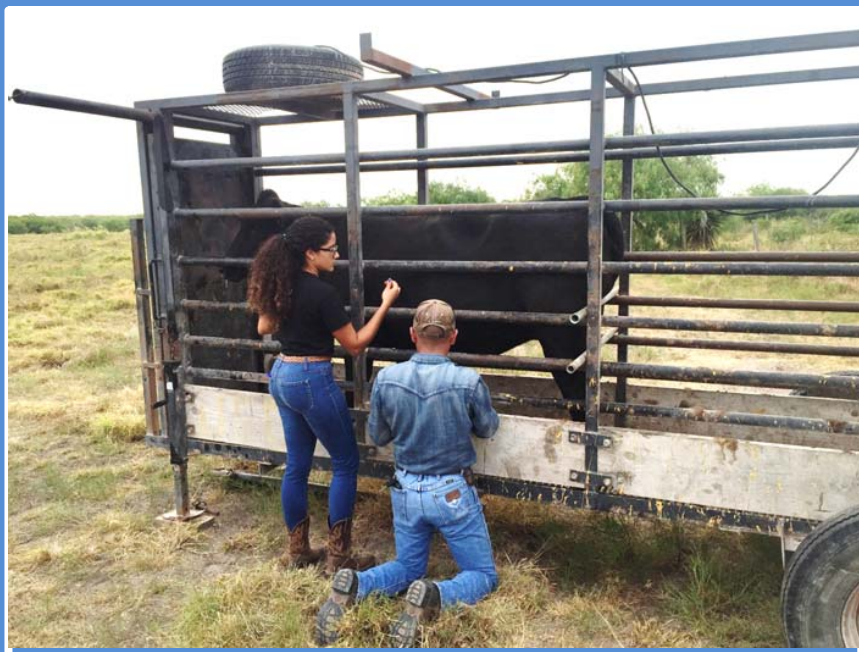
Adult Ticks in Controls Weekly 2014



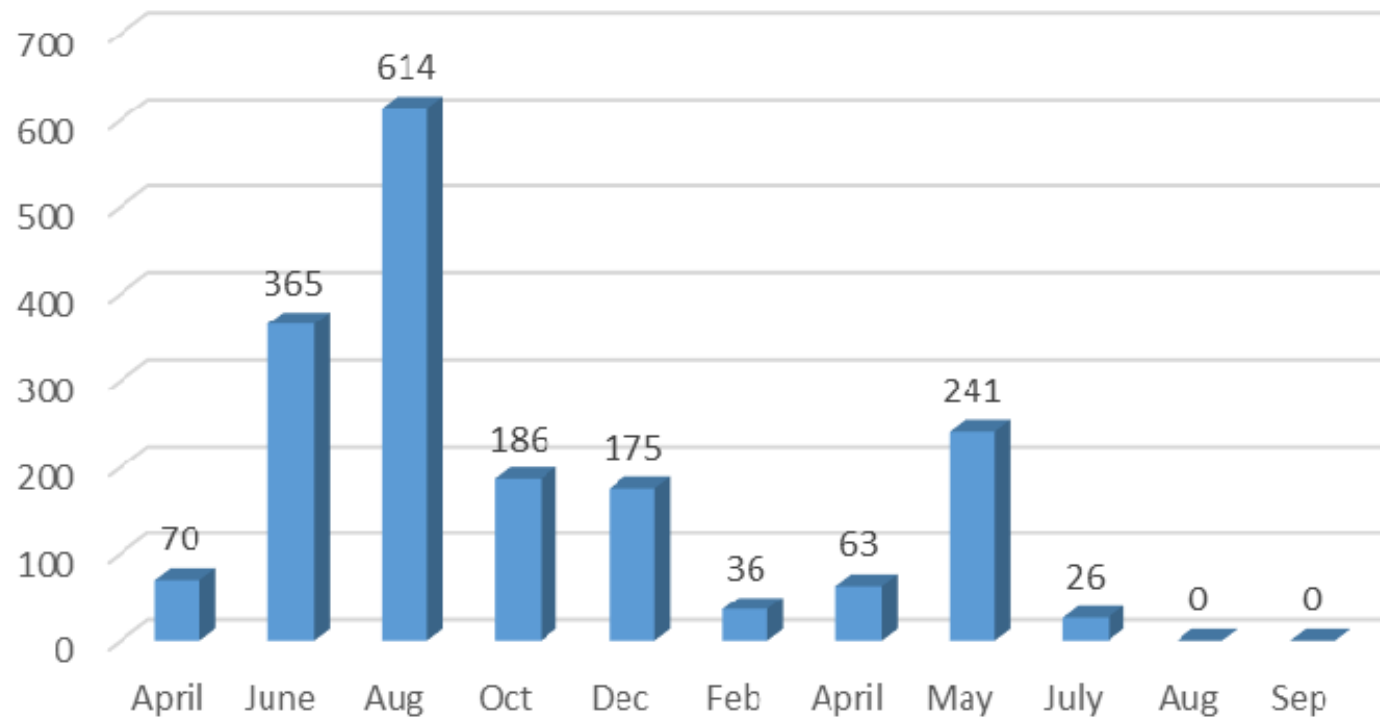
Full Scale Field Trial: Laguna Atascosa – 2015-2016



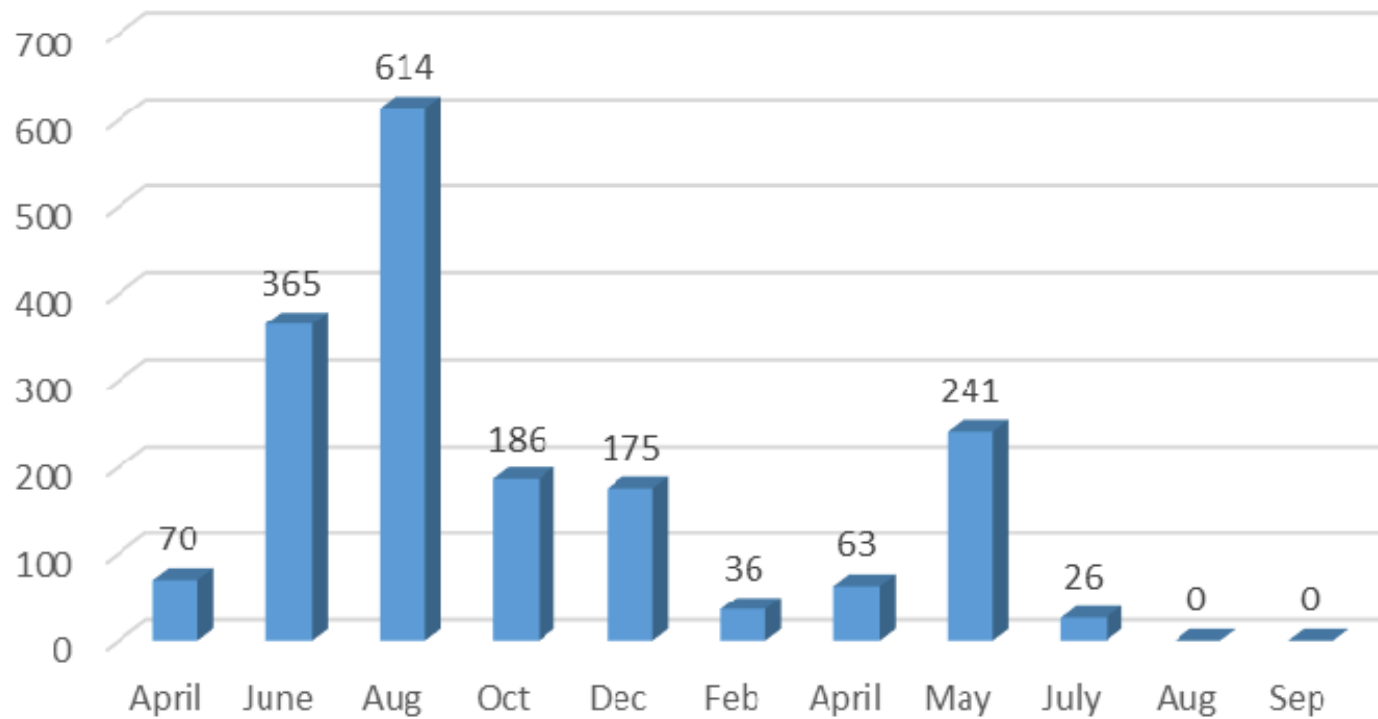
Moxidectin Field Trial nr. Laguna Atascosa, Cameron Co.



Fever Ticks by Date 2015-16



Fever Ticks by Date 2015-16



INCLUDES NO ENGORGED ADULTS