

Investigation of Control Practices for *Rhipicephalus microplus* in the Northwest Region of Paraná State, Brazil**SUPPLEMENTARY DOCUMENTS****SUPPLEMENTARY TABLE****Table S1**– Products used by Slaughter and Milk activities in quantity by producers in the municipalities of Umuarama, Perobal, and Xambrê, Paraná, Brazil.

Product	Application form	Active ingredients	Activity		General
			Slaughter	Milk	
Acatack	Pour-on	Fluazuron	1	6	7
Actyl	Pour-on	Fipronil	2	-	2
Barrage®	Spray	Cypermethrin	1	2	3
Bovguard	Pour-on	Fipronil	-	1	1
Bullmax Premiun	Injectable	Fluazuron Eprinomectin	1	-	1
Biotox	Spray	Fipronil	-	1	1
Butox® P CE 25	Spray	Deltamethrin	-	1	1
Colosso	Spray	Chlorpyrifos Cypermethrin	7	8	15
Colosso FC 30	Spray	Chlorpyrifos Cypermethrin Fenthion	4	6	10
Colosso	Pour-on	Chlorpyrifos Cypermethrin	1	2	3
Contratack® Plus	Injectable	Fluazuron Ivermectin	2	4	6
Cydectin®	Injectable	Moxidectin	2	1	3
Dectomax®	Injectable	Doramectin	6	9	15
Exzolt®	Pour-on	Fluralaner	-	3	3
Fiprotack®	Pour-on	Fluazuron Fipronil	-	3	3
Fluatac® Duo	Pour-on	Fluazuron Abamectin	-	2	2
Fluron® Gold	Pour-on	Chlorpyrifos Piperonyl Butoxide Cypermethrin Fluazuron	1	1	2
Flytion® EC 50	Spray	Chlorpyrifos High-cis cypermethrin	4	11	15
Frigoboi® Facilita	Pour-on	Abamectin	2	-	2
Fusion® CI50	Pour-on	Chlorpyrifos Cypermethrin Piperonyl Butoxide Fluazuron Citronellal		1	1
Insemax	Pour-on	Chlorpyrophos Cypermethrin Piperonyl Butoxide	-	1	1

Ivergen® Platinum	Injectable	Ivermectin	1	-	1
Ivermic Supreme	Injectable	Ivermectin	1	-	1
Ivomec®	Injectable	Ivermectin		2	2
Ivomec® Gold	Injectable	Ivermectin	2	3	5
Master LP	Injectable	Ivermectin	1	2	3
Potenty	Spray	Alphacypermethrin	-	4	4
		Ethion			
		Chlorpyrifos			
Solution	Injectable	Ivermectin	1	-	1
		Abamectin			
Supremo	Injectable	Ivermectin	2	1	3
Tackzuron	Pour-on	Fluazuron	2	1	3
Texvet Max	Pour-on	Cypermethrin	1	4	5
		Chlorpyrifos			
		Piperonyl Butoxide			
Tick Gard	Pour-on	Fluazuron	-	1	1
		Fipronil			
Topline®	Injectable	Fipronil	16	5	21
Treo®	Spray	Doramectin	2	1	3
Triatox®	Injectable	Amitraz	2	2	4

QUESTIONNAIRE

1. General Information:

Municipality of property: _____

Property size (in hectares): _____

2. Agricultural/farming/agro-industrial activities carried out on the property:

3. Productive characteristics of the cattle activity

How long have you been raising cattle (in years): _____

Type of Activity:

☐ Beef _____% ☐ Milk _____% ☐ Rearing _____% ☐ Semen _____%

☐ Other: _____

Breed(s): _____

Current number of cattle: _____

Average number of cattle in the last year (herd): _____

Feeding characteristics:

☐ Pasture _____%

☐ Semi-confinement _____%

☐ Confinement _____%

☐ Compost _____%

☐ Other(s): _____

Average annual production volume: _____

4 Tick control characteristics

Type(s) of control(s) used:

☐ Agrochemicals

☐ Natural bioactives

☐ Other(s): _____

Forms of use:

☐ Injection.

☐ Pour-on.

☐ Spraying.

☐ Other(s): _____

What is the percentage of product forms used?

Injection _____% Pour-On _____%

Spray _____% Other _____%

Which commercial product(s) do you use: _____

Do you use a concentration different from the product's label/dosage?

☐ No.

☐ Yes. Pour-On _____%.

Spray _____%.

Injectable _____%

Other(s) _____

Do you use more than one type of acaricide in the same application?

☐ No.

☐ Yes. Which: _____

Do you always use the same acaricide(s)?

☐ Yes.

☐ No. ☐ I replace it on average every _____ days.

☐ I replace it when I notice that the current one is not providing effective control.

☐ How many replacements have been necessary so far? _____

What is the application interval for each product (days)?

Injectable _____. Pour-On _____. Spray _____. Other _____.

Tick incidence during the winter period (%): _____.

Tick life stage(s) during which you apply the tick?

☐ Egg. ☐ Larva. ☐ Nymph. ☐ Adult.

Current tick control results with the acaricide(s) used:

☐ Very poor. ☐ Poor. ☐ Fair. ☐ Good. ☐ Excellent.

You believe that, overall, over the past year, your cattle have been:

☐ Clean. ☐ Controlled. ☐ Infested.

What is your perception of tick incidence over the last 10 years?

☐ Unable to answer. ☐ Lower. ☐ Same. ☐ Higher.

What is your perception of tick resistance over the last 10 years?

☐ Unable to answer. ☐ Lower. ☐ Same. ☐ Higher.

Have you ever had a tick biochemical test?

☐ No. ☐ Yes. How often? _____

Do you use or have you used specialized technical assistance for tick treatment?

☐ No. ☐ Yes. How often? _____

5. Markets

Direct Sales to Consumers:

☐ On-Property

☐ Door-to-Door (Street Sales)

☐ Farmers' Markets

☐ E-Commerce

☐ Other: _____

Direct Sales to Retailers:

☐ Supermarkets

☐ Restaurants

☐ Other: _____

Associations ☐

Cooperatives ☐

Dairy Products ☐

Slaughterhouses ☐

Intermediaries ☐

Other(s) _____

6. Production Destination

Domestic Market ☐

Export ☐. Which Countries: _____

ETHICS COMMITTEE APPROVAL

Proof of approval of the research project by the Ethics Committee for Research Involving Human Beings (CEPEH) of Universidade Paranaense – UNIPAR, protocol 70889323.9.0000.0190.

DETALHAR PROJETO DE PESQUISA

– DADOS DA VERSÃO DO PROJETO DE PESQUISA

Título da Pesquisa: Custos de controle do Rhipicephalus (Boophilus) Microplus (Canestrini, 1887) (Acari: Ixodidae) com uso de acaricidas em propriedades que praticam nos municípios de Perobal, Umuarama e Xantrê.

Pesquisador Responsável: Zilda Cristiani Gazim

Área Temática:

Versão: 1

CAAE: 70889323.9.0000.0109

Submetido em: 28/06/2023

Instituição Proponente: Universidade Paranaense

Situação da Versão do Projeto: Aprovado

Localização atual da Versão do Projeto: Pesquisador Responsável

Patrocinador Principal: Universidade Paranaense
Conselho Nacional de Desenvolvimento e Tecnologia



Comprovante de Recepção:  PB_COMPROVANTE_RECEPCAO_2154793