

received supplement plus 1% of Quebracho (SB) and the control groups (CTR) received only supplement. All treatment groups were randomly assigned to continuously graze native grass paddocks during January to June 2016. Liveweight, body condition score and Famacha© score were recorded from individual lambs fortnightly, and fecal samples were taken from the rectum of each lamb. Fecal egg counts and coprocultures were performed. Results from descriptive statistics indicated a mean initial bodyweight of 20.7kg for all groups and at the end SB lambs were heavier than the CTR and SC lambs (32.1kg vs 30.5kg). The mean FEC at the beginning was 600 for all groups and at the end were 2056 for CTR, 1910 for SC and 996 for SB with no statistical difference among groups ($p>0.05$). *Haemonchus* sp and *Trichostrongylus* spp were the most prevalent genera. Famacha 1, 2 and 3 were the predominant scores for all treatments, with few scores 4 and 5 in the SB and SC groups ($p<0.05$). Famacha© score and the number of treatments that individual lambs needed to receive were associated with FEC ($p<0.05$). During the whole period, there was 12, 19 and 18 lambs from the CTR, SC and SB groups respectively that had no need to receive chemical treatment. The main results suggest that the number of chemicals necessary to do sustainable GIN control in rearing lambs during Summer and Autumn under Uruguyan conditions, can be reduced using CT or SC as feed additives.

Keywords: sheep; gastrointestinal nematodes; non-chemical control.

Tratamiento selectivo para el control de nematodos gastrointestinales en ovinos bajo sistemas de producción extensivos, en Uruguay

Targeted selective treatment for the control of gastrointestinal nematodes in sheep under extensive production systems, in Uruguay

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En Uruguay, la resistencia a los antihelmínticos (RA) es un fenómeno muy extendido entre los establecimientos ovinos y la principal especie resistente y abundante es *Haemonchus contortus* (*H. contortus*). El objetivo de este estudio fue implementar la adopción de un programa de tratamiento selectivo utilizando el sistema Famacha©, reduciendo así la presión de selección de *H. contortus* resistente en ovinos, bajo cría extensiva. Al inicio del programa, se contactó a organizaciones de productores y veterinarios, se organizaron talleres y días de campo para capacitar a veterinarios, productores y personal de campo en el uso del sistema Famacha©. Los productores seleccionados iniciaron un programa de seguimiento durante el verano-otoño de 2023, que es el principal período de riesgo para *H. contortus*. Al inicio, en cada establecimiento participante se llevó a cabo una prueba de reducción del recuento de huevos en heces (FECRT) para comprobar la eficacia antihelmíntica y una formación exhaustiva utilizando el sistema Famacha©. Se llenó un cuestionario que recopilaba información sobre la demografía de la explotación y el manejo antiparasitario. Durante 2023, participaron 20 criadores de la raza Merino Australiano con un número promedio de 3710 ovinos (rango = 300 – 10. 000). La mayoría de las explotaciones realizan son de ciclo completo, realizan pastoreo mixto de ganado vacuno y ovino, fundamentalmente en campo natural. Durante 2022, el promedio de tratamientos antihelmínticos aplicado a todas las categorías fue de 6 (rango= 1 - 12) y el 20% había realizado FECRT. El 80% de los participantes conocía Famacha©, pero solo el 7% lo aplicaba. Los resultados del FECRT revelaron falla en la eficacia farmacológica de los grupos

moxidectina, fenbendazol y closantel en todas los predios participantes. En 18 establecimientos se encontró fallas de levamisol, en un establecimiento falla en eficacia de monepantel y la eficacia del naftalofos fue ≤ 90 en cinco granjas. La capacitación de Famacha© se implementó con éxito en todos los establecimientos. Durante el período de estudio, las condiciones climáticas fueron bastante secas y los productores tuvieron que cambiar su manejo del pastoreo en función de la disponibilidad de pasto y agua. A pesar de esto, *H. contortus* fue bastante prevalente y el número de aplicaciones se redujo entre un 60 y un 70 % durante la temporada de *H. contortus* de 2023 en comparación con el histórico registrado por los productores. Se continúa con las evaluaciones en épocas de mayores precipitaciones y analizando las motivaciones de los productores en la adopción de métodos no químicos para el control de los nematodos gastrointestinales.

Palabras clave: resistencia antihelmíntica, Famacha©, *Haemonchus contortus*

In Uruguay, anthelmintic resistance (AR) is a wide-spread phenomenon amongst sheep farms and the main resistant and abundant species is *Haemonchus contortus* (*H. contortus*). The aim of this study was to implement the adoption of a targeted selective treatment program using the Famacha© system, to reduce selection pressure of resistant *H. contortus* among sheep, under extensive farming. At the beginning of the program, farmers organizations and veterinary practitioners were contacted, and workshops and field days were organized to train veterinarians, farmers, and farm personnel on the use of the Famacha© system. The selected farmers started a follow up program during summer-autumn 2023 which is the main risk period for *H. contortus*. At the beginning, a fecal egg count reduction test (FECRT) to test anthelmintic efficacy, and a thorough training using the Famacha© system was carried out at every participating farm. A questionnaire was filled collecting information on farm demographics and GIN management. During 2023, 20 Australian Merino breed farmers participated with an average number of sheep was 3710 (range=300 – 10 000). Most of the farms had set stock and 94% mixed grazed cattle and sheep. During 2022, the average number of drenches used was 6 (range= 1 - 12), 20% did FECRT, 80% knew Famacha©, but only 7% applied it. The results from the FECRT revealed drug failure to moxidectin, fenbendazole and closantel in all participating farms. Eighteen farms had levamisole failure, one farm monepantel failure and naftalophos efficacy was ≤ 90 in five farms. The Famacha© training was successfully implemented in all farms. During the study period, the climatic conditions were quite dry, and the farmers had to change their grazing management based on grass and water availability. Despite of this, *H. contortus* was quite prevalent and the number of drenches were reduced by 60-70% during the *H. contortus* season 2023.

Keywords: anthelmintic resistance, Famacha©, *Haemonchus contortus*