

CASE 1: Students A-L (by last name)

Saints and Demons Bistro & Farm

Specializing in Lamb Meats and Goat Dairy



THE HISTORY

In 2021, after purchasing a 70-year-old 40-acre farm near Bahama in Durham County, Chef Mac McCheffie moved from the city of Boston to Bahama. On the 10-acre homestead, Chef McCheffie built a new home and renovated the old farmhouse to be a Bistro restaurant. The bistro, *Saints and Demons*, specializes in dishes of lamb meat and dairy goat products (cheese, butter, & milk). The sheep and dairy goats are raised on the farm surrounding the residence and restaurant. Currently, the "raised-on-site" lamb dishes are seasonal; with off-season lamb meat purchased from other local farmers. The "raised-on-site" dairy products are available year-round.

Besides the 10-acre homestead with restaurant; the 40-acre farm also includes 5 acres of forest and 15 acres of old tobacco fields of scrub brush, while the remaining 10 acres is a pasture on which the 20 dairy goats (all does) and 21 sheep (1 ram, 10 ewes, and approx. 10 lambs) are continuously grazed together.

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THE CASE

In early June, after 2 (January-born) lambs died, Chef McCheffie brings in an area veterinarian named Vincent for help.

Relevant history provided by McCheffie includes:

- For the past 3 years, the sheep and goats have been co-grazed continuously on the 10-acre pasture, except when in the barn during inclement weather or milking.
- Also, for the past 3 years, all animals have been dewormed every 2 months with Fenbendazole (SafeGuard) @ 5mg/kg (0.5 ml/25 lb), purchased over the counter at the local feed store.
 - (See article: 2021_GoatDewormerChart)



«Zoom in to see the dosing label.»

Vinny the Veterinarian's Diagnostic Data.

June 10:

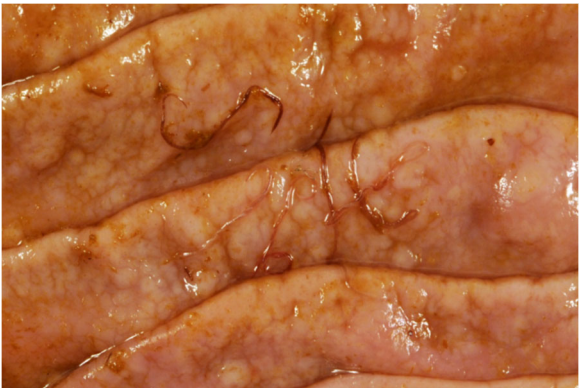
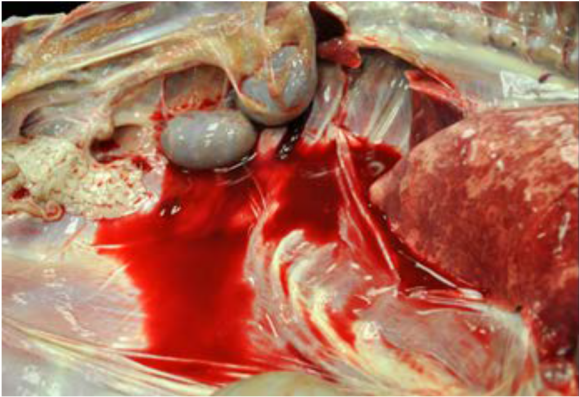
- Field Necropsy of a newly dead lamb found on pasture.
- FAMACHA scores taken
- Pre-treatment feces collected
- All animals treated with Oral Fenbendazole @ 10 mg/kg. [extra label]
- At the Vet Lab: Fecal Egg Counts (FEC) by McMasters Technique

June 20:

- Post-treatment feces collected
- At the Vet Lab: Fecal Egg Counts (FEC) by McMasters Technique.

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Necropsy



MDX (Morphologic Diagnosis):

- Body as a whole: Diffuse severe pallor (anemia)
- Retroperitoneum: Edema with pooling, non-coagulating thin blood
- Abomasum: Marked multifocal to coalescing proliferative gastritis with intralesional nematodes

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Lab Diagnostics

(A representative sample of diagnostic results)

Animal	Observations	FAMACHA	Pre-FEC (epg)	Post-FEC (epg)	FECRT (%)
Lamb 1	lethargy	4	1250	450	
Lamb 2	recumbent	5	4350	1775	
Lamb 3	lethargy	4	1000	375	
Lamb 4	lethargy	4	2575	1150	
Lamb 5	lethargy	4	1325	550	
Ewe 1	BAR	3	725	275	
Ewe 2	BAR	2	1350	600	
Ewe 3	Some Lethargy	3	825	350	
Ewe 4	BAR	3	775	300	
Ewe 5	BAR	3	550	225	
Doe 1	BAR	3	675	250	
Doe 2	Some lethargy	3	700	275	
Doe 3	BAR	3	650	275	
Doe 4	Lethargic, bottle jaw	4	400	175	
Doe 5	BAR	2	475	200	

BAR = Bright, Alert, Responsive

FEC = Fecal Egg Count

FECRT = Fecal Egg Count Reduction Test

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Case Assignment / Discussion

1. Use the included NC Extension article to determine Stocking rate. How many acres are needed for the number of Sheep & Goats? Are the pastures overstocked?
2. What nematode do you think is causing the pathology/mortality?
3. Determine FECRT:

$$\text{FECRT} = \left(\frac{\text{PreFEC} - \text{PostFEC}}{\text{PreFEC}} \right) \times 100$$

4. What is the average FECRT?
5. Is there anthelmintic resistance at *Saints and Demons Bistro Farm*?
6. Compare Lamb v/s Ewes FAMACHA & Pre-FEC scores.
In General, from these numbers what is your general analysis of disease manifestation of this parasite in Lambs v/s Ewes?
7. Compare & Contrast the FAMACHA & Pre-FEC scores for:
Ewe 2 v/s Ewe 5 v/s Doe 4
What is your analysis & recommendations?
8. Regarding the Deworming on June 10, is there anything you would have done different from Veterinarian Vinny?
9. What do you think of McCheffie's deworming protocol? Any deworming advice? (see Goat deworming chart)
10. What Advice would you give regarding Pasture Management options? (see Cases 3 & 4 for ideas)
11. Any other recommendations?