

Reedy Fork Farms- 3 May 2012

History

Reedy Fork Farms has been a certified organic dairy since 2007, currently with Holsteins and Holstein- Jersey Crosses. There is also an organic feed mill on the property, that produces some cattle feed but also a large amount of chicken feed. There are several groups of cattle kept separately: 16 calves in stalls being fed milk, 26 weaned calves approximately 8 months of age whose pasture has recently been rested for approximately the last two years, a mix of approximately 25 and approximately 20 mature heifers, approximately 30 individuals in the breeding herd, and 90 cows in the milking herd. There is currently no de-worming protocol, but an increase in vaccinations has recently occurred.

Health Concerns

- Coughing was observed in the weaned calves, originating from several individuals.
- In the pasture of 18 month old individuals, cow 457 had opaque lesions on both eyes with marked exophthalmos of the left eye, which could be a result of lymphosarcoma or a retrobulbar abscess. Cow 283 had multiple raised lesions around the face and jaw, which could have been engorged ticks, papillomas or something similar and was observed coughing. Cow 455 had an opaque lesion on the right eye.
- Chocolate the steer has an irregular left third eyelid, which is suspicious of squamous cell carcinoma.
- One of the horned cows in the breeding pasture had an open lesion on the upper right thigh.

Sample Collection

Fecal samples were taken from all calves in stalls. From each additional production group, fresh representative samples were taken from anonymous and tagged individuals.

Testing

Samples were processed using a double centrifugation technique. Strongyle-type eggs were counted via microscopic examination, and the total eggs per gram calculated. Any additional ova or parasites were noted.

Results - unless otherwise noted, the presence of coccidia, Moniezia, and Trichuris were seen in numbers less than 10

Stalled Calves	Strongyle- type eggs per gram	Other parasites
1	0	n/a
2	0	coccidia
3	0	n/a
4	0	n/a
5	0	coccidia
6	0	coccidia
7	0	n/a
8	0	n/a
9	0	n/a

10	6	coccidia
11	0	n/a
12	0	coccidia
13	0	coccidia
14	0	n/a
15	0	coccidia
16	0	n/a

8 month calves	Strongyle- type eggs per gram	Other parasites
296	397	coccidia
477	66	<i>Moniezia</i>
Unknown	263	<i>Moniezia, coccidia, Trichuris</i>
Unknown	1596	<i>Trichuris</i>
Unknown	3	n/a
Unknown	1248	coccidia
Unknown	18	coccidia
Unknown	368	<i>Moniezia, Nematodirus</i>
Unknown	128	coccidia
Unknown	719	<i>Moniezia, Nematodirus, Trichuris</i>

12-18 month and heifers	Strongyle- type eggs per gram	Other parasites
386	2	n/a
227	5	n/a
Unknown	5	coccidia
Unknown	5	n/a
Unknown	171	n/a
Unknown	3	n/a
Unknown	0	n/a
Unknown	0	coccidia
Unknown	36	n/a

Unknown	25	n/a
Unknown	2	n/a
Unknown	3	n/a
Unknown	0	n/a
Unknown	5	coccidia
Unknown	1	coccidia
Unknown	2	coccidia
Unknown	4	coccidia, <i>Moniezia</i>
Unknown	12	<i>Moniezia</i>
Unknown	12	coccidia

Breeders	Strongyle- type eggs per gram	Other parasites
Jersey bull	5	<i>Moniezia</i>
367	4	<i>Moniezia</i>
Unknown	0	n/a
Unknown	15	n/a
Unknown	0	n/a
Unknown	3	n/a
Unknown	1	coccidia
Unknown	2	coccidia
Unknown	0	n/a
Unknown	0	n/a

Milkers	Strongyle- type eggs per gram	Other parasites
TX	0	n/a
204	0	n/a
Unknown	0	n/a
Unknown	4	n/a
Unknown	1	n/a
Unknown	1	n/a
Unknown	5	n/a

Unknown	3	n/a
Unknown	1	n/a
Unknown	0	n/a
Unknown	0	n/a

Identified Parasites

Calves: Coccidia were seen at very low numbers in the calves. It is common in animals less than one year of age, and clinical infections (usually in stressed animals) will cause watery diarrhea and unthriftiness, but the infection is self-limiting and will spontaneously resolve. Only one calf was positive for strongyle-type eggs, calf 10 seen below, but was only at a level of 6 eggs per gram and is not of clinical concern.



8 months: Strongyle-type eggs were seen in clinically concerning levels in many of the samples. These eggs could come from several different intestinal nematodes, but the brown stomach worm, *Ostertagia*, is the most common. Clinical infections can result in watery diarrhea, anemia, and bottle jaw, and if the infection continues the affected animals can demonstrate poor weight gain and general unthriftiness. Infective larvae are ingested from pasture, which hatch from eggs passed by infected animals.

Coccidia were also seen in very low numbers, as well as *Moniezia*, *Trichuris*, and *Nematodirus*. Numbers of eggs seen of all of these were considered extremely low and therefore of no clinical concern. Clinical infections of *Moniezia* are generally asymptomatic. *Trichuris* also rarely causes clinical signs unless a severe infection is present. *Nematodirus* may cause diarrhea and poor weight gain when severe infections are present. Coccidia and *Trichuris* are ingested as infective eggs from pasture, *Moniezia* require the pasture mite as an intermediate host which are then ingested, and *Nematodirus* are ingested as infective larvae from pasture.

12-18 months and heifers: These animals demonstrated a low burden of strongyle-type eggs, coccidia, and *Moniezia*. As they become naturally resistant with age, these numbers should continue to decline.

Breeders: These animals demonstrated extremely low burdens of strongyle-type eggs, coccidia, and *Moniezia*, which are not of clinical concern.

Milkers: There were extremely low numbers of strongyle-type ova in this representative sample, presenting no clinical concern.

Recommendations

Many of the samples that were read indicated extremely low burdens of parasites on the farm as a whole. Fecal egg counts of less than 100 eggs per gram are not considered to be clinically significant in cattle, and we were seeing many samples with counts of less than 10 eggs per gram. The stalled calves could be considered 'clean' and it is recommended that they enter a pasture that has been rested for a period of time to help avoid the large strongyle burdens that are currently present in calves of the next age group.

The pasture with the eight month old calves featured some of the highest strongyle parasite burdens. Many of the samples were collected anonymously and indicate current passage of ova from the parasites onto the pasture. Strongyle nematodes tend to be of most economic importance in young cattle, predominantly first season grazers. It is recommended to either rest this pasture for the duration of the summer and fall allowing for the parasite ova to decline with winter, or to allow older cattle (second season grazers and older) to graze here. By doing so, the pasture contamination would not cause infection of any naive calves. We would strongly advise against moving the youngest group of calves into the pasture the 8 month olds currently populate, because, based on fecal analysis, the pasture is likely highly contaminated with infective stage strongyle larvae and those young calves could be significantly impacted.

Of those individuals in the 12-18 month group, it is highly recommended to evaluate calf numbers 457 and 455 based on abnormalities seen in their eyes. Calf 283 also appeared to be much smaller than the rest, separate from the group, and was demonstrating some signs of respiratory distress.

There was no evidence of lungworm presence this year, which is extremely encouraging and would suggest that only the newly- acquired calves from last year were infected and demonstrating clinical signs. Our findings this year strongly suggest that lungworm did not have an opportunity to establish on your pastures- great news!

We appreciate your hospitality and enjoyed our time at Reedy Fork Farms! Thank you for allowing us to visit and learn more about your organic dairy.