

# Minka Farm Parasitology Fall Report 2016

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Minka Farms is a grass-fed beef cattle farm operated by Kimberly and Brian Harry. The farm currently has 93 head, split into two groups of cows and one small group of their bull and two companion steers. In addition to cattle, they house about 50 chickens, 4 guinea hens, 150 ducks, and some donkeys, goats, and a horse. The oldest cow on the farm was born in 2008 and the youngest were born in late April 2016. This spring yielded 16 calves, which serve as sentinels for our parasite testing this week. As it currently stands, the farm is a closed herd that brings in a new bull for genetic diversity about every two years. Under advice from the CVM parasite class, Minka Farms stopped its yearly deworming of all the cattle in 2012 and now selectively deworms cattle under a year of age with albendazole. The farm relies primarily on rotational grazing to prevent parasitic disease. The strategy involves maintaining the cows on pasture until grasses are about 3 inches in length and then moving them to a fresh pasture. Grazing to 3 inches helps to keep the parasite transmission low as most nematodes will not migrate up the vegetation past that distance. The amount of time spent on each pasture is dependent on the season. In the spring and fall, the cattle generally do not need to be rotated as often, as the pastures are mostly comprised of cool season grasses and are therefore growing faster than in the summer months. In the winter, cattle are placed on a “sacrifice pasture,” which is rocky and hilly.

Currently the only major problems faced on the farm are a few open cows. Upon palpation at day 60, a few cows seemed to be without a calf, some of which were also open the year before. Additionally BCS was noted to be between 4-5 as compared to 5-6 the year before. If a particular cow appears to need individual attention, the sick cow is brought up for additional diagnostic work in the chutes. Use of low stress handling allows easy restraint of the beef cows despite only being worked twice a year. Cows are vaccinated for BVD, IVR, BV3 and blackleg in the spring and for blackleg in the fall. As a farm practicing more natural farming techniques, the owner noted that their methodology was more labor intensive but produced healthier cows on better pastures with less health problems. They have not had any parasite related clinical signs since our last visit in the spring.

Cow ID	Age	Strongyle Type (epg)	Strongyloides (Seen/not seen)	Eimeria	Trichuris	Nematodirus	Monezia	Capillaria
Z20	Mature cow	0	-	+	-	-	-	-
D13	<1	95.5	-	-	-	+	-	-
Adult	Adult	10.5	-	+	-	-	-	-
D14	<1	2	-	+	+	-	-	-
D5	<1	481	-	+	-	+	-	+

D10	<1	160	+	+	+	+	-	-
C21B	1	6	+	+	+	-	-	-
C11	1	2	-	+	-	-	-	-
C7	1	11	+	-	-	-	-	+
Unknown 2	UK	0	-	-	-	-	-	-
Unknown calf	UK	3.5	-	-	-	-	-	-
C21A	1	9	-	-	-	-	-	-
D23	<1	303.5	+	+	+	+	-	-
B69	2	9	-	+	-	-	-	-
Y14	Mature cow	4.5	-	+	-	-	-	-
X10	Mature cow	3.5	-	-	-	-	-	-
Z32	Mature cow	1.5	-	-	-	-	-	-
X6	Mature cow	2.5	-	-	-	-	-	-
B55	2	1	+	+	-	-	-	-
B56	2	2	-	-	-	-	-	-
D19	<1	229	+	+	+	+	+	-

Results: Some cows exhibited higher egg counts than have been seen in the past. However, this is the first time sampling has been conducted during the fall season and numbers reflect accumulation of parasites over the entire grazing season. It is expected that most of these parasites will be lost over the winter. The egg counts of cows in the 1.5-2 year old age group remained similar to egg counts in past years even though they're grazing with calves with much higher egg counts. Although it may seem necessary to deworm in calves with high egg counts, it might be better to consider whether the parasite burden in these calves is affecting performance, BCS, or causing clinical signs like diarrhea or inappetance (classic signs of *Ostertagia*). If not, it's reasonable to carefully consider whether there is a need to deworm when we've been having success without deworming for 2 years. Standard practice might be to deworm based only on the

number of eggs found, but if there are no deficits in growth or health in cows going to market (2 years of age) the parasite load doesn't seem to be significant in these animals. Resistance and acquired immunity develops with age and limits the amount of *Ostertagia* in the abomasum. Therefore, few parasites are surviving long enough to affect these cows' ability to put on weight, finish off, and go to market. Although it may be discouraging to see calves with high parasite loads, the older cattle on the property (seem to) develop immunity over time and remain unaffected from the parasites under the current farm practices. For example, in 2014, 2015, and during our visit this week "Cow X6" had a fecal analysis showing consistently low parasite loads between 2.5 and 4 strongyle-type eggs per gram of feces. Fecal analyses from other cows on your farm such as B55, B56, and X10 were also compared to data from previous years and showed no significant change in parasite burden. Having these numbers from previous years as a comparison allows us to remain confident that treating the cattle with dewormers is not necessary or in the best interest of the health of the herd at this time.

If it were decided to separate the cows and calves for the sake of parasite control, the young calves should be placed on the cleanest pasture. However, grazing calves and cows together actually helps to "clean" the pasture by allowing resistant adults to consume a large portion of the infective larvae without letting them turn into adult worms. The co-grazing of immune and susceptible animals helps to protect the susceptible and lower the overall parasite burden.