

The Camelid Health Trust

www.camelidhealth.org

Highlights of 2012 Alpaca and Llama Health Survey

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This survey was conducted online, using tools provided by www.surveymonkey.com. The llama and alpaca populations were surveyed separately. Links to the survey were emailed to the members of the NZLA (~70), and a compiled list of about 600 alpaca owners. A total of 66 alpaca surveys and 12 llama surveys were completed online.

The survey period was from September 1st 2011 through August 31st 2012. This survey period was selected as it encompasses one complete cycle on most farms; so that the births, deaths, and cria mortality to weaning are all within a single sample set.

The amount and quality of information provided by each respondent varied, causing occasional confusion as to the meaning of responses.

If you have more detailed queries about the data, please let me know. You can email me at stephen@camelidhealth.org.

Surveyed Population:

Alpacas

	Huacaya	Suri
Adult Males	153	17
Young Males	115	9
Adult Wethers	148	26
Young Wethers	21	8
Adult Females	646	72
Young Females	173	13

Total Alpaca Population: 1401

Male Cria Born	110
Female Cria Born	88

(Ratio 1.25:1)

Llamas

	Standard	Suri	Guanaco
Adult Males	17	1	2
Young Males	3	2	5
Adult Geldings	51	0	0
Adult Females	61	0	4
Young Females	2	2	1

Total Llama Population: 151

Male Cria Born: 2

Female Cria Born: 4

Responses came from all regions but the West Coast. There was one overseas submission from an alpaca farm in the USA.

Minor Health Issues

Eyes:

Alpaca had 15 cases of runny or weepy eyes, most of which cleared without treatment. One seed head was lodged in an eye and needed removal. There were multiple reports of seasonal or recurrent issues with runny eyes, which were often attributed to allergies.

There were no reported eye problems among the llamas.

Feet and legs:

Alpaca had a dozen cases reported, though some were owners concerned about the usually-harmless “pitted” look the foot pads developed in winter on wet ground. Six reports involved infections between the toes, which were cleared either by iodine spray or in one case a course of penicillin.

There was one llama reported with a “puffy” leg that was successfully treated with antibiotics.

Skin Issues:

Twenty cases were reported in alpaca, a mixture of mites, dermatopholis, eczema and mange. Most cases responded to treatment. One animal was reported to have a cocci bacterial infection around the nose and mouth “munge like”. Treatment has included antibiotics and manuka honey, but after 3 years the condition persists. Another animal had non-cancerous growths on her legs that would bleed if abraded.

Three cases were reported among the llamas. One was rain scald. The other two involved fungal infections. One responded to canesten cream, the other case was treated with zinc cream, though that animal had reoccurring problems each Spring.

Rye Grass Staggers:

Sixteen alpaca had RGS of varying severity. Many cases involved animals that are susceptible and are afflicted every year.

No llamas were affected by RGS.

Other minor issues:

Three abscesses were reported among the alpaca, all eventually cleared. One cria suffered a ruptured tendon after being trod upon by an adult, this healed sufficiently with bandaging.

Rickets:

3 cases among the alpaca. No cases among the llamas.

Stomach Ulcers:

2 alpaca, treated with Zantac injection and Carafate. No llama cases reported.

Colic:

Several instances of presumed sand colic, treated with metamucil plus flunixin. Cases would settle/resolve within 24-48 hours.

Another alpaca farm reported occasional cases of presumed spasmodic colic that would self-resolve within 1 to 3 hours.

No reported cases among the llamas.

FE:

2 reported cases in alpaca, neither lethal. No llama cases.

Poisoning:

Two alpacas were poisoned by rhododendron cuttings put on paddock burn-pile. Only treatment was molasses for energy. The animals were very sick, twitching and frothing, but both recovered after 48 hours. Another 6 month old alpaca died of suspected poisoning (type and source unknown).

Management Practices

Drench Use:

	Alpaca Owners	Llama Owners
Never	12	1
Once a year	11	3
Twice a year	18	3
Quarterly	3	0
As required	21	3

Dectomax remains the most popular brand of drench among alpaca owners (73% use it). Of the 23 Dectomax users who reported the dose delivered 13 were giving a good dose (2.5ml+, or by weight), 8 were giving marginal doses (2 ml), and 3 were giving low doses (1.5 ml or less).

Poor drench practice (under-drenching, drenching by calendar) remains a considerable issue. I assume drench practices are probably worse on average than those reported in the health survey, as those that fill out the survey have self-selected for their interest in animal health and welfare and thus are probably more likely to be independently seeking out information on best practice.

15 alpaca owners reported only drenching parts of their herd- the animals that required parasite treatment based on body score, weight, or fecal egg counts.

Fecal Egg Counting

Of the camelid 79 farms (66 alpaca, 13 llama) only 14 did regular fecal egg counts. Three did the FEC themselves, one did the test themselves and used the centrifuge method to isolate the eggs. The remaining 10 farms had their samples sent into veterinary diagnostic labs for testing.

Facial Eczema Plans

Of the 37 alpaca farms on the North Island 6 did not answer the question, 6 reported having no FE management plan, and 25 had plans to monitor and act in response to rising spore levels. Seasonal feeding of zinc oxide to the at-risk animals was the near-universal response. In most cases this was provided by means of alpaca nuts with Zinc, though some owners orally drench their animals with a measured quantity of zinc. A few owners reported removing their animals from affected pastures and hard-feeding until the danger had passed. Three properties used fungicidal sprays to limit spore formation.

Of the 6 alpaca farms in the Nelson/Marlborough region, five did not have an active FE management plan, one fed Zinc-containing nuts. In previous surveys there have been recorded fatalities caused by FE in this region.

Body Condition Scores

Results: number of herd reporting

Body Condition Score:	2.5	3	3.5	4	4.5	5
Alpaca- Breeding females	1	6	15	13	2	0
Alpaca- Working males		6	10	10	3	1
Alpaca- Non-working/breeding		2	8	19	8	1
Llama- Breeding females		2		1		1
Llama- Working males				4		5
Llama- Non-working/breeding				2	2	1

Submitter comments on these results included a mention that their reported average often represent a wide range of body scores. Others commented that in mobs under the same feed and metabolic conditions they had a wide range of body condition scores. Some farms mentioned having older animals that were thinner than the average. A number of people commented on how fat all their animals were, even without supplementary feed.

Results: scaled for herd size

Body Condition Score:	2.5	3	3.5	4	4.5	5
Alpaca- Breeding females	8	113	237	122	33	
Alpaca- Working males		48	15	26	22	2
Alpaca- Non-working/breeding		15	37	179	73	9
Alpaca- Suri Breeding females		6	31	20		
Alpaca- Suri Working males		3	4	10		
Alpaca- Suri Non-working/breeding			10	31	3	

Feed Availability

	Never	Always	Usually	Sometimes	Seasonal
Pasture Grass		51 A / 10 L	5 A / 1 L	1 A / 0 L	
Hay	2 A / 1 L	19 A / 4 L	12 A / 3 L	9 A / 2 L	12 A / 1 L
Baleage/Silage	19 A / 6 L	0 A / 1 L	3 A / 1 L	7 A / 2 L	11 A / 1 L
Nuts	3 A / 4 L	11 A / 0 L	4 A / 1 L	27 A / 4 L	6 A / 0 L
Zinc Nuts	19 A / 6 L	2 A / 0 L	2 A / 0 L	7 A / 2 L	10 A / 1 L
Chaff	11 A / 6 L	6 A / 0 L	7 A / 0 L	17 A / 4 L	6 A / 1 L

Note: the numbers presented above are # alpaca farms reporting / # llama farms reporting. As with other sections of the survey, every question was not answered by each respondent.

27 farms provided some other form of feed to their animals beyond what is listed above.

- 3 Fibre-Pro, 1 Maximize (Grain), 1 cool-ade, 1 horse musli
- plenty of carrots, apples, and access to browsing in trees, or provided with cut branches of willow, poplar, bamboo, etc.

Remark 1: Supplementary feeding is much less common on llama farms.

Remark 2: Two alpaca farms reported always feeding zinc-containing nuts, and two more reported usually feeding such nuts. This persistent feeding of Zinc may be causing a dangerous copper deficiency in their herds.

Reports of Chronic Wasting

There were about 14 reports (one report simply stated the number as “several”) of animals that suffered from chronic wasting.

7 were younger animals (under the age of 2) Two fully recovered after aggressive or extensive treatment, the others had variable outcomes. Veterinary examination pre or post mortem was common, and no cases of Johnes were identified. The majority of cases were in older animals which suffered a variety of ailments.

This is an open-ended question I add to the health survey on the chance that an important an unexpected/unknown health issue might be detected.

Matings, Births and Cria Ailments

Matings and Pregnancy

(Note: so few llamas surveyed were being bred that their data has limited statistical significance and is not included in this summary.)

18 alpaca refused to sit or were not receptive (~10% of bred animals)

4 alpaca had discharge from the vulva, cleared by antibiotic treatment. One owner reported a major personality shift in their affected animal.

37 slipped pregnancies (~20%). NOTE: 12 of these failed pregnancies occurred in animals that were about 8 weeks pregnant and had just been drenched with Matrix.

Birth Dystocias

13 positional dystocias reported (~6.5% of births).

1 breech (cria died)

1 uterine torsion (dam and cria died)

1 head back (cria died)

1 head back (cria survived)

3 had both legs back, all survived

1 had one leg back, survived

5 had incomplete data.

11 size-stuck dystocias reported (~5.5% of births)

1 dead

1 removed by c-section (survived)

9 out healthy with helping pulls

This results in an overall birth survival rate of 98%. 12% of the births required some assistance.

Stillbirths

7 alpaca stillborn full term.

7 alpaca stillborn premature, including 2 sets of twins (5 and 9 months gestation).

No or Inadequate Milk production

Ten alpacas with inadequate milk production were identified, three of which died between 2 and 4 weeks of age. Two of these females were maidens, another was reported as being “the fattest girl in the herd whose milk is always delayed”.

Rejected Cria

Three cases were reported. One was a case where the birth occurred in a hilly paddock and the owner supposes the mother and cria became separated and did not bond properly. This cria later suffered an injury after being kicked in the head by another female.

The second case involved a young maiden (2 years old, unintentional pregnancy). The owner persisted with trying to get the mother to accept the cria, while providing supplemental work, and managed to get the mother to finally accept it at 5 weeks of age.

The final case was a adult female which had rejected all her previous cria. Cria was hand reared, mother was culled.

Cria Deformities

1 Undershot jaw, cria alive and healthy

1 Choanal Atresia, cria died

Other Cria Ailments

1 heart murmur

1 dummy cria

1 very small full term cria (only 4.7 kg), died 45 minutes post partum. Presumed underdeveloped pulmonary system.

Morbidity and Mortality

Significant Illness/Injuries

- Animal found with cloudy, bulging eye. Vet determined it was likely due to injury. Treated with sulfadex with good results, but cloudiness subsequently returned. Two more courses of sulfadex did not clear the problem. Vet finally drew blood, spun out the serum, and then used it to treat the affected eye. Some cloudiness remained, but condition not progressing, nor is the eye bulging. Animal is blind in that eye.
- A broken back the occurred upon shearing. Animal was shorn on the ground, and began displaying symptoms within an hour after shearing. Post mortem discovered spinal trauma. Circumstances mysterious, as the shearing seemed to go normally.
- 3 reports of significant abscesses. One soft tissue, one foot, and one mandibular (20 year old female).
- Large, robust female with a severe case of dermatophilus. (editors note: diagnosis of skin conditions is quite variable, and many skin conditions are called dermatophilus. The diagnosis in this case cannot be confirmed.) Animal treated with Exceed twice, chlorhexadine & iodine washes, with additional softening and picking at crusts. Eventually came right.
- Two cases on one farm on the same day. Both dislocated shoulders, in unrelated accidents. Treated with sling and rest. Some residual limping, but otherwise animals are fine.
- A 'dummy' cria. Full case writeup is available on the camelidhealth.org website.

Deaths

36 alpaca and 7 llama deaths were reported. The information provided in each report varied widely.

Alpaca Deaths

Age	Sex	Details	PM
1 day	?	Died during caesarian section.	No
1 day	?	Born with severe heart murmur. Euthanized	?
1 day	?	Vet assisted birth. Dam was suffering from FE	No
1 day	M	Cria born full term but very dysmature. Died within 45 minutes. Trouble breathing, couldn't maintain temperature.	No
1 week	?	Born premature, off-farm while being agisted.	No
14 days	?	Cria death	No
2 weeks	?	Seemed normal first two weeks. Then started to scour and was dead within 12 hours.	?
17 days	?	Cria of mother with little milk. Maiden mother, slightly overweight. Feed supplementation was started, but possibly too late. PM showed E. coli.	Yes
3 weeks	M	Sudden onset of neurological conditions. Not improved with treatment with thiamine. Had been seem trying to nurse off other dams, so may have been a kick to the head. Died before he could be taken to the vet.	?
1 month	?	Went downhill. Temporary boost with Vit B12 injection, eventually died.	No
5 weeks	M	Dam had a history of slow-growing cria. (Two survived and sold overseas, another found dead in the paddock). This cria seemed okay at first, then increasing difficulty feeding. Even with supplementation he was able to take less and less without choking and spilling. Vet thought it might be a deformed aorta impinging on the esophagus. Euthanized	No
7 weeks	?	Found impaled on broken branch. Misadventure when jumping in long grass. Severely injured. Euthanized.	No.
Cria	?	Cria was not feeding well, so owners were providing supplementary feed. Cria died when they were away. They wondered if it stopped feeding.	No
Cria	?	Cria died for no apparent reasons	No
6 months	?	Newly weaned. Fine one day. Next day unresponsive, vomiting, diarrhea, refusing to eat and drink. Given fluid and antibiotics. Dead next morning. No other animal ill. Vet suggested possible poisoning due to sudden onset. Day before onset animal had been at a show.	No
6 months	F	Rickets. Never improved. Vet treated.	No
6 months	M	Died post-surgery. Eye had to be removed to to injury from unknown source.	?
?	?	Weanling. Died of Haemonhcus.	?
11 months	F	Found dead in paddock	No
18 months	F	Found dead in paddock after horrific weather conditions. Had seemed fine the previous day.	No

20 months	M	Found dead in paddock after horrific weather conditions. Had seemed fine the previous day.	No
20 months	F	Found dead in paddock after horrific weather conditions. Had seemed fine the previous day.	No
2 years	M	First illness in May, low phosphate and RBC with high parasite burden. Temperature normal. Two weeks later zero parasites, but even lower phosphate and RBC. Blood transfusion given, plus supplemental Blut and Phosphate. Two weeks later a second transfusion. He was given Sterivet Blut, colostrum, nitrotain, omeprazole, dicalcium phosphate, catosal for the next 3 weeks and progressing downwards. PM revealed only a thickened stomach lining and a large number of juvenile Haemonchus. Animal died in September, owner regrets not having him put down earlier.	Yes
3 years	M	Animal had previous health issues (gastric). Fell and broke leg. Bones may have been brittle due to other underlying conditions. Euthanized by vet.	No
3 years	F	Haemonchus. Blood transfusion applied, and it provided a brief improvement, but she died a week later.	No
4 years	F	Brain tumor. Animal suddenly became blind and deaf. Vet called, treatment ineffective, animal euthanized. Tumor near optic nerve.	Yes
4 years	M	Working stud. Multiple organ failure. Ataxic when stressed, low haemoglobin. Treated with Phosphorus, Catosol, Ivomec and oral Blut. Supplementary feed. Ataxia gone after 10 days. Reamined okay for a few months, but not recovering body condition. Parasitosis treated with more Ivomec. Weak, no appetite. Further Phosphorus, Iron and VitB12 ineffective. PM showed renal failure, pancreatitis, fluid in pericardium	Yes
4 years	F	Healthy female suffered spinal damage during shearing. Died within 2 hours of shearing with vet in attendance. Shearing had seemed normal.	Yes
11 year	F	Animal rescued in 2009, in poor health at time. Probable multiple exposure to FE and Haemonchus prior to rescue.	?
12 years	F	Sudden loss of body condition. Anaemia. Probably lymphoma	Yes
12 years	F	Had seemed well, then just lay down and died (in August). No indication of distress.	No
12 years	M	Wether with a heart problem	?
13 years	?	Found dead in kush in the morning. Had seemed fine the day before.	No
?	F	Died suddenly of a suspected heart attack	?
?	F	Twisted Uterus	?
?	M	Had to euthanize a 'Berserk' male. Dangerous attacks on humans.	No

Alpaca – 14 cria deaths pre-weaning (~7.5%). Of these two deaths were due to injury/misadventure, two were not viable and died shortly after birth, and two more died during difficult/assisted births. Three more probably died due to vulnerability from inadequate nutrition. Some of the other unexplained/sudden deaths may have also been due to inadequate nutrition, though that cannot be proved.

Llama Deaths

Age	Sex	Details	PM
8 years	M	Castrated male. Gradual wasting and discharge from nose (from the time I got	No

		him) After 2 years of regular drenching and supplementary feeding to no avail, I had him put down before winter.	
12 years	M	Chronic wasting. Pm found cancer.	Yes
14 years	M	Lost control of hindquarters - gradually worsened - euthanased. Owner suspects toxicity from white drench.	No
16 years	F	Wasting. Rallied with supplementary feeding, then died. PM found fungal lesions in gut.	Yes
18+ years	M	Wasting and lethargy. Euthanized	No
18+ years	M	Wasting and lethargy. Euthanized	No
?	F	Adult female, died suddenly 3 weeks after giving birth. PM found fungal lesions in gut.	Yes

Strange Cases

- An animal with a crusty face which has defied diagnosis and treatment. Owners have spent considerable effort and money trying to treat the animal, to no avail, and are now considering culling.
- An imported male which failed to produce spermatazoal in seminal fluid. At time of report was 48 months of age, and still no viable sperm.
- A llama that gave birth. Complete surprise as it had no contact with sires. Best theory is that she secretly encountered a male at a show. Theory B is immaculate conception.
- 2 cases on fungal lesions in the stomachs of llamas on the same farm in the Auckland/Northland region. No obvious source or cause. Lesions were large and easily spotted during gross pathology examination.