



**Pennsylvania Animal Diagnostic Laboratory System**  
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Report Date: 1/26/2024

**Final Report**

**Date Submitted:** 1/17/2024  
**Collection Date:** 1/15/2024

**Case Coordinator:** Deepanker Tewari

**Accession No:** S2401952

GRETCHEN KOCHER  
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**Associated Parties**

Veterinarian	JUSTIN L CUNFER	Vet Code:021383, BV012558
Vet Practice	CUNFER VETERINARY SERVICES	
Owner	GRETCHEN KOCHER	

**Reference Data**

Sample: 27 BLOOD

**Lab Findings**

**Mammalian Serology**

Specimen	Test Name	Result	S/P	PI	S-N
INDIA BLUE N AZALEA - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Female					
Blood - 1	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.009		
	Small ruminant lentivirus (cELISA)	NEG		-0.8	
GOATS@GRACE HILL HS SABINEWREN - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Female					
Blood - 2	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.000		
	Small ruminant lentivirus (cELISA)	NEG		6.3	
BEE - Mammalian - Caprine / goat - Goat - Boer - Female					
Blood - 3	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.279		
	Small ruminant lentivirus (cELISA)	NEG		0.9	
INDIA BLUE JD ENDLESS LOVE - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Female					
Blood - 4	Bovine pregnancy test (IDEXX ELISA)	Open			0.023
	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.004		
	Small ruminant lentivirus (cELISA)	NEG		2.8	
GOATS@GRACE HILL H BO-KATAN - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Female					
Blood - 5	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.004		
	Small ruminant lentivirus (cELISA)	NEG		3.3	
BETTER WAYZ BH MAROCCHINO - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Male					
Blood - 6	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.001		
	Small ruminant lentivirus (cELISA)	NEG		-2.1	





Specimen	Test Name	Result	S/P	PI	S-N
<b>GOATS@GRACE HILL HS FOXGLOVE - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Female</b>					
Blood - 7	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.009		
	Small ruminant lentivirus (cELISA)	NEG		6.3	
<b>GOATS@GRACE HILL S HIS GRACE - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Female</b>					
Blood - 8	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.001		
	Small ruminant lentivirus (cELISA)	NEG		-0.1	
<b>INDIA BLUE EOF JINSING - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Female</b>					
Blood - 9	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.005		
	Small ruminant lentivirus (cELISA)	NEG		1.4	
<b>LADY WALKERS ALPHA LYNCIS - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Male</b>					
Blood - 10	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.030		
	Small ruminant lentivirus (cELISA)	NEG		1.3	
<b>A LITTLE FUNNY FARM MAVIS - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Female</b>					
Blood - 11	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.027		
	Small ruminant lentivirus (cELISA)	NEG		2.3	
<b>BETTER WAYZ MILCHAMAH *B - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Male</b>					
Blood - 12	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.016		
	Small ruminant lentivirus (cELISA)	NEG		20.9	
<b>BETTER WAYZ MERCY ME - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Female</b>					
Blood - 13	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.004		
	Small ruminant lentivirus (cELISA)	NEG		4.8	
<b>GOATS@GRACE HILL HS 4GET ME NT - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Female</b>					
Blood - 14	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.005		
	Small ruminant lentivirus (cELISA)	NEG		5.8	
<b>BETTER WAYZ SWISS MOCHA - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Female</b>					
Blood - 15	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.443		
	Small ruminant lentivirus (cELISA)	NEG		10.6	
<b>GOATS@GRACE HILL PR NOIR IXORA - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Female</b>					
Blood - 16	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.022		
	Small ruminant lentivirus (cELISA)	NEG		12.6	
<b>SHANAGO FARM PEANUT - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Female</b>					
Blood - 17	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.004		
	Small ruminant lentivirus (cELISA)	NEG		7.5	
<b>BETTER WAYZ PUMPKIN SPICE - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Female</b>					
Blood - 18	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.018		
	Small ruminant lentivirus (cELISA)	NEG		12.1	
<b>GOATS@GRACE HILL H R2-D2 - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Male</b>					
Blood - 19	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.004		
	Small ruminant lentivirus (cELISA)	NEG		13.2	





Specimen	Test Name	Result	S/P	PI	S-N
<b>GOATS@GRACE HILL M SHAAK TI - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Female</b>					
Blood - 20	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.002		
	Small ruminant lentivirus (cELISA)	NEG		4.5	
<b>A LITTLE FUNNY FARM SPIDERROLL - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Male</b>					
Blood - 21	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.028		
	Small ruminant lentivirus (cELISA)	NEG		13.8	
<b>BETTER WAYZ PIPSQUEAK - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Female</b>					
Blood - 22	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.000		
	Small ruminant lentivirus (cELISA)	NEG		2.1	
<b>BETTER WAYZ HAMMER IN THE SKY - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Male</b>					
Blood - 23	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.338		
	Small ruminant lentivirus (cELISA)	NEG		0.6	
<b>TOBY - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Male</b>					
Blood - 24	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.000		
	Small ruminant lentivirus (cELISA)	NEG		10.9	
<b>THE BRENNAN TRIXIE - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Female</b>					
Blood - 25	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.000		
	Small ruminant lentivirus (cELISA)	NEG		5.2	
<b>BUFFALO CLOVER VAL VERSACE - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Male</b>					
Blood - 26	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.012		
	Small ruminant lentivirus (cELISA)	NEG		6.7	
<b>GOATS@GRACE HILL HS ZINNIA - Mammalian - Caprine / goat - Goat - Nigerian Dwarf - Female</b>					
Blood - 27	Caseous Lymphadenitis (SHI)	NEG			
	Mycobacterium paratuberculosis : Johne's Disease (ELISA)	NEG	0.002		
	Small ruminant lentivirus (cELISA)	NEG		4.8	

Bovine pregnancy test(IDEXX ELISA): The pregnancy status of the animal was determined by measuring the levels of Pregnancy Associated Glycoproteins (PAGs) in the submitted blood sample. The level of PAGs is measured by corrected optical density (OD) value (also called S-N) using IDEXX Bovine Pregnancy ELISA test.

S-N = Sample OD minus negative control mean OD

- a. If the S-N value is less than 0.300, the animal is considered not pregnant (open).
- b. If the S-N value is equal to or greater than 0.300, the animal is considered pregnant.

**Pregnant Recheck (validated in cattle only):** Embryonic deaths are common in the early stages of cow pregnancy and PAGs can circulate in blood for some time after early embryonic death. An optional recheck of the animal 7 to 10 days later is recommended if the S-N value is equal to or greater than 0.300 and less than 1.000.

The IDEXX assay has been shown to have 99.3% Sensitivity (95% CL: 98.3%-99.7%) and 93.8% Specificity (95% CL: 91.2%-95.7%) for determining pregnancy in cows. The assay has been validated for the detection of pregnancy status in the following species





with indicated specimen types.

- **Cattle** serum or EDTA plasma - from 28 days post-breeding and from 60 days post calving
- **Buffalo** EDTA plasma - from 30 days post-breeding and from 60 days post calving
- **Goats** serum - from 28 days post breeding
- **Sheep** serum - from 35 days post breeding

Small ruminant  
lentivirus(cELISA):

The Small Ruminant Lentivirus (SRLV) Antibody Test Kit, cELISA is a competitive, enzyme-linked, immunosorbent assay that detects antibodies to caprine arthritis encephalitis (CAEV) in goat sera or ovine progressive pneumonia virus (OPPV) in sheep sera. Serum samples with percent inhibition (PI) of equal to or greater than 35%, are classified "POSITIVE". Serum samples with percent inhibition (PI) of less than 35%, are classified as "NEGATIVE".

Mycobacterium paratuberculosis : Johne's  
Disease(ELISA):

ELISA test for Johne's disease measures antibody response in milk and serum. To control or monitor Johne's disease, it is important to start with screening strategies like ELISA but use of organism based tests on rotational or combination basis ensures better success in management of the disease. Positive ELISA tests should be confirmed with organism based tests. Paired comparisons have shown that up to 5-6% animals that are positive with serum ELISA can still be negative on milk ELISA. Furthermore, some of the low shedders and rarely few high shedders may never be positive with Johne's Milk/Serum ELISA tests but still can keep spreading the disease on farms. Animals reported with S/P values >1.00 are more likely to have Johne's even though they may still be subclinical. All animals reported as suspect should be retested, monitored and/or followed with fecal culture to determine their infection status.

Interpretation Serum Negative S/P = 0.45; Suspect > 0.45-0.55; Positive =0.55

Interpretation Milk Negative S/P = 0.20; Suspect < 0.20 - 0.30; Positive =0.30

Caseous  
Lymphadenitis(SHI):

Detection of antibodies to *Corynebacterium pseudotuberculosis* exotoxin, the causative agent of caseous lymphadenitis, by synergistic hemolysin inhibition, performed at 1:8, 1:16, 1:32 and 1:64 dilutions. Positive samples with titers listed as 64 are actually > or = to 1:64.

The SHI test is intended as a herd test since the results for an individual animal can be misinterpreted. SHI cannot distinguish between field exposure, resolved infection or vaccination antibodies. Recently infected animals may not elicit a detectable antibody response. Kids and lambs should be at least 6 months old before testing because of the possible presence of maternal antibodies. For biosecurity purposes, it is recommended that new animals be tested for CLA prior to introducing them into a herd. It is preferable to test the herd of origin. Herds with a high incidence of positive SHI results strongly suggest the presence of the bacterium. Testing the blood of new animals before they are introduced to a herd or flock can reduce the likelihood of introducing a carrier animal.

#### Interpretation

The IDEXX ELISA kit was used for Johne's disease testing. The kit is not currently approved in the US but is approved in Europe for the diagnosis of ovine and caprine Johne's disease. The sensitivity of the ELISA in sheep and goats for Johne's diagnosis is 34.9% and 56.4%, with a specificity of 98.8% and 100.0%, respectively. The test has higher sensitivity than the AGID test and uses a cut-off value of = 0.55 for positives. Fecal samples from suspect or positive animals can be cultured or tested by PCR for confirming the disease diagnosis.

*Corynebacterium pseudotuberculosis* infections can lead to false positives due to cross-reactive antibodies. The possibility of animals having caseous lymphadenitis (CL) or a previous exposure should also be





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**Interpretation**

considered when assessing Johne's ELISA positive lab results.

**Client Report History**

Report Type	Delivery Method	Sent To	Date Sent
Final	Email	<del>XXXXXXXXXXXX</del>	1/26/2024 10:48 AM

