

**PRELIMINARY REPORT ON DISEASE OUTBREAK IN CAMELS IN**  
**DISTRICT LAKKI MARWAT**

Reference to the Directives of the Director General Research, the under signed along with Dr Baitullah Research Officer proceeded to Lakki Marwat on 5/5/2015 to investigate the cause of the sudden deaths in Camel population of the area.

**History of Disease in Camels:**

According to the farmers the disease started in the area about twenty days ago. The predominant history of all the cases was sudden deaths without showing any signs. Currently the wheat cutting season is in progress and almost all the farmers use their camels for transportation of wheat crop from fields. According to the farmers most of the camels died during working hours and gave no time even to slaughter the animal. The undersigned saw a camel died in the sitting position. Some of the farmers were of the view that their camels died after feeding of the Gram spoiled during the recent heavy rain fall in the area, however, deaths have also occurred in the areas where no spoiled gram was offered for feeding and even the farmers stopped feeding of spoiled gram but the mortality is still continuous. Some farmers told the two dogs died after eating the meat of the died camels. Some farmers shifted their animals to other villages but unfortunately they could not save their animals from death. Some farmers told that their Camel started shivering with watery fluid from mouth and sudden death. So far more than sixty camels have died. The areas where the camels have died include Wanda Simu, Wanda Fatu, Wanda Kutana, Wanda Rehmani, Wanda Arsala, Badni Khel, Kuti Khel, Chowki Jand, Wanda Nemari, Wanda Haji gul, Pahar khel thal and Dallo Khel of district Lakki Marwat.

Dr Akhtar Ali Principal Research Officer/Regional Director Veterinary Research and Disease Investigation Center DI Khan has already paid visit to the affected areas in connection of the problem and submitted his report. According to his report, He and Dr Mubarik Khan Veterinary Officer Health visited the area, prepared smears on the spot, no pathogenic agent was observed/detected and according to their report the present sporadic deaths in camel population in Lakki Marwat could be due to poisoning caused by spoiled gram caused by recent heavy rain fall in the area.

**Meeting with the Veterinary Staff of the Area:**

The under signed visited the office of the District Director Livestock Lakki Marwat but he was not available in the office and was in the field in connection with same problem. The undersigned met the District Director Livestock in Taja Zai Complex in the Office of the Deputy Commissioner Lakki Marwat and discussed the problem in detail. The District Director Livestock



### Samples Collected:

- Blood smears were prepared from 60 Camels in different affected areas of the District Lakki Marwat
- 2.0 ml blood samples were collected in EDTA Vacutainers from jugular veins of 60 different Camels in the Area
- Feed samples of spoiled gram, Barseem and gram straw were collected from those houses where the mortalities had occurred.
- Fecal samples were collected for determination of parasitic load.
- Postmortem of the recently died camel was performed and Heart, liver, Spleen and Lungs samples were collected for further investigation.

### Laboratory investigation:

The samples thus collected were submitted to the Center of Poultry & Parasitology, Center of Animal Nutrition & Center of Microbiology & Biotechnology and is under investigation. As directed samples are being also submitted to National Veterinary Laboratories Islamabad

**Hematology:** hematology was performed with hematology analyzer. The results are shown as below:

Owner name	TLC	10 <sup>9</sup> /L	RBC 10 <sup>12</sup> /L		HGB g/dL		HCT (%)		MCV fL		MCH pg		MCHC G/Dl	
	Result	Normal Range	Result	Normal Range	Result	Normal Range	Result	Normal Range	Result	Normal Range	Result	Normal Range	Result	Normal Range
Aslam Khan	20.6	8.2-16.5	5.52	6.7-17.3	11.1	10.2-15.3	19.5	27-45	27.3	28.0-45	20.1	8.6-13	56.9	33-41
Sharifullah	14.1	8.2-16.5	5.15	6.7-17.3	10.9	10.2-15.3	18.5	27-45	27.3	28.0-45	21.1	8.6-13	58.9	33-41
Farzan	13	8.2-16.5	5.24	6.7-17.3	12.2	10.2-15.3	21.3	27-45	30.3	28.0-45	23.2	8.6-13	57.2	33-41
Fateh Muhammad	15.7	8.2-16.5	5.10	6.7-17.3	11.1	10.2-15.3	19.3	27-45	28.6	28.0-45	21.7	8.6-13	57.5	33-41
Alamgir	6.4	8.2-16.5	2.82	6.7-17.3	7.4	10.2-15.3	12.1	27-45	29.5	28.0-45	26.2	8.6-13	61.1	33-41
Manzoor	18.4	8.2-16.5	5.86	6.7-17.3	12.6	10.2-15.3	21.5	27-45	28.2	28.0-45	21.5	8.6-13	58.6	33-41
Abbas Khan	25.5	8.2-16.5	6.39	6.7-17.3	13.9	10.2-15.3	22.8	27-45	28	28.0-45	21.7	8.6-13	60.9	33-41
Salahuddin	16.8	8.2-16.5	5.08	6.7-17.3	12.9	10.2-15.3	20.9	27-45	30.8	28.0-45	25.3	8.6-13	61.7	33-41
Khaliq Raza	15.7	8.2-16.5	6.44	6.7-17.3	15.8	10.2-15.3	23.6	27-45	28.4	28.0-45	24.5	8.6-13	66.9	33-41
Saood	26.2	8.2-16.5	4.99	6.7-17.3	15.9	10.2-15.3	20.8	27-45	30.8	28.0-45	31.8	8.6-13	76.4	33-41
Akhtar Ali	18.6	8.2-16.5	4.62	6.7-17.3	12.5	10.2-15.3	22.6	27-45	26.93	28.0-45	21.31	8.6-13	57.39	33-41
Waheedullah	12.5	8.2-16.5	4.52	6.7-17.3	13.4	10.2-15.3	15.9	27-45	27.3	28.0-45	22.41	8.6-13	55.29	33-41
Muqarab Khan	11	8.2-16.5	3.94	6.7-17.3	12.9	10.2-15.3	23.3	27-45	32.03	28.0-45	25.72	8.6-13	59.52	33-41
Gul Wali	16.1	8.2-16.5	6.01	6.7-17.3	13.3	10.2-15.3	18.9	27-45	28.45	28.0-45	22.27	8.6-13	60.75	33-41
Asmatullah	10.3	8.2-16.5	1.94	6.7-17.3	3.99	10.2-15.3	13.3	27-45	31.05	28.0-45	24.02	8.6-13	63.10	33-41
Zaghfran	17.9	8.2-16.5	4.96	6.7-17.3	12.5	10.2-15.3	25.7	27-45	29.92	28.0-45	23.65	8.6-13	50.76	33-41
zaghran	26.6	8.2-16.5	5.92	6.7-17.3	15.0	10.2-15.3	19.7	27-45	27.90	28.0-45	25.70	8.6-13	62.09	33-41
Zainullha	17.8	8.2-16.5	4.90	6.7-17.3	14.0	10.2-15.3	21.9	27-45	34.93	28.0-45	25.30	8.6-13	63.27	33-41
Najeebullah	13.5	8.2-16.5	4.94	6.7-17.3	14.9	10.2-15.3	21.9	27-45	29.94	28.0-45	24.73	8.6-13	56.79	33-41
Abdulhameed	28.6	8.2-16.5	4.99	6.7-17.3	18.0	10.2-15.3	21.6	27-45	35.02	28.0-45	33.68	8.6-13	77.13	33-41
M. Nazeer	13.90	8.2-16.5	5.96	6.7-17.3	13.0	10.2-15.3	25.7	27-45	27.93	28.0-45	25.34	8.6-13	50.99	33-41
Najeebullah	14.35	8.2-16.5	5.32	6.7-17.3	11.8	10.2-15.3	18.9	27-45	20.63	28.0-45	22.41	8.6-13	51.29	33-41
M. Azeem	10.78	8.2-16.5	2.99	6.7-17.3	9.99	10.2-15.3	27.5	27-45	25.63	28.0-45	27.45	8.6-13	56.52	33-41
M. Khan	12.91	8.2-16.5	5.91	6.7-17.3	15.3	10.2-15.3	33.9	27-45	19.63	28.0-45	23.20	8.6-13	64.85	33-41
Gul Wali dad	10.53	8.2-16.5	3.24	6.7-17.3	6.45	10.2-15.3	19.3	27-45	34.65	28.0-45	25.00	8.6-13	45.34	33-41
Hameedullah S/o Gulnawaz	19.09	8.2-16.5	3.96	6.7-17.3	14.1	10.2-15.3	29.7	27-45	33.02	28.0-45	25.21	8.6-13	53.93	33-41
Gul Tayaz	29.06	8.2-16.5	6.02	6.7-17.3	13.6	10.2-15.3	21.2	27-45	26.90	28.0-45	24.79	8.6-13	60.00	33-41
Ibrahim	17.8	8.2-16.5	5.19	6.7-17.3	15.2	10.2-15.3	23.8	27-45	31.93	28.0-45	27.34	8.6-13	58.45	33-41
M. Ali	13.5	8.2-16.5	5.34	6.7-17.3	12.4	10.2-15.3	22.9	27-45	22.14	28.0-45	21.83	8.6-13	53.34	33-41
					16.3	10.2-15.3	27.3	27-45	33.91	28.0-45	29.68	8.6-13	69.70	33-41
											21.04	8.6-13	44.34	33-41



ullah	20.15	8.2-16.5	11.09	6.7-17.3	10.7	10.2-15.3	26.0	27-45	35.34	28.0-45	23.11	8.6-13	71.11	33-41
n Khan	13.12	8.2-16.5	13.12	6.7-17.3	13.1	10.2-15.3	19.4	27-45	21.27	28.0-45	21.04	8.6-13	39.32	33-41
or Aslam	12.32	8.2-16.5	14.23	6.7-17.3	14.2	10.2-15.3	26.2	27-45	26.45	28.0-45	20.51	8.6-13	46.21	33-41
ameedullah	12.32	8.2-16.5	18.06	6.7-17.3	12.2	10.2-15.3	23.1	27-45	23.81	28.0-45	29.35	8.6-13	57.50	33-41
Samiullah	9.15	8.2-16.5	15.71	6.7-17.3	15.7	10.2-15.3	39.3	27-45	20.30	28.0-45	19.10	8.6-13	60.88	33-41
Naeem khan	13.77	8.2-16.5	12.14	6.7-17.3	12.0	10.2-15.3	19.4	27-45	34.23	28.0-45	22.89	8.6-13	49.94	33-41
Gul zaman	22.13	8.2-16.5	11.76	6.7-17.3	19.0	10.2-15.3	35.2	27-45	30.42	28.0-45	19.35	8.6-13	51.67	33-41
Noor alam	19.61	8.2-16.5	13.86	6.7-17.3	13.8	10.2-15.3	21.3	27-45	29.12	28.0-45	24.89	8.6-13	58.23	33-41
Habib khan	16.02	8.2-16.5	16.14	6.7-17.3	13.2	10.2-15.3	38.3	27-45	39.03	28.0-45	33.21	8.6-13	53.31	33-41
Gul wali	13.35	8.2-16.5	37.10	6.7-17.3	12.0	10.2-15.3	40.4	27-45	26.78	28.0-45	34.78	8.6-13	56.34	33-41
Qamar ali	21.05	8.2-16.5	16.17	6.7-17.3	14.1	10.2-15.3	22.1	27-45	34.04	28.0-45	23.11	8.6-13	61.51	33-41
Waris khan	10.23	8.2-16.5	15.62	6.7-17.3	11.9	10.2-15.3	24.3	27-45	19.67	28.0-45	19.14	8.6-13	41.32	33-41
Rahmatullah	09.67	8.2-16.5	13.53	6.7-17.3	19.2	10.2-15.3	25.2	27-45	23.95	28.0-45	22.31	8.6-13	42.22	33-41
Ahmad hussain	13.56	8.2-16.5	16.76	6.7-17.3	09.2	10.2-15.3	27.0	27-45	28.98	28.0-45	25.32	8.6-13	51.53	33-41
Wahab khan	13.06	8.2-16.5	12.61	6.7-17.3	18.3	10.2-15.3	38.3	27-45	17.40	28.0-45	21.00	8.6-13	59.31	33-41
Noor wali	15.07	8.2-16.5	10.11	6.7-17.3	11.9	10.2-15.3	22.4	27-45	44.43	28.0-45	23.45	8.6-13	39.10	33-41
Ali ahmad	25.10	8.2-16.5	13.06	6.7-17.3	21.2	10.2-15.3	40.3	27-45	32.31	28.0-45	17.35	8.6-13	46.37	33-41
Shafiullah	20.31	8.2-16.5	9.06	6.7-17.3	14.1	10.2-15.3	23.8	27-45	30.11	28.0-45	25.99	8.6-13	48.03	33-41
Riaz khan	16.52	8.2-16.5	14.06	6.7-17.3	17.0	10.2-15.3	38.4	27-45	40.23	28.0-45	37.01	8.6-13	37.88	33-41
Mir wali	15.55	8.2-16.5	31.97	6.7-17.3	10.9	10.2-15.3	43.0	27-45	24.56	28.0-45	30.99	8.6-13	35.39	33-41
Gul aslam	22.95	8.2-16.5	17.10	6.7-17.3	15.0	10.2-15.3	29.4	27-45	37.84	28.0-45	25.16	8.6-13	63.01	33-41

### Results from the Center of Poultry & Parasitology Investigated no Protozoan Disease

S.No	Name	Address	Animal Species	Microscopic Results
1.	Aslam Khan	Wazarky	Camel	Negative
2.	Sharifullah	Pahar Khel Thal	Camel	Negative
3.	Farzan	Pahar Khel Thal	Camel	Negative
4.	Fateh Muhammad	Pahar Khel Thal	Camel	Negative
5.	Alamgir	Pahar Khel Thal	Camel	Negative
6.	Manzoor	Pahar Khel Thal	Camel	Negative
7.	Abbas Khan	Pahar Khel Thal	Camel	Negative
8.	Salahuddin	Pahar Khel Thal	Camel	Negative
9.	Khaliq Raza	Pahar Khel Thal	Camel	Negative
10.	Saood	Pahar Khel Thal	Camel	Negative
11.	Akhtar Ali	Pahar Khel Thal	Camel	Negative
12.	Waheedullah	Pahar Khel Thal	Camel	Negative
13.	Muqarab Khan	Dabak Mandra Khel	Camel	Negative
14.	Gul Wali	Pahar Khel Thal	Camel	Negative
15.	Asmatullah	dabak Mandra Khel	Camel	Negative
16.	Zaghfran	dabak Mandra Khel	Camel	Negative
17.	zaghfran	Pahar Khel Thal	Camel	Negative
18.	Zainullha	Pahar Khel Thal	Camel	Negative
19.	Najeebullah	Pahar Khel Thal	Camel	Negative
20.	Abdulhameed	Pahar Khel Thal	Camel	Negative
21.	M. Nazeer	Pahar Khel Thal	Camel	Negative
22.	Najeebullah	Pahar Khel Thal	Camel	Negative
23.	M. Azeem	Peer Wala	Camel	Negative
24.	M. Khan	Pahar Khel Thal	Camel	Negative
25.	Gul Wali dad	Pahar Khel Thal	Camel	Negative
26.	Hameedullah S/o Gulnawaz	Pahar Khel Thal	Camel	Negative
27.	Gul Tayaz	Pahar Khel Thal	Camel	Negative
28.	Ibrahim	Pahar Khel Thal	Camel	Negative



34.	Iqbal Khan	Pahar Khel Thal	Camel	Negative
35.	Habibullah	Pahar Khel Thal	Camel	Negative
36.	Yousaf Shah	Kuthi Khel	Camel	Negative
37.	Abdur Rehman	Kuthi Khel	Camel	Negative
38.	Master Bilal	Kuthi Khel	Camel	Negative
39.	Habibullah S/O Attaullah	Karbadin Khel	Camel	Negative
40.	Inayatullah	Pahar Khel Thal	Camel	Negative
41.	Aslam Khan	Mandra khel	Camel	Negative
42.	Noor Aslam	Mandra khel	Camel	Negative
43.	Hameedullah	Mandra khel	Camel	Negative
44.	Samiullah	Hafiz abad	Camel	Negative
45.	Naeem khan	Hafiz abad	Camel	Negative

## **DIRECTORATE OF LIVESTOCK RESEARCH AND DEVELOPMENT**

### **P.O BOX. 478 G.P.O PESHAWAR CANTT**

CAN/No/ 729

Dated: 10-06-2015

1. Name and address of sender/manufacturer: **Dr. Rafi Ullah, SRO (P&B)VRI,Peshawar .**
2. Date of receipt of sample: **11-05-2015**
3. Type of test required: **Aflatoxin B1 analysis**

#### **ANALYSIS REPORT**


S. No	Lab#	Description of Sample	Farmer Name	Aflatoxin B1 (ppb)
01	12606/ANS	Gram Leaves green	Abdul Hameed	15
02	12607/ANS	Gram leaves Dry	Zain(A) Kati	10
03	12608/ANS	Gram leaves Dry	Yousaf Shah, Lakki Marwat	15
04	12609/ANS	Gram leaves Dry	Ghufran, Kati	10
05	12610/ANS	Gram leaves Dry	Muqarab Khan, Kati	25
06	12611/ANS	Gram	Yousaf Shah, Lakki Marwat	25
07	12612/ANS	Gram Leaves(New)	Hameed Ullah	30
08	12613/ANS	Gram Leaves(old)	Hameed Ullah	35
09	12614/ANS	Gram Leaves(Green)	Hameed Ullah	45
10	12615/ANS	Gram Leaves Dry	Waheed Ullah, Kati	45
11	12616/ANS	Berseem Green	Waheed Ullah, Kati	40
12	12617/ANS	Gram Leaves Dry	Gul Niaz s/o Asad Khan	35
13	12618/ANS	Berseem Green	Gul Niaz s/o Asad Khan	30
14	12619/ANS	Gram Leaves Dry	Masood Khan	


**Suspect diagnosis**

- Camel Sudden Death Syndrome
- Anthrax

**Recommendations:**

- Vaccination of All the Animals against Anthrax in the Area
- Therapy of Long acting Penicillin or Oxytetracycline LA to the in contact Animals
- Proper disposal of the Carcasses
- Restriction on Camel movement into and out of the District if possible.

  
**Dr. Baitullah**  
Research Officer  
FMDRC

  
**Dr. Rafiullah**  
Senior Research Officer  
Pathology & Bacteriology