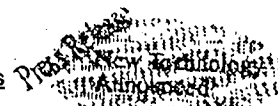




Universal Agri Products, Inc.
Universal Resource Technologies Marketing, LLC
1778 Cedar Ridge Way, Steele Spring, MO 65737
Phone: 417-338-8666 Fax: 417-338-8530

Home |
Diabond |
Mycotoxins |
Contact



Mycotoxins

Mycotoxins

Mycotoxins

Mycotoxins

Mycotoxins

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Mycotoxins

Certain fungi and mold commonly found on grain products have the capacity to form chemical substances that are poisonous, mutagenic, teragenic, or carcinogenic when consumed by humans or animals. These substances are called *mycotoxins*, a term derived from "myco" meaning fungus or mold and "toxin" meaning poison.

Climate -

Mycotoxins are usually associated with temperate regions. However, these molds can propagate in agricultural plants whenever environmental conditions are favorable. Such conditions include cool damp summers, late wet harvests, and poor storage after harvest - even at moisture levels as low as 16%. If mold has occurred it is likely that one or more strain of mycotoxin have also been produced.

Detection -

Mycotoxins may remain in food and feed long after the mold or fungus that produced them has died. Therefore products that are not visibly moldy or do not test positive for mold count can still contain potentially dangerous levels of mycotoxins. Diseases caused by mycotoxins in humans and animals are called *mycotoxicosis* and are specific to the mold species and the toxin produced.

Mycotoxicosis symptomology -

At lower levels mycotoxins produce a wide range of subclinical effects which may compromise the health and performance of livestock animals and poultry. Some of these symptoms include:

- Slightly reduced feed intake
- Feed refusal
- Rough hair coat
- Undernourished or parasitic appearance
- Higher than normal incidence of disease, especially metabolic disorders such as ketosis, DA's, retained placentas or metritis.
- Intermittent diarrhea, sometimes with bloody or dark manure
- Increased abortions
- Silent heats
- Pregnant cows displaying heats
- Decreased conception rates

For tables containing a more exhaustive profile on the disease pathology of mycotoxins click [here](#).

Tembo

Temporary Diet Change Form

TOPEKA ZOOLOGICAL PARK DIET ALTERATION FORM

Accession # 19766A, 002176

House Name Sunda, Tembo

Species Elephants

Dates of change 8/27/00 (include beginning and ending dates)

No. of Animals	AM	PM	Diet
2			Add a <u>total</u> of 2 cups of sunflower seeds in a separate container to the A&M diets. This is a trial for elephant enrichment.

Tembo

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No. of Animals	AM	PM	Diet
2			Add a <u>total</u> of 2 cups of sunflower seeds in a separate container to the A&M diets. This is a trial for elephant enrichment.

TOPEKA ZOOLOGICAL PARK *PC*
DIET ALTERATION FORM

Accession # _____

Date 10 October 00

Species Elephants, Giraffe

House Name _____

Old Diet	New Diet	Change
Elephant 12 lb Elephant Supplement Giraffe 20 lb ADF 16	Elephant 20 lb Elephant Supplement 5 lbs per elephant twice a day Giraffe 23 lb ADF 16 8 lbs for Jesse 7.5 lbs for Dolly 7.5 lbs for B.G.	Increase Elephant Supplement and ADF-16

Justification

This is basically a winter increase for all 3 species to make up for decreased
 browse availability in the winter.

To: Tembo

TOPEKA ZOOLOGICAL PARK
DIET ALTERATION FORM

Accession # 19766A, 002176

Date 9 June 00

Species Elephant

House Name Sunda, Tembo

Old Diet	New Diet	Change
20 lb Elephant Supplement	12 lbs Elephant Supplement	Decrease Elephant Supplement

Justification

This is a seasonal decrease as part of an overall diet decrease for weight control
and to compensate for extra dietary items such as browse and bread. The hay is
also to be decreased from 3.5 bales daily to 2.5 bales daily. The elephants
should be monitored for behavioral changes associated with the diet decrease.
These changes should be noted on daily records and if necessary, discussed at
EMC and/or vet rounds.

To: Tembo

Outline of Research Proposal

Principal Investigator: Stephanie Coster under supervision of Dr. David Ribble
Trinity University
715 Stadium Dr.
San Antonio, TX 78212

Title:
Genetic Variability of *Loxodonta africana* as revealed by microsatellites.

Objective:
To ascertain the genetic variability of *Loxodonta africana* by assessing the heterozygosity of microsatellite alleles.

Project Summary:
Recent improvements in DNA extraction techniques have made it possible to extract DNA non-invasively through fecal samples. This study is an exercise in perfecting this technique while determining the genetic variability of African elephants in captivity. The data collected will be compared to recent literature, which has published an account of the genetic variability of native populations.

Experimental design:
DNA extracted from fecal samples using Qiagen extraction kit, Polymerase Chain Reaction to amplify the DNA and microsatellites sized to ascertain genetic variability.

Type of Samples Required:
Fecal Samples of captive African elephants are requested.

Collection Method and Frequency:
One teaspoon of fecal matter placed in a collection tube. The frequency of the sample is one time.

Funding:
Department of Biology Trinity University

Samples Requested By:
As soon as possible

321
52

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3 To Recipient's Name Stephanie Coster c/o Dr. David Ribble Phone
Company Dept. of Biology Trinity University
Address 715 Stadium Dr. We cannot deliver to P.O. boxes or P.O. ZIP codes.

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FedEx First Overnight Next business afternoon delivery to select locations

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FedEx Express Saver Third business day
NEW FedEx Extra Hours Later drop-off with next business afternoon delivery to select locations

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FedEx 2Day Freight Second business day
FedEx 3Day Freight Third business day

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Available only for FedEx Priority Overnight and FedEx 2Day to select ZIP codes. Not available with FedEx First Overnight to select locations.

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Total Packages 1 Total Weight 1 Total Declared Value* 00
FedEx Act No. 406 FedEx Use Only

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By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

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