

**EFFECT OF INGESTING AFLATOXINS
CONTAMINATED DIETS ON REPRODUCTIVE
ASPECTS OF SOME FARM ANIMAL MALES**

By

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Approval Sheet

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ABSTRACT

This study was conducted to investigate the effects of oral administration of aflatoxins to rabbits on changes in body weight, some biochemical and seminal parameters, as well as some pathological changes.

Thirty one adult male New Zealand White rabbit bucks averaged 3.35 Kg body weight were used in this study. Three animals were slaughtered at the beginning of experiment. The rest of animals were divided randomly into four groups according to aflatoxins mixture dose.

- I) Low Dose (5µg daily) for 30 days
- II) High Dose (50 µg/kgBody weight daily) for 10 days
- III) High Dose (50 µg/kgBody weight daily)for 17 days,
- IV) The fourth group was kept as untreated control.

Biochemical parameters included total protein, total bilirubin, urea, alkaline phosphatase and transaminase enzymes (GPT and GOT) were studied

Seminal parameters included ejaculate volume, semen colour, semen density, pH, mass and progressive motility, sperm cell concentration and concentration of seminal fructose. Also pathological changes were determined.

The treatment had a highly significant effect ($P<0.01$) on plasma levels of total protein, total Bilirubin, urea and enzymes of liver Function (ALP, GPT, GOT). Also the treatment had a highly significant effect ($P<0.01$) on ejaculate volume, semen density, sperm cell concentration, mass and advanced motility, while both pH and seminal Fructose concentration were not affected significantly by the aflatoxins treatment.

The histopathological study revealed that liver tissue showed vacuulations, focal necrosis, haemorrhagic areas and multinucleated giant cells of hepatocytes. Also, Proliferation of bile ducts, periportal fibrosis were also seen. In addition testicular atrophy of the seminiferous tubules were observed. The amount of connective tissue in the interstitium increased, beside other pathological changes were recorded. Some of the histopathological signs were recovered within 94-114 days post treatment. The aflatoxins effects were related with dose and duration of exposure.

The aflatoxins administration induced mortalities in the two high dose groups at both pre-treatment period and the beginning of post-treatment period. Thenafter, the mortalities were stopped after with drawal of aflatoxins. during the treatment period and at the beginning of post-treatment period.

Key Words : Aflatoxins rabbit bucks, Hematology, Semen, Total Protein, Total Bilirubin, Urea, GPT, GOT, Alkaline Phosphatase, Sperm Motility, Histopathology, Liver, testis, fibrosis, hepatocytes, hypertrophy, Infiltration, Proliferation.

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LD 50	The median lethal dose
LDH	Lactic dehydrogenase
min	Minutes
mg	Milligram
ml	Milliliter
nm	Nano meter
NZW	New Zealand White
OM	Organic Matter
PDA	Potato Dextrose Agar
pH	Hydrogen ion concentration
ppb	part per billion
ppm	part per million
Sci	Science
SE	Standard Error
SR	Sedimentation rate
TB	Total Bilirubin
TP	Total Protein
TLC	Thin Layer Chromatography
μl	Microliter
μg	Microgram
Univ.	University
UV	Ultraviolet
Wk(s)	Week (s)
Wt	Weight



CONTENTS

CONTENTS

	Page
LIST OF TABLES	IX
LIST OF FIGURES	XII
LIST OF PLATES	XIV
INTRODUCTION	1
REVIEW OF LITERATURE	
Mycotoxins and Mycotoxicosis	2
Aflatoxins and Aflatoxicosis	
I. Chemical Structure of aflatoxins	3
II. Toxicology of Aflatoxins	
a. Forms of aflatoxicosis	5
b. Susceptibility of aflatoxins	5
1. The other mycotoxins	5
2. Age	6
3. Speciaes	7
4. Dose, 5 Sex	8
C. Biological Effects of Aflatoxins	8
a. Effect of aflatoxin on performance	10
1. feed consumption	10
2. feed digestibility and efficiency	11
3. weight gain and body weight	13
b. Effect of aflatoxins on some biochemical findings	14
1. Total Protein	15
2. Bilirubin	17
3. Urea 4. Alkaline phosphatase	18
5. transaminse enzymes	20
c. Effect of Aflatoxin on Semen Characteristics	
1. Semen Volume, 2. Semen Colour, 3. Semen density	22
4. Hydrogen ion concentration (pH), 5.Sperm mass motility,	
6. progressive motility	24
7. Sperm concentration, 8. Initial fructose concentration	25
d. Anatomical and Pathological Changes	27

MATERIALS AND METHODS

1. Preparation of Aflatoxins	33
2. Experimental Animals	33
a. Housing	33
b. Feeding and Watering	35
c. Experimental Design	35
3. Blood Analysis	
a. Total protein, b. Bilirubin, c. Urea	35
d. Alkaline phosphatase, e. Transaminases	36
4. Semen Quality	
a. Collection of Semen b. Colour,	36
c. Ejaculate volume, d. Semen density	37
e. Hydrogen ion concentration (pH), f. Sperm mass motility ,	37
g. Sperm Progressive motility	37
h. Sperm cell concentration, i. Initial fructose	38
5. Anatomical and Histopathological studies	38
6. Statistical analysis	39

RESULTS AND DISCUSSION

a. Effect of aflatoxins on body weight	40
b. Biochemical parameters.	
1. Total protein	44
2. Total bilirubin	47
3. Urea	51
Effect of aflatoxin on some blood enzymes	
4. Alkaline phosphatase	55
5. Glutamic-pyruvic transaminase	58
6. Glutamic-oxaloacetic transaminase	62
c. Semen Characteristics of aflatoxin treated rabbit bucks	
1. Ejaculate volume	66
2. Semen colour	70
3. Semen density	70
4. Hydrogen ion concentration (pH) 5. Sperm mass motility	76
6. Sperm progressive motility	82

	Page
7. Sperm cell concentration	88
8. Initial fructose concentration	92
d. Pathological changes	
1. Liver	96
2. Testis	110
e. Mortality Rate	118
GENERAL DISCUSSION	119
SUMMARY	121
REFERENCES	125
ARABIC SUMMARY	143

List of Tables

	Page
Table (1) Summary of some biological effects of aflatoxins.	9
Table (2) Summary for the reviewed estimates for ejaculate volume of New Zealand White-rabbit bucks	23
Table (3) Summary for the reviewed estimates of sperm concentration of New Zealand white rabbit bucks	26
Table (4) Means \pm SE for Live body weight (kg) of New zealand white rabbit bucks during different periods of the experiment.	41
Table (5) ANOVA for the effects of aflatoxins treatment and experimental periods on body weight of NZW rabbit bucks.	43
Table (6) Means + Se for Total protein (gm/100ml) for New Zealand White rabbit bucks treated with aflatoxins during different periods of the experiment.	48
Table (7) ANOVA for some constituents in plasma of New Zealand White rabbit bucks treated with aflatoxins.	49
Table (8) Means + SE for Total Bilirubin (mg/100ml) for New Zealand White rabbit bucks treated with aflatoxins during different periods of the experiment.	53
Table (9) Means + SE for Urea (mg/100ml) for New Zealand White rabbit bucks treated with aflatoxins during different periods of the experiment.	56
Table (10) Means \pm SE for ALP (unit/dl) of New Zealand White rabbit bucks treated with aflatoxins during different periods of the experiment	59
Table (11) ANOVA for some blood enzymes of Liver functions in plasma to New Zealand white rabbit bucks treated with aflatoxins.	60

	Page
Table (12) Means \pm SE for GPT (Unit/ml) of New Zealand White rabbit bucks treated with aflatoxins during different periods of the experiment	60
Table (13) Means \pm SE for GOT (unit/ml) of New Zealand White rabbit bucks treated with aflatoxins during different periods of the experiment	63
Table (14) Means \pm SE for ejaculate volume (ml) for New Zealand White rabbit bucks treated with aflatoxins during different periods of the experiment	67
Table (15) ANOVA for the effects of aflatoxins treatments and the and the experimental periods on ejaculate volume of New Zealand White rabbit bucks.	69
Table (16) Means \pm SE for semen color of New Zealand White rabbit bucks during different periods of the experiment.	71
Table (17) ANOVA for the effects of aflatoxins treatment and the experimental periods on semen colour of NZW rabbit bucks.	73
Table (18) Means \pm SE for semen density of New Zealand White rabbit bucks during different periods of the experiment.	74
Table (19) ANOVA for the effects of aflatoxins treatment and the experimental periods on semen density of NZW rabbit bucks	77
Table (20) Means \pm SE for Hydrogen ion concentration (pH) of New Zealand White rabbit bucks during different periods of the experiment	78
Table (21) ANOVA for the effects of aflatoxins treatment and the experimental periods on Hydrogen ion concentration (pH) of New Zealand White rabbit bucks	80

Table (22)	Means \pm SE for sperm mass motility of New Zealand White rabbit bucks during different periods of the experiment.	81
Table (23)	ANOVA for the effects of aflatoxins treatment and the experimental periods on sperm mass motility of New Zealand white rabbit bucks	84
Table (24)	Means \pm SE for sperm progressive motility of New Zealand white rabbit bucks during different periods of the experiment	85
Table (25)	ANOVA for the effects of aflatoxins treatment and the experimental periods on sperm progressive motility of New Zealand white rabbit bucks	87
Table (26)	Means \pm SE for sperm cell concentration ($\times 10^6$) for New Zealand White rabbit bucks during different periods of the experiment.	89
Table (27)	ANOVA for the effects of aflatoxins treatment and the experimental periods on sperm cell concentration of New Zealand white rabbit bucks	91
Table (28)	Means \pm SE for seminal fructose concentration of New Zealand white rabbit bucks during different periods of the experiment.	93
Table (29)	ANOVA for the effects of aflatoxins treatment and the experimental periods on seminal fructose concentration of New Zealand White rabbit bucks.	95