

# LIST OF CONTENTS

.Page No	Title
i	Dedication
ii	Acknowledgements
v	List of Tables
vii	List of figures
ix	Abstract
ix	Arabic Abstract
1	<b>Chapter one</b>
1	Introduction .1
5	<b>Chapter Two</b>
5	Literature Review .2
5	Botanical and Description of Prosopis species 2.1
6	Distribution of Prosopis 2.2
7	Composition of Prosopis pods 2.3
10	Anti- nutrition factor of Prosopis 2.4
13	Functional uses of Prosopis 2.5
16	Importance of Prosopis pods to live stock and wild life 2.6
17	Prosopis pods replacement in Ruminants ration 2.7
18	Effect of Prosopis pods inclusion in poultry rations 2.8
20	(Non- starch polysaccharides (NSP 2.9
20	Definition and classification of non starch 2.9.1 polysaccharies
23	The anti-nutritive effect of arabinoxylans 2.10
23	Increase the viscosity 2.10.1
24	Modification of gut physiology 2.10.2
25	Interaction of gut micro-flora 2.10.3
26	The anti-nutritive effect of insoluble arabinoxylans 2.11
27	Anti-nutritional effect of $\beta$ -glucans 2.12
28	Phytate 2.13
31	Phytate-protein –complexes 2.13.1
34	Dietary enzymes 2.14
36	The role of starch and non-starch polysaccharides enzyme 2.15 in poultry nutrition
38	Xylanase enzyme 2.16
40	Effect of xylanase enzyme of broiler chicken diets on 2.16.1 performance , metabolizable energy , digestibility , carcass composition and blood parameters
48	Phytase enzyme 2.17

53	The effect of dietary phytase on energy and protein utilization feed broilers 2.17.1
54	Effect of phytase on electrolytic utilization for broiler chicken 2.17.2
56	Effect of different levels of dietary phytase enzyme on performance and carcass characteristics of broiler chickens 2.17.3
60	Super-dosing phytase 2.17.4
62	Effect of xylanase and phytase enzymes combinations on performance , digestibility and meat quality of broilers 2.18
67	<b>Chapter three</b>
67	Materials and methods .3
68	The first experiment : Effect of microbial xylam enzyme supplementation to broilers diets containing Prosopis pods .3.1
68	Experimental diets 3.1.1
68	Collection and processing of Prosopis pods 3.1.1.1
71	Microbial xylam enzyme 3.1.1.2
72	Experimental chicks 3.1.2
73	Housing 3.1.3
74	Data collected 3.1.4
74	Performance data 3.1.4.1
74	Slaughter procedure and carcass data 3.1.4.2
74	Carcass data 3.1.4.3
75	Chemical analysis 3.1.4.4
75	Panel test 3.1.5
76	(Experiment (ii 3.2
76	Experimental chicks 3.2.1
76	Housing 3.2.2
76	Experimental diets 3.2.3
79	Data collected 3.2.4
79	Performance data 3.2.4.1
79	Slaughter procedure and carcass data 3.2.4.2
79	Carcass data 3.2.4.2.1
97	Chemical analysis 3.2.5
79	Panel test 3.2.6
79	(Experiment (iii 3.3
79	Experimental chicks 3.3.1
80	Housing 3.3.2
80	Experimental diets 3.3.3
83	Data collected 3.3.4
83	Performance data 3.3.4.1
83	Slaughter procedure and carcass data 3.3.4.2

83	Carcass data 3.3.4.3
83	Chemical analysis 3.3.5
83	Panel test 3.3.6
83	Experimental design and data analysis 3.3.7
84	<b>Chapter four .4</b>
84	Results.4
84	Experiment one .4.1
84	Performance 4.1.1
89	Carcass measurements 4.1.2
89	Carcass and non-carcass yield 4.1.2.1
91	Commercial cuts and their values 4.1.3
92	Meat objective and subjective attributes 4.1.4
92	( Meat chemical composition (objective.4.1.4.1
93	( Panel test (subjective 4.1.4.2
94	Economic appraisal 4.1.5
95	Experiment two 4.2
95	Performance 4.2.1
98	Carcass measurement 4.2.2
98	Carcass and non-carcass yield 4.2.2.1
99	Commercial cuts and their meat 4.2.3
101	Meat objective and subjective values 4.2.4
101	Meat chemical composition 4.2.4.1
102	Subjective meat attributes 4.2.4.2
103	Economic appraisal 4.2.5
104	Experiment three 4.3
104	The effect of feeding broiler chickens Prosopis pods flour.4.3 based diets supplemented with combinations of microbial xylam and phytase enzymes
104	Effect on performance 4.3.1
107	Carcass characteristics 4.3.2
108	Commercial cuts 4.3.3
110	Meat quality parameters 4.3.4
110	Meat chemical composition 4.1 4.3
111	Subjective meat attributes 4.3.4.2
112	Economic appraisal 4.3.5
113	<b>Chapter five</b>
113	Discussion , Conclusion and Recommendations
123	References
151	Appendixes

# **DEDICATION**

**:This Work is dedicated to  
The souls of my father and my\*  
.mother**

**.My husband\***

**.My daughters \***

**.My brothers and sisters \***

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## List of Tables

<b>Page</b>	<b>Title</b>	<b>Table</b>
69	Chemical analysis of Prosopis juliflora used in the three experiment	1
70	Composition of experimental diet used in the first experiment	2
71	Calculated analysis of experimental diet used in the first experiment	3
77	Composition of experimental diets used in the second experiment	4
78	Calculated analysis of experimental diets used in the second experiment	5
81	Composition of experimental diets used in the third	6
82	Calculated analysis of experimental diets used in the third experiment	7
85	Effect of different levels of xylam enzyme on performance of broiler fed diets containing Prosopis pods for 5 weeks	8
89	Effect of different levels of xylam enzyme on dressing percentage and body components expressed as percentage of broiler fed on diet containing Prosopis pods	9
90	Effect of different levels of xylam enzyme on percent of commercial cuts and their meat value	10
91	Effect of different levels of xylam on meat chemical composition of broilers fed on diet contained Prosopis pods	11
92	Effect of different levels of xylam enzyme on subjective meat attribute of broilers fed on diet contained Prosopis pods	12
93	Inputs and margin over major inputs per head of broiler chicken fed diets contained Prosopis pods supplemented with different levels of xylam enzyme	13
95	Effect of different levels of phytase enzyme on performance of broilers fed diets contained Prosopis pods for 5 weeks	14
98	Effect of different levels of Phytase enzyme on dressing percentage and body components	15

	expressed as percentage of broilers fed on diet contained Prosopis pods	
100	Effect of different levels of Phytase enzyme on %of commercial cuts of broilers fed on Prosopis diets	16
101	Effect of different levels of Phytase enzyme on meat chemical composition of broilers fed diets contained Prosopis pods	17
102	Effect of different levels of Phytase enzyme on subjective meat attribute of broilers fed on diets contained Prosopis pods	18
103	Major inputs and margin over major inputs per head of broiler chicken fed diets contained Prosopis pods supplemented with different levels of phytase enzyme	19
105	Effect of different levels of xylam and Phytase enzymes on performance of broilers fed diets contained Prosopis pods for 5 weeks	20
108	Effect on different of levels of xylam and Phytase enzymes on dressing % and body components expressed as % of broilers fed on diets contained Prosopis pods	21
109	Effect of different levels of xylam and Phytase enzyme on commercial cuts and their values of meat as %of broilers fed on diet contained Prosopis pods	22
110	Effect of different levels of xylam and Phytase enzymes on meat chemical composition of broilers fed on diets contained Prosopis pods	23
111	Effect of different levels of xylam and Phytase enzymes on subjective meat attribute of broilers fed on diets contained Prosopis pods	24
112	Major inputs and major over major inputs per head of broiler chicken fed on diet contained Prosopis pods supplemented with different levels of xylam and Phytase enzymes	25

### List of figures

<b>.Page No</b>	<b>Figures</b>	<b>figure .No</b>
86	Average body weight gain for broilers fed on different levels of xylam enzyme	1
87	Average feed intake of chicks fed on different levels of xylam enzyme	2
88	Average feed conversion ratio for broilers fed on different levels of xylam enzyme	3
96	Average body weight gain for broilers fed different levels of Phytase enzyme	4
96	Feed intake for broiler chicks fed on different levels of Phytase enzyme	5
97	Feed conversion ratio for broilers fed on different levels of Phytase enzyme	6
106	Average body weight gain for broilers fed on different levels of xylam and Phytase combinations	7
106	Average feed intake for broilers fed on different levels of xylam and Phytase combinations	8
107	Average feed conversion ratio for broilers fed on different levels of xylam and Phytase combinations	9

## ABSTRACT

Three experiments were run to study the effect of dietary microbial xylam 500 ( xylanase + amylase( 500 , 750 ) , enzyme ( Experiment 1 ) , Phytase (Nutrias P ) enzyme ( 1000, 1500) ( Experiment 2 ) and their combination ( Experiment 3 ) on performance and carcass characteristics of broiler chicks fed on diets containing 15% Prosopis pods ( mesquite ) . The experimental design used in each experiment was complete randomized design (CRD) . Two control diets were formulated in each experiment , (A) negative control diet (without Prosopis pods or enzymes ) and (B) positive control diet (with 15% Prosopis pods ).In experiment one , two levels of microbial xylam , 500 and 750 g/ton were added to the positive control diet . In experiment two , two levels of microbial Phytase , 1000 and 1500 g/ton were added to the positive control diet. In experiment three 4 dietary combinations of xylam and Phytase, (500 xylam and 1000 Phytase g/ ton); (750 xylam and phytase1000 g/ ton); (500xylam and Phytase 1500 g/ ton ); (750 xylam and phytase1500 g/ ton ) respectively were added to the positive control diet , using 168 chicks, four replicates , each of 7 chicks . All diets in each experiment were formulated to be iso-caloric (3100 K cal/Kg) and iso-nitrogenous crude protein (22.8%) to meet the nutrient requirements for broiler **-(NRC 1994)**. Experimental parameters covered performance, slaughter and carcass data and economic appraised . The results showed that addition of microbial xylam and Phytase enzymes , individually or in combination to diet containing Prosopis pods improved significantly ( $p \leq 0.05$  ) the body weight gain , feed intake and feed conversion ratio values of broiler chicks throughout the experimental period . No significant differences were observed between Prosopis pods diets supplemented with the enzymes , separately or on in combination with the negative control diet in body weight gain , feed intake and feed conversion ratio values of broiler chicks . The mortality rate was not significantly influenced by the dietary treatments. The results indicated that there were no significant differences among all treatment groups in percentages of carcass dressing , Giblets (liver, heart and gizzard ) , commercial cuts (thigh, drumstick and breast ) and their percent of meat, meat chemical composition (moisture ,protein ,fat and ash ) and subjective meat quality parameters (tenderness ,juiciness ,flavor and color . ) of broiler chicks

Economic appraised values were profitability ratio (1.096) of group D (750 gm xylam/ ton ) was the highest of the test groups. Profitability ratio (2.163) of group C (500 xylam + 1000 gm / ton Phytase ) was the highest of the test groups . Profitability ratio ( 1.68 ) of group C (1000 gm / ton . Phytase ) was the highest of the test groups

## الملخص

تم اجراء ثلاثه تجارب لدراسه اثر انزيم الزيلام 500 المايكروبي (زيلانيز + اميليز) (التحروبه الاولى) , الفايترز المايكروبي (نيوتراس ب) (التجربه الثانية) و مخاليطها (التجربه الثالثة) على الاداء الانتاجي و خصائص الزيحة لدجاج اللحم المغذي على عليقة تحتوى على 15 % قرون المسكيت . صممت كل تجربة باستخدام النظام العشوائى الكامل . تم تكوين عليقتين قياسيتين لكل تجربة (أ) عليقة قياسية سالبة ( لا تحتوى على قرون المسكيت او الانزيمات ) , و (ب) عليقة قياسية موجبة (تحتوى على 15% قرون المسكيت) . فى التجربة الاولى تم اضافة مستويين من انزيم الزيلام المايكروبي 500 , 750 /جم /طن الى العليقة القياسية الموجبة . فى التجربة الثانية تم اضافة مستويين من انزيم الفايترز المايكروبي 1000 , 1500 /جم /طن الى العليقة الاساسية الموجبة . فى كل تجربة تم استخدام 56 كتكوت عمر 7 ايام غير مجنس سلالة (روس 308) , قسمت عشوائيا الى 4 مجموعات تجريبية 4x مكررات بكل واحد منها 7 كتاكيت . فى التجربة الثالثة تم اضافة الزيلام و الفايترز معا من مخاليط انزيمية (500 زيلام + 1000 فايترز/جم /طن) , ( 750 زيلام + 1000 فايترز/جم /طن ) ( 750 زيلام + 1500 فايترز / جم / طن ) ( 500 زيلام + 1500 فايترز /جم / طن ) الى العليقة القياسية الموجبة , غذي بها 112 كتكوت لاحم من سلالة (روس 308) غير مجنسة عمر 7 ايام , قسمت عشوائيا الى 4 مجموعات تجريبية 4x مكررات بكل منها 7 كتاكيت . جميع الكتاكيت فى كل تجربة تم تغذيتها على العليقة التجريبية لمدة 6 اسابيع , تم تكوين كل الاعلاف التجريبية فى الثلاثه تجارب لتكون متماثلة فى البروتين الخام ( 22.8 % ) و الطاقة المتمثلة (3100 كيلو كالورى / كجم ) حسب الاحتياجات الغذائية الموصى بها للدجاج اللاحم (NRC,1994) شملت قياسات التجربة الاداء الانتاجي , قيم الزبح و الزيحة والتقييم الاقتصادى . اظهرت النتائج بان اضافة انزيمى الزيلام والفايترز بصورة منفردة او مزدوجة فى مخاليط مختلفة الى العليقة التى تحتوى على قرون المسكيت قد أدت الى تحسين معنوي ( $P \leq 0.05$ ) فى قيم وزن الجسم المكتسب , العليقة المستهلكة ومعدل التحويل الغذائى لدجاج اللحم . لم يناثر معدل النفوق معنويا بالمعاملات الغذائية المختلفة . دلت النتائج على انه لا توجد فروقات معنويه بين مجموعات المعاملات المختلفه فى نسب التصافى , الاعضاء الداخليه (القلب, الكبد, القانصه) , القطع التجاربه (الساق, الفخذوالصدر) ونسب اللحم منها , مكونات التحليل الكيمياءى للحم (الرطوبة, البروتين, الدهن والرماد) قياسات اللحم الانطباعيه (الطراوه, العصيره, النكهه واللون) لدجاج اللحم . اظهر التقييم الاقتصادى ربحيه نسبيه (1.096) فى المجموعه (750) ( D جم زيلام/طن) وكانت الأعلى بين مجموعه الاختبار . الربحية النسبية (2.1263) لمجموعه الاختبار (500 زيلام+ 1000 جم /طن فايترز) ( C). والربحية النسبية (1.68) للمجموعه (1000) (C) جم /طن فايترز) .