

**USING SOME PLANTS BY-PRODUCT  
IN RABBIT FEEDING**

By

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## ABSTRACT

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To investigate the effect of replacing Fennel straw or basil straw by-products at 25, 50 and 75% of alfalfa hay as a source of fiber in the diets of growing rabbits. Eighty-four unsexed, weaned New Zealand white rabbits, aged 5 weeks, with an average body weight of  $625.42\text{g} \pm 18.25$  were randomly assigned to seven dietary treatments (12 rabbits/treatment). A control diet; three diets the basil hay substituted for 25%, 50% and 75% of alfalfa straw; and three diets the fennel hay replaced 25%, 50% and 75% of alfalfa straw. Results obtained showed that replacement of alfalfa hay with 25 % fennel straw significantly reduced average daily gain compared with the other experimental treatments, while no significant difference was observed among the other experimental treatments during the stage 5-8 week. On the contrary, the animals fed diets contained 25 % fennel straw gave significantly higher average body weight gain compared with the other experimental groups and no significant differences were observed among the other experimental treatments during 8-11 weeks. Regarding body weight gain during the total period from 5 to 11 weeks of age, the result indicates that no significant differences among all treatments were detected. The values of FCR showed no significant differences within all tested groups. Rabbits group fed B50% recorded the highest significant digestibility coefficients of dry matter, organic matter, crude protein, ether extract, neutral detergent fiber, acid detergent fiber, TDN and DCP when compared to all groups. Levels of basil straw or fennel straw in rabbit diets induced an insignificant effect on hemicellulose. There were higher dressing and hot carcass percentages were recorded with rabbits fed B50%. Plasma values of total protein, albumin, globulin, cholesterol or Alanine aminotransferase (ALT) and Aspartate aminotransferase (AST) concentration were not significantly

affected due to adding basil straw or fennel straw to rabbit diets. Replacement alfalfa hay with fennel and basil straw resulted in decrease feed cost. Rabbits fed B25% showed higher economic efficiency percentage compared to the other treatments. The results revealed that using basil straw and fennel straw at 25% in growing NZW rabbit diets had no detrimental effects on productive performance, the physiological and biochemical status and it could be used economically instead of alfalfa hay.

**Keywords:** Fennel straw, Basil straw, Rabbit, Performance, Carcass traits,  
Economic efficiency

## CONTENTS

No		Page
	<b>LIST OF TABLES</b>	
	<b>ABBREVIATIONS</b>	
<b>I.</b>	<b>INTRODUCTION</b>	1
<b>II.</b>	<b>REVIEW OF LITERATURE</b>	3
2.1.	Agriculture wastes	3
2.2.	Medicinal and aromatic plants	4
2.2.1.	Fennel	6
2.2.2.	Basil	6
2.2.3.	Effect of the use of agricultural wastes in rabbits on productive performance	8
2.2.4.	Changes in digestibility due to herbal feed additive	8
2.2.5.	Blood parameter	8
2.2.6.	Body weight and body weight gain	10
2.2.7	Feed intake and feed conversion	11
2.2.8.	Carcass characteristics	11
2.2.8.1.	Carcass interior parts	11
2.2.8.2.	Carcass traits	11
2.2.9.	Economic efficiency	12
<b>III.</b>	<b>MATERIALS AND METHODS</b>	14
3.1	Medicinal plants by-products	16
3.2	Growth experiment	16
3.2.1	Experiment animal	16
3.2.2	Experimental diets	16
4	Management of Animals	17
5	Rabbit performance	17
6	Digestion Trials	18
7	Analytical Methods	18
8	Blood Parameters	19
9	Slaughter trial	21
10	Caecum characteristics	21
11	Economic efficiency	22
12	Statistical analysis	23
<b>IV.</b>	<b>RESULTS AND DISCUSSION</b>	26
4.1.	Chemical composition of basil straw and fennel straw and alfalfa hay, % on a DM basis	24

4.2.	Effect of replacement alfalfa hay with ascending levels of basil straw or fennel straw in rabbit diets on ration formulation and its chemical analysis.	24
4.3.	Effect of Basil straw and Fennel straw inclusion in rabbit diets	26
4.3.1.	Feed consumption (g/rabbit/day)	26
4.3.2.	Nutrients digestibility and nutritive values	28
4.4	Blood parameters	29
4.4.1.	Total proteins (TP)	29
4.4.2.	Albumin	29
4.4.3.	Globulin	29
4.4.4.	Cholesterol	31
4.4.5.	Kidney function for growing rabbits experimental	31
4.4.5.1.	Urea	31
4.4.5.2.	Alkaline phosphatase	32
4.4.5.3	Creatinine	32
4.4.6.	Liver function	33
4.5.	Growth performance	33
4.5.1.	Live body weight	33
4.5.2.	Daily weight gain	35
4.5.3.	Feed conversion ration	35
4.5.4.	carcass traits	36
4.6.	Economic efficiency (EEF)	38
<b>V</b>	<b>SUMMARY AND CONCLUSION</b>	<b>42</b>
<b>VI</b>	<b>REFERENCES</b>	<b>45</b>
	<b>ARABIC SUMMARY</b>	

**LIST OF TABLES**

<b>No.</b>		<b>Page</b>
1	Chemical composition of basil straw, fennel straw, and alfalfa hay meal (% on DM basis)	25
2	Formulation of experimental diets	15
3	Chemical analysis of the experimental diets, % on a DM basis	16
4	Effect of replacing alfalfa hay with basil and fennel straw on daily feed consumption (g/day) of growing rabbits	27
5	Effect of replacing alfalfa hay with basil and fennel straw on nutrient digestibility and nutritive values for rabbits at 10 weeks old	30
6	Effect of graded substitution of alfalfa hay with basil and fennel straw on plasma analysis of rabbits aged 11 weeks	34
7	Effect of replacing alfalfa hay with basil and fennel straw on growth performance variables of rabbits aged 5-11 weeks	37
8	Effect of replacing alfalfa hay with basil and fennel straw on carcass traits of rabbits aged 11 weeks	40
9	Economic traits of NZW rabbits aged 11 weeks as affected by dietary replacement of alfalfa hay with basil straw and fennel straw	41