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لم ترد بالأصل

EFFECT OF FEEDING OLIVE TREE PRUNING BY-PRODUCTS IN SINAI ON SHEEP PERFORMANCE

By

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B.Sc. Agric. Sc. (Animal Production), Ain Shams University, 1999
M. Sc. Agric. Sc. (Animal Nutrition), Ain Shams University, 2004

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ABSTRACT

Hend Ahmed Ali Mohammed Aziz. Effect of Feeding Olive Tree Pruning By-Products in Sinai on Sheep Performance, Unpublished Doctor of Philosophy Dissertation, Department of Animal Production, Faculty of Agriculture, Ain Shams University, 2009.

This work was carried out to study the effect of treated olive trees pruning by-products (leaves and twigs) biologically and chemically on its chemical composition, fiber constituents, nutrients digestibility, rumen fermentation, ruminal protozoa count, blood parameters and sheep performance. Laboratory trials were carried out to choose the perfect period for fungus to be growing. Six digestibility trials were carried out using the following treatments: T1: Concentrate feed mixture (CFM) + Berseem hay (Control). T2: CFM+ Air-dried olive trees by- products untreated. T3: CFM + olive trees by-products treated with 4% urea. T4: CFM + olive trees by-products treated with *Phanerochaete chrysosporium* + *Saccharomyces cerevisiae*. T5: CFM+ olive trees by-products treated with *Trichoderma viride* + *S. cerevisiae*. T6: CFM+ olive trees by-products treated *P. chrysosporium* + *T. viride* + *S. cerevisiae*. Three growing trials were carried out using female lambs as followed: T (1): CFM + berseem hay (control). T (2): CFM +olive leaves and twigs treated with urea. T (3): CFM +olive leaves and twigs treated with *T. viride*+ *S. cerevisiae*. At the end of the growing trials 3 digestibility trails were carried out. The data of the laboratory trials showed that inoculation for fungi and yeast with olive by-products for 20 days had the best results for chemical composition and fiber fraction. The main results showed that urea and biological treatments tended to increase ($P<0.01$) total dry matter intake more than untreated group T2 being 956.25 and 954.92 vs 894.37 g/h/d; respectively. The digestibilities of DM and OM were significantly differed. All treatments tended to increase ($P<0.01$) CP, CF and it's fractions digestibilities more than untreated group. Control group T1 followed by urea treatment T3 and biological treatment with *T. vi.* and *S. ce.* (T5) had the highest CP, CF and it's fractions digestibilities. Urea treatment had the highest values of TDN and DCP (% of intake). Water balance showed highly significant difference among treatments. Nitrogen

balance was higher in treated groups than untreated group being 4.88, 4.14 and 3.09 for T3, T5 and T2; respectively. Biological treatment had the highest value of ruminal pH. Urea treatment (T1) increased ($P<0.01$) ruminal TVFA's being 8.24 vs 6.57 for untreated. All treatments increased ($P<0.01$) ruminal total nitrogen, NPN, ammonia and total ruminal protozoa count more than untreated group. Biological treatments and urea treatment increased ($p<0.01$) serum total proteins, albumin, globulin, urea, creatinine, GOT and GPT more than control. The data of growing trials indicated that feed intake was not affected by treatments. Urea treatment (T2) and biological treatment (T3) showed higher final body weight and average daily gain than the control group being; 143.66, 137.87 and 135.61g /day. The lowest feed cost was for urea treatment followed by biological treatment with *T. vi.* and *S. ce.* Total proteins, albumin, globulin, A/G ratio, urea, creatinine and GOT concentrations increased ($P<0.01$) in urea treatment followed by biological treatment with *T.viride* + *S.cerevisiae*, all blood parameters showed gradual increase ($P<0.01$) from the first month to the six month. The data of digestibility trials on sheep females almost had the same trend of males digestibility trials.

It can be concluded that feeding sheep on olive trees pruning by-products treated biologically or chemically improved rumen fermentation, nutrients digestibility, ruminal protozoa count and blood parameters.

Keywords:

Biological treatments, urea, digestibility, blood and ruminal parameters.

CONTENTS

	Page
LIST OF TABLES.....	vii
1- INTRODUCTION …….....	1
2- REVIEW OF LITERATURE …….....	3
2-1-Fibrous agriculture residues in Egypt…….	3
2-1-1-Characteristics of agricultural crop residues……	3
2-1-2-Chemical composition of agricultural crop residues …….....	4
2-2-Olive trees pruning by-products……..	4
2-2-1-Characteristics of olive trees pruning by-products…….	4
2-2-2-Chemical composition of olive trees pruning by-products…….	5
2-3-Improving utilization of low quality roughages……..	6
2-3-1-The use of chemical treatments for improving poor quality roughage……...	7
2-3-2-The use of biological treatments for improving poor quality roughage……...	8
2-4-Effect of chemical and biological treatments of poor quality roughage on chemical composition……..	9
2-4-1- Chemical treatments…….....	9
2-4-2- Biological treatments……..	10
2-5-Effect of chemical and biological treatments on crude protein content……	11
2-5-1-Chemical treatments……	11
2-5-2- Biological treatments……..	12
2-6-Effect of chemical and biological treatments on cell wall constituents……	13

2-6-1-Chemical treatments…… 13

2-6-2- Biological treatments…….. 14

2-7-Effect of chemical and biological treatments on digestibility of crop- residues……... 16

2-7-1-Chemical treatments…… 16

2-7-2- Biological treatments……. 17

2-8-Effect of chemical and biological treatments of poor quality roughage on nutritive value……. 20

2-8-1- Chemical treatments……..... 20

2-8-2- Biological treatments…… 21

2-9-Effect of chemical and biological treatments on Nitrogen balance…….. 22

2-9-1-Chemical treatments……. 22

2-9-2- Biological treatments…….. 24

2-10-Effect of chemical and biological treatments on feed intake……. 25

2-10-1-Chemical treatments……. 25

2-10-2- Biological treatments……..... 26

2-11-Effect of chemical and biological treatments on water intake…… 27

2-11- 1- Chemical treatments…… 27

2-11- 2- Biological treatments…… 27

2-12-Effect of chemical and biological treatments on average daily gain……. 28

2-12-1-Chemical treatments…… 28

2-12-2- Biological treatments……..... 29

2-13-Effect of chemical and biological treatments on feed utilization efficiency……..... 30
2-13-1-Chemical treatments……..... 30
2-13-2- Biological treatments……. 31
2-14-Effect of chemical and biological treatments on economic efficiency……..... 32
2-14-1-Chemical treatments……..... 32
2-14-2- Biological treatments……..... 33
2-15-Effect of chemical and biological treatments on rumen liquor parameters……..... 34
2-15-1-Ruminal pH value……..... 34
2-15-1-1-Chemical treatments……..... 34
2-15-1-2- Biological treatments……..... 35
2-15-2-Ruminal volatile fatty acids…… 36
2-15-2-1-chemical treatments……..... 36
2-15-2-2- Biological treatments……..... 37
2-15-3-Ruminal ammonia……..... 38
2-15-3-1-Chemical treatments……..... 38
2-15-3-2- Biological treatments……..... 39
2-16-Effect of chemical and biological treatments on blood parameters……..... 40
2-16-1-Serum total proteins…… 40
2-16-1-1-Chemical treatments……..... 40
2-16-1-2- Biological treatments……..... 41
2-16-2-liver function…….. 43
2-16-2-1-Chemical treatments…… 43
2-16-2-2- Biological treatments 43
2-16-3-kidney function 45
2-16-3-1-Chemical treatments…… 45

2-16-3-2- Biological treatments 46
3. MATERIALS AND METHODS 48
3-1- The first experiment (laboratory experiment) 48
3-1-1- Urea treatment 48
3-1-2- The fingal treatment 49
3-2-The second experiment (digestibility experiment on rams) 50
3-3-The third experiment (growth experiment for ewe lambs) 51
3-4-The fourth experiment (digestibility experiment on ewe lambs) 51
3-4-1-Urea treatment during digestibility and growth experiments 52
3-4-2-The biological treatments during digestibility and growth experiments..... 52
3-5-Management and feed schedule..... 52
3-5-1- Digestibility experiment on rams..... 52
3-5-2-Growth experiment 53
3-5-3- Digestibility experiment on female sheep..... 53
3-6- Sampling of rumen liquor..... 54
3-7- Ruminal protozoal count 54
3-8- Sampling of blood..... 55
3-8-1- Digestibility experiment 55
3-8-2-Growth experiment 55
3-9-Statistical analysis..... 56
4-RESULTS AND DISCUSSION..... 57
4-1-The first experiment (laboratory experiment) 57
4-2-The second experiment (digestibility experiment on rams) 59