

## **The Effect of Summer Shearing on the Performance and some Carcass Characteristics of Fattening Awassi Lambs**

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### **ABSTRACT :**

Sixteen Awassi ram lambs,  $25.5 \pm 3.4$  Kg in weight and 5 months old were used to investigate the effect of summer shearing on the performance and carcass traits. The lambs were randomly divided into two equal groups from which one group was closely shorn during summer, while the other was left unshorn. The lambs were individually fed concentrates and roughages ad lib. for a period of 70 days and then slaughtered.

Results revealed that shearing had no significant effect on daily gain, feed efficiency, carcass traits and rectal temperatures and respiratory rates.

**Key words :** Sheep, shearing, gain, carcass traits.

Shearing of fattening lambs during early spring and early summer was found to increase growth rate (Rea et al., 1963; Tucker, 1964; Drinan and Fergusson, 1966; Hackett and Hillers, 1979). Previous study on Barki and Merino lambs in Egypt showed that shearing had no significant effect on lamb performance during summer (Azamel et. al., 1987), whereas, in Iraq Alkass and Al-Jaryan (1989) found a slight but non significant increase in lamb performance as affected by autumn shearing.

In Iraq, the high summer temperature does impose a climatic stress on fattening lambs and shearing may reduce such a stress. This experiment was conducted to study the effect of summer shearing on the performance and carcass characteristics of Awassi lambs in central Iraq.

Sixteen Awassi ram lambs, 5 months old and weighing  $25.5 \pm 3.4$  Kg were randomly divided into two groups of equal weight. Lambs of the 1st group were shorn during summer (August) while the others were left unshorn. All lambs were individually fed a concentrate diet and green roughage ad lib. The concentrate mixture was formulated to supply 17.98 MJ/Kg and 12.0 DP/Kg. Rations were offered once daily at 09.00 a.m. and allowed free access to fresh water. Live body weight was recorded weekly to the nearest 0.25 Kg, and feed intake was determined daily as the difference between feed offered and that refused. After 70 days, fattening period, animals were slaughtered, and the carcasses were weighed and chilled for 24 h (4°C), reweighed, then the right side was cut into standardized wholesale cuts (Forrest et al., 1975). The rack was physically dissected into lean, fat and bone.

Data were analysed and differences between treatments were tested for significance using the simple T-test (Steel and Torrie, 1982).

Shearing had no influence on lamb performances (Table 1). Lambs of both groups consumed similar amounts of roughage and concentrate and had more or less feed efficiencies. Unshorn lambs had slightly higher rectal temperatures and respiration rates ( $P > 0.05$ ) indicating no appreciable effect of shearing. Similarly, shearing had no effect ( $P > 0.05$ ) on slaughtering parameters, and physical composition of the rack (Table 1). This might well be due to the

Table 1. Lambs performance, carcass characteristics, rectal temp and respiration rate as affected by shearing in fattening Awassi sheep.

	Shorn	Unshorn
No of animals	8	8
Initial weight (kg)	25.4 ± 4.4	25.6 ± 2.1
Final weight (kg)	37.3 ± 5.2	37.6 ± 2.4
Av. daily gain (g)	169.7 ± 17.2	171.4 ± 34.8
Av. DM intake (kg/day)		
roughage	0.2 ± 0.0	0.2 ± 0.03
concentrate	1.1 ± 0.2	1.1 ± 0.1
Total	1.3 ± 0.2	1.3 ± 0.2
Av. DM intake/kg gain	7.1 ± 0.8	7.5 ± 1.5
Empty body weight (kg)	32.7 ± 5.4	32.5 ± 1.6
Hot carcass weight (kg)	18.2 ± 3.0	18.0 ± 1.3
Cold Carcass weight (kg)	17.7 ± 3.0	17.5 ± 1.4
Dressing percentage :		
% hot carcass weight / body weight	49.5 ± 1.9	49.9 ± 1.8
% cold carcass weight / empty body weight	54.0 ± 1.7	53.6 ± 2.3
Rack (physically dissected)		
Lean (%)	54.6 ± 2.3	55.6 ± 4.5
Fat (%)	24.5 ± 2.9	23.1 ± 6.2
Bone (%)	18.4 ± 2.3	19.7 ± 3.3
<sup>o</sup>		
Rectal Temp., ( °C)	39.0 ± 0.2	39.2 ± 0.2
Respiration rate per minute	48.0 ± 7.7	56.0 ± 7.3

similar fattening performance and slaughter weights of both groups. Shorn lambs were reported by Rea et al., (1963); Tucker (1964) and Hackett et al. (1979) to grow faster and to produce heavier carcasses with better killing out percentages.

Our earlier observation (Alkass and Al-Jaryan, 1989) has also shown that autumn shearing of Awassi lambs in Iraq resulted in only slight improvement in killing out percentage. However, the reason of such improvement was mainly due to the lower gut full of shorn lambs. The present observation may possibly reflect the adaptability of Awassi sheep to the hot climatic conditions of Iraq.

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#### REFERENCES

- Alkass, J.E. and L.J.F. Al-Jaryan. 1989. Effects of Autumn shearing on the performance of fattening Awassi lambs. *The Iraqi Journal of Biological Sciences*. 9:47-52.
- Azamel, A.A.; A.A. Younis and M.M.Mokhtar. 1987. Effect of shading, shearing and breed type on heat tolerance and performance of lambs under semi-arid condition. *Indian J. of Anim. Sci.* 57:1132-1137.
- Drinan, J.P. and D.D. Ferguson. 1966. The influence of shearing on the growth and economic value of carry over lambs. *Proc. Aust. Soc. Anim. Prod.* 6:190-193.
- Forrest, G.J.; D.E. Aberle; K.B. Hed; D.M. Judge and A.R. Merkel 1975. *Principles of Meat Science*. W.H. Freeman and Company.

- Hackett, M.R. and J.K. Hillers, 1979. Effect of artificial lighting on feeder lamb performance. *J. Anim. Sci.*, 49: 1-4.
- Rea, J.C.; C.V. Ross and W.H. Pfander. 1963. Studies of factors affecting performance of growing-finishing lambs. *Missouri Agricultural Research Bulletin*, No. -827, May 1963, P. 65.
- Steel, R.G.D. and J.H. Torrie. 1982. In : Principles and procedures of statistics. A Biometrial Approach. 2nd Edition. Tosho printing Co. Ltd., Tokyo, Japan.
- Tucker, M.J. 1964. Shearing carryover lambs. *Agriculture Gazette of New South Wales*. 75: 1318-1322.

## تأثير الجز الصيفي على الكفاءة وبعض صفات الذبيحة للحملان العواسية المسمنة .

لمياء جواز فارس الجريان  
كلية الزراعة . جامعة بغداد . العراق

### الخلاصة

اجريت هذه الدراسة على ١٦ حملا عواسيا بمتوسط عمر ٥ اشهر وزن ٢٥٥٥ +  
٢٤٤ كغم لفرض دراسة تأثير الجز الصيفي على الكفاءة وبعض صفات الذبيحة .  
وزعت عشوائيا الى مجموعتين متساويتين حيث جزت احدهما في بداية شهر اب  
بينما تركت الاخرى بدون جزء كانت الحيوانات تفدى بصورة فردية على العلف  
المركز والغشن بصورة حرة . وذبحت عند انتهاء فترة التجربة .

لم يلاحظ تأثير معنوي للجز على كل من الزيادة الوزنية اليومية . كفاءة  
التحويل الغذائي . صفات الذبيحة ودرجة حرارة الجسم ومعدل التنفس .

كلمات مفتاحية : حملان . الجز الصيفي . الزيادة الوزنية . صفات الذبيحة .