

## EFFECT OF DIFFERENT PROTEIN LEVELS ON PUBERTY OF THE AWASSI FEMALE LAMBS

Mawfak Y. Hamdoon

Safwan L. Shihap

College of Agri. and Forestry / University of Mosul – Iraq

### ABSTRACT

This study was conducted in the animal husbandry station Al-Rashidiya, a branch of the general enterprise of animal researches in Mosul Governorate. Twenty one single female lambs at weaning age 90 days were divided randomly into three groups, fed on three rations different in protein levels 12, 15 and 18%. The rations was offered restricted feeding at a rate of 1 kg/head/day until the age of puberty. Weight of female lambs were recorded monthly after weaning age up to age of nine months. Blood samples were collected monthly at age of six months from Jugular vein to determine the concentrations of FSH hormone. All the female lambs were subjected to the rams at age of 7 months to determine the age and weight of early breeding. The results indicated that protein levels had no significant effect on the age and weight of lambs at puberty. The female lambs which were fed 12% ration reached the age of puberty at 242 days and were faster than other lambs which fed 15 and 18% rations. However, lambs fed on 18% protein reached the age of puberty at weight of 41.30kg when compared with other lambs fed other level of protein and were 42.88 and 44.83 kg, respectively. Protein levels had a significant ( $P < 0.05$ ) effect on the concentration of F S H at age of 7 and 9 months only. However, only 15 female lambs were successfully breed. Mating was take place between 246-319 days of age.

### المصادر

- جواد ، نازك عبد الجبار (١٩٨٣) . تأثير موسم الولادة وبتر الالية على البلوغ الجنسي والاداء التناسلي للفطائم العواسية . رسالة ماجستير – كلية الزراعة – جامعة بغداد .
- حمدون ، موفق يحيى (١٩٩٨) . تأثير اعمار القطام المختلفة في انتاج الحليب واداء الحملان العواسية . اطروحة دكتوراه . كلية الزراعة – جامعة الموصل .
- الخواجة ، علي كاظم ، الهام عبد الله وسمير عبد الاحد (١٩٧٨) . التركيب الكيميائي والقيمة الغذائية لمواد العلف العراقية . نشرة صادرة عن قسم التغذية في مديرية الثروة الحيوانية العامة . وزارة الزراعة والاصلاح الزراعي . جمهورية العراق .
- الراوي ، عبد الرزاق عبد الحميد وطاهر عبد اللطيف شجاع (٢٠٠٢) . الكفاءة التناسلية للنعاج العواسي وخطاتها تحت نظام تكرار الولادة . مجلة الزراعة العراقية . ٧ : (٦) : ٨١-٧٣ .
- الصائغ ، مظفر نافع و جلال ايليا القس (١٩٩٢) . انتاج الاغنام والماعز . مطبعة دار الحكمة – جامعة البصرة .
- العامري ، حساني وازهر حسن الحبوبى واميرة حسين حمزة (٢٠٠٤) . مقارنة عمر البلوغ الجنسي بين فطائم العواسي ورباعي العساف ورباعي التركي . مجلة الزراعة العراقية ، ٩ : (١) : ١٠٢-١٠٩ .
- عجام ، اسماعيل كاظم والسعدي حسين عبد الكريم والحكيم مرتضى كمال . (١٩٨١) . فلسجة التناسل والتلقيح الاصطناعي والرعاية التناسلية . كلية الزراعة . دار الكتب للطباعة النشر . جامعة الموصل .
- Al-Haboby, A. H., K. H. Shideed and G. K. Khatab (1997) Sheep fertility survey in Iraq (Apreliminary report). Sociaecomomic group meeting for the mashreq countries in the mashreq/maghreb project . March, 24-37, Amman, Jordan.
- Al-Kass, J. E., D. A. Aziz, and K. A. Al-Nidawi (1994). Genetic aspects of puberty in Awassi ewes. Small Res.; 14: 249-252.

- Awawdeh, T. Faisal, M. A. F. Al-Dabbas and H. A. Hamra (2003). Effect of arginine supplementation on puberty and some reproductive traits in female Awassi sheep. Ministry of Agriculture. 1: 82-85.
- Boulanouar, B. M., T. Ahmad, D. Klopffestien, J. Brink and K. Kinder (1995). Dietary protein or energy restriction influences age and weight at puberty in ewe lambs. Anim. Reprod. Sci., 40: 229-238.
- Darwish, A. (1991). Factors influencing puberty and production of Awassi ewe lambs and their Finn-texel×Awassi cross. M. Sc. Thesis University of Beirut.
- Dyrmundsson, O. R. (1973). Puberty and early reproductive performance in sheep. I. ewe lambs. Anim. Breed. Abstr., 41: 273-284.
- Dyrmundsson, O. R. (1981). Natural factors affecting puberty and reproductive performance in ewe lambs: a review. Live Stock Prod. Sci.; 8: 55-65.
- Dyrmundsson, O. R. and J. L. Less (1972). A note on factors affecting puberty in clun forest female lambs.
- Manning, J. M., C. G. Herbosa, C. R. Friedman, and D. L. Foster (1992). Patterns of GnRH secretion in the pituitary portal circulation of the growth-related female sheep during Hypogonadotropin. Annual meeting at society of Neuroscience. Anabein G. H., P191.
- Mukasa, E. M., O. B. Kasali, and A. N. Said (1991). Effect of nutrition and endoparasitic treatment on growth, onset of puberty and reproduction activity in Menz ewe lambs. Theriogenology, 36 (2): 319-328.
- Numan, A., M. Al-Rayyan and F. Lubbudeh (2000). Effect of protein level on onset of puberty of Awassi female lambs in the Jordan valley, J. Dirasat. Agr. Sci., 27 (2): 176-183.
- SAS (1996). Statistical Analysis System. User's guide for personal computer release 6.12, SAS Institute Inc., Cary, Ns, USA.
- Younis, A. A. (1977). Increasing ewe fertility in Arab countries. World review Anim. Prod., 13: 31-36.
- Younis, A. A., M. Hafez and M. S. Dana Soury (1972). Age of puberty as affected by date of birth, weaning weight and weight of puberty in the young ewe. Desert. Inst. Bull. A. R. E., 22: 213-218.