



**For their great help and kindness**

**Who look for distinction**

**Whom I love and loved me**

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**Abstract**

This study was conducted in Azahir Company for Agricultural production and processing at Albagair Area in northern region of Al-Gazeera State, during the period from November 2004 to October 2005 in Holstein/ Friesian cows. The objective of this study is to evaluate the effect of number of milking on yield and composition.

Fifteen Cows were used in the observation in the same age and lactation they were milked two-times /day six months and three-times/day another six months ,milk samples subjected to chemical analysis in the laboratory of Animal Production Department- College of Agricultural Studies – Sudan University of Science and Technology. To compare the results of the analysis we used T-test in SPSS version 12 was used.

The results indicated that there were significant differences ( $P > 0.01$ ) between milking two-times/day and three-times milking/ day. The production is  $(2920.80 \pm 334,$

3371 ± 162) liters respectively, while the milk fat is reduction and showed highly significant differences ( $P > 0.01$ ) with means ( $3.62 \pm 0.08$ ,  $3.28 \pm 0.11$ ) between two-times/day and three-times milking/ day, respectively.

Although, protein content showed no significant differences between two-times/day and three-times milking/ day with means ( $3.19 \pm 0.23$ ,  $3.27 \pm 0.26$ ) respectively. The total solid demonstrated significant differences ( $p > 0.05$ ) with means ( $12.66 \pm 0.45$ ,  $12.26 \pm 0.55$ ) between milking two-times and three-times/day. The solid not fat “SNF” contents have significant differences with means ( $8.90 \pm 0.41$ ,  $8.58 \pm 0.30$ ) for two-times/day and three-times milking a day respectively. The values of ash content disclosed significant ( $p > 0.05$ ) with means ( $0.68 \pm 0.08$ ,  $0.7 \pm 0.06$ ) between milking two-times/day and three times milking /day. The economical benefit in two-times milking/day was low in labor, electricity and additional services. Means production/day in two times

and three times were 16.2 and 18.7 litre and the price cost /litre 56 and 53SD respectively, this was due to the increasing on the yield.

## خلاصة البحث

أجريت هذه الدراسة في شركة أزاهير للإنتاج والتصنيع الزراعي بمنطقة الباير في الجزء الشمالي بولاية الجزيرة في الفترة من نوفمبر 2004 وحتى أكتوبر 2005م. في سلالة ابقار الفريزيان هولستين, حيث كان الهدف من الدراسة . تقييم اثر عدد الحلبات في الانتاج ومكونات الحليب

تم اختيار خمسة عشر بقرة فى نفس العمر ومرحلة الانتاج, حلبت مرتين لمدة ست اشهر وثلاث مرات فى اليوم لمدة ست اشهر اخرى, اخضعت عينات الحليب(الدهن, البروتين, الماد الصلبة ,المواد الصلبة الغير دهنية, الرماد) للتحليل الكيمياءى بمعمل قسم الانتاج

الحيوانسكية الدراسات الزراعية بجامعة السودان للعلوم  
والتكنولوجيا ولمقارنة نتائج التحليل استخدم  
(اختبار (ت) ببرنامج التحليل الاحصائي اصدار 12)

أوضحت النتائج انه توجد  $p > 0.01$  في الانتاج باللتر ما بين (

فروقات معنوية

الحلب مرتين. وثلاث مرات فى اليوم حيث بلغ متوسط  
الإنتاج 2920.8 و 3371.53 لتر على التوالي بينما إنخفض  
دهن اللبن عندما تم حلبها ثلاث مرات مقارنة بالحلب مرتين  
بمتوسط  $(0.08 \pm 3.62)$  ( $p > 0.01$ ) يومياً وأوضح فروقات معنوية  
و  $(0.11 \pm 3.28)$  بين الحلبتين والثلاث حلبات على التوالي لم  
يظهر للبروتين اى فروقات معنوية بين الحلبتين والثلاثة



حلبات فى اليوم حيث كانت المتوسطات (  $0.23 \pm 3.19$  ) و  
حلبات على التوالي أما المواد الصلبة فقد وجد بين  
وكانت (  $p > 0.05$  ) الحلبتين والثلاثة حلبات فروقات معنوية  
المتوسطات (  $12.6645 \pm$  و  $12.26 \pm 0.55$  ) بين الحلبتين  
والثلاثة حلبات على التوالي ، وأيضا المواد الصلبة الغير دهنية  
وجد فروقات معنوية بين الحلبتين والثلاثة حلبات بالمتوسطات  
(  $0.41 \pm 8.9$  و  $0.3 \pm 8.58$  ) على التوالي بينما قيم محتوى  
عند الحلب مرتين (  $p > 0.05$  ) الرماد أوضحت فروقات معنوية  
و ثلاثة مرات فى اليوم بمتوسط (  $0.08 \pm 0.68$  و  $0.7 \pm$   
(  $0.06$  ) وعند العائد الاقتصادي في الحلبتين والثلاثة حلبات فى  
اليوم وجد ان التكلفة من ناحية العمالة والكهرباء وبعض

الخدمات الإضافية اقل الا ان سعر اللتر يقل فى الثلاثة  
حلبات 53 دينار سوداني مقارنة بالحلبتين 56 دينار سوداني  
حيث بلغ متوسط الإنتاج فى الثلاثة حلبات والحلبتين فى اليوم  
16.2 و 18.7 لتر على التوالى والذي يعزى للزيادة الواضحة  
فى الإنتاج .

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