## **Accepted Manuscript**

Stall and Feed Bunk Stocking Rates Impact Cows' Diurnal Behavior and Activity in Automatic Milking Systems

A.A. Witaifi, A.B.A. Ali, J.M. Siegford

PII: S1558-7878(17)30117-X

DOI: 10.1016/j.jveb.2018.01.004

Reference: JVEB 1114

To appear in: Journal of Veterinary Behavior

Received Date: 16 June 2017

Revised Date: 24 December 2017 Accepted Date: 12 January 2018

Please cite this article as: Witaifi, A.A., Ali, A.B.A., Siegford, J.M., Stall and Feed Bunk Stocking Rates Impact Cows' Diurnal Behavior and Activity in Automatic Milking Systems, *Journal of Veterinary Behavior* (2018), doi: 10.1016/j.jveb.2018.01.004.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



## ACCEPTED MANUSCRIPT

| <b>a</b> . |              |           |             | ~            |                |                       |
|------------|--------------|-----------|-------------|--------------|----------------|-----------------------|
| Sta        | ill and Feed | l Bunk St | ocking Rate | s Impact Cow | s' Diurnal Beh | avior and Activity in |

| Automatic Milking Systems |
|---------------------------|
|                           |

- 3 A.A. Witaifi, A.B.A. Ali\* and J.M. Siegford
- 4 Animal Behavior and Welfare Group, Department of Animal Science, Michigan State
- 5 University, East Lansing, 48824.
- 6 \*Also at Animal Behavior and Management, Veterinary Medicine, Cairo University, Egypt

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

1

Abstract: High stall stocking rates have been shown to alter behavior of cows in parlormilked systems; however, no studies have examined stocking rates for cows milked with automatic milking systems (AMS). Therefore, we examined the influence of stall and feed bunk overstocking on cows' behavior, displacements, cows' activity and rumination time in an AMS dairy farm. Each of two pens contained 60 cows/pen and 58 free-stalls and 60 headlocks. The effect of stocking rate was examined using three treatments applied separately to stalls and feed bunks (100% = 58 stalls or 60 headlocks available for 60 cows; 120% = 50 stalls or 50 headlocks available for 60 cows; 150% = 40 stalls or 40 headlocks available for 60 cows). Each stall or feed bunk treatment was applied separately for 1 week in a randomized order that was different for each pen, with a 1-week washout period between treatments. Data were collected during the last 2 days of each treatment week. Activity level, time spent ruminating and number of displacements were recorded for both feed bunk and lying stall treatments. The number of cows lying, perching or standing in lying stalls was recorded in response to stall stocking rate treatments and the number of cows eating or standing at the feed bunk was recorded for feed bunk stocking rate treatments. Statistical analyses were performed using R software (version 3.3.1). Overstocking stalls to 150% reduced the number of cows lying and standing in stalls but

## دريافت فورى ب متن كامل مقاله

## ISIArticles مرجع مقالات تخصصی ایران

- ✔ امكان دانلود نسخه تمام متن مقالات انگليسي
  - ✓ امكان دانلود نسخه ترجمه شده مقالات
    - ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
  - ✓ امكان دانلود رايگان ۲ صفحه اول هر مقاله
  - ✔ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
    - ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات