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RESEARCH ARTICLE

EFFECT OF THE ANIMAL WELFARE IN DAIRY COWS ON REPRODUCTIVE PARAMETERS

Córdova-Izquierdo Alejandro^{1*}, Iglesias-Reyes Adrián Emmanuel¹, Espionsa-Cervantes Román¹, Guerra-Liera Juan Eulogio², Inzunza-Castro Jorge Fabio², Villa-Mancera Edmundo Abel³, Méndez-Mendoza Maximino³, Huerta-Crispín Rubén³, Juárez-Mosqueda Ma De Lourdes⁴, Gómez-Vázquez Armando⁵, Méndez-Hernández William⁵, Cansino Arroyo Gerardo⁵, Olivares-Pérez Jaime⁶, Pedro Sánchez Aparico⁷ and Velázquez-Ordóñez Valente⁸

¹Departament of De Producción Agrícola y Animal. Universidad Autónoma Metropolitana Unidad Xochimilco, México, Calz. Del Hueso 110 Col. villa Quietud, C.P. 04960, México. D.F

²Facultad De Agronomía. Niversidad Autónoma de Sinaloa, México

³Facultad De Veterinaria. Benemérita Universidad Autónoma De Puebla, México
⁴FMVZ-UNAM

⁵División Académica de Ciencias Agropecuarias. Universidad Juárez Autónoma De Tabasco, México

⁶Unidad Académica De Veterinaria. Universidad Autónoma De Guerrero, México
⁷FMVZ-UAEM

⁸Centro De Investigación Y Estudios Avanzados En Salud Animal. FMVZ-UAEM

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ABSTRACT

The aim of this study was to evaluate the effect of animal welfare (AW) on reproductive parameters in dairy cows. The work was performed in 25 units of animal production (UPAS) dairy cattle Dairy Basin Tizayuca, Hidalgo, Mexico. The comfort of the cows (facilities management, health, nutrition and behavior) was evaluated. A questionnaire called Score for cow comfort on the Dairy Farm was used. With the help of reproductive records fertility was assessed taking into account aspects such as labor-partum interval, calving to conception, design services, doses per conception, percentage of waste for reproductive problems and age at first birth of primiparous cows. Subsequently, data and data comfort of fertility in the JMP3.1.2 SAS Institute program, which correlated with fertility comfort-was performed, were ordered. With fertility data collected descriptive statistics was performed and finally, analyzed the type of hormones that are used. The UPAS who had maximum comfort, had an average value of 17.5 fertility and those with minimal comfort, had minimal comfort level was 8.63; the significance level was (P = 0.13). One R² = 0.09 was obtained indicating that fertility is explained by .09 1 .91 comfort and other variables comfort; in addition, there is a positive relationship between the animals comfort and fertility are. Of the 14 rated UPAS only work under conditions of cow comfort and the remaining 11 have minimum conditions of comfort. Services per conception, dose per conception, birth-partum interval, age at first birth; they were high regarding optimal; however, without reaching values that cause problems; the percentage of waste for reproductive problems, said serious problems. The interval calving to conception was unique that was within the optimum values, according to the average of descriptive statistics. In conclusion, we need to BA, in the UPAS analyzed, so it is recommended awareness among the staff working in the UPAS of the importance of WA, on the productivity of animals.

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INTRODUCTION

The goal of every dairy farmer is to produce as much milk as possible under minimal cost; however, to achieve this goal it is necessary to provide the necessary environments, which should promote animal welfare in (Tucker *et al.*, 2004). Currently, considering animal behavior in UPAS can be improved production, since knowledge of BA can be applied in feeding programs, reproduction, facility design, handling

and transportation of animals (Duncan *et al.*, 1992; Albright 1993; Arabic and Albright, 1997; Rushen *et al.*, 2001; Etol, 2004; Ortega y Gómez, 2006). Vellum *et al* (2004) found that cows spend most of the time to behaviors that are classified as maintenance, predominating the time devoted to rest, ruminant and social behavior; mainly to social licking, cows are found in a welfare state, a condition attributable among other factors, housing conditions and ambient temperature. Animals that are crowded, it is common stereotypical

behaviors develop, severely affecting their productivity (Vickery and Manson, 2005). The aim of this study was to evaluate the effect of animal welfare (AW) on reproductive parameters in dairy cows.

MATERIAL AND METHODS

This work was performed in 25 UPAS of Cuenca Lechera Tizayuca, Hidalgo, Mexico. Comfort where are the UPAS, in terms of facilities, management, health, food, cleanliness and behavior was assessed visually this evaluation was subjective and was based on a questionnaire called Score for cow comfort on the Dairy Farm, which it was developed by Dr. Frank JCM Van Eerdenburg. Two hours a day were spent by each UPA, cleaning waterers, feeders, beds, floors revised; also observed the treatment provided to the animals by managers; noise was in each UPA; the number of beds, feeders and drinking troughs counted; the material of the beds and floors verified; was measured with a tape measure the width and length of feeders, beds and walkways; with environmental thermometer, the temperature in each UPA was measured; light periods checked; finally the body condition was assessed. Points earned by UPA, were emptied into an Excel spreadsheet in order to assess that obtained UPAS comfort and which fell into the category of less comfort. With the help of reproductive records fertility was assessed, taking into account labor-partum interval, calving to conception, design services, doses per conception, percentage of waste for reproductive problems and age at first birth, only primiparous cows. Reproductive data were recorded in Excel. Subsequently, data and data comfort of fertility in the JMP3.1.2 SAS Institute program, which correlated with fertility comfort-was performed, were ordered. With fertility data collected, descriptive statistics of UPAS performed together. Reproductive parameters of each of the UPAS with those reported in the literature were compared. Finally, the type of hormones used in each was assessed UPAS.

RESULTS

The UPAS who had maximum comfort, had an average value of 17.5 fertility and those with minimal comfort, had minimal comfort level was 8.63; the significance level was ($P = 0.13$). One $R^2 = 0.09$ was obtained indicating that fertility is explained by .09 1 .91 comfort and other variables comfort; in addition, there is a positive relationship between the animals comfort and fertility are. Of the 14 rated UPAS only work under conditions of cow comfort and the remaining 11 have minimum conditions of comfort. Services per conception, dose per conception, birth-partum interval, age at first birth; they were high regarding optimal; however, without reaching values that cause problems; the percentage of waste for reproductive problems, said serious problems. The interval calving to conception was unique that was within the optimum values, according to the average of descriptive statistics.

DISCUSSION

Has been reported in several studies (Hazard, 2000; Rushen *et al.*, 2001; Xolalpa *et al.*, 2003; Dominguez., 2006 Cordova-Izquierdo *et al.*, 2010) that the existence BA in UPAS should be taken into account different environmental factors and management; the results obtained in this work, prove it. Ortega y Gomez (2006) indicated that mention the good

handling of animals, especially from an early age can prevent them from developing fear of humans, so it is very important to train people responsible for their management for not wearing out aggressive practices; which often they are unnecessary in routine work in the UPA and also affect the BA of animals.

CONCLUSION

We need to WA, in the UPAS analyzed, so it is recommended awareness among the staff working in the UPAS of the importance of WA, on the productivity of animals.

Bibliography

- Albright, J. L. 1993. Dairy cattle husbandry: En: T. Grandin (ed.), Livestock Handling and Transport. CAB. International, Wallingford, UK.
- Arabe, C. W; J. L. Albright; 1997. The Behavior of Cattle. 1ª cages on welfare and production of hens. Brit. Poultry Sci. 33: 25-3.
- Córdova-Izquierdo, Alejandro, Aída Lorena Práctica Privada y Castillo Juárez, Héctor. 2010. Efecto de factores climáticos sobre la conducta reproductiva bovina en los trópicos. Una revisión. REDVET 11(1): 1-12.
- Domínguez, A. D. 2006. Evaluación de los parámetros reproductivos y su repercusión en la productividad y competitividad de los establos lecheros del complejo agro-industrial de Tizayuca Hgo. México D. F. Tesis de maestría. UNAM FMVZ.
- Duncan, E.T, Appleby, M. C; Hughes, B. O. 1992. Effect of perches in laying cages on welfare and production of hens. Brit. Poultry Sci. 33: 25-35.
- Estol, L. 2004. Confort de las vacas lecheras incrementa los beneficios. Agro y Veterinaria. Perú 2004; ISSN 1688-2075.
- Hazard, T. S. 2000. Importancia de la nutrición en la reproducción de las vacas lecheras. INIA Carillanca. México (en línea) disponible en: shazard@carillanca.inia.cl (Accesado el 30 de Septiembre del 2007).
- Ortega, C. E. M; Gómez, D. A. A. 2006. Aplicación del conocimiento de la conducta animal en la producción pecuaria, Rev. Interciencia; 31 (12):26-28.
- Rushen, J; De Passille, A.M.B., Haley, D.B; Manninen, E. and Saloniemi, H; 2001. Using behavioural indicators and injury scores to assess the effects of the stall flooring on cow comfort, In R.R. Stowell, R. Bucklin and M. Bottcher (Eds) 6th Int Symp Livestock Environment, ASAE, Louisville Kentucky USA; 70 (1): 716-723.
- Vickery, S. S; Manson G. J. 2005. Stereotype and preservative responding in caged bears. Appl. Anim. Behav. Sci. 91: 247-260.
- Vítela, C; Cruz-Vázquez, J; Solano, P. 2004. Behaviour of Holstein cows under a free housing system, in winter, in an arid zone, México. Arch. Med. Vet. 37 (1):23-27.
- Xolalpa, C. V; Pérez, R. M. y García, O. C. 2003. Incidencia de eventos de falla reproductiva y su impacto sobre el intervalo parto-concepción (días abiertos) de bovinos hembras de la Cuenca lechera de Tizayuca Hidalgo, México, Durante los años 2001 y 2002. Rev. Salud Anim. 25 (1):45-49.