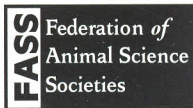


Journal of Dairy Science[®]

Official Publication of the American Dairy Science Association[®]



ELSEVIER



Volume 93, Number 10

October 2010

ISSN: 0022-0302

Journal of Dairy Science

October 2010

Volume 93, Number 10

CONTENTS

INTERPRETIVE SUMMARIES	vi
NEWS AND ANNOUNCEMENTS	xiii
INVITED REVIEWS:	
<i>Invited review: Lactobacillus helveticus</i> —A thermophilic dairy starter related to gut bacteria L. Slattery, J. O’Callaghan, G. F. Fitzgerald, T. Beresford, and R. P. Ross	4435
<i>Invited review: Modeling within-herd transmission of Mycobacterium avium subspecies paratuberculosis in dairy cattle: A review</i> C. Marcé, P. Ezanno, M. F. Weber, H. Seegers, D. U. Pfeiffer, and C. Fourichon	4455
DAIRY FOODS:	
Sensory and microbiological quality of yogurt drinks with prebiotics and probiotics L. C. Allgeyer, M. J. Miller, and S.-Y. Lee	4471
Effect of bovine lactoferrin addition to milk in yogurt manufacturing I. Franco, E. Castillo, M. D. Pérez, M. Calvo, and L. Sánchez.....	4480
Classification of Pecorino cheeses produced in Italy according to their ripening time and manufacturing technique using Fourier transform infrared spectroscopy M. J. Lerma-García, A. Gori, L. Cerretani, E. F. Simó-Alfonso, and M. F. Caboni	4490
Potent antilisterial cell-free supernatants produced by complex red-smear cheese microbial consortia A. Bleicher, T. Stark, T. Hofmann, B. Bogovič Matijašić, I. Rogelj, S. Scherer, and K. Neuhaus.....	4497
Production efficiency of micellar casein concentrate using polymeric spiral-wound microfiltration membranes S. L. Beckman, J. Zulewska, M. Newbold, and D. M. Barbano	4506
Bactericidal activity of lauric arginate in milk and Queso Fresco cheese against <i>Listeria monocytogenes</i> cold growth K. A. Soni, R. Nannapaneni, M. W. Schilling, and V. Jackson	4518
<i>Bifidobacterium bifidum</i> BF-1 suppresses <i>Helicobacter pylori</i> -induced genes in human epithelial cells Y. Shirasawa, H. Shibahara-Sone, T. Iino, and F. Ishikawa.....	4526
A synbiotic containing <i>Lactobacillus acidophilus</i> CHO-220 and inulin improves irregularity of red blood cells L.-G. Ooi, R. Bhat, A. Rosma, K.-H. Yuen, and M.-T. Liong.....	4535
Influence of milk pretreatment on production of free fatty acids and volatile compounds in hard cheeses: Heat treatment and mechanical agitation M. A. Vélez, M. C. Perotti, I. V. Wolf, E. R. Hynes, and C. A. Zalazar	4545
Production of functional probiotic, prebiotic, and synbiotic ice creams T. Di Criscio, A. Fratianni, R. Mignogna, L. Cinquanta, R. Coppola, E. Sorrentino, and G. Panfili	4555
Rheological properties and microstructure of Cheddar cheese made with different fat contents N. R. Rogers, D. J. McMahon, C. R. Daubert, T. K. Berry, and E. A. Foegeding	4565
<i>Short communication: Relationships between α-lactalbumin and quality traits in bulk milk</i> E. Wickström, K. Persson Waller, H. Lindmark-Månsson, and Å. Sternesjö	4577

PHYSIOLOGY AND MANAGEMENT:

- The use of an internal teat sealant in combination with cloxacillin dry cow therapy for the prevention of clinical and subclinical mastitis in seasonal calving dairy cows
D. J. Runciman, J. Malmo, and M. Deighton..... 4582
- Activin-related proteins in bovine mammary gland: Localization and differential expression during gestational development and differentiation
E. Bloise, G. D. Cassali, M. C. Ferreira, P. Ciarmela, F. Petraglia, and F. M. Reis..... 4592
- The effect of selenium supplementation before calving on early-lactation udder health in pastured dairy heifers
A. Ceballos-Marquez, H. W. Barkema, H. Stryhn, J. J. Wichtel, J. Neumann, A. Mella, J. Kruze, M. S. Espindola, and F. Wittwer 4602
- Effect of cytochrome P450 and aldo-keto reductase inhibitors on progesterone inactivation in primary bovine hepatic cell cultures
C. O. Lemley and M. E. Wilson..... 4613
- Molecular characterization of *Prototheca* strains isolated from Italian dairy herds
M. Ricchi, M. Goretti, E. Branda, G. Cammi, C. A. Garbarino, B. Turchetti, P. Moroni, N. Arrigoni, and P. Buzzini 4625
- Effect of inseminating cows in estrus following a presynchronization protocol on reproductive and lactation performances
R. C. Chebel and J. E. P. Santos..... 4632
- Output of selenium in milk, urine, and feces is proportional to selenium intake in dairy cows fed a total mixed ration supplemented with selenium yeast
G. P. Walker, F. R. Dunshea, J. W. Heard, C. R. Stockdale, and P. T. Doyle 4644
- Activation of liver X receptor (LXR) enhances de novo fatty acid synthesis in bovine mammary epithelial cells
J. W. McFadden and B. A. Corl 4651
- The Garfagnina goat: A zootechnical overview of a local dairy population
M. Martini, F. Salari, I. Altomonte, D. Rignanese, S. Chessa, C. Gigliotti, and A. Caroli..... 4659
- Associations between cow hygiene, hock injuries, and free stall usage on US dairy farms
J. E. Lombard, C. B. Tucker, M. A. G. von Keyserlingk, C. A. Kopral, and D. M. Weary 4668
- Use of individual cow milk recording data at the start of lactation to predict the calving to conception interval
A. Madouasse, J. N. Huxley, W. J. Browne, A. J. Bradley, I. L. Dryden, and M. J. Green 4677
- Blood profiles in dairy cows with displaced abomasum
L. Stengårde, K. Holtenius, M. Tråvén, J. Hultgren, R. Niskanen, and U. Emanuelson 4691
- Milk selenium concentration and its association with udder health in Atlantic Canadian dairy herds
A. Ceballos-Marquez, H. W. Barkema, H. Stryhn, I. R. Dohoo, G. P. Keefe, and J. J. Wichtel..... 4700
- Diagnosis and treatment of subclinical mastitis in early lactation in dairy goats
S. McDougall, K. Supré, S. De Vliegher, F. Haesebrouck, H. Hussein, L. Clausen, and C. Prosser..... 4710
- Localization of *Mycobacterium avium* subspecies *paratuberculosis* in artificially inoculated milk and colostrum by fractionation
L. Van Brandt, K. Coudijzer, G. Vlaemynck, M. Hendrickx, C. Michiels, W. Messens, L. Herman, and J. De Block 4722

<i>Short communication: Analysis of milk yield and composition for dairy heifers limit-fed lower forage diets during the rearing period</i>	
G. I. Zanton and A. J. Heinrichs	4730

NUTRITION, FEEDING, AND CALVES:

Evaluation of in vitro gas production and rumen bacterial populations fermenting corn milling (co)products	
W. L. Williams, L. O. Tedeschi, P. J. Kononoff, T. R. Callaway, S. E. Dowd, K. Karges, and M. L. Gibson	4735
Inclusion of psyllium in milk replacer for neonatal calves. 2. Effects on volatile fatty acid concentrations, microbial populations, and gastrointestinal tract size	
S. J. Cannon, G. C. Fahey Jr., L. L. Pope, L. L. Bauer, R. L. Wallace, B. L. Miller, and J. K. Drackley	4744
Effect of induction of subacute ruminal acidosis on milk fat profile and rumen parameters	
E. Colman, W. B. Fokkink, M. Craninx, J. R. Newbold, B. De Baets, and V. Fievez.....	4759
Effects of supplementing dairy cows with chromium propionate on milk and tissue chromium concentrations	
K. E. Lloyd, V. Fellner, S. J. McLeod, R. S. Fry, K. Krafka, A. Lamptey, and J. W. Spears	4774
Abomasal or ruminal administration of flax oil and hulls on milk production, digestibility, and milk fatty acid profile of dairy cows	
R. Kazama, C. Côrtes, D. da Silva-Kazama, N. Gagnon, C. Benchaar, L. M. Zeoula, G. T. D. Santos, and H. V. Petit	4781
Effect of feed sorting on chewing behavior, production, and rumen fermentation in lactating dairy cows	
D. D. Maulfair, G. I. Zanton, M. Fustini, and A. J. Heinrichs.....	4791
Effect of fish oil and sunflower oil on rumen fermentation characteristics and fatty acid composition of digesta in ewes fed a high concentrate diet	
P. G. Toral, K. J. Shingfield, G. Hervás, V. Toivonen, and P. Frutos	4804
Effects of stage of lactation and dietary concentrate level on energy utilization by Alpine dairy goats	
I. Tovar-Luna, R. Puchala, T. Sahlu, H. C. Freetly, and A. L. Goetsch.....	4818
Effects of stage of lactation and level of feed intake on energy utilization by Alpine dairy goats	
I. Tovar-Luna, R. Puchala, T. Sahlu, H. C. Freetly, and A. L. Goetsch.....	4829
A single mild episode of subacute ruminal acidosis does not affect ruminal barrier function in the short term	
G. B. Penner, M. Oba, G. Gäbel, and J. R. Aschenbach	4838
<i>Short communication: In vitro ruminal fermentability of a modified corn cultivar expressing a thermotolerant α-amylase</i>	
W. Hu, M. E. Persia, and L. Kung Jr.....	4846
<i>Short communication: Effect of grazing on the concentrations of total sialic acid and hexose in bovine milk</i>	
S. Asakuma, Y. Ueda, F. Akiyama, Y. Uemura, M. Miyaji, M. Nakamura, M. Murai, and T. Urashima.....	4850
<i>Technical note: Precision and accuracy of in vitro digestion of neutral detergent fiber and predicted net energy of lactation content of fibrous feeds</i>	
M. Spanghero, P. Berzaghi, R. Fortina, F. Masoero, L. Rapetti, C. Zanfi, S. Tassone, A. Gallo, S. Colombini, and J. C. Ferlito.....	4855

GENETICS AND BREEDING:

- Identification of single nucleotide polymorphisms in the bovine interleukin-12 and interleukin-23 receptor genes and their associations with health and production traits in Holstein cows
A. Skelding, F. S. Schenkel, B. S. Sharma, C. Verschoor, S. Pant, G. Biggar, H. Boermans, and N. Karrow 4860
- The effect of the number of observations used for Fourier transform infrared model calibration for bovine milk fat composition on the estimated genetic parameters of the predicted data
M. J. M. Rutten, H. Bovenhuis, and J. A. M. van Arendonk..... 4872
- Claw health index for Dutch dairy cattle based on claw trimming and conformation data
C. van der Linde, G. de Jong, E. P. C. Koenen, and H. Eding 4883
- Genetic parameters of feed intake, production, body weight, body condition score, and selected type traits of Holstein cows in commercial tie-stall barns
J. E. Vallimont, C. D. Dechow, J. M. Daubert, M. W. Dekleva, J. W. Blum, C. M. Barlieb, W. Liu, G. A. Varga, A. J. Heinrichs, and C. R. Baumrucker 4892
- Assessment of inbreeding depression in a Guzerat dairy herd: Effects of individual increase in inbreeding coefficients on production and reproduction
J. C. C. Panetto, J. P. Gutiérrez, J. B. S. Ferraz, D. G. Cunha, and B. L. Golden 4902
- A genome scan for quantitative trait loci affecting milk somatic cell score in Israeli and Italian Holstein cows by means of selective DNA pooling with single- and multiple-marker mapping
R. Tal-Stein, L. Fontanesi, M. Dolezal, E. Scotti, A. Bagnato, V. Russo, F. Canavesi, A. Friedmann, M. Soller, and E. Lipkin..... 4913

OUR INDUSTRY TODAY:

- Processing factors that influence casein and serum protein separation by microfiltration
E. Hurt and D. M. Barbano..... 4928
- Understanding the milk-to-feed price ratio as a proxy for dairy farm profitability
C. A. Wolf 4942
- Effects of running time of a cattle-cooling system on core body temperature of cows on dairy farms in an arid environment
X. A. Ortiz, J. F. Smith, B. J. Bradford, J. P. Harner, and A. Oddy 4949
- A comparison of the effects of 2 cattle-cooling systems on dairy cows in a desert environment
X. A. Ortiz, J. F. Smith, B. J. Bradford, J. P. Harner, and A. Oddy 4955
- “Global” and “local” predictions of dairy diet nutritional quality using near infrared reflectance spectroscopy
H. Tran, P. Salgado, E. Tillard, P. Dardenne, X. T. Nguyen, and P. Lecomte..... 4961
- Effect of pregrazing herbage mass on methane production, dry matter intake, and milk production of grazing dairy cows during the mid-season period
C. M. Wims, M. H. Deighton, E. Lewis, B. O’Loughlin, L. Delaby, T. M. Boland, and M. O’Donovan 4976
- Associations of breed and feeding management with milk production curves at herd level using a random regression test-day model
M. Caccamo, R. F. Veerkamp, J. D. Ferguson, R. Petriglieri, F. La Terra, and G. Licitra..... 4986
- Errata 4996