



IGA Newsletter September 2017

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National Foundation for Biotechnology Development (NADBIO) and the Venezuelan Department of Agriculture Initiate Program for Caprine Integral Development (PIDEL)

Written by Luis Dickson, IGA Regional Director for South America
Instituto Nacional de Investigaciones Agrícolas - Venezuela

The traditional breeding of goats began in Venezuela a few decades after the colonization by the Spaniards and has survived without many changes since then. The animal used is the Criollo, a very resistant animal that evolved from a mixture of Spanish, African and Canarian breeds introduced more than 200 years ago and that is adapted to the rough semiarid conditions of Venezuela. Breeders also use a very prolific mixture of crosses of Criollo and more recent introduced breeds like French Alpine, Anglo Nubian, Saanen and Majorera.

According to most recent data available (Censo Agrícola, 2007- 2008), goat breeding in Venezuela is an activity that unites about 16,332 goat breeders. This activity has traditionally been carried out in the semiarid regions in the states of Lara, Falcón and Zulia, where approximately 80.3% of a total of 1,057,056 goats are located. Nevertheless, according to an unpublished work (Dickson et al., 2017) the number of traditional goat breeders is rapidly decreasing in some areas by almost 40%. This is due mainly to cattle rustling and depredation by domestic dogs that have become wild, among other reasons.

The decrease in the number of traditional goat breeders is partly compen-

sated by an increase in non-traditional goat breeding units where at least 3,000 new producers have enrolled in the last 10 years. These producing units are not necessarily located in semiarid regions, but are located near big urban centers. This modality is stimulated by the fact that goat and sheep milk, meat and other products are not price regulated, giving this activity a special appeal in a price controlled economy.

Promoting development and sustainability of agricultural activity is probably the main goal of most state funded projects in developing countries over the past 50 years. Despite best intentions, an important part of these projects end up not reaching proposed goals and

have little or no impact on producers' welfare, mainly due to the failure of extension programs.

The need to stop the decline in number of goat breeders and to increase production of animal protein from non-conventional sources, like sheep and goats, have given rise to the Program for Goat and Sheep Development (PIDEL - Goat and Sheep), which is mainly a training and extension program carried out by the National Foundation for Biotechnology Development (Fundacion NADBIO) financed by the Agriculture Ministry of Venezuela.

This program uses non-conventional
Continued on Page 8

National and International Sheep and Goat Symposium, July 20-21, 2017



Dr. Jean-Marie Luginbuhl was invited by the Ministry of Agriculture and Rural Development of Colombia to speak at the National and International Sheep and Goat Symposium in July of this year. The event took place in Bogotá during Agroexpo, one of the most renowned agricultural fairs in Latin America. Dr. Luginbuhl instructed producers on goat gastrointestinal parasite control and grazing systems.

Additional information can be found on the following blog: caprovia-ca.blogspot.com/

Producción de caprino en México

Written by Héctor Mario Andrade-Montemayor, Universidad Autónoma de Querétaro - México

INTRODUCCION

El inventario nacional de caprinos en México asciende a cerca de 8,7 millones de cabezas, que producen 167.000 toneladas de leche (1,1% producción mundial) y 48.000 toneladas de carne (0,89% producción mundial). Este sector se concentra principalmente en las zonas áridas y semiáridas que corresponden al 60% del país, extendiéndose de sur a norte (Figura 1). Siendo los principales estados según sus censos: Puebla, Oaxaca, San Luis Potosí, Guerrero, Coahuila, Zacatecas, Guanajuato y Michoacán. (Foto 1)

Los sistemas de producción se dividen por el principal producto obtenido, siendo estos: Cabrito (Cría lechal de 30 días con un promedio de peso de 10 kg pie) en el norte y parte del centro de la república, Chivo cebado (Chivo de 40 a 45 kg) en el Pacífico y la región Mixteca, y producción de leche (que produce cabrito como subproducto) en La laguna, Centro y Bajío.

Actualmente la producción de cabras sigue asociada mayormente a estratos de población rural con menores ingresos, siendo en un 80% sistemas de producción de subsistencia. Cerca de 1,5 millones de mexicanos viven de la cabra, la cual se encuentra en 450.000 unidades de producción (SIAPSAGARPA, 2012). Sin embargo, se reconoce a la cabra como una de las pocas fuentes de ingresos en las regiones semiáridas del país, y cada vez es mayor el sector empresarial dedicado a la producción de leche y su transformación, en especial en la región de la Laguna (Coahuila y Durango) y el Bajío (Guanajuato, Querétaro, Michoacán y Jalisco) (SAGARPA, 2012).

SISTEMAS GANADEROS CAPRINOS

Como se ha mencionado anteriormen-



te en México aparecen según su producto final tres modelos de producción: Cabrito lechal (8-10 kg PV), Chivo cebado (Chivo de 40 a 45 kg PV) y producción de leche.

Cada sistema es acuerdo al producto generado, se ubica en diferentes agroecosistemas, clasificado de acuerdo a la presencia de sistemas de riego y a la presencia de

apariciones según su producto final tres modelos de producción: Cabrito lechal (8-10 kg PV), Chivo cebado (Chivo de 40 a 45 kg PV) y producción de leche.

Cada sistema es acuerdo al producto generado, se ubica en diferentes agroecosistemas, clasificado de acuerdo a la presencia de sistemas de riego y a la presencia de vegetación natural para alimentación del ganado. En ese sentido la producción de leche y cabrito (como subproducto), se presenta regiones con un amplio rango de precipitación (200 a 600 mm), pero requiere de la presencia de cultivos de riego y/o temporada y de vegetación natural. En el caso de la producción de carne de animales adultos se presenta regiones con rangos de precipitación menor (350 a 450 mm) pero se ubica en regiones en donde no existen cultivos de riego pero si de temporada y de vegetación natural. Y para sistemas dedicados a la producción de cabritos, se establecen en regiones con una menor pre-

cipitación (180-300 mm), regiones en donde los residuos agrícolas son pobres y dependen principalmente de la vegetación natural.

En los tres sistemas existen problemáticas similares (Cuadro 1), como es el caso de escasez de alimentos entre diciembre y mayo, la estacionalidad reproductiva presentándose los partos en épocas inadecuadas (temporada de escasez de forraje) lo que representa una elevada mortalidad y fallos reproductivos, así como reducida producción, siendo más severo en las regiones en donde no existen sistemas de riego.

Los sistemas de producción de leche de cabra son generalmente intensivos (con estabulación permanente) o semintensivos en donde el pastoreo post cosecha de residuos agrícolas, aunado al uso de agostaderos naturales y a la suplementación con forrajes de corte y granos producidos en la región predominan (Iruegas et al. 1999., Gómez et al. 2013; Salinas et al 2013).

Un problema importante que limita la producción y comercialización de la leche de cabra es su estacionalidad, debido a la estacionalidad reproductiva de los animales, los cuales presentan sus partos de Noviembre a Febrero (Andrade-Montemayor et al 2011), y por lo tanto, la producción de leche desciende en forma importante a partir de Septiembre hasta marzo, presentando su mayor producción de Mayo a Agosto (Iruegas et al. 1999). Esto es uno de los principales problemas ya que los meses con una mayor demanda de productos lácteos tales como quesos y dulces se presentan en los meses de Octubre a Diciembre.

RAZAS CAPRINAS

En el caso de los sistemas caprinos lecheros, las razas utilizadas son principalmente razas tipo Alpino (Saanen, Alpino Francés y Nubio), que en su

Continued on Page 3

Producción de caprino en México (*Continued from Page 2*)

mayoría han llegado por medio de programas de apoyo gubernamental, y en muchos de los casos ha introducido problemas sanitarios que eran inexistentes en la región. Estas razas presentan una menor adaptación aun cuando presentan una mayor producción de leche pero de menor calidad que la criolla, a lo cual el productor ha respondido por medio de cruzamientos con Criollas o buscando el regresar a la Criolla (Andrade-Montemayor 2016).

En los últimos 10 años ha tomado importancia la recuperación de caprinos de razas criollas, que son animales que se originan de razas introducidas durante la colonia española, y que se han mantenido debido a su rusticidad bajo condiciones extremas. Desde principio del siglo pasado se inició la introducción de cabras de origen Alpino, además de Anglo Nubia, y durante los últimos 20 años de ganado de origen Sudafricano (Boer), lo cual debido a programas de apoyo de gobierno se han fomentado, y han desplazado a grupos de animales criollos con excelentes características zootécnicas. Para mejorar esta situación, algunas universidades mexicanas (Universidad Benito Juárez de Oaxaca, Benemérita Universidad Autónoma de Puebla, Universidad Autónoma de Guerrero y la Universidad Autónoma de Querétaro), han desarrollado programas de valorización de razas criollas, iniciando por la gentrificación y caracterización morfológica, así como de su caracterización productiva, y dándoles un nombre característico tal como Cabra Pastoreña (cabra blanca aparentemente de origen celtibérico) de la Mixteca, cabra con excelentes características cárnica, rusticidad, y buen desarrollo, esta ha predominado en sistemas de producción rustico y trashumante de la región centro sur del país. En la región centro y norte se inicia un trabajo con la Cabra Criolla Negra, que en apariencia se deriva de la Cabra Granadina.

En los cuadros 2 y 3 se presentan algunos datos sobre la producción de leche y respuesta reproductiva de cabras de tipo lechero y de cabras criollas en México.



COMERCIALIZACION Y ASOCIACIONISMO

Los canales tradicionales de comercialización tienen varios pasos que van del productor de Leche--Proveedores-Fabrika de queso o dulce-Distribuidor-Consumidor, o en el caso del productor de leche y transformador artesanal, el paso es: Queso o Dulce-Intermediario-Consumidor. Entre cada uno de estos pueden existir otros intermediarios.

La estacionalidad productiva y la falta de organización en el acopio y venta de la leche es lo común. Gran parte de la leche de cabra se comercializa en forma no pasteurizada para la elaboración de dulces de diversos tipos y quesos que van desde quesos frescos tradicionales y regionales hasta quesos de pastas lácticas y quesos de pasta dura madurados con calidad gourmet que pueden alcanzar precios por kilogramo en el mercado de 25 a 30 dólares, comparados con los quesos frescos de un valoren el mercado de 5 a 7 dólares, esto está impulsando una industria que va en aumento debido a lo atractivo de su mercado.

En cuanto a la organización del sector en México existen diversos formas, que van de organizaciones enfocadas a la producción de ganado caprino de registro a organizaciones locales con fines de apoyo a productores, acer-

carlos a la obtención de apoyos económicos gubernamentales, y comercialización de productos. También aparecen los consejos nacionales de Caprinocultura, con la finalidad de agrupar a las diversas organizaciones.

En el primer término existen dos organizaciones de productores de Criadores de Ganado Caprino de Registro, La Asociación Nacional de criadores Ganado caprino de Registro y La Asociación Mexicana de ganado caprino de registro, la primera enfocada a producción de leche y la segunda con mayor cantidad de productores de ganado para producción de carne tipo Boer y Nubio. La función de ambas es el registro de genealogía del ganado de razas puras, así como el establecimiento de programas de control de producción lechero, centros de testaje, programa de evaluación genética, programas de control sanitario, y de desarrollo tecnológico para sus agremiados. También se cuenta con un Consejo Mexicano de Caprinocultura (COMECPRI), que agrupa a productores de toda la república sin importar si son de ganado de registro o no.

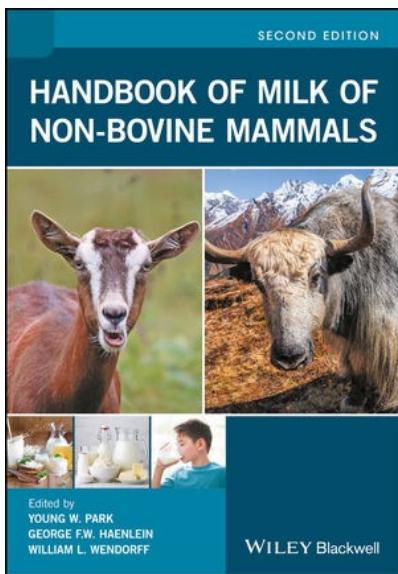
También a partir de 1985 se han desarrollado diversas organizaciones de técnicos en Caprinocultura, la llamada AMPCA (Asociación Mexicana de Producción Caprina) la cual cada dos años organiza un congreso en donde se presentan las investigaciones desarrolladas en esta área en el país.

PROYECTOS DE FUTURO Y COLABORACIONES CON ESPAÑA

México al igual que América Latina sigue teniendo lazos de encuentro con España, uno de los más importantes ha sido el de la capacitación de profesionistas del área en diversas Universidades españolas, como es el caso de la de Murcia, Córdoba, Madrid, Barcelona, y Canarias. Por otra parte, recientemente en el 2016 un grupo de técnicos y productores mexicanos fueron apoyados por iniciativa de

Continued on Page 8

Announcement: Handbook of Milk of Non-Bovine Mammals (2nd edition)



The first edition of the Handbook of Milk of Non-Bovine Mammals was so popular, that since published in 2006,

the book has been translated into Spanish and Chinese, which were published in 2010 and 2011, respectively. Furthermore, the handbook has been adopted as the textbook for research by Harvard Medical School.

Because of so much global demand from readers/scientists, Wiley-Blackwell published an updated 2nd edition of the book this year.

Contents

- Overview of Milk of Non-Bovine Mammals (Second Edition)
- Goat Milk
- Sheep Milk
- Buffalo Milk
- Mare Milk
- Yak Milk

- Zebu-Brahma and Mithun Milk
- Reindeer Milk
- Sow Milk
- Other Minor Species Milk
- Benddicte Coude
- Flavor and Sensory Characteristics of Non-Bovine Species Milk and Their Dairy Products
- Potential Applications of Non-Bovine Mammalian Milk in Infant Nutrition
- Human Milk

You can find copies available at many online retailers.

ISBN: 978-1-119-11027-9, 712 pages
July 2017, Wiley-Blackwell

Editors: Dr. Young W. Park, Dr. George F. W. Haenlein, and Dr. William L. Wendorff

Dairy, Science, Society, and the Environment

Written by Dr. Christopher Lu, published by Oxford University Press

Dairy has intertwined with human society since the beginning of civilization. It evolves from art in ancient society to science in the modern world. Its roles in nutrition and health are underscored by the continuous increase in global consumption. Milk production increased by almost 50% in just the past quarter century alone. Population growth, income rise, nutritional awareness, and science and technology advancement contributed to a continuous trend of increased milk production and consumption globally. With a fourfold increase in milk production per cow since the 1940s, the contemporary dairy industry produces more milk with fewer cows, and consumes less feed and water per liter of milk produced. The dairy sector is becoming more global, as people from a wider geographical distribution are consuming milk, from cattle to species such as buffalo, goat, sheep, and camel. The dairy industry continues to experience structural changes that impact society, economy, and environment. Organic dairy emerged in the 1990s as consumers increasingly began viewing it as an appropriate way of both farming and rural living. Animal welfare, environmental preservation, product safety, and health benefit are important considerations in consuming and producing organic dairy products. Large dairy operations have encountered many environmental issues related to elevated greenhouse gas emissions. Dairy cattle are second only to beef cattle as the largest livestock contributors in methane emission. Disparity in greenhouse gas emissions per dairy animal among geographical regions can be attributed to production efficiency. Although a number of scientific advancements have implications in the inhibition of methanogenesis, improvements in production efficiency through feeding, nutrition, genetic selection, and management remain promising for the mitigation of greenhouse gas emissions from dairy animals. This article describes the trends in milk production and consumption, the debates over the role of milk in human health, the global outlook of organic dairy, the abatement of greenhouse gas emissions from dairy animals, as well as scientific and technological developments in nutrition, genetics, reproduction, and management in the dairy sector.

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Dairy, Science, Society, and the Environment

Oxford Research Encyclopedia of Environmental Science

Dairy, Science, Society, and the Environment 
Christopher Lu
Subject: Agriculture and the Environment | Online Publication Date: Jul 2017
DOI: 10.1093/acrefore/9780199389414.013.316

Summary and Keywords

Dairy has intertwined with human society since the beginning of civilization. It evolves from art in ancient society to science in the modern world. Its roles in nutrition and health are underscored by the continuous increase in global consumption. Milk production increased by almost 50% in just the past quarter century alone. Population growth, income rise, nutritional awareness, and science and technology advancement contributed to a continuous trend of increased milk production and consumption globally. With a fourfold increase in milk production per cow since the 1940s, the contemporary dairy industry produces more milk with fewer cows, and consumes less feed and water per liter of milk produced. The dairy sector is becoming more global, as people from a wider geographical distribution are consuming milk, from cattle to species such as buffalo, goat, sheep, and camel. The dairy industry continues to experience structural changes that impact society, economy, and environment. Organic dairy emerged in the 1990s as consumers increasingly began viewing it as an appropriate way of both farming and rural living. Animal welfare, environmental preservation, product safety, and health benefit are important considerations in consuming and producing organic dairy products. Large dairy operations have encountered many environmental issues related to elevated greenhouse gas emissions. Dairy cattle are second only to beef cattle as the largest livestock contributors in methane emission. Disparity in greenhouse gas emissions per dairy animal among geographical regions can be attributed to production efficiency. Although a number of scientific advancements have implications in the inhibition of methanogenesis, improvements in production efficiency through feeding, nutrition, genetic selection, and management remain promising for the mitigation of greenhouse gas emissions from dairy animals. This article describes the trends in milk production and consumption, the debates over the role of milk in human health, the global outlook of organic dairy, the abatement of greenhouse gas emissions from dairy animals, as well as scientific and technological developments in nutrition, genetics, reproduction, and management in the dairy sector.

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the debates over the role of milk in human nutrition, the global outlook of organic dairy, the abatement of greenhouse gas emissions from dairy animals, as well as scientific and technological developments in nutrition, genetics, reproduction, and management in the dairy sector.

Book Announcement: Holistic Goat Care

A Comprehensive Guide to Raising Healthy Animals, Preventing Common Ailments, and Troubleshooting Problems

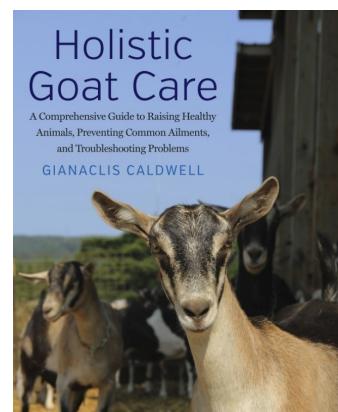
Goats have provided humankind with essential products for centuries; indeed, they bear the noble distinction of being the first domesticated farm animal. From providing milk and meat for sustenance and fiber and hides for clothing and shelter to carrying packs and clearing brush, there isn't much that goats cannot do. Managing goats successfully requires an understanding of how nature designed them to thrive, including nutritional and psychological needs, as well as how to identify a problem and intercede before it's too late.

For more than a decade, Gianaclis Caldwell and her family have operated Pholia Farm Creamery, an off-the-grid, raw milk goat cheese dairy. In Holistic Goat Care, Caldwell offers readers a comprehensive guide to maintaining a healthy herd of goats, whether they are dairy goats, meat goats, fiber goats, or pet goats.

Holistic Goat Care will empower even

novice goat owners to confidently diagnose and treat most of the ailments that goats might experience. For the experienced goat farmer, the book offers a depth of insight and approaches to treatment not found in any other book. Caldwell places special emphasis throughout on holistic, natural, and alternative approaches to caring for goats, including information on:

- Handling and managing goats using their natural instincts as an asset
- Developing good farm management practices such as appropriate housing and fencing systems and manure and mortality management
- Making feeding decisions based on understanding goats' ruminant digestive system and their evolutionary needs
- Growing forage and garden crops as feed and utilizing wild browse
- Troubleshooting health problems based on assessing symptoms
- Implementing advanced health procedures such as pain control, fecal testing, and transplanting rumen microbes from healthy to



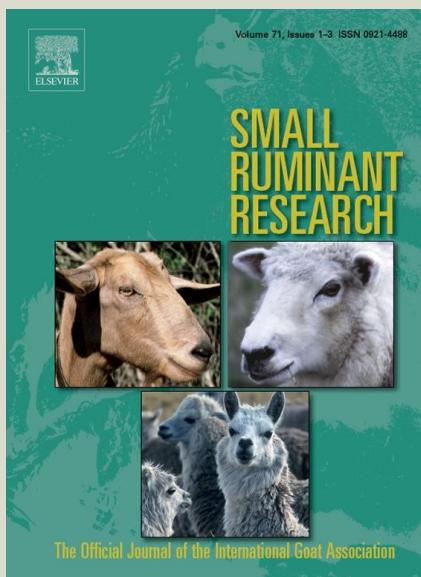
sick goats

- Diagnosing, treating, and preventing more than 75 common goat ailments

Whether your herd is two or two hundred, this first-of-its-kind, comprehensive book will help you keep your goats healthy, safe, and productive and give you a deep and enjoyable insight into the wondrous creature that is the goat.

Get your copy now. The publishers have agreed to offer IGA members a 25% discount for copies ordered from www.chelseagreen.com/holistic-goat-care and shipped in the USA. Contact us (admin@iga-goatworld.com) for the discount code.

Interesting Articles from Recent Small Ruminant Research Issues



Articles we think you'll enjoy

Variation of natural diet of free ranging mouflon affects their ruminal protozoa composition

A. Obidziński, R. Miltko, L. Bolibok, M. Wajdzik, J. Skubis, P. Nasiadka

Highlights

- We analysed mouflon rumen protozoa in relation to variation in the natural diet.
- The most numerous ciliate was Entodinium..
- Other protozoa groups were Anoplodinium, Eudiplodinium, Epidinium and Dasytricha.

- The density of ciliates of Entodinium and Diplodium varied distinctly with diet composition.

- Rumen microfauna may indicate the mouflon's membership in the intermediate feeders category.

Abstract

The mouflon's traditional classification as a grazer has recently been questioned, therefore new insight into the species' feeding and digestion is needed. The presence and share of different ciliate genera in the rumen may contribute to an

Continued on Page 6

Interesting Articles from Recent SRR Issues (*Continued from Page 5*)

understanding of a species' feeding physiology, therefore we analysed the composition of mouflon rumen ciliates and correlated their density with the percentage of different food types eaten by the animals. We found that the dominant ciliates were Entodinium spp., with a small proportion of Anoplodinium denticulatum, Eudiplodinium maggii, Epidinium ecaudatum caudatum and Dasytricha ruminantium. The main food types taken by the animals were deciduous tree leaves, grass and bramble. The density of ciliates from the Entodinium genus rose with an increase in deciduous leaves in the diet and fell with an increase of graminoids in the diet. The density of ciliates from the Anoplodinium and Eudiplodinium sub-genera increased with a rise in tree shoots and was reduced with a rise of deciduous leaves in the diet. These results confirm that the protozoal fauna vary with current food composition in intermediate feeders.

Keywords:

Ovis musimon, diet, ciliates, feeding types, Central Europe, alien species

[To read the entire article, visit SRR](#)

Genetic diversity within economically important loci in European, Middle Eastern, and African sheep breeds: An insight into their development

Stefania Chessa, Isabella Jasmin

Giambra, Horst Brandt, Anna Maria Caroli, Elisha Gootwine, Georg Erhardt

Highlights

- Phenotypes causative mutations are considered non-optimal for studying livestock diversity.
- Markers in genes of economic importance provided information on sheep diversity.
- Decline of heterozygosity with increasing distance to the domestication centre was not observed.
- Clustering according to local origin/purpose was visible, but without a complete breed grouping.

Abstract

The aims of this study were to analyze sequence variability within genes related to important economic traits in dairy and non-dairy sheep breeds, and to evaluate the genetic variability as an insight into their development. In total, 31 single nucleotide polymorphisms (SNPs), one indel, and one microsatellite, all located in ovine milk protein genes (CSN1S1, CSN1S2, CSN2, CSN3, LGB), and 13 SNPs located in genes associated with production and reproduction traits of economic importance (DGAT1, DGAT2, GHR, FASN, GHRHR, CTSB, MCR1, KRT1, IL2, IGF1, HR, GDF8, GDF9) were genotyped. The analysis included 752 samples de-

rived from 23 different European, Middle-Eastern (Turkey and Israel) and African (Nigeria and Cameroon) sheep breeds, and the European Mouflon.

We could not observe the often described decline of heterozygosity with increasing distance to the domestication centre maybe because of high gene flow and gene introgression between breeds following domestication. Tendencies of clustering according to the local origin of the animals were visible, whereas a clear breed grouping was not identified. No significant difference was found by principal component analysis of casein haplotypes between dairy and non-dairy breeds. However, using Canonical Discriminant Analysis most of the non-dairy individuals were correctly assigned to the non-dairy group, with an increasing precision when considering both casein haplotypes and the remaining SNP. The distribution of variation in the production-related SNP analyzed reflects both the long history of migrations, adaption, isolation, and the most recent effect of gene flow or isolation due to selection in the different breeds.

Keywords:

Ovine species, Genetic variability, Single nucleotide polymorphism, Casein, Haplotype, Economic trait loci

[To read the entire article, visit SRR](#)

Are you an IGA member?

You can pay your membership online through the [IGA Store](#)

Now is a great time to join:

- IGA memberships are effective for 1 year from the date you join.
- All IGA memberships include online access to [Small Ruminant Research](#).

- Participate in IGA projects, such as the IGA Consulting Group.
- Access to the MEMBERS area of the IGA website, where you get exclusive information, access to IGA member documents, etc.
- Submit articles for publication in the IGA Newsletter.

- Opportunities for leadership and participation in IGA committees.
- IGA is the voice of goat researchers & producers at national & international levels.

Pay Now



Poland conference, December 2, 2017

Title: Goat health - nutrition and disease prevention

Location: Veterinary Faculty of Warsaw University of Life Sciences

Date: December 2, 2017

Aim: meeting with goat breeders and training on nutrition and health of goats

Technical demonstration within the conference: presentation of the nutritive products for goats and kids, brochures on sponsors.

Languages of the conference: Polish and English. Translation will be provided.

Information about the conference is on the "KoziSerwis" website (which is run for goat breeders): <http://www.kozy.edu.pl/>

Main subjects - preliminary plan:

- 1) Milk period in kid rearing, importance of good quality milk replacer. Wim Twisk, Trouw Nutrition Sloten. Netherlands.
- 2) Nutrition and feeding management in dairy goats. Jose Maria Bello Dronda, Nanta. Spain
- 3) Important aspects in mineral nutrition. Prof. Dr. hab. Emilia Bagnicka, IGAB PAS. Poland
- 4) Deworming principle in dairy goats. Dr hab. Jarosław Kaba, dr Michał Czopowicz, WULF. Poland
- 5) Using herbal preparations in improving the health and efficiency of goat production. Dr. inż. Krzysztof Biatoń, Adi Feed. Poland
- 6) The importance of nutrition in the prevention of goat diseases. Mariusz Dobies, Trouw Nutrition. Poland
- 7) Using Probiotics to improve dairy

goat profitability and increase feed efficiency - practical managements aspects." Dr. Pierre Pichon - Lallemand Animal Nutrition. France

The organizers of the conference:

- Trouw Nutrition Poland
- Polish Society of Veterinary Sciences
- Veterinary Faculty of Warsaw University of Life Sciences

Information on the main organizer:

Trouw Nutrition Polska sp. z o.o.
ul. Chrzanowska 21/25
05-825 Grodzisk Mazowiecki
Poland

www.trouw.pl

Representative of the company: Mr. Mariusz Dobies, mail: mariusz.dobies@trouwnutrition.com

Genetic resistance to transmissible spongiform encephalopathies (TSE) in goats

EFSA Panel on Biological Hazards (BIOHAZ)

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Abstract

Breeding programmes to promote resistance to classical scrapie, similar to those for sheep in existing transmissible spongiform encephalopathies (TSE) regulations, have not been established in goats. The European Commission requested a scientific opinion from EFSA on the current knowledge of genetic resistance to TSE in goats.

An evaluation tool, which considers both the weight of evidence and strength of resistance to classical scrapie of alleles in the goat PRNP gene, was developed and applied to nine selected alleles of interest. Using the tool, the quality and certainty of the field and experimental data are considered robust enough to conclude that the K222, D146 and S146 alleles both confer genetic resistance against classical scrapie strains known to occur naturally in the EU goat population, with which they have been challenged both experimentally and under field conditions. The weight of evidence for K222 is greater than that currently available for the D146 and S146 alleles and for the ARR allele in sheep in 2001. Breeding for resistance can be an effective tool for controlling classical scrapie in goats and it could be an option available to member states, both at herd and population levels. There is insufficient evidence to assess the impact of K222, D146 and S146 alleles on susceptibility to atypical scrapie and bovine spongi-

form encephalopathy (BSE), or on health and production traits. These alleles are heterogeneously distributed across the EU Member States and goat breeds, but often at low frequencies (< 10%). Given these low frequencies, high selection pressure may have an adverse effect on genetic diversity so any breeding for resistance programmes should be developed at Member States, rather than EU level and their impact monitored, with particular attention to the potential for any negative impact in rare or small population breeds.

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methodologies and approaches, some of which are taken and adapted from some existing participative research methodological tools and others that were generated by PIDEL work teams in previous successful research and extension experiences (Dickson et al., 2007), to diagnose and prioritize needs for training and extension to improve productivity and strengthening goat and sheep production.

Experiences show how goat milk production can be raised more than 100% in a community of breeders only by making changes in herd management. These changes come about and remain through the direct training of producers (Dickson, et al., 2007).

PIDEL Goat started in June 2016 and by May 2017 it has enrolled 5,625 goat breeders from 96 communities in 9

states of Venezuela. This represents approximately 34.4% of existing breeders in the country, all of which have been subscribed to a training program that has until now conducted 108 workshops and practical courses. The program is about to start in 3 more states to reach some 7,000 breeders.

The program is also monitoring milk, meat and cheese production to measure the impact on goat and sheep productivity of PIDEL. It is also posting a market observatory on the internet to keep up with price changes which promises to generate a lot of interesting data that will be of great help to government policy makers.

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Producción de caprino (*Continued from Page 3*)

COMECPRI para realizar diversas visitas técnicas con la Asociación de caprinocultores de Málaga (CABRAMA), con ACRIMUR y MUR-CIGRAN, así como con la empresa "Genética Española", el objetivo fue realizar intercambio tecnológico, e intercambio de experiencias, entre otras cosas se importaron 10,000 dosis de semen de Murciano Granadino.

Cada año contamos con la presencia de diversos investigadores, veterinarios y maestros queseros, en la Feria de la cabra, el queso y la cajeta, celebrada en Celaya Guanajuato, así como con la presencia de investigadores españoles a diversos foros del área, como son las reuniones nacionales sobre Caprinocultura organizadas por la Asociación Mexicana de Profesionistas en Caprinos (AMPCA), o la visita de investigadores y técnicos Mexicanos a la SEO (Sociedad Español de Ovinotecnología y Caprinotecnología).

Por otra parte, es importante el trabajo que se ha realizado con la Universidad de Córdoba en el departa-

mento de Genética, en especial con la genotificación de caprinos criollos Mexicanos, así como en la preparaciones de especialistas del área.

BIBLIOGRAFIA

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We are proud to inform our members that Davinia Sánchez Macías was asked to join the Board of Directors of the International Goat Association. She has demonstrated knowledge of and commitment to the goat sector and IGA. We are confident that she will be a great addition to an already outstanding Board.

We are also proud to announce Professor Jun Luo as our Regional Director for Asia, along with four new wonderful Country Representatives:

- Marisia Geraci, South Africa
- Muhammad Ayaz, Pakistan
- Sun Haizhou, Inner Mongolia, China
- Yongiu Zhao, Southwest China

You can see the full list of all our Board members, Regional Directors, and Country Representatives on our website: www.iga-goatworld.com/inside-iga.html