



IGA Newsletter March 2017

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Situation of dairy goats in the world

Written by Francisco de Asis Ruiz Morales, IGA's Country Representative for Spain

Worldwide goat milk production has increased by 108.7% from 1988 to 2013, from 8,828,266 to 18,422,372 metric tons (FAOSTAT, 2013). Nevertheless, the goat is still exploited mainly for the production of meat, milk only being the principal product on the European continent.

In Europe, the goat milk market is main-

ly located in 3 countries: France, Spain and the Netherlands. In addition, Greece stands out at the production level. Each of these countries has their own peculiarities in terms of milk production and finished product systems. In recent years, The Netherlands has become one of the most important dairy resources for the French industry. The Dutch sector is characterized by highly technological systems, with animals of good genetic quality and a high capitalization of the farms. Spain stands out for its heterogeneity in milk production systems, from pastoral to indoor stall systems: the market for its milk depends mainly on the production of mixed cheeses (mixing milk from goat and cow, or from goat, ewe and cow) and from exports to France. The Spanish sector has been experiencing periodic price crises, but important advances have been made in the organization of its sector through Interprofessional (INLAC). France continues to be the European benchmark, both in milk produc-

tion and in the production of pure goat cheese, with an increase in goat cheese production of 7.5%. In Greece, with its pastoral systems, goat milk is dedicated to the production of traditional cheeses

Continued on Page 2

Continent	Production (liters per goat)
Africa	59.2
America	64.3
Asia	96.8
Europe	278.9
Oceania	34.5

Table 1. Average production of goat milk at the continental level (FAOSTAT, 2013)

Situación del caprino de leche en el mundo

Escrito por Francisco de Asís Ruiz Morales, Representante de IGA para España

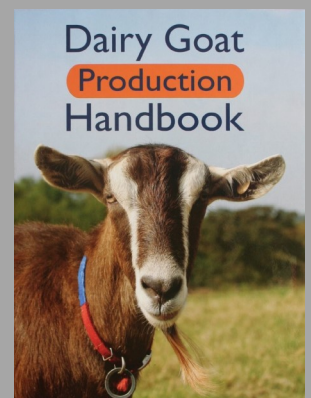
La producción de leche de cabra ha aumentado a nivel mundial un 108,7 % en el periodo de 1988 a 2013, pasando de 8.828.266 a 18.422.372 toneladas (FAOSTAT, 2013). A pesar de ello, el caprino se sigue explotando principalmente para la producción de carne, tan solo en el continente europeo es la leche el producto principal.

[Lea el artículo completo aquí.](#)

Dairy Goat Production Handbook

The First Edition of the Dairy Goat Production Handbook from Langston University has been published and is now available. The breadth and depth of topics and information included in this book will serve all dairy goat producers from those persons who raise and milk only a few does in their backyard to producers operating a large commercial dairy. Upon perusing the book, the reader will see that experts in all areas of production were invited to author chapters. Excellent pictures and charts accompany the narrative of each chapter. Production of safe, wholesome dairy goat milk and milk products is the aim of all dairy goat producers. The editors and authors hope that this handbook serves to assist in fulfilling that aim.

[Download an order form](#)



Situation of dairy goats in the world (continued from Page 1)

for the national market and national consumption. In addition, new countries interested in goat milk are beginning to appear, due to the crisis in the dairy cow sector and/or as an opportunity for product diversification: countries like Italy and Portugal are moving in this direction.

Asia is the number one continent in goat production: countries such as India, China or Bangladesh have a strong sector but, in the case of milk, directed mainly to self-consumption. With an important diversity of dairy breeds, some areas are beginning to develop an industry linked to dairy



Macro goat dairy in China (Author: Juan Capote, ICIA).

goat production with important projects, both in terms of volume and resources (Photo 1).

Mexico is the leading American country in goat production and represents the benchmark in the evolution of the goat dairy sector in Latin America. The systems continue to be mostly self-sufficient, using low resources both in terms of pastures and crop residues. In contrast, a more professional and innovative sector is developing, using more productive breeds, modern reproductive techniques and the transformation of milk into cheeses and other dairy products into small industries.

Concerning the African continent, the situations are diverse, according to the regions but, in general, meat production is the main product. Different activities have been initiated for the development of dairy in certain countries, especially in northern and western Africa, with attempts to improve the production of their animals but also in training for the production of dairy products.

Milk from goats is a product with many development opportunities and future due to its nutritional characteristics, its diversification in terms of



Herd of goats in Mexico.

the elaboration of transformed products (milk, cheese, yogurt, desserts...) and, above all, due to the adaptability of the goat to a multitude of environmental conditions, thanks to the still existing biodiversity still in goat breeds.

Literature Cited

FAOSTAT, 2013. www.fao.org/faostat/en/#home

IGA, 2016. www.iga-goatworld.com

CAPRIROM - The National Association of Goat Breeders - Progress in the Development of Goat Husbandry in Romania

Written by Dr. Stela Zamfirescu, former IGA Board member, Vice president and Honorary president of Romanian Goat Association, CAPRIROM

The goat breeding sector in Romania has steadily increased in the past decade, reaching a total of 1,868,000 head at the end of 2016. Of these, 1,125,600 are reproduction-aged goats, and over 133,000 young female goats are mated. The interest of the Romanian population in consuming goat products - meat, milk and by-products has risen continuously. ANCC Caprirom had a major positive impact on the development of the goat sector, both socially and economically.

By its structure and goals, ANCCC uses the tools of the multidisciplinary approach, corroborating activities from different areas: animal husbandry consultancy (livestock breeding technologies, reproduction, selection and amelioration, nutrition) and economic consultancy (marketing plans for capitalizing productions, technical assistance to achieve national and European programs like National Rural Development Program, European Agricultural Fund for Rural Development, the representation of breeders and processors on traditional and modern markets), education and professional training (courses, workshops, symposia, congresses), activities regarding the representation of the rights and



interests of goat breeders in connection to various government agencies or NGOs.

Caprirom manages the Official Control of Milk Production for 11.1% of the national goat population, which was 80,000 head in 2016 and 100,000 head in 2017, reared on 420 goat farms. By its actions, ANCC Caprirom leaves its mark on the economy of the entire goat breeding sector, solving technical and real economic and social problems.

Continued on Page 3

CAPRIROM - The National Association of Goat Breeders *(continued from Page 2)*

The association is divided into several subsidiaries: Caprirom Botosani, Caprirom Reghin, Caprirom Caransebes, Caprirom Onesti, Caprirom Popauti, Caprirom Bacau, Caprirom Constanta, Caprirom Dambovita, and Caprirom Teleorman. ANCCC is a founding member of the Romanian Association for Animal Genetic Resources Management and of the Romanian Federation of Animal Sciences.

The annual conference of the goat breeders is organized every year. On this occasion, the members are informed about the accomplishments of the previous year, the economic and financial activity is presented and the budget for the following year is approved.

From the beginning of its existence (1993), The National Romanian Association of Goat Breeders (Caprirom) aimed at interdisciplinary cooperation, not only at the national level but also internationally. Anchored at international level through its affiliation to IGA - the International Goat Association - since 2000, ANCC Caprirom promotes the tradition of small ruminant husbandry in Romania. The research activity is confirmed by the collaboration with The Palas Research and Development Institute for sheep and goat breeding of Constanta, "Ovidius" University of Constanta and with other universities with agricultural profile and by participating in national and international research projects. The number of IGA members range between 15 and 22.

Therefore several associations, institutes, farmers and processors of European Union countries such as France, Italy, Spain, Germany, Portugal were contacted in order to take over practical, scientific and organizational information.

With relevant activity in the goat farming field, ANCCC influences positively and resolves important issues of a developing goat sector that is found

ed on an occupation that has always defined the Romanian space. All these collaborations contributed decisively to the development of the association's activities that has become a known brand at the national and international level.

Among the first collaborations with a distinct impact on the dissemination of genetic progress through artificial insemination and embryo transfer was with the INRA Tour Institute, INRA Station Rouille Station and Procreatech Company. Here, Romanian specialists have improved their knowledge regarding the freezing of goat semen, the intracervical and laparoscopic insemination technique of goat with frozen sperm, and the technology of collecting, freezing and transferring of goat embryos. Later, this technique was spread in all research stations around the country. There followed a series of exchanges of information and visits to Spain, Germany, Belgium and France where genetically valuable genitors and frozen germplasm (semen and embryos) were acquired.

Caprirom joining IGA was another valuable contact after which the activity of the association was known worldwide, and Romanian animal husbandry. Since 2004, Romania has been one

of the countries with the largest number of IGA members and has organized no less than three international conferences (Constanta 2004, Constanta 2006 and Oradea 2014). Specialists, farmers and IGA members attended international and regional conferences, where they presented scientific papers on topics such as reproduction, food and nutrition, and breeding and husbandry technologies. Between 2006 and 2008 Romania participated through Caprirom, along with five other European countries under a FAO project, to study goat farming systems in Romania.

Among the most important achievements of Caprirom is its participation, along with "Ovidius" University of Constanta, in the European project, entitled "Hormone-free non-seasonal or seasonal goat reproduction goat milk for a Sustainable European market - FLOCKREPROD", ("Capacities" SMEs, under FP7). This project was realized by seven European countries. The research was finalized with the accomplishment of a Romanian practical guide for non-hormonal reproduction, which has been disseminated in over 400 copies to farms and private households.

Continued on Page 4



A short course from NC State University, August 7-9, 2017

Course Description:

This 3-day short course is designed to provide participants with both theoretical background and significant opportunity for hands-on practice needed to facilitate the adoption of artificial insemination into their goat breeding programs. With the use of improved transcervical AI breeding techniques for goats, pregnancy rates comparable to those routinely achieved for AI in cattle are now possible. This short course will consist of an initial series of lectures on Monday morning coupled with four hands-on practice sessions (Monday pm, Tuesday am & pm, and Wednesday am). Lecture topics will include anatomy & physiology of the female reproductive tract, estrous & ovulation synchronization, AI breeding techniques (standard and improved), and the use of frozen semen for AI.

Who Would Benefit:

Livestock agents, Producers, Veterinarians, Veterinary Technicians, International Agriculture Workers, Animal Science and Veterinary Science Students

Continuing Education Credit:

15 AVMA CE hours available for qualified individuals (AVMA Event ID# To Be Announced)

Registration Costs:

\$500 (early bird); \$550 after July 20, 2017
All registrations must be completed
online: www.cals.ncsu.edu/ncsugoatAI/

Registration Fees Include:

Morning and afternoon refreshment breaks, boxed lunches for Monday and Tuesday, manual, parking passes for personal vehicles for all course venues. All supplies for working with the animals and AI practice will be provided. Barn boots and coveralls will also be provided. Visa letters available upon request. For more information, contact course coordinator.

Course Dates and Times:

Monday, August 7, 2017 (8:30am-5:00pm; AM Lectures with PM Laboratory Practice Session)
Tuesday, August 8, 2017 (8:30am-5:00pm); AM Laboratory Practice Session & PM Laboratory Practice Session
Wednesday, August 9, 2017 (8:30am-noon; AM Laboratory Practice Session)

Course Coordinator:

Dr. Charlotte Farin (Char_Farin@ncsu.edu)

For Course Information and Online Course Registration, go to our website at:

www.cals.ncsu.edu/ncsugoatAI/

NC STATE UNIVERSITY

COOPERATIVE EXTENSION

COLLEGE OF AGRICULTURE

AND LIFE SCIENCES

CAPRIROM - The National Association of Goat Breeders *(continued from Page 3)*

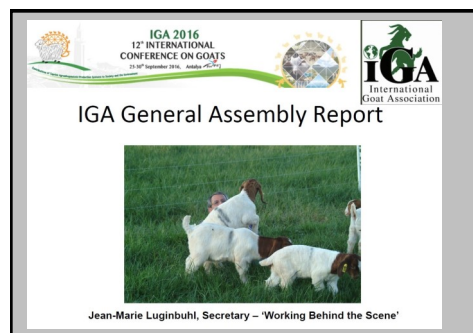
Caprirom has been represented by Prof. Stela Zamfirescu at multiple international collaborations in parasitology (COST project - CAPARA - Goat parasites, 2010-2014), FAO project in goat nutrition (Greece, 2007) and goat milk quality (Norway, 2011), and has a long collaboration with Heifer Project Romania Foundation for implementing projects in Romania with goats and sheep. One considerable impact upon the farmers is the journal "Goat Bulletin" and the books, News in Goat Farming and Goat breeding in East European Countries- Present and Future, endorsed by Caprirom.

At present, ANCC Caprirom is the largest association of goat breeding in Romania and it keeps developing its

activities, the technical base and the human resources with the purpose of satisfying the needs of goat breeders and supporting sustainable development in this important domain.

For more information, you can contact CAPRIROM at:
ANCC - CAPRIROM, Sos. I.C.Bratianu nr. 248, Constanta 900316

tel/fax: 0241626511, 0727869984
e-mail: caprirom@canals.ro or caprirom@yahoo.com
site: www.caprirom.ro



2016 General Assembly Report

[View the report](#) from Jean-Marie Luginbuhl, IGA's Secretary-Treasurer, which was presented in September 2016 at the 12th International Conference on Goats during the IGA General Assembly.

You can either [download the PDF](#) version or [click through the slides](#).

Thank you again to ALL of our wonderful members.

The 18th Japan National Goat Summit in Aso



The 18th Japan National Summit, entitled “Ecological Life and Agriculture with Goats,” took place on November 12-13, 2016 in Aso, Kumamoto. The Aso area was severely damaged by the 2016 Kumamoto Earthquake with a magnitude 6.2 foreshock on April 14 followed by a magnitude 7.0 mainshock on April 15, which killed more than 50 people and evacuated 44,000.

The organizers faced difficulties in implementation of the Summit this year; however, they decided to make the Summit as a symbol of recovery. With their strong tie and efforts, the Summit was successfully conducted. Despite harsh accessibility due to reconstruction and damaged roads, the Summit welcomed more than 280 participants from all over the country.

Keynote lectures were made by Ayumi Kotani, an agricultural journalist, who spoke on “Diversity and Complementarity of Goats,” and Masaharu Manda, Professor Emeritus at the Kagoshima University, who spoke on “Goats that support livelihood.” The 4 invited lectures were:

“Things that Goat Keeper Should Know” by Nobuo Kato, Director, Nagano Station, the National Livestock Breeding Center

“Supporting Systems that Enhance Goat Production” by Akio Imai, the President of National Goat Network, Japan

“Threads and Measures to Control Internal Parasitism in the U.S.A” by Yoko Tsukahara, Visiting Scholar, Langston University, USA

“Basics of Livestock Sanitation and Disease Control” by Hozumi Tanaka, DVM.

In addition, there were 7 case studies made by producers, students, and young scientists.

After the plenary session, 6 section meetings were held in areas of: Life with Goats, Milk and Meat Processing, Goat Production, Goats in Education/Animal Therapy Using Goats, Weed Control Using Goats, and Introduction to Goat Management.

Presenters were divided into each meeting and participants selected a meeting according to their interests. In each session, there were more questions and answers, as well as deeper discussions.

The evening social program included a buffet style dinner with hot-pot, sushi, and local vegetables. Interactions, discussions, and meeting with new people lasted until midnight. The programs the following morning were practicing hoof trimming and artificial insemination using simple equipment, which was led by technicians from the Nagano Station of the National Livestock Breeding Center.

During the Summit, a goat picture contest was held and every single participant voted best 3 pictures among 100 pictures. The best picture got the prize was # 9, “Pregnancy Exercise of Saanen Does.”

Exhibits included goat products, grazing equipment, and electric fences, as well as does and kids from the Asagiri-Seiryu project. The Asagiri-Seiryu project has been promoting goat production and utilization in Asagiri Town, Kumamoto. They sell goat milk, promote goat meat consumption, and utilize goats for weed control, animal therapy, and juvenile education. You can visit their website at <http://asagiri-seiryu.com> for more details.

Yuko Takahashi, IMA Cheese Factory, sold his “Chaus-Dake Chevre.” He is a

SPECIAL POINTS OF INTEREST:
第12回国際ヤギ会議
in トルコアンタルヤ
The 18th Japan
National Goat
Summit in Aso

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国際ヤギ協会 日本支部

IGA Japan
国際ヤギ協会 日本支部
ISSUE 8
DECEMBER 2016

**IGA 2016
12th INTERNATIONAL
CONFERENCE ON GOATS**

第12回国際ヤギ会議 in トルコアンタルヤ

2016年9月25日から30日まで、トルコのアンタルヤ市において4年一度の国際ヤギ会議が開催されました。今年の中核テーマは、「ヤギを利した社会(種地・森林・草地)連携」という公式発表でした。学術プログラムでは、口蹄疫による羊蹄疫の発生が話題となり、海外からの参加者もアットホームでくつろいでいる様子が見られました。ここIGAJapanは、無事開催を報告するとともに、トルコ開催の予定が早く決まることが、大きな励みになりました。しかしながら、参加者が少なかったが、参加者同士の密接な交流が実現し、全体としては大きな成功だったと感じています。また、IGAJapanの会長とサウンズ議長をはじめとする、トルコの人々の熱い歓迎と温かい声援に感謝しています。来年はIGAJapanの海外からの参加者もアットホームでくつろいでいる様子が見られました。ここIGAJapanは、無事開催を報告するとともに、トルコ開催の予定が早く決まることが、大きな励みになりました。

2016年9月25日から30日まで、トルコのアンタルヤ市において4年一度の国際ヤギ会議が開催されました。今年の中核テーマは、「ヤギを利した社会(種地・森林・草地)連携」という公式発表でした。学術プログラムでは、口蹄疫による羊蹄疫の発生が話題となり、海外からの参加者もアットホームでくつろいでいる様子が見られました。ここIGAJapanは、無事開催を報告するとともに、トルコ開催の予定が早く決まることが、大きな励みになりました。

The IGA Japan newsletter for Fall 2016 is now available to read.
[Click here to read it.](#)

cheese producer at Ima Farm, Nasu Kogen, Tochigi. He had learned goat cheese making in Germany in 2011 and is now producing high quality cheeses in his factory with his wife Yukari who is also an excellent cheese producer. Yuko has been honored as a Guild International of Fromage in November 2016, following his wife Yukari who received it in April, 2016.

Yagi Sakura Farm (Goat and Cherry Farm) exhibited and sold the “Goat Perfect Soap” and “Goat Natural Cream (moisture cream).” The farm is from the Aso area, owned by Kencho Futagoishi

Other exhibitors were the Agricultural Technology Center, Shimane, which showed grazing equipment, Surge Miyawaki K.K., an electric fence dealer in Tokyo and others. Participants enjoyed their products and to interact with the Exhibitors.

National Goat Summit 2017

The 19th National Goat Summit will be held in Gifu prefecture in fall 2017. More information will be available at the Japan Goat Network website <http://japangoat.web.fc2.com/index.html>

Synergising Productivity Impacts from Oil Palm-Ruminants Silvopastoral Systems: The Unfinished Agenda

This book announcement was provided by Dr. C. Devendra, IGA's Country Representative for Malaysia. This is Dr. Devendra's 24th book. We wish to extend our congratulations to him. His passion for writing, combined with his deep dedication to the science of animal production systems in the developing world, has produced many impeccable books.

The oil palm ranks supreme among tree crops (coconut, cashew, citrus and rubber). Today, the Malaysian palm oil industry is remarkable in one of the most highly organized sectors of any national agricultural research (NARS) system in the world. In Malaysia, oil palm is referred as "the golden crop."

This book was launched by the Minister of Primary Industries and Commodities on January 10th on the 100th year anniversary of the commercialization of the palm oil industry in Malaysia. The reference to "*The unfinished agenda*" emphasizes shared ideals and major opportunities for potential increased productivity in integrated animal-agriculture, mainly cattle and goats.

The oil palm environment not only provides shade, but also mixed herbaceous biomass (grasses, shrubs, ferns and tree leaves) which provide 72-93% palatable feeds. One of the unique features of the oil palm is that almost all parts of the palm are edible by ruminants. The by-product feeds include oil palm trunks (OPT), palm press fibre (PPF), palm kernel cake (PKC and palm oil mill effluent (POME). Ruminants relish oil palm leaves.

Silvopastoral systems are the focus of this book, and are important pathways for increasing animal protein production, but the systems are sadly neglected. The concept of silvopastoral systems relate to agroforestry

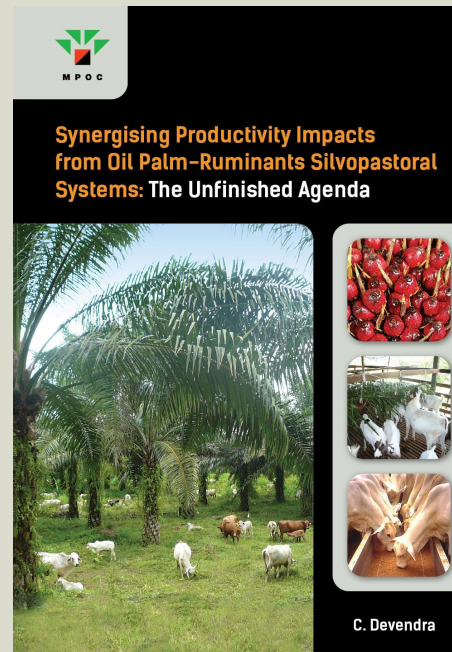
crop options that are integrated with animals. They are an important pathway for food production. Integrated systems link the natural resources (crops, animals, soils and water) to economic, social and ecological perspectives. Malaysian agriculture is essentially mixed farming, and given the vast diversity of crops and animals, integration and diversification of various crops and animals is common. The impact of the synergistic interactions gives a greater total contribution than the sum of their individual effects. Thus, integration of beef cattle with oil palm results in

my, superseded only by staple cropping. The quest to increase per animal production is justified by the awesome human needs and rising incomes, increasing per animal production is justified and driven by the awesome human needs and rising incomes.

Unfortunately, agriculture is waning and so is R and D, exacerbating inefficiencies in natural resource management (NRM) and production systems, persistence of food insecurity, poverty, malnutrition, exploding food prices, catastrophic floods, survival, and natural resource degradation particularly in the less-favored areas (LFAs), mitigation, and the unpredictable effects of climate changes are major challenges and concerns.

12.5% of world population is currently malnourished (FAO, 2012), and emphasizes the need for more food. Food-demand patterns are also rapidly changing which imposes changes in farming systems which may go against tradition. Farming systems in Asia are characterized and dominated by small farms, dominating presence of about 87% of the global total of 470 million small farms (< 2 ha), many of which are models of efficiency. Key descriptors of small farmers are deprivation, subsistence, illiteracy, survival and vulnerability, whose lives are a non-ending syndrome of poverty - adaptation - fragile lives - little hope - low life expectancy complex (Devendra, 2011). Technology-driven transformation, empowerment and community-based pro-poor development are essential.

The unfinished agenda merits an assertive program, institutional commitment, and joint efforts with the private sector. In the absence of this urgent action, the development of sustainable silvopastoral systems will remain a continuing academic rhetoric. The combined threats and effects



increased fresh fruit bunches (FFB), palm oil, and beef. Additionally, ecological and economic sustainability are mutually reinforcing. In small farms, ruminants are multifunctional and contribute significantly to productivity, stability and sustainability of many farming systems in the developing world.

Challenges for agriculture

The livestock sub-sector is one of the fastest growing in agriculture (World Bank, 2003), and the second largest contributor to the agricultural econo-

Synergising Productivity Impacts *(continued from Page 6)*

of climate change damage to the environment are unpredictable. Equally serious is the limited capacity of the national agricultural research systems in most countries. Dr. Devendra suggests revitalized intensification of animal agriculture to enhance productivity through three pathways:

- Significantly intensify the efficient use of the natural resources and enhance the integrity of the environment.
- Increase the availability and access to food, especially animal proteins (Devendra, 2010), by improving the integrity of the natural resource base upon which agriculture depends.
- Intensify the use of less-favored rainfed areas (LFAs), and empower the most marginalized men and women farmers to improve farming systems and agricultural productivity. Goats can be used as the entry point for development.

The unfinished agenda merits an assertive program, institutional commitment, and participatory efforts

with the private sector. Time is not on our side and there is urgency in the resolution of priority issues in the immediate future. Without these and urgent action, sustainable silvopastoral systems will remain a continuing academic rhetoric.

In Chapter 12, Dr. Devendra identifies new issues such as diet trends, intensification, enzootic diseases, and rising costs which challenge cost-effective production, efficient use of the production resources and the policy framework. Appropriately, he emphasizes the tenets of research, leadership and direction. A long reference list at the end of the book provides a guide to the primary sources of data.

Vision must lead the way, and it is sobering to reflect in closing on two very appropriate and endearing quotations:

- “Beyond your diagrams and equations don’t forget the face of the hungry man.” Albert Einstein
- “Land rich in livestock is never poor and land poor in livestock is never rich.” Ethiopian proverb

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First published in Malaysia in 2017 by MALAYSIAN PALM OIL COUNCIL (MPOC). This book can be purchased from the publisher for approximately \$17 USD (not including shipping).

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The path to greener pastures

Here is an excellent report about the future of pastoralism, which was an important topic of discussion at the ICG XII in Antalya, during the very popular Agro-Sylvo-Pastoralism Workshop. Although globally, pastoralism is not limited to small ruminants, in nearly every ecological niche, goats and sheep are an important part of pastoralist livelihoods.

[CLICK HERE TO GET THE PDF.](#)



The path to greener pastures
Pastoralism, the backbone of the world's drylands



TECHNICAL BRIEF

Join IGA Pay your membership online

2017 OFFICIAL MEMBERSHIP APPLICATION

MEMBERSHIP YEAR
(Check appropriate box or boxes)

2017 2018 2019 2020

Family Name: Tip: Use to enter text. **Given or First Name:** Tip: Use to enter text.

Title: Tip: Use to enter text. **Organization:** Tip: Use to enter text.

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City/State: Tip: Use to enter text. **Country/Zip Code:** Tip: Use to enter text.

Telephone Number: Tip: Use to enter text. **Fax Number:** Tip: Use to enter text.

Email: Tip: Use to enter text.

IGA MEMBERSHIP
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 \$98.00 USD per year – one year IGA membership* without the journal
 \$188.00 USD per year – one year membership* with the official journal of the IGA, Small Ruminant Research
 US Human Development Index countries below \$98
 \$12.00 USD per year – one year IGA membership* without the journal
 \$68.00 USD per year – one year IGA membership*, including Small Ruminant Research
*All IGA memberships include online access to Small Ruminant Research and is valid for 1 year from the date payment is received.

Pay Now

A Genetic Perspective about the Origins of the Canarian Livestock

The food animals with the largest distribution on Earth are goats, with more than one billion heads. Sixty-one percent of these are distributed in twenty-seven percent of the poorest countries. Goats can be found in the Polar Circle or in the tropical rain forests, in the steepest mountains or in desert regions, on high-tech farms or in refugee camps. Nonetheless, most of them survive in pockets of poverty, among the most outcast pariahs, where their very existence can separate life from death in humans. This study focusing on the genetic perspective of the origins of goats from the Canary Islands contributes to the universality of that specie. In addition, the book includes research that demonstrates the influence of goats from the Canary Islands on American 'creole' genotypes. Finally, the book also discusses the origins of sheep and swine from the Canary Islands.

This book aims to provide a perspective that can be useful for historians and other scientists, thus enriching the scope of their work. It has been elaborated by geneticists and ethnologists who work in the field of Animal Science, which is mainly focused on the study of domestic animals. In order to elaborate the research presented in this book, both modern and ancient animals from archaeological sites have been sampled. Besides establishing the phylogenetic relationships amongst Canarian livestock populations, in several cases comparisons with other domestic breeds from America, Africa and the Iberian peninsula have been established. One of the most important conclusions of these genetic studies is that the gene pools of Canarian livestock species have been strongly shaped by the founder effects associated with the settlement of the first colonizers of the archipelago. Moreover, the authors provide evidence that Canarian livestock participated in the foundation of American creole breeds

This book is written in Spanish and English.

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Una Perspectiva Genética sobre los Orígenes del Ganado Canario

Los animales de abasto con mayor distribución en la Tierra son los caprinos, con más de mil millones de ejemplares. El 61% de éstos se encuentran repartidos en el 27% de los países más pobres. Se pueden encontrar cabras en el Círculo Polar o en las selvas tropicales, en las montañas más abruptas o en los desiertos, en granjas tecnificadas o en los campamentos de los refugiados. Pero en su gran mayoría sobreviven en las bolsas de pobreza, junto a las parias más parias, allí donde su sola existencia puede separar la vida de la muerte entre ser humanos. Este estudio de la perspectiva genética sobre los orígenes del ganado canario contribuye a la universalidad de esta especie. Además, el libro recoge trabajo de investigación donde se demuestra la influencia del ganado canario sobre los genotipos criollos americanos. Por otra parte, el libro también trata de los orígenes de los ovinos y porcinos canarios.

Este libro pretende ser una herramienta para que historiadores y otros especialistas puedan tener una perspectiva que permita enriquecer sus trabajos de investigación. Ha sido elaborado por genetistas y etnólogos que trabajan en el área de la Ciencia Animal, rama del conocimiento dedicada al estudio de las especies domésticas. Para realizar las investigaciones recopiladas en este libro, se han utilizado tanto muestras procedentes de animales vivos como extraídas de material hallado en yacimientos arqueológicos. Además de establecer las relaciones filogenéticas entre los genotipos pertenecientes a las distintas poblaciones ganaderas canarias, en algunos casos las investigaciones se han realizado comparando dichos genotipos con otros procedentes de América, África y la Península Ibérica. Entre las conclusiones más significativas de estos trabajos, cabe destacar que el acervo génico de las poblaciones canarias, traídas por los primeros habitantes del archipiélago, se ha visto muy influenciado por el consiguiente efecto fundador. Asimismo, los genotipos canarios han contribuido de manera importante a la formación de las razas criollas americanas.

Este libro está escrito en español e inglés.

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