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## 13th International Conference on Goats, Eger, Hungary, October 3-8, 2021

The IGA Board of Directors has decided to postpone the 13th International Conference on Goats.

The new date is 3-8 October 2021.

Even though the 13th ICG is several months away, the current COVID-19 crisis has made it extremely difficult to plan any large gathering. We know the dangers of infectious diseases and the need to prevent exposure, so rather than put people at risk unnecessarily, the Board of Directors postponed this conference.

As the COVID-19 Global Pandemic moves across the world, we send our sincere hope for good health and protection to the entire IGA family. We are all affected by this situation, some more seriously than others.

We need to support each other professionally and personally as best we can. And we need a future where robust science informs public policy to prevent this type of tragedy. May we, our families, and colleagues endure this current situation, and we will see you again in Hungary in

EGER/HUNGARY

Follow all the IGA COVID-19 news here: <a href="https://www.iga-goatworld.com/blog/category/covid19">https://www.iga-goatworld.com/blog/category/covid19</a>.

## Message from the IGA President

Greetings to the IGA Community! We hope conference is selected, we will send out that you are safe and well.

The current COVID-19 crisis has created extraordinary changes in our world. We know the dangers of infectious diseases and the need to prevent exposure. It has become challenging to plan any large gathering, so rather than put people at risk unnecessarily, the IGA Board decided to postpone the 13th International Conference on Goat.

Unfortunately, because the 13th ICG is postponed, elections for the new Board will be delayed. When a new date for the an official call for nominations. Any IGA member in good standing (meaning their membership dues are up-to-date) can be nominated to serve a four-year term. Check our website regularly for more information in the coming days and months!

During this time of isolation, we wanted to take a moment to reflect on the past year. We have seen the rising prominence of the goat sector globally. The number of animals continues to climb over 1 billion, mainly in Africa and Asia. Consumption of goat milk products is growing, especially in middle and high-income countries, and

the "functional food" segment like yogurt and kefir is especially strong. Demand for goat meat also grows as more people can afford to consume animal products, and the market for luxury fibers like cashmere and mohair is also rising.

Research to help producers and to develop new goat products is also increasing. The diversity of research topics is evident in Small Ruminant Research, IGA's scientific journal, at https:// www.journals.elsevier.com/small-

ruminant-research. Also, mainstream animal and food science journals are

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### Message from the IGA President (Continued from Page 1)

publishing more about goats and their products than ever before. There is an increased study of the goat genome, and the search for desirable genetic traits, in both locally adapted indigenous goats, and high performing commercial breeds. The FAO/OIE Global Eradication Programme to eradicate Peste des Petits Ruminants (PPR) by 2030 has brought increased attention to infectious diseases in goats, and also to improved animal health delivery systems, especially in marginalized rural communities. (https:// www.oie.int/en/animal-health-in-theworld/ppr-portal/).

IGA is an essential link between goat producers facing nutritional, genetic, health, marketing, and environmental challenges, and new technical tools and policies necessary for improvement. In addition to our scientific journal SRR, the IGA website offers a wealth of information and internet links to books, articles, websites, online courses, data, and projects that connect you to what's happening across the global goat community. IGA is a member of two important global

initiatives impacting small ruminants: the SMARTER research network (https://www.smarterproject.eu/), and the PPR Eradication Advisory Council, and Research and Expertise Network.

National, regional, and international conferences are one of the best ways to share information and develop new collaborations. We are happy to report that a record number of meetings and workshops on goats or small ruminants have taken place in the past two years, due to the tireless efforts of the IGA Board, our Scientific Committee, and the Regional Directors and Country Representatives (https:// www.iga-goatworld.com/ country\_representatives.html). These include the 1st Asian Regional Conference on Goats [ARCG] (India, 2018), the 2nd ARCG (Nepal, 2019), XI Congress of the Latin American Association of Specialists in Small Ruminants (Mexico, 2019), European College of Small Ruminant Health Management [ECSRHM], (Poland, 2019), the Ontario Beth A. Miller Small Ruminant Veterinary Conference (Canada, 2019), the 3rd National

Conference on Goats (USA, 2018), the 4th Asian-Australasian Dairy Goat Conference (Vietnam, 2018), World Goat Day (Iran, 2017) and many more. The proceedings for these and other goat related conferences are available on the IGA website, along with announcements of upcoming meetings. It's not too late to send us links to other proceedings; just write to admin@iga-goatworld.com!

As we face the future together, please remember that IGA is a membership organization, and we need you to join as individuals or as institutions. Together we can strengthen the goat sector in all countries for the benefit of humankind. We know that you value the IGA website, Newsletter, Facebook page, and Twitter, and we need your support to continue these benefits.

We wish all of you good health, prosperity, and peace.

President, IGA

## Conferences - Rescheduled and Postponed

#### **RESCHEDULED**

November 4-5, 2020 – Belgium IDF is bringing together the global dairy community to focus on "Sheep, Goat and other non-Cow milk" in Brussels.

website: https://www.fil-idf.org/ sheepandgoat2020/

#### **RESCHEDULED**

May 19-21, 2021 ALEPRyCS and IGA Latinoamericana XXXVIII Curso Internacional de En-

#### **RESCHEDULED**

October 3-8, 2021 13th International Conference on Goats, Eger, Hungary website: www.icg2020.org

#### **RESCHEDULED**

September 19-23, 2022 10th International Sheep Veterinary Congress, Seville, Spain website: https://isvc2022.com

#### **POSTPONED**

Transfer and Vitrification of Embryos in Sheep, Argentina and trenamiento en Congelamiento de Semen e Inseminación Artificial en Ovinos y Caprinos Date: to be determined

X International Training Course on

Organized by: INTA EEA Bariloche -Animal Production Area- Minor Ruminant Reproduction Group. http://sipan.inta.gov.ar/jornadas/

#### **POSTPONED**

5th Asian-Australasian Dairy Goat Conference (AADGC) 2020, Nonthaburi, Thailand Date: to be determined

website: <a href="http://aadgc2020.com/">http://aadgc2020.com/</a>

#### **POSTPONED**

2020 AGM and ECSRHM Annual Conference in Italy Palazzo Trecchi, Cremona, Italy website: https://ecsrhm.eu/ update-2020-agm-and-ecsrhmannual-conference-in-italy/

## Sándor Kukovics interview with Romanian Agricultural Leadership Forum (RALF)

Sándor Kukovics, International Zoo- semi-legal activity as required by technics Specialist, Hungary: Whenever possible, greater reserves should be created for the future.

Prof. Univ. Dr. Sándor Kukovics is one of the most important international specialists in the field of animal husbandry and coordinator of the sheep / goat sector in Hungary.

RALF: What are your advice for zootechnical farmers in the new economic context?

Sándor Kukovics: There is a rather interesting situation where direct sales have a rather limited opportunity to reach the final consumer due to the closed markets. There are few sheep and goat keepers who are not adversely affected by the current situation. Due to the limited operation of slaughterhouses, sales for meat are only possible for farm slaughter, which is only a

regulators. At the same time, live sheep sales and exports have fortunately been steady in recent weeks due to transportation facilitations. The problem is the unpredictable demand of the traditional Italian



market for exports, but fortunately the shift to exports to alternative markets has started, which has helped a lot in the situation of sheep farmers. However, milk sales Read the full English version are in a less favourable position due to the sudden disappearance

of consumers (HORECA sector, tourism).

The sale of milk is less of a problem for sheep's milk, because processors make products with a longer shelf life anyway, and they can buy them until their storage is full of finished products. Sales from home processing to the direct consumer affect only a few farms. In the case of goat's milk, the problems are much greater. Only those producers were able to find a bridging solution that formed their customer base and were able to serve them by sending a direct package or home delivery. Fortunately, some markets are slowly reopening and worries are easing somewhat, but unfortunately, a significant proportion of consumers have seen their earnings on such products fall.

Read the full Romanian version

### POSTPONED - 5th AADGC 2020

Dear Sir/Madam

On behalf of the 5th AADGC 2020 organizing committee, we would like to inform you that due to COVID-19 pandemic outbreak. The AADGC board and the 5th AADGC 2020 organizing committee have unanimously decided to postpone the event to another date, which has not been decided yet. We have monitored the COVID-19 situation for the best time to have a great success and safe for the conference and all participants, respectively.

We also apologize for any inconvenience caused by postponing the conference and hope to see all of you at this important international event to celebrate all together.

The Organizing Secretary will contact all parties involved (Speakers, Sponsors & Exhibitors, Delegates, Poster Pre-

senters, and others) with further information.

Take care and best regards.

Visit the AADGC website for more information, http://aadgc2020.com.



# Fodder tree leaves as a supplementation option for smallholder goat keepers in Mozambique

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Goats play a vital role in food security and contribute to improved livelihoods for various resource-poor communities. In Africa, goats are deeply entrenched in almost every African culture, particularly within those communities that are not able to keep large livestock. Goats have a relatively high productivity in harsh environments, use inexpensive feed resources, have a short reproductive cycle and have higher prolificacy when compared to cows. These animals also have a beneficial effect on income generation and provide social and economic security to rural communities.

Goat production has increased during the last decade and there are currently more than 1 billion goats, globally. Approximately 96% of these animals are meat goats and are found in developing countries in Asia and Africa. The African goat population has also increased over the last

five years to approximately 422.7 million goats, representing 40.9% of the world's goat population. Approximately 35 million of these goats are part of the Southern African population. Mozambique has around 3.94 million goats, ranking fifth among African countries in terms of its goat population. Of the total number of goats in Mozambique, smallholder farmers keep 97.7%, while only 2.27% are part of medium-scale systems and a negligible 0.07% is produced in intensive systems.

The traditional production system in which smallholders keep their goats is characterised by informal labour (mostly from a family member), sometimes with low numbers of livestock kept per unit area, minimal use of technology and limited resources. The system is often hindered by land and water shortages, infections and predators. The smallholders generally do not have the skills and resources available for keeping records and uncontrolled mating and inbreeding occur.

The two main types of goats found in Mozambique are the indigenous Landim and Pafuri breeds, which are both meat goat breeds. The Landim breed, also known as the Portuguese Landrace, is the most abundant and

found throughout the country, while the Pafuri breed is mainly limited to the Pafuri region, and north of the Gaza Province. The indigenous Landim is a small-framed breed, and an average male weigh 50 kg while the females are lighter at approximately 35 to 40 kg. The Pafuri breed resulted from the cross-breeding of male Boer goats from South Africa with Landim females. The average mature body weight of an adult male Pafuri goat is 60 kg, and the females weigh approximately 43 kg.

Goat production in Mozambique faces several challenges, of which fodder scarcity in the dry season is the most severe. Goats depend exclusively on natural veld to meet their nutritional requirements, however, the seasonal fluctuations in forage availability and quality have been recognised as one of the leading causes of nutritional stress limiting animal production in (sub)tropical regions. Protein is the primary limiting nutrient in the dry seasons, and mineral deficiencies can decrease forage digestibility and herbage intake, which can ultimately lower live weight gain and livestock production efficiency. Due to nutritional stress, indigenous goats generally have low conception rates and litter sizes, as Continued on Page 5





Mozambican Pafuri doe

Landim goats

# Fodder tree leaves as a supplementation option for smallholder goat keepers in Mozambique (Continued from Page 4)

well as high rates of mortality and stunted growth of young animals. The poor physical condition of adult animals' results in inferior growth performance, reduced carcass yield, low meat quality and an overall low productivity index.

Crude protein (CP) and minerals such as calcium (Ca) and phosphorus (P) should be supplemented in the dry season in Southern Africa. Conventional supplementation might not be feasible in low-income communities in Mozambique due to the high cost involved in the acquisition of such supplements. Therefore, there is a need to introduce cost-effective and sustainable alternative energy and protein sources. Such alternative feed resources may include locally available fodder trees, which represent an inexpensive source of protein and micronutrients. Recently, there has been an increased interest in the utilisation of alternative protein sources such as tree foliage and shrubs as feed for goats. Leucaena leucocephala (LL) and Moringa oleifera (MO) are two of the alternative local sources that were identified with the potential to improve nutritional supply to goats. The advantage of forage trees over conventional concentrate supplementation

is that the leaves can be readily harvested, sun-dried and used to prepare protein supplements by goat keepers. These can then be used to replace the more expensive standard supplements.

Findings of the study:

Goats in two resource-poor districts of Mozambique, namely Namaacha and Moamba were raised under extensive systems where the goats were dependant on natural pasture throughout the year. Although the goats were hardy and well adapted to local conditions, their production was limited by poor nutrition, a lack of management and a high prevalence of diseases and parasites. Tethering was a common management practice and this often limited adequate dry matter and nutrient intake during the dry season.

The key browse species commonly consumed by goats in the Changalane district included Sclerocarya birrea, Spirostachys africana, Dichrostachys cinerea, Flueggea virosa, Acacia nigrescens, Acacia nilotica, Panicum maximum and Morus alba. These species were able to provide adequate energy and protein levels, meeting the daily energy and crude protein intake requirement to

support maintenance and growth of the goats during the rainy season, but not during the dry season. The daily intake of calcium and phosphorus did not show significant seasonal variations and were below the maintenance requirements of a goat during the dry season and a pregnant doe during both seasons. There was a clear need to supplement goats with energy, protein and phosphorus for maintenance, growth and reproduction during the dry season.

Supplementation with *L. leucacepha* and *M. oleifera* leaves during the dry season had a positive effect on the growth rate and reproductive performance of goats. Moderate levels of supplementation (LL75 and MO60) were found to be optimal and these levels could be used to overcome shortages of major nutrients during the dry season.

Both Leucaena leucocephala and Moringa oleifera are easy to plant and are resistant to droughts. Levels of supplementation must be indicated to smallholders in a way that is possible to implement practically as these resource-poor goat farmers do not have adequate equipment such as weighing scales.





Leucaena leucocephala

Moringa oleifera

## Cheese-making workshop, September 26-27, 2019 Klimkówka in Poland

On September 26-27, 2019, the conference "Raising and breeding of native goat breeds with a particular focus on production and dissemination of traditional dairy products" took place, in the manor house Ostoia in Klimkówka (Podkarpackie voivodship, Poland).

The meeting was organized by the Department of Sheep and Goat Breeding of the National Research Institute of Animal Production in Balice near Krakow as a part of the project BIOSTRATEG II "The directions of use and the conservation of farm animal genetic resources under sustainable development" financed by the National Centre for Research and Development. The participants of the conference were breeders of Carpathian goats, researchers from scientific entities such as the National Research Institute of National Production, the University of Life Science in Lublin, Institute of Genetics and Animal Breeding in Jastrzębiec, and employees of the Regional Association of Sheep and Goat Breeders in Nowy Targ.



However, the main event of the conference was a cheese-making workshop conducted by Mr. Sylwester Wańczyk, an experienced cheese-maker (http://wanczykowka.com) on the first day of the meeting. Mr. Wańczyk taught the participants about the basic principles of cheese-making and the method of production of various kinds of cheeses. The breeders took an active part in the workshop, producing their cheeses (they learned about the process of milk treatment, different bacterial cultures suitable for various kinds of cheese, and renneting). Not only ripening cheeses or fresh acidrennet quarks were produced, but also yogurt and buttermilk.

Prof. Jędrzej Krupiński from the National Research Institute of Animal Production (the head of the BOSTRATEG II project) opened the scientific part of the conference.

Prof. Krupiński's lecture concerned traditional products derived from native animal breeds. The next talk. "Current research results, which concern goat products," was presented by Dr. Aldona Kawecka from the National Research Institute of Animal Production and Principal Investigator in the BIOSTRATEG II project. The next two lectures concerned programs for restoration and conservations native goat breeds resources, with the address given by Dr. Jacek Sikora from the National Research Institute of Animal Production on the Carpathian goats breeding program and Prof. Anna Szymanowska from the University of Life Sciences in Lublin on Sandomierska goats restoration. The lecture "Digitization of goat breeding - databases and websites" was given by Dr. Marta Pasternak (the National Research Institute of Animal Production).

Breeders also brought their products, and the first day of the conference ended with tasting gourmet cheeses and other milk products from Carpathian goats.

On the second day of the conference, during the third part of the workshop, the breeders presented the cheeses they made the previous day, and all participants evaluated these cheeses. The second part of the lectures concerned, "The milk recording of goats in European countries. The activity of IGA (the International Goat Association) in 2019" (Prof. Emilia Bagnicka, Institute of Genetics and Animal Breeding of the Polish Academy of Sciences), "Certification rules and conditions for dairy products derived from goats (Dr. Paweł Radomski, National Research Institute of Animal Production), "Veterinary Prevention" (Veterinary Surgeon, Jarosław Wieczorek, the University of Agriculture in Krakow) and "Feeding small ruminants using the products of Trouw Nutrition company" (MSc. Mariusz Dobies, Trouw Nutrition).

The conference was concluded and closed by Prof. Jedrzej Krupiński.

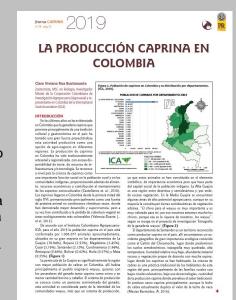


## La producción caprina en Colombia

Clara Viviana Rúa Bustamante Zootecnista, MSC en Biología, Investigador Máster de la Corporación Colombiana de Investigación Agropecuaria (Agrosavia) y representante en Colombia de la International Goat Association (IGA)

#### Introducción

En los últimos años se ha evidenciado en Colombia que la ganadería caprina que proviene principalmente de una tradición cultural y gastronómica en el país ha tomado una gran fuerza proyectándose esta actividad productiva como una opción de agronegocio en diferentes regiones. La producción de caprinos en Colombia ha sido tradicionalmente artesanal y regionalizada, con escasa disponibilidad de tierra, de recursos de infraestructura y/o tecnología. Se reconoce a nivel país la crianza de caprinos como una importante función social en la población rural y en las comunidades indígenas, proporcionando además de alimento, recursos económicos y contribución al mantenimiento de los aspectos socioculturales (Castellanos et. al., 2010). Los caprinos llegaron a Colombia desde la primera mitad del



siglo XVI, permaneciendo principalmente como una Fuente de proteína animal en condiciones climáticas secas, donde han demostrado mayor desarrollo y supervivencia, pero a su vez han contribuido a la pérdida de cobertura vegetal en áreas ecológicamente más vulnerables (Valencia-Duarte, J., et al. 2012).

De acuerdo con el Instituto Colombiano Agropecuario-ICA, para el año 2019 la población caprina en el país

está conformada por 1.006.077 animales aproximadamente, ubicados en su gran mayoría en los departamentos de La Guajira (78,84%), Boyacá (3,93%), Magdalena (3,45%), Cesar (3,16%), Santander (3,12%), Cundinamarca (1,94%), Antioquia (0,66%), Bolivar (0,62%), Huila (0,57%) y Meta (0,55%). (Figura 1)

La península de La Guajira es significativamente la region con mayor población de cabras en Colombia, allí habita principalmente el pueblo originario wayuu, quienes son los poseedores del ganado tanto caprino como ovino y en menor cantidad bovino y caballar. El sistema de producción se conoce como un pastoreo seminómada del ganado; esta actividad es considerada parte de la identidad de las comunidades wayuu, más que un sistema de producción, ya que estos animales se han constituido en el element simbólico, de importancia económica pero que hace parte del capital social de la población indígena. La Alta Guajira es una región entre desértica y semidesértica y, por ende, de escasa vegetación. En la Media Guajira se encuentran algunas áreas de alto potencial agropecuario, aunque en su mayoría la constituyen tierras semidesérticas de vegetación arbórea. "El chivo para el wayuu es muy importante y es muy valorado para mí, por eso nosotros amamos mucho los chivos, porque esa es la riqueza de nosotros, los wayuu", según se recoge en el proyecto de investigación 'Etnografía de la ganadería wayuu'. (Figura 2)

El departamento de Santander es un territorio reconocido como productor caprino en el país, allí encontramos un accidente geográfico de gran importancia ecológica conocido como el Cañón del Chicamocha, lugar donde predominan los suelos semidesérticos, topografía muy quebrada, alta temperatura, humedad

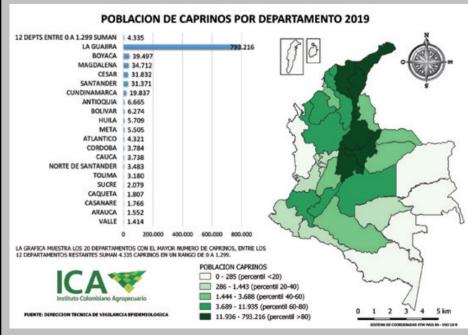


Figura 1. Población de caprinos en Colombia y su distribución por departamentos. (ICA, 2019).

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## La producción caprina en Colombia (Continued from Page 7)

relativa muy baja, abundante material rocoso y vegetación propia de desierto con mucha espina, lugar donde los caprinos se han habituado. La crianza de cabras es una práctica tradicional de los habitantes de esta región del país, principalmente de las familias rurales con bajos niveles educativos, bajo uso de tecnologías, rusticidad de la producción caprina donde prevalece el saber tradicional. Se produce carne caprina principalmente, aunque la leche de cabra actualmente duplica el valor de la leche de vaca

(Macías Bermúdez, A. 2016).

Los departamentos de Boyacá, Cundinamarca, Antioquia y Tolima han desarrollado sistemas de producción caprina de leche con la elaboración de derivados lácteos en forma artesanal con bastante aceptación por los productores. En el caso del sur del Tolima y norte del Huila, los caprinos representan un renglón pecuario de importancia económica para campesinos e indígenas. **LEE MAS...** 



Figura 2. Corral con caprinas en La Alta Guajira. Fotografía: Clara Viviana Rúa Bustamanté.

## Sheep, goat industry takes a hit from COVID-19

Like most of the U.S. economy, the Texas A&M AgriLife Extension sheep and goat industry is expected to take a few hard knocks from the COVID-19 epidemic as restaurants close temporarily, and more people work from home.

Sheep and Goat Specialist Reid Redden tells producers that COVID -19 is causing major market disruptions in the sheep and goat industry. The disease couldn't have worse timing, striking during the biggest peak in the supply-demand **READ MORE...** 

season for lamb, Redden said. A few weeks ago, the American Lamb Board had indicated retail sales of lamb increased 50 percent before COVID-19 started impacting the U.S. economy.

## BioWorma®, an Alternative to Traditional Anthelmintics

Written by Jean-Marie Luginbuhl, IGA Secretary-Treasurer

This webinar presentation is about BioWorma®, a fungus (Duddingtonia flagrans) that traps and kills roundworm larvae in the manure of livestock. The presenter

is Chris Lawlor from International Animal Health, the Australian company that developed, manufactures, and markets BioWorma®. The date of the webinar was May 13, 2020. The presentation is followed by a Questions & Answers session.



#### Watch the webinar.

## 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.



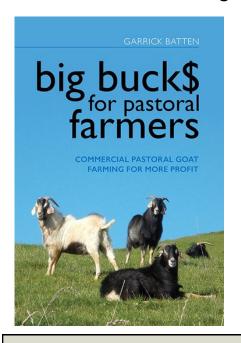








## Book Announcement - big buck\$ for pastoral farmers



Big buck\$ for pastoral farmers 2018 published by CAPRINEX gathers 40 years of farmer experience and research into 50 sections of readable information. It is especially for commercial livestock farmers adding goats to help them to profitably produce meat, fibre, enhance clover and control weeds. Pastoral goats are as essential as fertiliser and fencing on especially hill country farms, and will be a key animal in future sustainable farming. Recommendations for simple low cost, low risk introduction of goats to sheep and cattle systems will support especially new farmers with their management. Existing commercial farmers with goats can also have much to learn.

As founder, and later with several partners, author Garrick Batten developed the Kiko pastoral goat by pioneering population genetic breeding in goats and focussing on key profit points. Kiko foundation stock were exported to the USA in the mid 90s where they became the second largest meat goat breed. Kiko breeding stock and genetics were also exported to six other countries. More recently he instigated a New Zealand project with a partner to develop the Kikonui™ breed as an improved Kiko specifically for NZ hill country.

BUY YOUR COPY HERE.

## Comunidades Indígenas Pueblo Originario Wayuu -Colombia

El pueblo originario wayuu representa el 20% de la población indígena de Colombia, siendo la etnia con mayor representatividad.

Ha habitado históricamente en la peninsula de LaGuajira. Son considerados población binacional, ya que su territorio se encuentra dis- LEE MAS...

tribuido entre el norte de Colombia y Venezuela. El wayunaiki es su lengua nativa de tradición principalmente oral. La Sociedad Wayuu presenta una estructura de carácter matrilineal, se encuentran organizados por clanes.



## New livestock data portal aims to drive better decisions and investments

Livestockdata.org offers data and evidence on livestock health and productivity in low and middleincome countries

A new website aims to communicate the best available data and evidence on livestock health and productivity. Launched today, Livestockdata.org is managed by Supporting Evidence Based Interventions (SEBI) on behalf of the Livestock Data for Decisions (LD4D) community of practice. According to SEBI, poor quality, scarce and disparate data are holding back development of the livestock sector in low and middle-income countries. This impacts the lives of millions of people who depend on livestock for a living. The new site aims to build up a knowledge base

of open access data, interactive tools and visualisations that policy makers and investors can use to make evidence-based decisions.

#### **READ MORE...**



## The status of Adani goat rearing in Bushehr province

AbdulMahdi Kabirifard<sup>1</sup>, Sayed AbuTaleb Sadeghi<sup>1</sup>, Mohammad Sadegh Yazdanshenas<sup>2</sup>, Nader Papi<sup>3</sup>, Farhad Mirzaei<sup>3</sup>
1. Animal Science Department, Bushehr Agricultural and Natural Resources Research and Education Center, AREEO, Bushehr, Iran
2. Jihad-e-keshavarzi Organization of Bushehr Province

3. Agricultural Research Education and Extension Organization (AREEO), Animal Science Research Institute of Iran, Karaj.

## History of goat breeding in the province

Adani goat almost since the European colonial countries participated in the Persian Gulf in Bushehr province was entered. This goat in coastal areas where the climate is hot and humid, easily adapted, and able to endure high and with optimal milk production is approximately indigenous. This goat over many generations under the influence of natural and artificial selection have been reared. In terms of local, the ecotype named Adani, also called Khargi and Gaysi.

#### Geographic distribution areas

This goat exists only in the Bushehr province, mostly in coastal areas from Genaveh to Assaluyeh.

#### **Population**

The population of this goat in herds is almost 35 thousand head crossed with native black goat and Pakistani in most townships. At present, in the breeding station for Adani goats, there are 340 Adani goats and 90 Adani crossed with Alpine and Sannen goats.

#### The types of rearing systems

The population in herds is variable between 2 and 50 heads. The main reason for the interest of livestock breeders is low-cost nutrition, twinning, and high milk production. Rearing of this goat in the province is accomplished in two ways:

- 1) Home rearing: In this method, the number of goats is always between 2 to 5 heads. The goats are maintained in traditional stalls at home and are fed there over the years. The feeding ingredients include dry bread, a small amount of barely (during the lactating season), grade 3 date palm, and human food residuals.
- 2) Rural rearing: This method is used in the fields along the rural coastal strip. The number of goats is always 15 to 50 heads. Goats graze daily in pastures around the village, and feeding is the same as home rearing.

#### Job creation

In addition to a decline in rural emigration, industrial rearing creates

jobs. Raising of just three goats can provide the majority of meat needed for a family of four in a year.

# Cultural, social and economic relation with nomadic and rural communities

The Adani goat is a dual-purpose (milk-meat) animal. The meat, in terms of quality, is tender and has low fat and has many fans in Bushehr province. The phenotype is very beautiful (deerlike) which results in high value, especially in Persian Gulf countries. Additionally, their resilience to the harsh environment along the coastal strip encourages increased rearing by goat keepers.

#### Appearance features

The body size is small and delicate, with small hooves, a triangle head, and graceful, narrow snout. Eighty percent of males and 68 percent of females have horns that are V shape. Their bodies are short. Adani goats are frequently a gray-brown (deer) color, and reddish fawn (intermediate frequency), white uniform, black Continued on Page 10





Fig. 1. Adani goats, female (left) and male (right)

### The status of Adani goat rearing in Bushehr province (Continued from Page 10)

uniform, white and black, and white and brown are less frequent. Quarters are large and bulky, usually in the color of the body. Nipples are fine and have medium length and diameter. Adani goats often have a characteristic strip of blond and brown or black and white near the spine. There are often light-brown to black stripes on their cheeks from under the eyes to the muzzle.

#### **Export**

Adani goats are one of the most important livestock genetic and biological resources of the country with high production potential. Their high value in Persian Gulf countries could be part of a future program for exporting.

Proliferation and exportation of this goat as a non-oil commodity would be beneficial.

#### Use of products

Due to the low population of Adani goats, only residents use their milk, yogurt, curd, and oil. The meat uses as a valuable protein source for local people.

## Measures for identifying and genetic improvement

The Jihad-e-Keshavarzi organization of Bushehr province began studies on this goat in 1364 (1985) and 1375 (1996), establishing a breeding station for genetic improvement. The station currently has 340 Adani goats included

190 does, 30 male kids, 25 bucks and 95 female kids. Crossbreeding projects with Adani goats and Alpine or Sannen are being conducted at this station to increase milk and meat production, and intensive breeding for reducing stock pressure on pastures is in progress. There are now 90 head of Adani crossed with Alpine and Sannen. The main objectives of the Adani goat breeding station include:

- 1) Proliferation, production, and breeding of Adani goats
- Genetic improvement and breeding of Adani goats
- Production and distribution of crossed bucks
- Sperm and embryo production and the development of artificial insemination

## Suggestions for ways to improve performance

- Establish economic values and breeding objectives.
- 2) Help farmers improve the nutrition and reproduction efficiency of the goats.
- 3) Shift breeding practices towards industrial systems and away from traditional.

Special thanks to <u>Farhad Mirzaei</u> (IGA — Country representative for Iran) for sharing this report with us.

Gender	Body lengt	h Wi	Withers height		Chest round
Adult male	54.0		71.6		75.4
Adult female	43.3		68.6		76.0
	Table 2. Annual	production of	f Adani goa	t (Kg)	
Lactation period (Day)	Milk	Wool	Vool Hair		Carcass
120	90-120	-	1-1		15-17
Ta	ble 3. Reproduct	tive character	istics of Ad	ani goat	
Maturity age	Mating age	Partu	Parturition		Twinning
(months)	(Months)	interval (	interval (Months)		(%)
6	12	(	6		35
	Table 4. Eco	nomic traits o	f Adani go	at	
Gender	Live weight (Kg)				
	Birth	Weaning	6 M	onths	Mature
Male	2.7	6.8	1	5.5	30-35
Female	2.4	6.4	1	4.1	18-20

## AdaptMap: exploring goat diversity and adaptation



International initiatives on goat genetics and genomics Goats are bred worldwide and present in a wide variety of production environments. Local breeds, which are well adapted to a range of agroecological conditions, contribute to ensuring the sustainability of livestock farming in marginal and difcult areas in both developed and developing countries. Compared to other livestock species, goats

have been domesticated in a single region and subject to a limited amount of hybridization between breeds, thus they represent one of the best species for the study of

genetic diversity and adaptation.

The International Goat Genome Consortium (IGGC, <a href="http://www.goatgenome.org">http://www.goatgenome.org</a>) was created in 2012 with the general goal of increasing the range of genomic tools and publicly available information for the goat. In 2013, the 50 K goat single nucleotide polymorphism (SNP) panel was developed (<a href="http://www.goatgenome.org">http://www.goatgenome.org</a>; [3]) by combining whole-genome sequencing and reduced representation libraries from eight breeds/populations from Europe and Asia through the cooperation of the Institut National de la Recherche Agronomique (Inra) in France, Utrecht University in Te Netherlands, the Malaysian Agricultural Research and Development Institute (MARDI) in Malaysia, and DNA Landmarks in Canada.

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# New AgResults Project to Encourage FMD Vaccine Development and Uptake in Eastern Africa

On January 22, the AgResults Foot and Mouth Disease (FMD) Vaccine Challenge Project, which uses a prize competition to support the development and uptake of high-quality FMD vaccines tailored for Eastern Africa, officially launched. Two launch events took place during the EuFMD Global Vaccine Security Meeting and brought together stakeholders from the animal health industry to recognize the project's potential.

ganization (FAO) headquarters in Rome, a daytime session included presentations from the Pirbright Institute, AgResults, and GALVmed about the project's goals and approach. In attendance were animal health companies from around the world interested in participating in the competition and developing new FMD vaccines. After the presentations, potential competitors had a chance to ask questions and learn more about the prize structure and timeline.



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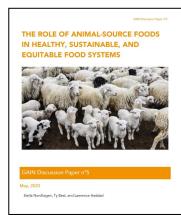
Held at the Food and Agriculture Or-

The Role of Animal-Source Foods in Healthy, Sustainable, and Equitable Food Systems

Among the major issues facing the global population are persistent malnutrition (including both undernutrition and overweight/obesity), climate change, and environmental degradation. At the crossroads of these issues, animal-source food (ASF; meat, poultry, fish, dairy, and eggs) have attracted considerable attention for both their role in diets and their environmental impacts-and their production also plays an important role in livelihoods, particularly

in low- and middle-income countries (LMICs). As these issues are intertwined, they must be considered jointly and with sufficient recognition of the nuance involved. This paper aims to add to this debate through a review and discussion of evidence on ASF spanning several dimensions: nutrition, health, environment, livelihoods, and equity.

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## Epidemiology and disease control by region

- Eradication of peste des petits ruminants: Application of new research to guide and facilitate the global elimination of the disease, Medycyna Weterynaryjna, 2020
- Efforts to control livestock disease PPRV should focus on herd management style, not age, EurekAlert 2020

#### Africa

- A One Health framework for integrated service delivery in Turkana County, Kenya, Pastoralism, 2020
- Characterisation of Peste Des

- Petits Ruminants Disease in Pastoralist Flocks in Ngorongoro District of Northern Tanzania and Bluetongue Virus Co-Infection, Viruses, 2020
- Livestock disease risk tied to herd management style (Tanzania), Eurek Alert 2019
- Coronavirus Tchad : plus de 384 000 animaux vaccinés, Alwihda 2020

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