

IGA Newsletter

Keep informed—Stay in Touch—Get Involved

- Fostering the use of goats to provide for the needs of humankind.
- Encouraging research with and development of goats to increase their productivity and usefulness throughout the world.
- Perpetuating the International Conferences on Goats.



Editorial

by **Pierre Morand-Fehr**
President of IGA

Whatever our nationality, our religion or our opinions, we can only have feelings of sadness. Some of you, due to the socio-economic or political situation, are rather upset and appear to be worried. I wish to tell those of you so worried that in such difficult times that it is essential to demonstrate even more enthusiasm and dynamism towards the IGA. Personally, as President of IGA, I feel that there are several favourable factors concerning IGA that should give us comfort:

- the commitment that all IGA Board Members and Country Representatives have shown during the last Board electronic conference (see page 2)
- the Year of the Goat in the Chinese traditional lunar calendar which has renewed enthusiasm in several countries, even non Asian ones (see page 5)

From the Secretariat

by **Cindy Walla**
Secretary-Treasurer of IGA

During the last Board meeting, increasing IGA membership, both institutional and individual, was recognized as a priority for 2003. A goal was set to have 500 individual and 50 institutional members before the upcoming conference in South Africa. In order to realize this goal and complete other IGA objectives, we need your help in recruiting members. Please take advantage of our two-year membership special by using the application form in this newsletter to renew your membership. Then encourage friends and colleagues to do join as well. The office of the Secretariat is available to help you in all your IGA efforts. Brochures are available at your request.

- the success of IGA Regional Conferences at Cavalese and Fuerteventura (see page 6)
- the news from various countries showing the dynamism of the goat sector (see page 20)
- the Conference of Pretoria whose preparation is progressing well.

All these factors demonstrate the fact that the actions and projects undertaken by IGA are becoming fruitful.

During these times, we must not be pessimistic. Instead we must redouble our efforts to reach our objectives. All IGA members must feel involved and ready to participate in IGA's actions and projects. Volunteers and supporters are still needed to participate in new IGA activities or projects. Do not hesitate to contact us on this subject : Cindy Walla (e-mail : goats@heifer.org or myself (e-mail : duspiwa@inapg.inra.fr).

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Conclusions of the Electronic Conference of IGA Board January 29 – March 3rd 2003 by Pierre Morand-Fehr

As agreed at the last IGA Board meeting (Cairo, Sept. 2nd, 2003), the IGA Board Electronic Conference (EC) was held from January 29 to March 3rd 2003.

Here is a summary of the main decisions taken by the Board during the EC. These decisions are to be applied as soon as possible.

Progress of this EC

All Board Members and twenty-four CRs participated in the EC.

The numerous issues show that this EC was more efficient than the previous one and enabled more people to express their opinion than a classic conference requiring personal attendance. This EC has proved to be more fruitful in terms of new suggestions and in terms of improvement of cooperation between participating Board Members.

The sole disadvantage of such an EC is the great amount of work required of the coordinator who had to manage around 700 pages of e-mails.

IGA's orientation and organization

The following proposals stated in the Electronic Conference have been approved by the Board:

The IGA Board, except when prevented by unexpected circumstances, will meet two times each year, one meeting will be a Board Electronic Conference and the other meeting will be a classic conference requiring the personal attendance of Board Members at the most convenient place for the majority of the attendees.

Results:

YES: 100%, ABSTENTION: 0%, NO: 0%

Before each IGA Board meeting, CRs will be informed of agenda items so that they might express their point of view to the Board. As stated in IGA Statutes, only IGA Board Members are entitled to initiate and approve agenda items.

Results:

YES: 100%, ABSTENTION: 0%, NO: 0%

Comment: This decision should encourage participation of the CRs with the Board's decisions. It will also ensure that the Board Members are better informed of the views of members from the CR's represented countries.

IGA needs to improve its communication. Proposals on this topic will be presented at the next Board meeting. As a first step, a project aimed at identifying different media (especially journals) dedicated to the knowledge of the goat, goat sector and goat products will be implemented. Any such project should be submitted to Board Members in May-June 2003 and completed by Dec. 2003.

Results:

YES: 100%, ABSTENTION: 0%, NO: 0%

In order to retain the input of IGA Board Members after their tenure on the Board, past members will be allowed to continue with the Board as Emeritus Board Members. As an Emeritus Board Member, they will not be allowed to initiate agenda items or vote on them, but can participate in discussion and may be appointed as the responsible party for actions decided on by the Board.

Results:

YES: 92%, ABSTENTION: 8%, NO: 0%

The IGA Board will form working groups on important subjects.

Results :

YES: 100%, ABSTENTION: 0%, NO: 0%

Comments: These working groups will be empowered to make proposals to the Board. These groups will be composed of Board Members and concerned IGA members at large.

Should IGA form two voting committees; one for institutional members and one for individual members, especially in regards to election of IGA Board members? A majority of Board rejected this suggestion. The Board modified the proposal to be as follows:

Conclusions Continued....

All IGA memberships (individual or institutional) will receive one vote.

Results:

YES: 69%, ABSTENTION: 23%, NO: 8%

Comments: According to IGA rules on institutional membership, the institutional member at the Silver, Gold and Platinum level is entitled to nominate 1, 3 or 6 individual members respectively. Accordingly, 1 vote for the institutional member + 1, 3 or 6 votes for the representatives members of this institution are allowed. This will enable each IGA institutional members to have a voting representation of 2, 4 or 7 votes. This should deal with concerns of under-representation of institutional members within IGA.

IGA membership

The priority for IGA for the year 2003 must be increasing membership.

Individual membership

The actions undertaken by Mrs. Duspiwa to recruit the authors of interesting scientific and technical papers will continue.

The IGA secretariat is charged with the effective management of membership.

In 2003, each Board Member and each Country Representative is charged with recruiting 5 new members. The most active CRs will be awarded financial support for attendance at the 8th ICG SA.

Results:

YES: 100%, ABSTENTION: 0%, NO: 0%

Comment: The IGA President and Secretariat will contact each CR or Board Member so as to help them fulfil this duty. CR's need to request letters, brochures and other items as needed.

Institutional Membership

In 2003, a concerted effort to increase the institutional membership is required of Board Members and CR's. The

IGA President will be the responsible party for directing this action and will rely on every IGA member's assistance in order to ensure success.

Regional Conferences

The Fuerteventura Conference organized by Juan Capote is designated as an IGA Regional Conference:

Results:

YES: 100%, ABSTENTION: 0%, NO: 0%

IGA projects

The three IGA projects on goat institutions, goat products and goat information are progressing in a satisfying way. The EC has enabled IGA to establish new contacts that are likely to enrich these projects, especially for goat institutions and goat products projects.

A section of the IGA webpage entitled Web Goat Production (WGP) has been approved by the board in principle.

A project dedicated to defining the objectives of this proposal will be presented to Board Members for volunteers in the Summer of 2003.

The suggestions proposed by Jean-Paul Dubeuf in his presentation of the IGA information project have been approved. The list of subjects must be approved of in Summer of 2003. All Board Members and CRs will be requested to approve of the list of the main subjects on the selected topics. A committee will be appointed for final selection. This project is done with the assistance of Cirval.

Country Representatives

Pierre Morand-Fehr updated the Board on the current list and activities of CR's, requirements to become a CR, expected duties of the CRs, and assistance being provided to CRs in order to help them in achieving these duties.

The Board approved of the following nominations:

Lars Eik as IGA CR for Norway
Kristaq Kume as IGA CR for Albania
Drago Kompan as IGA CR for Slovenia
Raisul Alam as IGA CR for Bangladesh
Maria Norma Ribeiro as IGA CR for Brazil

Results:

YES: 100%, ABSTENTION: 0%, NO: 0%

Conclusions Continued...

Nominations of new IGA Board Members

During this EC, Lisa Colledge, Technical Editor of SRR at Elsevier and Andrea Rosatti, Secretary General of EAAP have been elected as IGA Board Members.

Results:

YES: 100%, ABSTENTION: 0%, NO: 0%

Comments: Lisa is the successor of Ken Plaxton at Elsevier and Andrea the successor of Jean Boyazoglu at EAAP.

Election of the new Board in 2004

The Board approved of Pierre Morand-Fehr's suggestions of the Board election process for 2004.

The Year of the Goat

IGA supports every action aimed at improving the image of goats and at promoting goat breeding and products.

Results:

YES: 77%, ABSTENTION: 23%, NO: 0%

All the Board members and CRs to take advantage of the year of the Goat in the Chinese calendar and declare 2003 as the International Year of the Goat. In 2003, every member is encouraged to promote the technical, traditional and cultural uses of goats.

Some members suggested an International Conference on the cultural role of goats and regional traditions linked to goats be held in 2005-2006. The French Society of Ethnozootechnia will assist in the scientific aspects of this event. IGA needs to determine what country is best suited for hosting and organizing this event and then move forward in the planning.



Publications

SRR

Every Board member congratulated David for his Editorial leadership and agreed with the main proposals in his report: inviting papers, avoiding redundant papers (presenting repetitive experiments) to ensure that IGA continues to encourage publication of the most advanced scientific papers from the developing and developed world. Due to volume of submissions, the selection process must be more intense.

The Board approved of the letters to the Editor, so long as they were carefully monitored.

9th International Conference on Goats

During this EC, 3 suggestions for organizing the 9 ICG coming from South America, Romania and Italy have been made but these are only at a prospect level aimed at getting the reaction of the IGA President and Board Members. These initiatives are encouraged but they will have to meet the requirements of IGA which will be stated and transmitted to the candidates in May.

Next Board meeting

The next board meeting will be during the 54th Annual Meeting of EAAP thanks to Andrea's invitation (Roma, probably 31st August or 3rd September 2003).

Results:

YES: 77%, ABSTENTION: 23%, NO: 0%

All IGA members must now assist the Board in implementing the decisions of this EC. At the present time, we are in need of members willing to assist with these projects

Celebrating the Chinese Traditional Lunar Year of the Goat

by Jiabi Pu, Taiyong Chen, Zegao Deng, Bin Peng 羊

As spring begins, so too does the Chinese Lunar Year of the Goat. Every Chinese Lunar Year is represented with one of twelve animals: mouse, ox, tiger, rabbit, dragon, snake, horse, goat, monkey, chicken, dog and pig. Each animal is associated with ancient Chinese folk culture. These animals were chosen due to the ancient Chinese respect of animals, totem worship, and principles of Astronomy. The ox, rabbit, horse, goat, chicken, and pig were chosen because they reflected the every day life of people. The mouse, tiger, and snake were chosen to represent dangers to humankind. Some were chosen to represent abilities that humans could never reach, such as the power of the dragon, olfactory sense of the dog, and agility of the monkey. Selection of these specific animals correlates to twelve Earthly Branches invented keeping track of the days and years. Each of the twelve Earthly Branches was represented by one of the previously mentioned animals.

According to Chinese tradition, the goat was assigned precedence for 2003. During the Spring Festival, people always greet one another by saying "Good Luck for the Year of Goat", "With Three Goats Begins Prosperity". Chinese folklore is rich with stories about goats and these are popular topics of discussion. Advertisements take advantage of the increased emphasis on goats and incorporate them.

Some claim that goats originated in the southwest border area between Tibet and China. Archeological sites prove that 15,000 years ago, goats were tamed by people in Yellow River, Yangtze River and Pearl River drainage areas. Since then, the goat was commonly used as the sacrifice offerings for worship and recognized as the symbols of wealth, sanctity and luck.

Since ancient times, goats have played a core role in Chinese folk culture. Goat Fight, a popular sports game in the Yellow River drainage area, originated in the Three Kingdom Period the following story: About 1850 years

ago there was a war between two powerful generals, General Cao Cao and General Yuan Shao. Cao Cao's troops were defeated and retreated to Caozhou, tired and with morale sinking. General Cao was quite depressed until he saw two goats fighting one another with great vigor. Cao Cao called his troops to witness the fight between the goats. Seeing the goats, his troops were filled with purpose and returned to fight Yuan Shao, eventually defeating him. General Cao Cao encouraged the Goat Fight tradition in Caozhou. After the passage of thousands of years, the goat fight is still an important custom in this area.

Goats have also been an important figure in building the Great Wall. During the Qin Dynasty, 2200 years ago, goats served as the pack animals to carry stone into the mountains. In doing so, goats contributed to protecting the Dynasty.

THE CHINESE ANIMAL ZODIAC



Goat shows have been a significant part of Chinese Culture since ancient times. These shows have evolved from ancient folk culture into a scientific animal production event. In ancient times, the winner of a goat show garnered great fame and respect and increased his social status. The shows also helped the ancient Chinese people form strong gene pools for selective breeding of their goats. In the modern world, these same shows are an important means of accelerating the development of animal science.

Goats and their products have been a traditional source of sacrificial offerings for worship and as symbols in grand ceremonies in the colorful Chinese traditional cultures. From the Tibet, where white goat hair, soaked in ghee is waved during the wedding ceremony, to the sacrifices of the Muslims in Islam Coban, goats pervade all of the numerous Chinese groups.

Celebration Continued...

In the rich Chinese food culture, there are over 70 cooking methods based on goat meat. All regions of China have unique methods of preparing goat meat.

Goats are also an important part of traditional medicine. On the day of winter solstice, drinking goat meat soup is very popular in order to increase resistance to cold. Chinese ancient codex, *Compendium of Materia Medica*, says that poisoned human hand bitten by viper could be put into goat stomach with feces for immediate detumescence and acesodyne with incredible efficacy. As a result, goat parts are often raw materials for traditional prescriptions.

Goats have also contributed a lot to the advanced

bio-science. The first group of cloned embryonic and somatic cells cloned in China were those of goats. This sets up a concrete foundation for future artificial organs and potential bio-medicine produced in batches.

Finally, goats have a traditional impact on those humans born in the year of the goat, approximately 100 million Chinese people. These people are believed to be able to assume a huge burden, to easily handle harsh environments, and be both diligent and gentle when doing so.

The Chinese people embrace the goat at all times, but especially celebrate its impact during the Year of the Goat.

News From Regional Conferences



Meeting on goats and sheep farming in the Italian Alps (Cavalese, Italy, 21st September 2002)

by Michelle Corti

The meeting took place in Cavalese (Autonomous Province of Trento NE Italy) on September 21st during the Desmontegada de le Caore (coming back of summered goats from alpine pasture) Festival. The event was organized by the SoZooAlp (Society for studying and enhancement of alpine animal farming systems) whose President, Prof. M. Corti (University of Agriculture of Milan) is the country representative of IGA for Italy. The Agricoltura Institute of S. Michele all'Adige supported the meeting.

Goat farming was the topic of most of the lectures indicating the growing interest for goats in the alpine area. Here in the past, goat farming was traditionally widespread and was of paramount importance for self-maintenance of local communities.

The speakers dealt with local breeds, their conservation, the evolution of traditional farming systems, typical cheese manufacturing and risks of transmission of dangerous pathologies from wild animals to goats.

Quite a large number of breeds are still farmed on the Italian Alps in spite of the genetic erosion from widespread breeds suitable for intensive farming systems. The region with the largest number of autochthonous breeds is Lombardy which occupies the center of the massive border with Switzerland. Local

breeds are also present in Piedmont, Aosta Valley, South Tyrol and Friuli. The total number of goat breeds is 12 (including two Swiss breeds –Walliser and Verzasca– farmed both in Switzerland and in Italy). In spite of this large number of breeds, the genetic distance between some of them seems to be comparatively small. Data from AFLP molecular markers indicate that there is quite a large distance between Passirier Gebirgsziege from South Tyrol and other breeds whereas breeds from Central Alps, apart from Orobica (Valgerola goat), are quite close to each other. Local breed from the Central Alps in turn display small genetic distance from Saanen. On the other side, from the point of view of biodiversity maintenance, it is of interest to observe that quite large genetic diversity has been maintained within breeds.

The maintenance of local breeds depends on developing high quality cheese and meat products manufacturing and marketing. Goat ham and goat sausages are good examples of products from goats extensive or semi-extensive farming systems. Tourism may play a key role in developing this market as demonstrated the success of Cavalese Goats Festival when thousands of tourists gather to admire the parade of the hundreds of goats.

From Friuli bad news came about the danger of transmission of pathologies from wild animals to goats. The spreading of Rogna sarcoptica disease of *Rubicapra rubicapra* may affect goats flocks since reciprocal transmission between the two species is possible. Several

Regional Conferences Continued...

affected goats died in Frill in an area where the local population of *Rubicapra rubicapra* is heavily affected by the disease.

These circumstances, along with the reintroduction of large predators (wolf and brown bear), indicates that range management may face new constraints in the future in spite of the circumstances that favored the great rise in alpine goat populations during the last decades

(EEC subsidies, decreasing of milking cows farming, softening of forestry rules against goats).

Thus a third farming method seems to be necessary between intensive farming systems (with no grazing) and range systems that prevents from exploiting the potential productivity of local goats stocks and sometimes impact negatively on wild plants and animals communities.



Fuerteventura Seminar (Canary Islands, Spain)

by Juan Capote

The IGA Regional Conference "CaprAA" took place from April 3rd to 6th in Fuerteventura, Canary Isles. The theme was Goats in Arid Areas: Specified references and conditions for their increased contribution to rural development.

The conference was supported by the Cabildo of Fuerteventura (local government) and other international or national organizations, such as the FAO, CIRVAL, CYTED, CIHEAM, IGA and INIPRO. Eight main papers and thirty posters were presented as well as four round tables.

One hundred scientists and technicians from twelve countries participated.

During two field visits included in the meeting, the participants had the opportunity of observing different exploitation systems and traditional island goat management.

Distinguished speakers of the IGA (Roberto Rubino, Pierre Morand-Fehr, Jean-Paul Dubeuf, Board members, and Mrs Ribeiro and Stemmer, CRs for Brazil and Bolivia) participated at the conference together with important researchers from three

continents. Aspects such as feeding strategies, environmental impact, evaluation of systems and structure of development for goat farmers, were discussed as were other important topics regarding the mammary gland, the quality of products and genetics.



At end of the Conference the IGA President presented the main conclusions and recommendations. It was emphasised that goat farming in arid areas plays a more important role than economic weight alone would indicate, and it is necessary to create international networks and take local decisions about breeding and the balance between vegetation and the raising of livestock.

Goat Situation in Different Countries



Goat Sector in Portugal by Jose Ribeiro

The inventory of the existing livestock breeds in Portugal has not been an easy task to accomplish. In fact, the variety of structures in which the breeds are aggregated and all the physical and human history involving them, condition a whole of ecosystems with different dimensions which elucidate the present reality.

The purpose, which we have been trying to achieve with all the inherent difficulties, is a thorough study of the subject, with an explicit definition of each breeds' biotype, a characterisation of its productive and reproductive abilities and a study of its potentialities.

In the past few years, the public services, the livestock breeders and the associations have endeavoured to collect the necessary data in order to characterise the populations, not always quite homogeneous, that consist in the national livestock breeds.

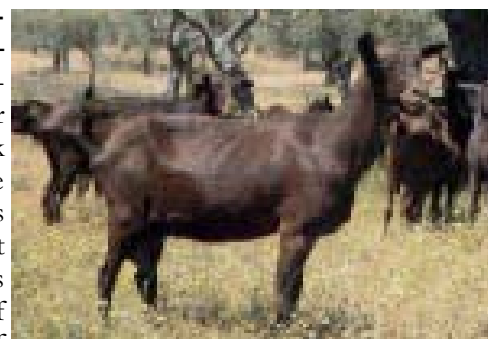
In Portugal, we have five different breeds and we are sure that, as genetic resources, they constitute a safe guarantee for patrimony support.

ALGARVIA Breed – This Goat's name came from its original region, Algarve. The Algarvia population has more or less 14,000 adult animals. From these, about 8,000 are located in the Algarve. Typical management is based on extensive grazing, especially on the poor hilly areas of Algarve. In periods of food shortness, shepherds supplement goats with oat grain or even commercial concentrates. The majority of the flocks have between 20 to 49 heads.

BRAVIA Breed – Its name Bravia (wild) is due to the fact that these animals are reared in wild conditions. This goat plays an important role in the local economies of the northern and eastern mountainous region of the country, since their grazing provides the producing of animal protein from very poor feeding resources. It is normally kept in large flocks (thousands of animals) from different owners. Villagers replace themselves in this work task, working in groups.

C H A R N E - QUEIRA Breed

Used as a dual-purpose animal, for meat and milk production. The total population is estimated in about 35, 000 heads including part of the provinces of



Beira Baixa and Alentejo. It is very well adapted to its natural environment. The feeding system is normally based on extensive grazing. The most common foodstuffs are spontaneous plants and stubbles. Flocks consist normally of 150 to 250 animals, guided by shepherds in the southern regions. In northern areas, flocks are smaller, about 10 to 50 animals, and kept by the owners.

SERPENTINA Breed – The aim of its production is to obtain both meat and milk, however it is considered the best Portuguese breed for meat production. Serpentina goats are reared in extensive grazing systems in poor soils and hot-sunny weather all over Alentejo. The number of animals is estimated in about 100.000. Flocks have usually 100 to 200 heads. The traditional management system is based on extensive grazing. The usual diet is poor consisting mainly of spontaneous plants and stubbles.



SERRANA Breed – Is the most common breed in the country. As result of its different areas of distribution, four distinct types may be found: **Jarmelista**, **Da Serra**, **Ribatejana** and **Transmontana**. Serrana goats are completely adapted to its natural environment, showing a relatively good milking performance even in poor feeding conditions. Its population is estimated in 241,000 adult animals. The traditional management system is based on grazing all year round. Flocks of 40 to 70 goats are kept by a shepherd or even by the owner.

Goat Situation Continued....

Goat Sector in Portugal (cont)

Usually marginal pastures are used and goats are housed at night.

<u>Breed</u>	<u>Breeders</u>	<u>Reg. Females</u>
Algarvia	30	1 873
Bravia	101	9 166
Charnequeira	41	2 117
Serpentina	19	3 795
Serrana	223	15 953



Goat Sector in Morocco by Ahmed El Aich

The goat sector in Morocco is moving slowly. Most of the work that has been done within the frame of this sector concern the dairy sector. Indeed, many units of dairy goats have been started producing cheese. These units are mainly located close the big cities such as Rabat, Casablanca, Marrakech and Tetouan.

It should be pointed out that almost no valorization of goat meat has been done, even in areas considered as niches.

Goats is the animal of least concern as far as research. Most research in Morocco is conducted with sheep and cattle.

Until recently, the professional association such as the ANOC (Association Nationale des Ovins et des Caprins) devoted little interest to goat producers. ANOC has started to become involved in the dairy goat sector.



Goat Sector in Sudan by Muna Ahmed

Goat breeds in Sudan

Sudan goat population is estimated to be approximately 15 million. They increase in fairly rapid rate, occasionally topping that of sheep and cattle. They are distributed throughout the country from arid zones northwards to humid zones southwards. Four major types are identified in Sudan, namely Nubian, Desert, Nilotic and Dwarf goats.

Nubian goats

Sudan Nubian goats developed along the river Nile and are distributed in northern, central and western regions. They have a large body size, long legs and small to medium sized heads. They are characterized by their



Prominent forehead, Roman nose and pendulous dropping ears usually turned outwards at the tips. Horns, if present, are rather light and of medium length. Height at withers ranges from 70 – 80 cm with mature body weight 50 – 70 kg for males and 40 – 60 kg for females.

Goat Situation Continued...

Coat color varies from brown to black, but black is the most common. The animal is mainly kept for milk but kids are slaughtered for meat.

Desert goats

This breed has special adaptation for arid regions. It is found in the dry regions of Sudan especially in the north. Body size ranges from medium to large.

Length at withers range from 65 – 85 cm, mature body weight for male is 50 ± 6.2 kg and for female it is 32.7 ± 5.2 . The head is fine with flat forehead and straight or slightly dished profile. Both sexes are horned. Horns up to 35 cm long projecting outwards or backwards. Ears are medium to very long (12 – 20 cm) and lopped. The color is variable from white, grey, fawn, or red to black with short fine hair. The breed is primarily valued for meat and skin. The breed is very prolific and produce high proportion of twins.



Nilotic goats

Known also as dwarf goats inhabiting humid areas of Sudan (Equatoria). They are of the meat type, they have variable physical features of compact body, light weight, and small size. Their live weight range from 11 – 25 kg. The forehead is convex and the facial profile is straight. Both sexes usually carry small horns. The most common coat color is a mixture of black and white. This breed is vigorous, fertile and resistance to parasites.

Mountain goats

Known also as Tagger goats and are found in mountains and hilly areas of Sudan mainly in the south west, eastern parts along the blue Nile and Red Sea. They have small body size (20 – 30 kg) with short legs and ears held horizontally, both sexes have horns and the coat color ranges from creamy to brown and dark brown. Facial black lines extend along the face from the base of the horns to the nostrils.

Goat husbandry practices in Sudan

In Sudan goats are kept under wide range of ecological and social systems which can be classified into two systems:

Goat husbandry in irrigated areas: these areas include irrigated agriculture, the main Nile, and its tributaries and irrigated agriculture schemes. In these areas goats are kept in two systems; (i) Intensive system where goats are kept in confinement with limited access to land. This is found around towns and large villages. Here goats are kept mainly for milk and fed cut forages beside small amounts of concentrate supplement (ii) Semi-intensive, where a communal village grazing system is adopted in large villages. Here a shepherd collects goats in the morning, takes them to natural pasture and brings them back in the evening where the animals are housed and given a night supplement of concentrate feeds, mainly sorghum grains. In urban areas, goats are left to scavenge on streets utilizing available feed resources during the day. During the night they are given fodder, concentrates and household left over.

Goat husbandry in non-irrigated areas: non-irrigated areas are those which are away from river or irrigated schemes and where rainfed agriculture is practiced. Goats in these areas are kept under husbandry system varying extensive combined with migratory nomadism to semi-intensive. Furthermore, following crop harvest, goats are left loose to utilize crop residues. In most occasions, goats depend mainly on natural pasture, browsing trees and shrubs available in the rangeland. Concentrate supplement is practiced on very limited basis.

Production characteristics of mountain goats (Tagger)

Phenotypic characteristics, management practices and production potentials were studied in Nuba mountains (south western region of Sudan) at altitude 3000 ft above sea level, Lat 11.30° and 12°N, Long 31.15° and 31.41°E. The area lies within the savanna zone of the Shelia belt and can be classified as having hot semi-arid climate; max temperature: 40°C (March - April), min temperature 13°C (January - February) with rain fall varying between 500 – 650 mm during the rainy season (June - October) at RH 18 – 78%. Flock size per household is 29 goats; females comprising 66.65% and breeding males 7.5% while castrates constituted 7.99%, buck/doe ratio 6.4:1. Breeding is uncontrolled, kidding occurs all year round with a peak

Goat Situation Continued...

usually noticed in the wet season. Age at first kidding is 13.53 months (older than many African goats) with average kidding interval 7.71 months. Twinning rate is 57%, birth weight 1.44 kg, and mature body weight 20 kg for males, 18.5 kg for females. Mortality rate is 16.1% for young kids and 7.9% in adults. Slaughter kid weight is 12.66 kg for males and 13.35 for the females with hot carcass weight 5.53 kg and 5.33 kg for males and females respectively.

Warm dressing out percent and muscle bone ratio were 43.69%, 3.51; 41.69%, 2.47 for male and females kids respectively. For the adult animals, slaughter weight, hot carcass weight, warm dressing out percent and muscle to bone ratio were: 19.85, 8.22, 40.7%, 3.14; 21, 8.79, 40.59%, 3.01 for males and females respectively. These findings indicated the importance of this breed as a meat-producing animal due to the high dressing out percent and high bone to muscle ratio.



Goat Sector in China by Pr. Pu Jiabi, Chen Taiyong, Gan Jiyun, Deng Zegao

INTRODUCTION OF GOATS AND RELATED PRODUCTS IN CHINA

China is located in a sub-tropical zone with a large area and various terrains. The conditions meet the requirements of goat. There are 147 million goats in China. The related products, such as meat, cashmere, skin and casing, rank first in quantity and quality in the world and are traditional export merchandises

A rich source of goat breeds

There are 34 goat breeds, totaling 147 million goats. Through natural selection and artificial breeding/selection, various breeds have been formed, such as a meat breed, a milking breed, a skin breed, a wool breed and an ordinary breed. After the liberation of China, some fine breeds of goats were imported to enrich the genetic sources.

Various high quality goat products

Some traditional export merchandise, such as skin, casing and cashmere, have had a good reputation all around the world for a long time.

- There are about 800 thousand tons of high quality goat meat on the Chinese market. Goat meat is popular because it contains high protein, low fat and low cholesterol.



- Over 60 million goat skins are currently on the market annually. Among them, the Sichuan, Yungui and Wuhan lines are of the best quality.
- There are a total of about 54 million cashmere goats producing 72 million tons of cashmere per year, with the production of 200 grams to 400 grams individually. Cashmere is called White Pearl due to its diameter of 11 to 14 mm and length of 5 to 6 cm.
- Milking goats amount to 2 million with a total milk yield of about 1 million. Forty thousand barrels of goat casing are produced every year. Casing functions as a high-quality resource for food, medicine and industry, and is a traditional export good.
- Fur is also well-known and popular all over the world. Fur is characterized as light, warm and lovely.

Goat Situation Continued...

Vision for the future

- Develop dragon-headed enterprises to intensify and industrialize the goat industry.
- Utilize fine breeds to popularize cross-breeding to improve production performance.
- Enhance popularization of research and techniques to improve goat rearing skills.
- Frame and perfect quality standards for goat products to promote processing, marketing and foreign trade

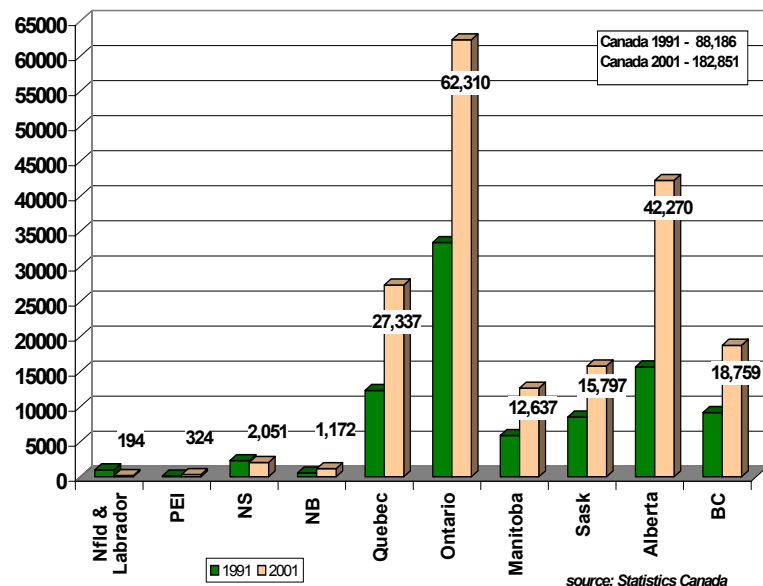


Goat Sector in Ontario by Paula Menzies

State of Ontario Goat Industry Report 2002

Data from the Canadian 2001 Agriculture Census indicate that significant growth has occurred in the goat industry. Most provinces have shown significant increases in numbers of goats. Total number of goats in Canada were 182,151 head, an increase of 45.3 percent from 1996's total of 125,818 head. The graph below shows the changes in the numbers of goats by province in the past 10 years. Although not shown in the graph, the number of producers has declined slightly in the past 10 years. Average national herd size has increased by 56 percent.

Provincial Goat Populations 1991 and 2001



Slaughter Statistics

Provincial slaughter continues to gradually increase as is shown in the graph below. Slaughter in 2001, at 22,638 head, was 4.1 percent higher than 2000's slaughter of 21,736. During the first 9 months of 2002, 17,026 head of goats were slaughtered, representing an increase of 16.5 percent compared to the same period in 2001. The following table shows the change in goat slaughter over the past six years.

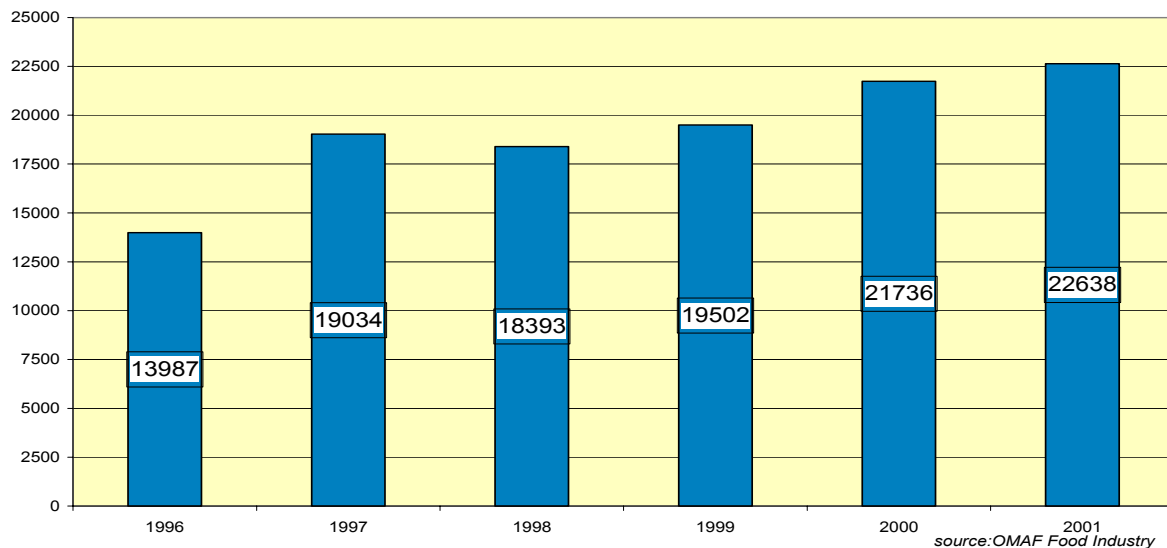
Yearly Provincial Goat Slaughter in Ontario (head)

1996	1997	1998	1999	2000	2001	2002*
13,987	19,034	18,393	19,502	21,736	22,638	17,026

January to September 30 2002 SOURCE: FOOD INDUSTRY DIVISION, OMAF

Goat Situation Continued...

Yearly Provincial Goat Slaughter (head): 1996 - 2002



Imports of Goat Meat Into Canada

Imports of goat meat into Canada declined by 14.6 percent during the year of 2001. To December 31, 2001, 755,991 kilograms of goat meat entered Canada, down from 884,726 kilograms in 2000. Australia continues to supply the largest portion (92.5%) of goat meat imports. In the late 1980's and early 1990's, New Zealand was our major supplier of goat meat, but was surpassed by Australia in the mid 1990's.

Imports into Ontario account for 89.0 percent of total imports during 2001. This has varied from 47 to 75 percent of total imports during the past five years. A very small volume (105 kilograms) of goat meat was imported from the United States. This is the first importation from U.S. since 1997 when 35,018 kilograms were imported.

The value of goat meat imports represented 2.4 million Canadian dollars in 2001 compared to 2.8 million Canadian dollars in 2000. Average price per kilogram has increased to \$3.23, compared to \$2.48 in 1995.

Ontario Market Prices

Industry participants report that prices during 2001 have remained fairly stable compared to 2000. Boer, Nubian, and their respective crosses continue to attract premium prices, of up to \$15 per kid higher than dairy-type kids.

Dairy Goat Sector

The commercial goat milk industry continues to enjoy rapid growth. Total number of licensed producers shipping milk has increased from 180 in 2000 to 223 this year.

According to Ontario Goat Milk Producers' Association (OGMPA), there are currently 13 processors licensed to use goat milk in the province. OGMPA also estimates that over 10 million litres of goat milk was processed during 2001. Supply continues to fall short of demand. Producers shipping to the largest buyer of goat milk are being paid based on milk butterfat and protein levels since March 2001. This has resulted in an increase in the average price per litre.

Goat Situation Continued...

	New Zealand (kgs)	Australia (kgs)	Total Wt (kgs)	Value Cdn \$\$	Value Per Kg
1995	163902	1041341	1205243	2991535	2.48
1996	149695	574556	724251	1989570	2.75
1997	306951	705092	1047061	3034510	2.9
1998	191611	589601	781212	2456074	3.14
1999	110615	562195	672810	2102801	3.13
2000	100956	783770	884726	2806900	3.28
2001	56871	699120	755991	24389	3.23
2002*	37338	569778	607221	55	

*to August 31, 2002

SOURCE: STATISTICS CANADA

Cheeses remain the number one product being processed from goat milk, with new and regular varieties being produced. The remainder of milk is processed into yogurt, ice cream, butter, powdered milk and fluid milk. Currently, three of the 13 processors package fluid milk. OGMPA reports that, although the majority of consumers still drink goat milk for health reasons, such as food allergies, an increasing number are attracted to goat milk's natural image and reputation. OGMPA stresses the importance of this image not being compromised.



Imports of Cheeses

Canada continues to import a considerable amount of specialty cheeses into the country. Import data for cheeses are reported by variety – one of which is specifically goat's milk cheese. From the table below, one can see the dramatic increase in importation of goat milk cheese (double that of 1997 and 13 times more than in 1993!!).

Although not indicated in the statistics, we can assume that some portion of varieties like **feta, the cream cheeses, soft cheeses, and some of the hard cheeses** is also goat milk product. What that portion represents, is difficult to assume. The following table provides figures for imports of goat milk cheese and "typical" varieties of which some portion may be goat milk cheese

Fibre Sector

As with all natural fibres, price for mohair remains low, but was somewhat stronger during the past year compared to previous years.

Goat Situation Continued...

Imports of Goat Milk Cheese into Canada

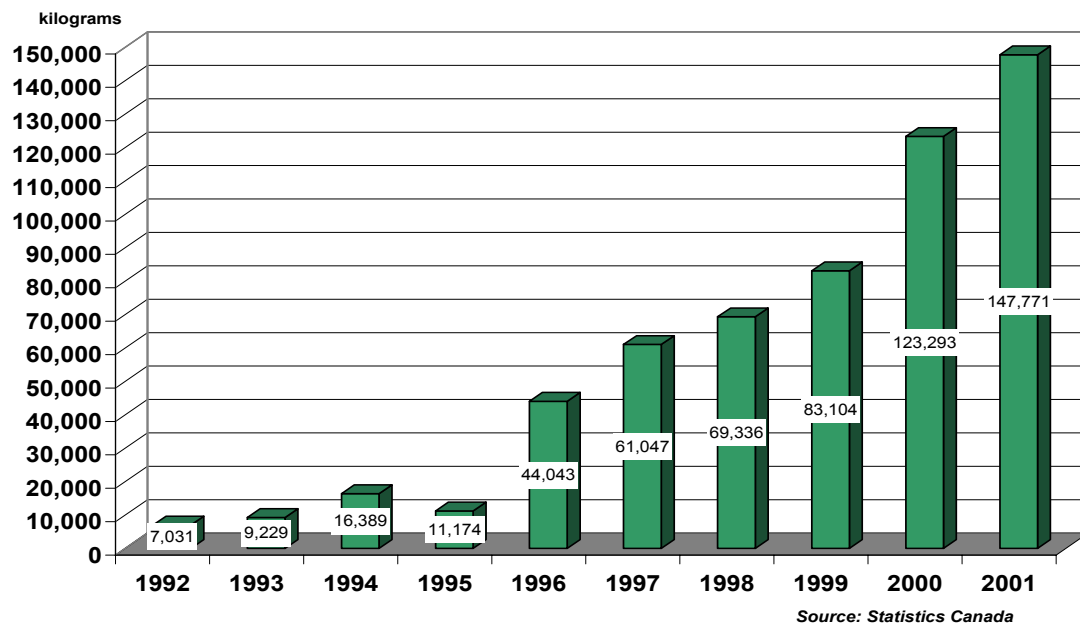


Table 1: IMPORTS OF SOME VARIETIES OF SOFT & FRESH CHEESES

Variety	Kilograms									
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Goat	7,031	9,229	16,389	11,174	44,043	61,047	69,336	83,104	123,293	147,771
Feta	676,954	708,571	799,493	765,340	679,530	722,274	588,401	764,188	740,975	790,167
Romanello	2,000	7,000	2,000	2,000	-	-	-	-	-	-
Crotene	163,105	222,185	164,245	61,526	-	-	54,103	80,634	47,006	24,459
Ricotta	12,103	15,256	17,376	12,564	-	-	13,622	8,299	20,296	12,560
Romano	414,133	427,362	402,281	514,735	1,562,089	915,829	234,464	278,398	267,579	351,148

SOURCES: CANADIAN DAIRY COUNCIL & STATISTICS CANADA

Those producers who sell direct to mills or consumers, or have it processed and returned to them for cottage industry production, are generating somewhat better returns. However they are finding it discouraging to raise fibre goats, use their mohair to make yarn at a mill in Canada and have to compete the yarn imported from Bradford England which sells at 1/2 the cost of processing here in Canada. It is getting more difficult for producers to find processors who will process mohair and return to the producer their own fibre.

One processor in Quebec was offering to buy Canadian mohair at the following prices in April 2001:

- Kid 1st clip,(male and female): \$8.40/lb
- Kid 2nd clip,(female): \$8.10/lb
- Yearling(male 2nd,female 3rd& 4th) \$5.00/lb
- Young Adult(female 5th,6th & male 3rd) \$3.40/lb
- Adult(female 7th & up) \$2.90/lb

There is also an opportunity to send mohair to Canadian Cooperative Wool Growers in Carleton Place, and then have it sold on the world market.

Goat Situation Continued...



Goat Production in North Carolina by Jean-Marie Luginbuhl

Meat Goat Industry Size, Value and Expansion

Interest in meat goat production in North Carolina (NC) has increased during the past ten years because of the increased demand for goat meat. This increase in demand is linked to a growing segment of the population of NC which represents ethnic groups who prefer goat meat in their diet. In NC, the Hispanic population alone is estimated at 350,000 to 500,000 out of a countrywide population of 45 million. Significant number of people of African, Asian, Middle-Eastern and Caribbean origin also resides in NC. Although the current market picture is disjointed and confusing, there is an unfilled demand for goat meat in NC and the major cities of the USA, and especially in the population centers of the Eastern seaboard. Since 1991, the USA is a net importer of goat meat. In 2002, 6,982 metric tons of goat meat were imported for a total value of \$14.2 million, compared to 3,363 metric tons in 1999 for a total value of \$7.8 million.

According to the NC Department of Agriculture statistics, a total of more than 215,000 goats were sold for meat in NC in 2002, representing receipts of more than \$9 million. In addition, it is estimated that the NC meat goat breeding stock inventory totals 146,000 animals for a total of 3,200 farms, or an average of 46 goats per farm. It is anticipated that the meat goat inventory will grow by an average of 8-10% in 2003. The above breeding stock inventory represents a capital of more than \$14.4 million. Another indicator of the expansion of the meat goat industry is the fact that goat shows have been successfully implemented at the Mountain and NC State Fairs since 1996. Interest grew rapidly: 52 goats were entered in the Goat Show at the NC State Fair in 1996 versus 423 in 2002. In addition, the number of goats entered in the Junior Market Goat Show totaled 46 animals in 1997 vs. 317 in 2002. These statistics clearly indicate the increased interest in meat goats by young people of NC. The foundation of a meat goat industry depends on the existing natural resource base. The state of NC possesses the land, water, and the forage and shrub base to play a pivotal role in the expansion of the national meat goat herd.

Twenty-five million acres, divided into grassland pasture, crop land used only for pasture, idle crop land, crop land used for crops and forest land, are available. In addition, it is estimated that most beef cattle farmers would have enough "excess" feed in cattle pastures to feed 1 to 2 goats per cow at no additional cost. There are more than 500,000 beef cows in NC, suggesting that beef pastures could support between a half and one million goats. The complementary effects of grazing cattle and goats on the same farm provide an opportunity to enhance and augment the existing NC beef cattle industry by improving pasture condition and feed quality, and by increasing profit per unit area. Goat farming seems to be independent of scale. Small, part-time farmers with only a few acres can raise enough animals to provide an income supplement. Conversely, very large farms can efficiently integrate a meat goat enterprise to aid in diversification of the farm.

Meat Goat Industry Historic Development

The South African Boer goat has provided a great incentive to the development of the NC meat goat industry. In April of 1993, Boer genetics were released from quarantine in New Zealand and were offered for sale in the USA, mainly as frozen embryos. NC State University and a few key producers were able to obtain some of these embryos to form the core for a research herd and to provide a sound genetic base for the improvement of meat goat genetics in the state. Producer's interest resulted in the founding of the NC Meat Goat Association in November 1993.

Since then, membership has been steadily increasing to approximately 500 members. Following several years of speculative prices, Boer goat breeding stock prices are now affordable to smaller producers. Crossbred animals having Boer genetics are now being sold for meat at auction markets or under private sales and buyers and consumers already have recognized the superior carcasses of those animals. In collaboration with the NC State University Meat Goat Program and the Franklin County Cooperative Extension Service, the NC Meat Goat

Goat Situation Continued...

Producers Cooperative was created in June 2001 to direct market live goats or goat meat directly to consumers and area retail stores and restaurants, thus bypassing middlemen and establishing a direct link from producers to consumers, or “from pasture to plate.” Thanks to grants from several foundations and other sources, the Cooperative now totals 300 members representing 55 of NC 100 counties. The NC Meat Goat Association and the NC Meat Goat Producers Cooperative have initiated talks to merge as one organization.

The NC State University Meat Goat Educational and Research Program

North Carolina State University (NCSU), following an appropriation from the NC General Assembly, established in 1995 a research and extension faculty position with technical support staff and an operating budget in support of this fledgling industry. Soon thereafter, work began to evaluate the potential of cool-season and warm-season perennial and annual forages to meet the nutritional requirements of productive does throughout the different stages of their production cycle and of growing kids and replacement does. The potential of woody trees and shrub species adapted to our environmental conditions and suitable for meat goats as protein and/or energy banks during the summer are also being evaluated. Byproduct feeds such as cottonseed, wheat-middling, corn-gluten feed and soybean hulls are being tested with goats fed forage-based diets. The effect of gossypol, a yellow pigment found in whole cottonseed that may affect male reproductive function, is being examined in collaboration with Virginia State University. The tolerance of meat goats to copper, a micro-mineral affecting growth and the immune system, is also being investigated. Additional research conducted in collaboration with scientists from the NCSU College of Veterinary Medicine and the Virginia Polytechnic Institute and State University is exploring non-pharmaceutical approaches to treating goats against gastrointestinal parasites using

herbal dewormers and copper oxide needle boluses, and testing agricultural practices that have the potential to decrease gastrointestinal parasite loads in pastures. The role of goats as biological agents to control noxious vegetation that invades pastures is also being explored as a low-cost and environmentally-friendly alternative to herbicide application and mechanical cutting. Research has demonstrated that the foraging habits of goats have important environmental implications by ultimately increasing the sustainability of production systems.

Presently, the NCSU meat goat educational, research and breeding herd is comprised of 135 breeding animals, 34% being purebred Boer females, 63%

crossbred Boer females, mostly 3/4 Boer, and 3% purebred Boer males. In addition, more than 200 kids were born during the February 2003 kidding season. Another research herd of about 150 Boer cross animals, of which more than 50 are adult females that kidded last April, is located at the NC



Department of Agriculture Mountain Research Station in western NC.

Dairy and Fiber Production

The dairy goat industry is also expanding due to an increasing demand for goat cheese by ethnic groups and Americans that have lived or traveled abroad. Presently, three registered goat dairies manufacture various fresh and aged cheeses sold through farmers' markets and area retail stores. In addition, a group of dairy goat farmers recently received a planning grant in support of the development of a farmer owned, goat milk cheese-processing facility. Many other “hobby” dairy goat farmers use milk for personal consumption, to make soaps for sale and to fatten hogs.

In the mountains of western NC, a small but growing number of producers are raising Angora goats as breeding stock and/or either selling the fiber to spinners and knitters or making and marketing garments themselves.

Goat Situation Continued...



State of goat production in Venezuela by Fidel A. Pariacote

Introduction

The contribution of the goat to total world production and consumption of food has increased significantly in the last years (Haenlein, 2001). However, in many countries the breeding of goats has not been emphasized. In Venezuela, in spite of the multiple and varied official intents, the goat industry, in their majority, have an economy of subsistence, and cases where the value of the product is insufficient to cover the basic necessities of the family are common. A very general vision of the situation is described in this paper.

Population

The goat population in Venezuela has been estimated in a million and a half heads, without significant inter-annual variations observed in the last decade (MAC, 1998). More than 80% of the direct gene pool of this population comes from the animals that were introduced during the conquest, the rest come from breeds introduced more recently, as the Alpine, Nubian, and Canaria, among the most commons (Ruiz et al., 2001). However, the new breeds have not been managed as such; that is to say, conforming pure flocks. In most of the cases, the objective has been the crossbreeding, which has made that most of the flocks have been polluted with genes from the exotic breeds. The preference is for exotic breeds. The proportion of crossbred animals observed in a herd can be used to measure the administration capacity of that particular producer to get exotic bucks. Also, it could be indicative of the degree of friendship or political link of the producer with the on duty boss of the official or private entities that promote crossbreeding as an improvement method.

The role of goats in Venezuela

Worldwide, goat breeding has been justified with several arguments. In Venezuela, the social role of the goat, among others, should be within the most important ones. Life of thousands of rural families depends, from one way or another, upon goat breeding. Any vertical improvement done to typical systems will have a direct impact in the well being of these families.

The breeding and marketing of goat products does not have a significant effect on the economy of the country as a whole, but goat activities can be very important for

some regions. The goat meat consumption at national level, estimated from the numbers of slaughtered animals⁻¹ yr, averaged less than 1, but in some regions, it reaches up to 6kg/person/year. In harsh environments, the goat is, with the exception of hunting, the almost exclusive source of protein of animal origin of rural families. Twenty percent out of the eight hundred thousand heads that are slaughtered⁻¹ yr is done in a handmade way.

The situation for milk production is similar. The orientation of the system toward milk or meat is highly bound to regions.

The milk is transformed and marketed in form of cheese and sweet, both of them handmade elaborated. On the average, 80 and 20% of the goat population is used in meat and milk oriented systems, respectively.



Goat Situation Continued...

Problem

The most pressing problem is the low quality of life of goat producers, especially those producers that are located in the arid and semiarid areas of the country (Pariacote, 2000). Undoubtedly, this problem is due to the low production capacity of typical goat production system. Therefore, it is important to increase the scale of production of these systems above the necessities of the producer and their family. By doing this, it will be possible for them to market their goat products, meat and milk, to others, creating a real and durable socioeconomic development.

The goal should be to achieving sustainable, competitive and efficient goat production systems, through transdisciplinary, continuous, and autochthonous technological development that involves a majority of the goat producers. The desired outcome is more likely to result through deliberate and planned work, with active participation of all sectors, than from exogenous modernization, restricted to a minority.

Development

Official Plans

There have been many and varied official plans for increasing goat production in Venezuela. Plans range from technical assistance, financial support, to programs promoting goat organizations and industry. However, in most cases the social and economic goals of these plans have not been realized. The reduced results of these plans seem to be related to the fact that plans are imposed ignoring the true nature of the problem. Also, the fact that the plans all too often are formed, ignoring local impacts and restrictions causes them to be formed based on faulty assumptions.

Pariacote (2001 and 2002, gives this matter deeper consideration.

Without exception, plans should be oriented to improve the well-being of the producer and consumer. But they should be based clearly delineated concept that allows them be evaluated in the future. It is also important that a clear situation where they are going to be applied be described.

Institutional support

Since 1970, many organizations and programs dealing

with the development of goat production systems have arisen. Most public regional corporations settled in goat productions states have had their own program for the development of the goat sector, but few of them last. It is common to see neglected facilities that formerly belonged to these public entities. In table 1, organizations of continuous proven link with goats, on going projects, and producers trade union activities are listed.

Education and research activities in goats are done by universities and the National Institute for Agricultural Investigation (INIA); particularly, by those located in the goat production states. There are many other public institutions dealing with goats; agricultural colleges, state governments, municipalities, etc., but their contribution to producers is not well defined. New private organizations and producers are rare, but they are the only successful ones. Associations of producers are basically for political reasons and not formed as true trade union interests.

In general, scientific personnel are scarce and most institutions, with the exception of INIA, do not have the basic framework that is required to support oriented research in goats.

Restrictions

Difficulties for the development of goat production systems in Venezuela are many and of diverse nature (Vallée et al., 1983; Guichard, 1985; García, 1986; Blanchard and Moron, 1991; García and Dickson, 1991; Montiel, 1991; Pariacote, 2002). About 80% of the total goat population is located in arid and semiarid environments, where physical support for agricultural activities is scarce. Herds are managed for producers of scarce resources and of a very specific cultural pattern.

On the whole, the situation of each producer is unique. It may be one of the reasons why development plans have not done the job, as expected. Standard plans of development, usually exogenous, are based under economic assumptions, and the cultural environment of producers is normally ignored. For example, most typical systems produce under condition of minimum input; that is to say that they are economic efficient systems, but they are not competitive due to the low monetary value of their crop in a yearly basis. Under those conditions, investment is required to improve the economic benefit of the system, and producers are often unwilling to run

Goat Situation Continued...

that risk, even if they had the resources. As time passes in a development project, the resources for the investigation and development become scarcer. Thus, plans and contribution from official entities to the sector, often depends on how those in charge like goats. The situation is even more serious due to the frequency with which officials are replaced.

Participation of official bodies should be for defined objectives and the input of scientific personnel appropriate to the local need is urgent.



Conclusions

Venezuelan goats support the lives of thousands of rural families. Any improvement on typical systems will have a direct social impact. Producers must be involved in the elaboration and execution of the plans, which should focus on increasing production above families needs.

News From Different Countries

News from South Africa

by Ned Donkin

GOAT NEWS from South Africa 2003

South Africa has approximately seven million goats. Commercial goat production is associated mainly with the production of mohair from Angora goats, and the production of meat from Boergoats. These industries are well-established, and the breeders produced high quality products from excellent genetic material. Angora goats and Boergoats are in demand internationally. Lesser-known breeds include the Savannah and the Kalahari Red. There are relatively few producers of goat milk and cheese, but there is an active Milk Goat Breeders' Society. However, a very important component of goat production is in the non-commercial sector, where South African Indigenous goats (Nguni, Pedi, etc.) are kept mainly for meat produc-

tion and social functions. These goats are hardy and disease resistant.

Sources of Information:

A Goat Webpage has been developed by Amelia Breytenbach in the Library at the Faculty of Veterinary

A Small Ruminant Research and Development Network for South Africa (SA SR-NET) and for the SADC Region (SADC SR-NET)

A Small Ruminant Network has been established for South Africa (SA-SRNET). The nominated representative for South Africa is Ned Donkin (email: ndonkin@op.up.ac.za).

Goat Situation Continued...

Alternatively, contact Heleen Els (e-mail: hels@op.up.ac.za) or Gavin MacGregor (e-mail: hpsagm@mweb.co.za). The Network is growing, and people are encouraged to join. It is linked to networks in other countries in Southern Africa. News and information are distributed, and the idea is to include as many people as possible in South Africa, from those who are interested in small ruminant production.

Small Ruminant Conference, October 2002

A successful Small Ruminant conference was held from 30th September to 4th October 2002, in co-operation with the Developing Animal Agriculture Interest Group of the South African Society for Animal Science (SASAS-DAAIG), at Jan Kempdorp near Kimberley in the Northern Cape Province.

The Fifth International Sheep Veterinary Congress, 2001

This Congress was held at Stellenbosch, South Africa, in January 2001. A wide range of papers was presented encompassing management as well as veterinary aspects of sheep and goat production. The proceedings are available on a CD from Gareth Bath e-mail: gfbath@op.up.ac.za or Ken Pettey: e-mail: kpettey@op.up.ac.za. The website is: <http://www.up.ac.za/academic/lhpg>. This is also linked through the goat webpage.

The Eighth International Conference on Goats (2004)

In 2004, the Eighth International Conference on Goats (ICG) will be held in South Africa, and this will be the first time on the African continent. The intention is to

intention is to make it a unique opportunity for Southern Africa in particular, and not only for South Africa. We are looking for support from all people involved in this field of endeavour, in order to ensure that this Conference is a great success.

Norman Casey of the University of Pretoria is the Chairman of the Organizing Committee (e-mail: icgsa@icon.co.za). The website is at: www.icgsa.co.za

Other sources for Goat Information

- The Angora goat breeders produce four million kg of mohair each year. At present prices are very favourable. There is a wide selection of excellent animals to choose from. For more information about the industry, visit the website: www.mohair.co.za, or contact Frans Loots at e-mail: info@mohair.co.za
- Boergoats are in great demand as the best meat producing goat breed. There is a wide selection of breeders to choose from. For more information visit the website:

<http://studbook.co.za/boergoat/index.html>

<http://studbook.co.za/boergoat/index.html>

or contact the Society at e-mail: society@studbook.co.za

- For information about other breed societies, go to the Goat Webpage (see above).
- Research on goats is carried out by a wide range of organizations across the country. For a review see: Ramsay & Donkin (2000): A review of the current status of goat research and development in South Africa. Go to the Goat Webpage.



News Continued...

News from China

by Pu Jiabi

The 4th National Representative Conference of the Society of Goats & Sheep of Chinese Association of Animal Science & Veterinary Medicine, the academic exchange meeting, was held in Beijing, Capital of China, from October 19 to 22. Over 360 participants were present at the conference. The Conference received 85 papers, four of which were submitted by Professor Pu Jiabi, Director of Heifer International China Office. As a Board Member

and Regional Director of North Asia for IGA, Prof. Pu Jiabi gave a presentation about activities of IGA, the International Conference on Goats, and also presided over an exchange meeting of all Chinese IGA members and applicants for IGA membership. There were 26 representatives showing interest in IGA membership with five

of them applying for membership for 2003.



News from France

by Pierre Morand-Fehr

On December 12th, 2002, the French Society of Ethnozootechnia and the International Goat Center CABRILA organized a meeting in the heart of the French goat region. The resulting workshop was entitled: The goat: its role in the 20th century society, particularly in France. More than 200 persons interested in the goat sector participated in this event. The objective was reflect on the conclusions which can be drawn on the ethnozootechnic history of the goat. This was aimed at finding solutions for current problems such as welfare of goats, the social demand in regards of quality of goat products, respect of the environment, etc...

works are important to both the nostalgic minded hobbyist farmer and goat experts when making decisions on goat farming.

Three IGA Board Members: Jean Boyazoglu, Roberto Rubino and Pierre Morand-Fehr, as well as Gilbert Toussaint, Country Representative for France, and Claudia Lorentz substitute to Mrs Muhlheer, Country Representative for Switzerland attended this workshop.

The proceedings (approximately 150 pages) should

News Continued...

News from Morocco by Ahmed El Aich

In 2000-2002, the French Institute of Agronomic Research (INRA) and the Moroccan Institute Hassan II for Agronomy and Veterinary Medicine have undertaken a scientific project on the production of young male goats in the Argan tree forest areas (West Center part of Morocco). Its objectives are to assess the carcass quality of young goats grazing argan tree leaves and twigs by climbing on trees. This study has revealed that the carcasses of young male goats reared on argan trees contain less adipose tissues and more unsaturated fatty acids of better dietetic quality than young male goats fed concentrate.



The seminar emphasized the important role of goat farming in argan tree forests, its impacts with the argan oil production and the necessity to include it in the sustainable development of this ecosystem. The following five recommendations resulted:

- Implementation of programs aimed at the development of goat meat in the argan tree ecosystems.
- Support of the professional organization, ANOC for this program by implementing goat farmers groups and by bringing technical help.
- Development of other grass, shrub or tree forages to limit the grazing pressure of goats on argan trees.

The positive results obtained in the project have given the Moroccan Ministry of Agriculture the opportunity to organize a seminar at Essaouira (17-18 March 2003) on goat farming in the argan ecosystem. Approximately 140 experts from all regions attended this seminar.



- Implementation of a Committee of support for this program responsible for the evaluation of the results obtained and with the modifications of its objectives if necessary.
- Organization of seminars on this topic regularly, probably every 3 or 4 years.

Scientific News

France

ALTERNATIVE METHODS AGAINST GASTRO-INTESTINAL NEMATODES IN GOATS: USE OF TANNIFEROUS PLANTS AND CONDENSED TANNINS

BY V. PAOLINI, H.HOSTE.

Anthelmintics are the usual method of control of gastrointestinal nematodes. However, anthelmintic resistances in worm populations are now widespread and begin to severely impair the efficiency of treatments. In addition, the concern of consumers on the use of chemical substances in farms is increasing. There is thus a need for alternative or complementary methods to anthelmintics.

Amongst those, the results of several studies in sheep have shown that condensed tannins (Athanasidou et al., 2000a,2000b) or tanniferous plants (Niezen et al.,1998) have an effect on infections of the gastrointestinal tract with nematodes. In contrast, up to now, few data are available on goats (Kabasa et al., 2000), despite differences in feeding behaviour, metabolism and ability to exploit rangelands. The aim of the PhD project is to examine the effects of condensed tannins or tanniferous plants on gastrointestinal nematodes in goats and to analyse the possible mechanisms

Three main objectives are defined:

- To assess the efficacy of the condensed tannins against three main species of nematodes occurring in France (*Trichostrongylus colubriformis*, *Teladorsagia circumcincta* and *Haemonchus contortus*). Experimental studies have shown that the main effects observed were 1) a reduction in parasite egg excretion, due to a decreased fertility of female worms when tannins were given to goats infected with adult nematodes, 2) a reduced establishment of larvae when tannins and infective

larvae were given at effective concentrations ?

What are the possible effects on the milk production? the same time. Both results could have an impact on the epidemiology of nematodes and the contamination of pasture.

- To examine the consequences on natural infections of the distribution of a forage rich in tannins. When sainfoin hay (*Onobrychis vicifoliae*) was given to goats, a decrease in egg excretion was observed and the goats showed a better resilience. These results were the first ones described with hay from tanniferous forage and need to be confirmed. Measurements of effects on the dynamics of infection in a large flock and on milk production are in progress.



- To explore the underlying mechanisms. The possible direct effects on worm biology of condensed tannins from different plant extracts are currently examined by *in vitro* methods on adult worms and larvae from different nematode species. Indirect effects of tannins by stimulation of

the host immune response are also examined.

These results confirm in goats the same effects of condensed tannins on gastrointestinal parasitism described in sheep. However, many questions remain to be solved. The mechanism of action is a major basic point to be examined in the future.

Scientific News Cont...

SUDAN

The use of underground salts in comparison with bone meal as supplements in the diets of desert goats

Two types of underground salts obtained from two different locations in western Sudan together with a bone meal were included at rate of 2% each in the ration of non-pregnant, pregnant and lactating desert goats. The basal ration consisted of sorghum straw, groundnut cake, and wheat bran. The underground salt at one location (A) contained 7.5% calcium (Ca) and 0.05 phosphorous (P), at the second location (B) it contained 8.9% Ca and 0.05% P, while the bone meal contained 35.5% Ca and 13.5% P. Feed intake increased significantly with salt B in the non-pregnant goats and with both salts in the pregnant animals compared with the bone meal. Total or daily milk yield was the highest with salt A. Blood analysis showed that PCV, haemoglobin (Hb), and serum Ca levels were the highest with salt B in both pregnant and lactating goats. While P was also the highest with salt B in the lactating animals. The non-pregnant goats had the highest P and Hb levels with bone meal. The present study had shown that, under extensive system, certain underground salts could be used as source of calcium for goats at different physiological states.

Inclusion of paper waste in the diet of Nubian kids

Nubian kid goats less than one year old were assigned randomly to four rations which, were formulated to be iso-nitrogenous, iso-fibrous and semi-iso-caloric. Paper waste (PW) from different presses were collected (free from ink) to be included in the diets of Nubian kids so as to replace ground hulls in a basal ration of sorghum grain, molasses, urea, and cotton seed cake. PW was included at rates of 0, 5, 15, and 23%. The highest growth rate (0.26 kg/day)

and the heaviest final weight (18.73 ± 2.23 kg) with the best conversion ratio (8.85) were obtained in the group fed the ration which contained 15% PW. Carcass analyses showed that the highest dressing-out percent (50.52 ± 2.25) was obtained in the group fed the ration which included 23% PW which also showed the highest profitability.

Adaptability and productivity of Nubian goats and their crosses (25 and 50%) with Saanen breed to the semi-arid conditions of Sudan

Pure Nubian goats together with their crossbred (25 and 50%) with Saanen were investigated for their adaptability and productivity from birth to lactation. The 50% kids



were the heaviest at birth, pre-weaning and weaning age although significant differences could not be detected. Both food and water consumptions were the highest in the 25 and 50% crossbreds during the pre-mature, gestation and lactation periods. There was also a significant positive correlation between ambient temperature and water intake for both crosses but was insignificant for the pure breed. Body temperature was higher for both crosses compared with

the pure breed. There was also a significant correlation body temperature and ambient temperature for both crosses but not for the pure breed. Body weight was the highest with the 25% crossbred during gestation and lactation. Milk yield was higher for both crosses compared with the pure with high positive correlation between body weight and milk yield. It could be concluded that the pure breed was more adaptable its respective crosses which were more productive. Selection for crosses with high adaptability will be at the expense of productivity, therefore certain management practices are required for the crossbred to achieve maximum productivity.

PRETORIA CONFERENCE

You are invited to attend the 8th International Conference on Goats 2004, to be held in Pretoria, South Africa, from Sunday 04 July to Friday 09 July 2004. This event will be held under the auspices of the International Goat Association in collaboration with the South African Society for Animal Science and the University of Pretoria. This will be the premier goat meeting and your attendance is encouraged. For the latest information on the conference, please visit the website at www.icgsa.co.za. Sections of the Conference brochure follow



Our Credo and Objectives

Our Credo

- To Provide Equal Opportunity for all people without prejudice.
- To uplift and advance agriculture through science and technology in the interest of human welfare.
- To preserve our natural heritage

Our Objectives

- To review scientific achievements which promote improved goat production and utilization.
- To disseminate scientific information.
- To develop human capacity.
- To initiate new trains of thought.



When and Where

The 8th ICG SA 2004 will take place from Sunday 04 July 2004 –Friday 09 July 2004 pm the ,aom ca,[is pf the University of Pretoria. July is mid winter and the dry season in Pretoria. Morning Temperatures are cool and crisp 0 to 5 Celsius, rising to 20 Celsius, with clear skies and cool evenings. The University of Pretoria is a 30 minute drive from Johannesburg International Airport and Shopping malls and services are within walking distance of the campus.



Accommodation

Accommodation will be available at selected rated hotels, guest houses and in university residences, all within close proximity of the venue.



General Information

The conference will consist of plenary papers, posters, discussions and round table discussions on special topics. Details for the submission of posters for public presentation and an accompanying short paper for the conference proceedings can be obtained from the website (www.icgsa.co.za) or can be sent to you by post or fax.

Enquire from the ICGSA Secretariat.

The conference will be presented in English.



Contact details

Contact Persons:

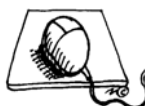
Secretariat of the 8th ICG, South Africa, 2004

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Registration

Registration fee: \$500 (US) per delegate

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PRETORIA CONFERENCE CONT.....

The following program represents the topics that have been selected. Speakers will be nominated in May.

	8:30 to 10:30	10:30 to 13:00		14:00 to 16:00	16:00 to 18:00	18:00 to 20:00	20:00 to 22:00
Sun	Registration and Meet and Great function						
Mon	Opening and Welcome S1 Foresight on Goat Research S2 Social Environment	Posters and Discussion on S2 R1 Towards achieving social and economic equity through goat farming	L U N	S3 Physical Environment and Infrastructure Posters and discussion on S3	Traditional South African braai		
Tues	S4 Business Environment S5 Nutrition	Posters and Discussion on S4 and S5 R2 Nutrient Requirements	C H	S6 Genetics and Biodiversity S7 Physiology	Posters and discussion on S6 and S7 R3 Application of genomic developments	IGA General Business Meeting	Free Evening
Wed	Technical tours to research institutions or interest tours to Johannesburg. Soweto gold mine; or Cullinan diamond mine and subsistent farming, or archological site						
Thurs	S8 Health S9 Goat Production	Posters and Discussions on S8 and S9 R4 Strategies for monitoring health and sanitation	L U N	R5 Quality Standards for Goat Products	R6 Information and Technology transfer in support of business development	Prepare for Dinner	IGA Dinner
Fri	S10 International Relationships and Trading	S11 The Goat in Philosophy and Perspective Overview : Closing and Good-byes	C H		Departure to airport Flights to Europe and North America leave Johannesburg International Airport early evening.		



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