IGA Newsletter

April 2015

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SPECIAL ANNOUNCEMENT: New Benefit for IGA Members

Hello IGA members!

The International Goat Association is excited to announce a special new benefit for our members. We unveiled a **MEMBERS** area on the IGA website yesterday. You should have received an email from us (noreply@www.iga-goatworld.com) inviting you to join the IGA website. ***If you didn't receive one, please check your SPAM folder or contact us to get your link***.

This new feature will enhance your ability to access, not only the most up-to-date information available, but we will also be able to share more inside information from IGA.
To sign in:

1) Follow the link
2) Enter your email in the Email field
3) Enter your password in the field
4) Click on "Sign In" box

If you ever forgot your password, don't worry it is easy to get it reset. If you have any questions or problems, please contact:
Christian De Vries
admin@iga-goatworld.com

Countries Pledge to Wipe Out Sheep and Goat Plague Globally

Worldwide campaign aims for complete eradication of Peste de Petits Ruminants by 2030

2 April, 2015, Abidjan, Cote d'Ivoire - High-level authorities from 15 countries pledged on Thursday to collaborate on a global plan to wipe out forever the devasting animal disease known as 'Peste des petits ruminants' by 2030, a lethal plague for goats and sheep and the scourge of rural households in vast swathes of the developing world.

Ministerial delegations, along with more than 300 participants from across the continents, representatives of regional bodies and international organizations, agreed to a plan to control and eradicate PPR drawn up by FAO and the World Organisation for Animal Health (OIE) and presented at a meeting organized by the two institutions with the Government of Cote d'Ivoire.

The campaign will make PPR only the second animal disease ever to be eradicated, after rinderpest in 2011. PPR is estimated to cause over $2 billion in losses each year, mostly in Africa, Asia and the Middle East, and its elimination will improve food and nutritional security

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Country Report - Status of dairy goats in South Africa

Written by Carina Visser, IGA Board Member

Livestock farming in South Africa is an important part of the food supply chain as only 12% of the country's 1.2 million square kilometre surface area is suitable for crop farming activities. With a population that exceeds 50 million people, the importance of animal production efficiency is increasing, with the emphasis being placed on cost effective production while decreasing the impact on the environment. The FAO estimates that the South African goat population consists of about 6.2 million animals. This estimate is complicated by the fact that most of the goats in South Africa (63% as estimated by the Department of Agriculture, Forestry and Fisheries) consist of unimproved indigenous goats in the non-commercialized agricultural sector. These goats do not participate in a recording scheme, and without official statistics exact numbers are difficult to determine.

The commercial dairy goat industry is quite small, with less than 4 000 goats registered with South African Stud Book (SA Stud Book, PO Box 270, Bloemfontein, 9300). Commercial dairy goats are mainly distributed around the economic centres in Gauteng and the Western Cape, where goats' milk products are more easily marketed. Producers are also found in the Northern Cape, Eastern Cape, Free State, KwaZulu Natal and Limpopo.

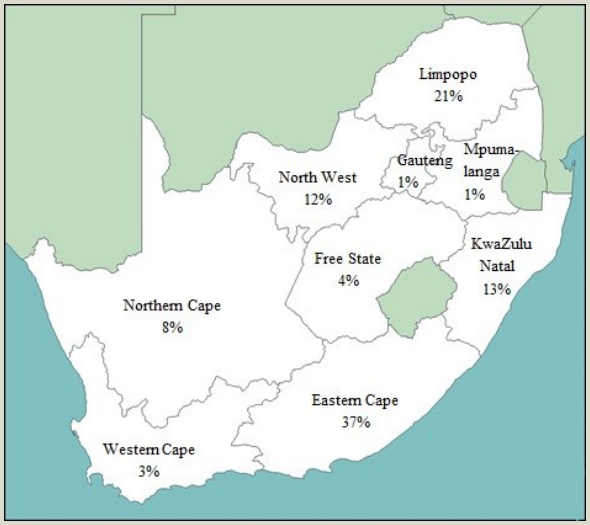

Figure 1: Map of South Africa showing the distribution of the South African goat population in each of the provinces

Specialized dairy goats arrived in South Africa at the turn of the 20th century, originating from Switzerland and Britain. Originally four breeds were officially recognised in South Africa, namely the Saanen, Toggenburg, British Alpine and an Anglo-Nubian Swiss composite, but the Anglo-Nubian Swiss had disappeared by 1928. The South African dairy goat industry is small in comparison to some of the developed countries such as France and Spain, and supplies a niche market with speciality cheeses. An increase in local demand for goats' milk products has led to an increase in the interest in keeping dairy goats, and concerned breeders have questioned whether the isolated populations have enough genetic diversity to support the growing industry.

Marketing of cheeses and other value-added products occur mostly in an informal way, such as by selling directly to consumers via on-farm sales, or at fresh food, organic or farmer's markets held over weekends. Limited quantities of local goat's milk products are sold through retailers and supermarket chains, and it is therefore difficult to estimate

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Country Report - Status of dairy goats in South Africa *(Continued from Page 2)*

the true volumes of milk that is produced. Goats' milk supply is hampered by the seasonality of production seen in the commercial herds, where around 82% of the does kid in the spring season (from late August to early October), which results in a couple of months in a year when no fresh goats' milk is produced. The dairy goat population currently does not produce enough to warrant investment in large scale freezing facilities to ensure year-round supply.

Table 1 Lactation statistics for the British Alpine, Saanen and Toggenburg for the 2012/2013 season

Breed	Lactations recorded	Average milk (kg)	Average protein %	Average fat %	Average days in milk
British Alpine	45	1366	3.6	5.0	202
Saanen	85	1227	3.2	4.0	317
Toggenburg	30	1297	3.6	4.9	215

Source: SA Stud Book

The exotic Saanen, the Toggenburg and the British Alpine breeds are preferred for commercial milk production, despite being vastly outnumbered by the indigenous goat population, because of their increased production levels and the predictability of production. Studies found that South African indigenous goats produce 23kg of milk over a lactation spanning 93 days, which is much less in comparison to the exotic dairy breeds. Table 1 indicates that the Saanen, Toggenburg and British Alpine does produced, on average, more than 1200kg milk during the 2012/2013 lactation period. The average days in milk were also two to three times the length of the lactation period recorded for the indigenous goats.

There are no more than a couple of producers in South Africa that produce dairy goat products on a true commercial scale; the largest portion of the dairy goat population is found on these intensive production systems. The rest of the producers in South Africa keep commercial dairy goats in a small-holder setting, with herds rarely exceeding 100 animals in number. Producers are furthermore divided between those that breed stud animals - represented by the South African Milch Goat Breeders' Society (SAMGBS, http://www.milkgoats.co.za/milkgoat_society/) - and producers that wish to breed for the sake of production, and not necessarily breed stud animals. These producers are represented by the Southern African Goat and Sheep Milk Processors Organization (SAGS). SAGS also certifies the goat milk products produced by its members, provided that the goat it was produced from are at least 7/8 Swiss-type dairy goats. This accommodates commercial farmers who make use of cross-breeding practices to improve the butterfat content of the milk, usually by crossing Saanen with Toggenburg. The F1-generation is crossed back to one of the parent breeds, or to a third breed, such as the British Alpine. It should be noted that the commercial dairy goats and their products are not normally the primary source of income for their producer in Suth Africa, but rather an expansion on other farming activities, or even completely unrelated to the producer's primary source of income. A large part of the dairy goat industry in South Africa can therefore be described as a "hobby" industry.

An investigation into the genetic diversity of the dairy goat population, using a panel of 25 microsatellite markers, found that the overall genetic diversity was moderate in all three breeds, varying from 62.6% to 63.4%. The location of South Africa is such that genetic material cannot be readily exchanged with other major centres of dairy goat production due to the distances and other logistical issues, including outbreaks of diseases such as Foot-and-Mouth, and the prevalence of endemic diseases. South Africa is free of scrapie, and therefore importing live goats from areas where scrapie is endemic is prohibited. By keeping limited imported stock pure, the risk is being taken that the gene pool becomes too small through inbreeding.

A cluster analysis of the population structure of the Saanen, Toggenburg and British Alpine (Figure 2) found that the Saanen animals formed three geographically independent clusters, while the Toggenburg and the British Alpine each formed their own cluster. A sixth cluster was identified that contained animals from each breed. Upon further

Continued on Page 4

Country Report - Status of dairy goats in South Africa *(Continued from Page 3)*

investigation it was determined that these were hybrid animals that resemble one of the parent breeds based on coat colour, and could therefore pass as a purebred member of that breed. This is problematic, as the SAMGBS allows the registration of goats with unknown parents with the relevant herdbook based on an inspection. It is therefore possible that crossbred animals could be assigned to the wrong breed based on coat colour alone.

There is still wide scope for improvement of the South African dairy goat population. It was found that there is enough variation within the Saanen, Toggenburg and British Alpine populations to be exploited for upgrading indigenous goats to economically viable milking animals. This would benefit rural communities where food security is often a problem, with protein sources being scarce and non-reliable. If indigenous goats could be upgraded, goats' milk would be a viable option as protein supplement for under-privileged children.

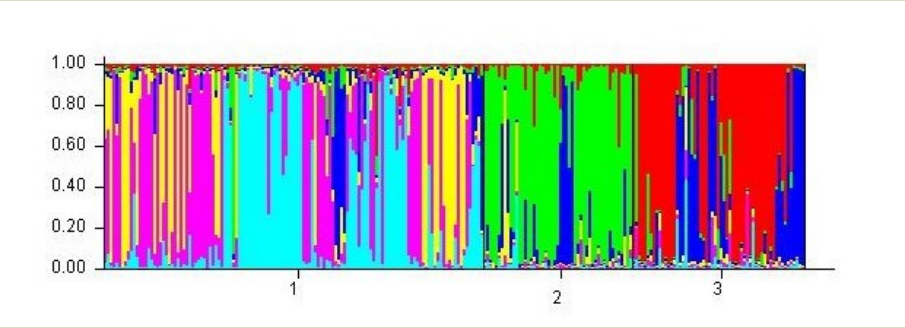

Figure 2: A cluster analyses of the Saanen, Toggenburg and British Alpine populations based on microsatellite markers

AASRP call for abstracts

Small Ruminant Research Summaries
AASRP Meeting at 48th Annual AABP Conference
September 18, 2015 in New Orleans, Louisiana

The 48th Annual AABP Conference will feature a scientific session focused on small ruminant research that is directly applicable to the health, welfare and productivity of goats, sheep, camelids or farmed deer. Faculty, graduate students, practitioners or veterinary students are urged to disseminate information to practitioners. Each presentation should be limited to 15 minutes.

Research projects having direct application to small ruminant practitioners are being solicited for the Oral Session on Friday, 4:15 to 6:00 p.m. Project summaries focused on all areas of small ruminant health, welfare and production are welcome including pharmacology, epidemiology, medicine, surgery, economic analysis, pathology, preharvest food and environmental safety, diagnostics, and health monitoring. Projects should have relevance to practitioners and may be broadly applicable or more specifically applicable.

To be considered for the AABP Small Ruminant Research Summary session and publication in the annual meeting proceedings, the abstract must be submitted electronically to AABP by **May 1, 2015**.

For more information and to submit an abstract, go to www.aabp.org and select the Conference link located on the top of the page and then click on the Abstract Submission link located in the Conference submenu.

If you have questions about the AASRP research summaries program, contact Patty Scharko (pschark@clemson.edu or 803-422-6998.)

Scaling-Up Successful Practices on Sustainable Pro-Poor Small Ruminant Development

We are happy to announce the publication of the completed report, Scaling-Up Successful Practices on Sustainable Pro-Poor Small Ruminant Development, implemented by experts from the International Goat Association between 2011 and 2013.

The objective of the study, undertaken upon request of the International Fund for Agricultural Development (IFAD), was to develop a business-like approach to prioritize processes/ strategies and sensitize national policy and decision makers, as well as donors about the role and effectiveness of small ruminants in development to reduce poverty.

You can download the PDFs here, as a single large document or in 5 smaller parts for easier downloading. The last two documents (The Goat Value Chain Toolkit, and Scaling Up Goat Based Interventions to Benefit the Poor) were written for this project, but were intended to be used in the field, for research, and to explain the importance of goat investments to decision-makers.

- Scaling-Up Successful Practices-FULL (IGA)
- Scaling-Up Successful Practices-01 (IGA) - Pages 1-37, Introduction - Objective and Methodology
- Scaling-Up Successful Practices-02 (IGA) - Pages 38-228, Knowledge Harvesting Reports
- Scaling-Up Successful Practices-03 (IGA) - Pages 229-333, Scaling-Up Goat Based Interventions to Benefit the Poor - Business Assessment and Cost Benefit Analysis
- Scaling-Up Successful Practices-04 (IGA) - Pages 334-384, Key Issues and Lessons from Experiences - Outlined Basic Questionnaire
- Scaling-Up Successful Practices-05 (IGA) - Pages 385-436, The Goat Value Chain Toolkit (Heifer International)
- Scaling Up Goat Based Interventions to Benefit the Poor – A brief report summarizing the evidence.

This study was made possible owing to the financial support from the International Fund for Agricultural Development (IFAD), Policy and Technical Advisory Division, and through the logistic and scientific support of the International Goat Association (IGA).

We are particularly and personally grateful to all those who participated in the studies for this project or edited the final document:
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Assistance: Carlos Monleón

We also extend our special thanks to the FAO Business Center for implementing the “Business Assessment and Cost Benefits Analysis for Pro-Poor Small Ruminant Development” report.

The implementation of the study and the edition of the final report were coordinated by IGA officers, Jean-Paul Dubeuf (INRA France), Beth A. Miller, (Miller Consulting, USA), Juan Capote (ICIA, Spain), Jean-Marie Luginbuhl, (NCSU, USA) with Dilip Bhandari, (Heifer International Inc., Nepal and USA).

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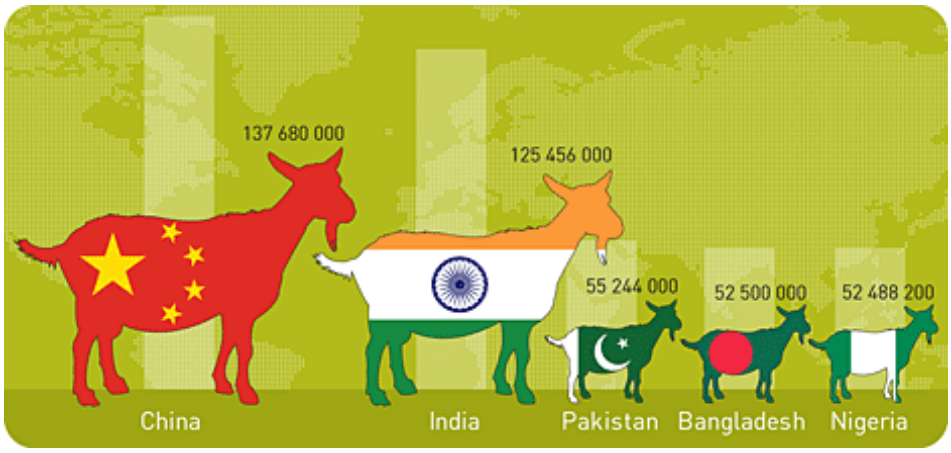
Dubeuf, J-P., B. A. Miller, D. Bhandari, J. Capote, and J-M. Luginbuhl. 2014. Scaling-Up Successful Practices on Sustainable Pro-Poor Small Ruminant Development. pp 431. International Goat Association. Little Rock, Arkansas, USA.

Each article and report of this publication could be quoted independently with their own author.

Please contact us if you have any questions about the contents of this report.

IGA in China: Dairy Goat Conference in Fuping, Shaanxi Province

By Beth A. Miller, Assistant Secretary-Treasurer, IGA



The first Chinese Dairy Goat Conference was held in Shaanxi Province, PRC from 19-21 October 2014. The Conference at the Fuping Tiancheng Garden Hotel featured national and international speakers covering all aspects of dairy goat production, health and milk processing. Exhibitors from dozens of private companies displayed a variety of goat milk products, including baby formula, dry milk powder for all human age and activity levels, and dairy processing equipment. Conference participants visited several large-scale goat farms near Fuping City, and the plants that processed the goat milk into UHT packages, yogurt and powder. The goats are all purebred Saanens, and are machine-milked. The group received an extraordinary welcome with music, fireworks, and festivities.

Shaanxi Province was declared the Official Capital of China's Dairy Goat Industry, and is already exporting dairy goat products throughout China and Asia. The Chinese market for goat milk has been expanding, especially for baby formula, after the 2008 scandal when melamine-contaminated formula made with cow's milk. Other products such as goat yogurt appeal to the affluent urban population concerned about their health. The Chinese government is supporting dairy goat production with loans and subsidies, to improve employment in Shaanxi and increase food security.

IGA was featured prominently in the Conference. IGA President Dr. Juan Capote gave the keynote address at Fuping, and also a presentation at the Northwest Agriculture and Forestry University in nearby Yangling City. Professor Jun Luo, IGA's Representative for Northwest China helped to organize the Conference, with Professor Shi Huaiping. IGA Regional Director for North Asia Professor Zhang Yingjie also participated, as did IGA Assistant Secretary-Treasurer Dr. Beth Miller. The IGA officers held a meeting about expanding IGA's presence in China in the future. Dr. Miller also met with former IGA Representative Chen Taiyong in Chengdu City, Sichuan Province, to discuss potential partnerships between IGA and Heifer China. IGA Representative-elect for Southwest China, Mrs. Fu Changxiu explained more about the meat goat value chain in China, as they toured farms with the Sichuan Big Black Meat Goats near Chengdu.

Goat production, processing and marketing will continue to grow in China, and IGA is a part of this historic development. Through IGA, members can participate in technical exchanges, provide consulting and improve economic development.

Capr'inov 2014 - Conference Report

More than 3,500 visitors passed through the gates of the exhibition center of Niort Noron in November 26 -27, 2014. The professionals of the national and international goat sector were once again at the rendezvous.

The 5th Capr'Inov ended on a very positive note. Majority of Poitou-Charentes (58% of visitors), and more broadly the Great West (81% of visitors), the number of visitors remained constant since 2012.

25 countries were represented with, as such, an increasing number of international visitors (over 500 people). A new center devoted to international aspects was created to accommodate all delegations. The room was also expanded with over 10,000 m² of exhibition.

The many demonstrations: trimming hooves, making ice cream by Enilia, the contest of young pointers by students of the department, equipment demonstrations, and more, created two very full days.

Nearly 700 people attended the 33 meeting that were scheduled during the 2 days of the show, on various topics (production techniques, diet, economy, etc.).

Do you need more information about Capr'inov?
Contact: Lucile Fouchez - Tel : 05.49.77.16.59 – 07.81.37.45.23 - l.fouchez@yahoo.fr

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Goats: Imperatives for Developing the Champions of the Poor and the Landless

By Dr. C. Devendra

Introduction

Animal-agriculture production is pivotal for food security, economic growth and rural prosperity. In Asian agriculture, the goat is revered as the first animal to be domesticated, and has an important economic and ecological niche. It is very widely distributed, but the preferred environment is the semi-arid to arid agro-ecological zones (AEZs) [1] such as West Asia and North Africa (WANA) region [2], within-country in Rajasthan in India, Baluchistan in Pakistan, Harare in Zimbabwe, Chihuahua and San Louis Portosi in Mexico The value of goats increases in relation to its contributions, capacity to adapt to different rainfed less-favored areas (LFAs), cope with the effects of climate change, and respond to market opportunities and human dietary changes [3].

READ MORE...


Agrotechnology

Goats: Imperatives for Developing the Champions of the Poor and the Landless

Devendra C

Introduction

Inherent Attributes of Goats

Current Trends in R and D

Are you an IGA member?

You can pay your membership online through the IGA Store
Now is a great time to join:

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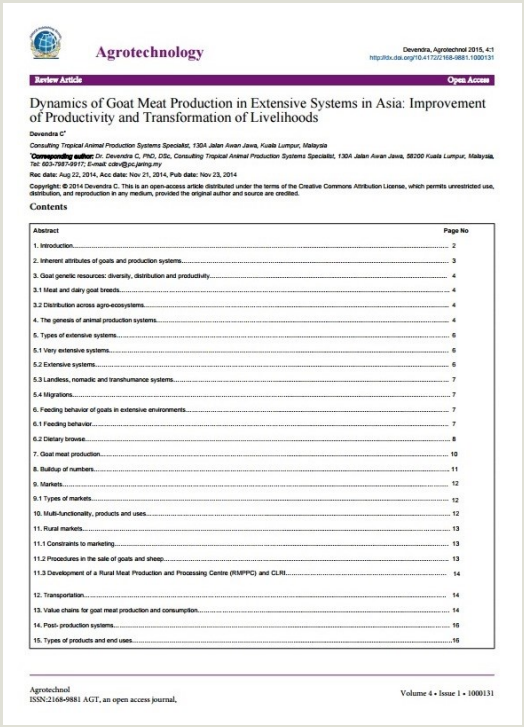
- Memberships include online access to *SRR*.
- Latest information on regional conferences.
- Receive the IGA Newsletter.

Dynamics of Goat Meat Production in Extensive Systems in Asia: Improvement of Productivity and Transformation of Livelihoods

By Dr. C. Devendra

Abstract

The principal objective in the improvement of agriculture for food production is to ensure efficient use of the natural resources (land, crops, animals and water) that match population and income growth and dietary changes. Population growth is currently placing great pressure on food supplies from overused existing arable land areas, forcing the need to look beyond to improving less favored areas (LFAs) like rain fed regions in a sustainable way. Among domestic animals in developing countries, goats are very valuable for multifunctional reasons. Increasing productivity from them is justified in the context of the diversity of goat genetic resources, dynamics of extensive and migratory systems, multifunctionality, and productivity improvements through research and development (R and D). Imperatives for successful pro-poor projects are realistic project design, prioritization of R and D, and predictable impacts to transform agricultural growth. Goat meat is sought after for its high lean meat content and inadequate supply has pushed high prices in most countries. The unique biological and socio-economic attributes of goats in farming systems are described, including contributions to nutrition and food security, stability of farm households and survival of the poor. Discussion focuses on characteristics of extensive systems, distribution across agro-ecological zones (AEZs), feeding behavior and digestive efficiency, types of markets (assembling, distribution, ,weekly and rural), marketing systems, market players, transportation of live animals for slaughter, value chains, socio-economic implications and major constraints. Rural markets are an Asian concept and serve numerous functions. Current R and D is discipline – oriented, but need to shift to more assertive community-based pathways involving small farmers, the landless, researchers and extension personnel. The presence of large concentrations of goats and sheep in less favored areas (LFAs) provides an entry point for transforming agriculture and the utilization of well-adapted indigenous breeds in crop-animal systems. Empowering the knowledge base is a priority, to enrich small and commercial farmers alike. An overriding challenge is to define a policy framework that promotes greater institutional involvement, systems approaches to improved understanding of rain fed agriculture, capacity to cope with climate change and stratification of production options. The latter includes breeding increased goat numbers, intensive utilization of available forage biomass and crop residues in situ, development of intensive zero grazing systems, and integrated resource utilisation. The sustainability of the natural environment is important, as it influences the entire basis for food production. Priority setting is essential to demonstrate technology application to transform agriculture. Increased investments increases agricultural productivity, but agricultural development and goat production is hampered by the lack of investments and climate change, and it is doubtful if yield increase can be achieved. Major challenges exist for improved land use, management of production and consumption, environmental degradation and water scarcity. Despite this gloom, for, enduring hope of several millions of the poor and the landless, the enduring hope remains - sustained food supplies from animal-agriculture through efficiency enhancing technologies, access to food for all, in which self-reliance and vision needs to lead the way.



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Review Article Open Access

Dynamics of Goat Meat Production in Extensive Systems in Asia: Improvement of Productivity and Transformation of Livelihoods

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Countries Pledge to Wipe Out Sheep and Goat Plague Globally *(Continued from Page 1)*

for billions of consumers and especially the more than 300 million vulnerable households who keep sheep and goats in the affected regions.

"We have a plan, the tools, the science, and the partners," said FAO Director-General José Graziano da Silva. "Eradication of PPR is not only within reach, but also in our hands. With OIE, we have agreed to establish a joint secretariat for the implementation to be hosted by FAO."

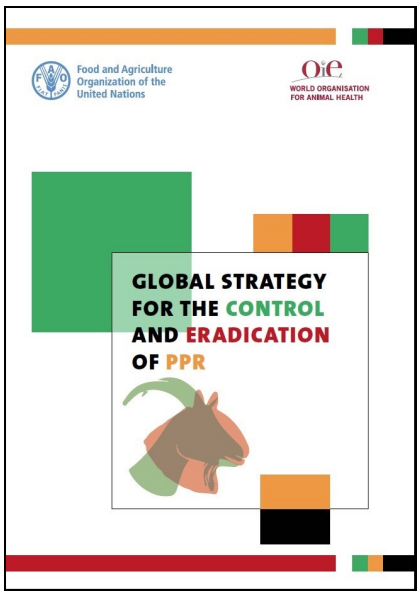
"We can mobilize now public and private components of national veterinary services worldwide to influence our strategy," stated OIE Director General, Dr Bernard Vallat. "Improving animal health is our duty and our passion."

Eradication is a "bolder next step"

Eradication is a step beyond efforts to control and reduce incidences of the disease. It is a "bolder next step" in line with the Strategic Development Goals that the international community is drafting in 2015, which include ending rather than reducing hunger, Graziano da Silva said.

The plan developed by FAO and OIE is estimated to cost from US$4 to US$7 billion over a 15-year period. Annual savings generated by eradication are expected to quickly pay back the investment required. FAO and OIE believe that this could be done in less time if they have the strong support from governments, partners and regional organizations.

Moreover, the campaign will produce very significant collateral benefits, both by boosting the goods and services of the national veterinary systems that can control other livestock diseases such as brucellosis or foot-and-mouth disease, and because eradication of the PPR threat will unleash greater investment in the sector, improve nutrition, and secure people's livelihoods.



Download the Global Strategy document.

Demand for meat and milk from small ruminants in Africa is expected to rise by 137 percent from 2000 to 2030, and even more in Asia, according to FAO, and diseases cripple the efficiencies in reaching these needs.

READ MORE...

Goat Artificial Insemination Short Course, August 10-12, 2015

About the Training

This short course is designed to provide participants with both theoretical background and significant opportunity for hands-on practice needed to facilitate the adoption of artificial insemination into their goat breeding programs. With the use of improved transcervical AI breeding techniques for goats, pregnancy rates comparable to those routinely achieved for AI in cattle are now possible.

This short course will consist of an initial series of lectures on Monday morning coupled with four hands-on practice sessions (Monday pm, Tuesday am & pm, and Wednesday am). Topics will include anatomy & physiology of the female reproductive tract, estrous synchronization, ovulation synchronization, AI breeding techniques (standard and improved) and the use of frozen semen for AI.

WHEN:
August 10-12, 2015

WHERE:
NCSU Campus, Raleigh NC
NCSU Small Ruminant Educational Unit

FOR MORE INFORMATION AND TO REGISTER ONLINE, GO TO:
http://www.cals.ncsu.edu/ncsugoatAI/

The Local Roots of Goat Cheeses in Norway: The Example of Undredal

Written by Jean-Paul Dubeuf

Undredal is a small village in the Sogn og Fjordane county in Norway. With a population of approximately 100 people and 500 goats, Undredal is famous for the brown goat cheese (Brun Geitost) that is still produced the traditional way. The production of cheese is important to the local economy as eight farms produce 10 to 12 tons of cheese each year. Goat sausage is also produced locally.

LIFE IN ALPINE DAIRY FARMS

Alpine dairy farms (støl) are buildings settled where the herds are kept during summer. A farm can have several alpine dairy farms both further down in the valley and up on the high mountains. The animals and dairy maids travel up the mountain when the snow melts and new grass grows. The road to the alpine dairy farm is both long and steep. The use of mountain pastures has been a part of the system since livestock farming has existed in Norway. The Gulating Laws are at least 1100 years old and include regulations on when to drive the herds up in the mountains.

THE IMPORTANCE OF MAKING HAY

Summer's cut provides winter fodder

In Undredal, farmers have always kept small livestock, keeping the tradition of harvesting grass alive over the generations. This hard work on steep hillsides provides winter fodder for the animals and the scythe has been the preferred tool in this difficult terrain. The hay was then dried on hay racks.

The work-saving zip-line

In 1870, a new device was introduced to the farmers, the zip-line. Thick wires up and down the hillsides became a great help in the hard work. Big loads of grass and firewood which had to be carried or packed in the past were now easily sent to the bottom of the hill. The grass was however still cut by hand.

Modernisation

The farmers began to use modern equipment for harvesting grass in the 1950s. The horse drawn reaper now found its way to Undredal and within the next decade the motorized reaper was used by most farmers. Most farms also had silos built in the 1960s leaving many hay racks superfluous. Even the tractor has now found his way to Undredal, making grass tranport still more convenient. The scythe is still used on the steepest hills alongside the motorized reaper. The hay drier has become commonplace in all hay barns. Most of the grass dries lying on the ground and his fan system allows a bit of drying to take place In the barn.

Grass fields by the Fjord requires boat transport

Several Undredal farms keep small grass fields along the fjord. The cut grass is dried on hay racks, then it is gathered in big loads. The farmers carry the hay to the boat, row back to the farm, and carry it on to the barn. This hard work, which has proved difficult, to modernize has been a vital addition to the fodder as well as an important contribution to the maintenance of the cultural lanscape.

CHEESE PRODUCTION IN UNDREDAL

In Norway, and in Undredal, milk is used for two kinds of cheeses – white cheese and brown cheese. Goat milk has a distinctive flavor that makes the Undredal cheese so famous. The first operation in milk processing is to separate the milk into a solid curd, used to make white cheese and liquid whey, used to make brown cheese. The technology of white cheese is well known. This brown cheese (Brunost) is a unique Norwegian tradition. It is not covered by the classical definition of cheese like other whey

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The Local Roots of Goat Cheeses in Norway *(Continued from Page 10)*

cheeses (ricotta in Italy, Brocciu in Corsica, requeson in Spain, sérac in the Alps, Manouri in Greece, etc.). When the curd is removed to make white cheese, the whey is heated. In Undredal, as most of the fat in the fat stays in the curd, some cream from cow milk is added to the whey. The whey is cooked in a copper –bottomed cauldron over a splinter fire. What is original in this technology is the fact that the whey is cooked from six to eight hours. So the milk sugar caramelizes giving the cheese its brown color and sweet flavor. After cooking, the cheese is kneaded and put in tins.

A TRADITION IN PROGRESS – The dairy in Undredal

A unique Norwegian tradition

Cheese production in Norway has in many ways been opposite to production elsewhere. Brown cheese has not been much valued. Hence dairy farmers have separated the milk. The cream has been removed before making the cheese and added to the boiling whey. By this way, the farmers have produced a lean white cheese and a richer brown cheese. After World War II, farmers in Undredal ceased separating the milk because they wanted to make a white cheese that was richer in taste. To avoid the brown cheese turning too dry and lean, cream from cow's milk was added to the whey.

In the past, cheese production took place on the alpine dairy farm and each farmer made his or her own cheese. The dairy maid did the work by hand. The cheese was transported to the village for further distribution. In 1929, farmers in Undredal joined in establishing the Undredal geitotysteri (goat cheese dairy factory). Their aim was to rationalize production and gain position in the market. The brown cheese was most important and they therefore separated the milk. After the war, the farmers returned to make their cheeses individually and did not separate milk and whey.

The production of brown cheese in Undredal has been modernized in the 1980s. One farmer, Øystein Borlaug had the idea of a machine for mechanical stirring in the cauldron. The wooden ladle used for stirring was connected to an engine. The machine also lifted the cauldron off the fire. Thus, the two heaviest operations were mechanized, while all the benefits of the traditional operation were preserved. In 1982, the Undredal fellestøl (joint dairy farm) was established. Cheese production in Undredal was on its way! In the 1990s, it was difficult to be a small-scale cheese manufacturer in Norway. The authorities demanded pasteurization of all milk used for milk. But the farmers in Undredal think that pasteurization has several negatives consequences on the flavor of the cheese. For them, the focus on hygiene was oversized and they had to convince them during a long battle, finally won in 2001. So, Undredal Stølsyteri (alpine dairy farm) was established in 2001. This dairy is still today the only one in Norway with a full legal license for production of traditional goat cheese made from unpasteurized milk. It is also a member of the Slow Food Foundation, acting to strengthen traditional quality food, production methods and biodiversity.

Special thanks to Jean-Paul Dubeuf for recording his visit to Undredal during a cheese exhibition and sharing it with us.

Pastoral goats near the fjord