



WORLD  
ASSOCIATION  
for ANIMAL  
PRODUCTION

*The World Animal Science News*

## Main Topics

- News from Industry and Science
- Waap members
- Job positions
- Upcoming conferences
- New publications

n. 4

## EDITORIAL

*Policy and Agenda for Creating a Distinguished Culture in Japan Through Development of the Livestock Industry*

Eimei Sato

President, National Livestock Breeding Center, Incorporated Administrative Agency, Fukushima, Japan

### **Livestock Industry in Japan and the Influence of Climate and Buddhism**

Livestock production operates under the influence of specific local circumstances, especially natural circumstances such as climate. Based on his personal travel experiences in Europe, the Japanese philosopher Tetsuro Watsuji in his book "The Climate" in 1979 classified the world's climate into three types—monsoon, desert, and pasture. The last of these, pasture, is characterized by dryness in the summer and dampness in the winter. As seen in Europe, once pastureland is established, it can be kept in its state for centuries and will support the human activity of livestock production. Mr. Watsuji concluded that the natural circumstances for pasture in Europe have encouraged the development of livestock production there.

In the last 50 years, the livestock population and the quantity of livestock products such as milk, meat, and eggs are increasing in Japan and the rest of Asia. Although Asia has many different climates, the major part of the continent, like Japan, has a monsoon climate. Mr. Watsuji pointed out that people in a monsoon area can live by consuming plants such as rice that are known for their vigorous growth; they can live without fear of hunger by meeting their sustenance needs through consuming these plants and therefore have no need to keep livestock for food. In these countries, agricultural use of farm animals such as cattle and horses has mainly been to support the cultivation of land. At present, however, the people in monsoon areas increasingly desire to consume livestock products, despite the long-term experience in being supported by plants adapted to the climate. These residents have come to realize that consuming livestock products gives them a strong body frame and a longer life span. Pasture lands in Japan have typically been located in the restricted areas such as the northern island (Hokkaido) and upland or mountain; however, the livestock industry is currently undergoing active expansion beyond these areas into monsoon areas so that livestock production is increasing in monsoon areas in addition to areas of traditional pasture lands.

...Continues

**EDITORIAL**

Mr. Watsuji also pointed out that climate has influenced the cultural traits of Japanese people such as their sense of acceptance, of both their circumstance and authority. People in Japan accept the strong power of nature such as the heavy rains, storms, floods, and drought that characterize a monsoon climate. As a force too strong for humans to control, the power of nature must always be obeyed. Based on these Japanese cultural traits developed by living over many generations in a monsoon climate, I think that Japanese people have largely accepted the doctrines of Buddhism, and have been heavily influenced by Buddhist teaching.

The *Jodo-shu*, or Pure Land sect, one of the most influential and popular schools of Buddhism in Japan, prohibits the killing of living bodies including animals. As depicted in the *Ojoyoshu*, a text written and illustrated by Genshin, the founder of the *Jodo-shu* sect in 985, in the afterlife, someone who violated lives with cruelty or who took the life of another living being is drawn into a hell. According to the *Ojoyoshu*, the pain in hell is manifest and fearsome: occupants of the red-hot interior suffer hunger and waste away. The pain is illustrated by the hellish picture transmitted to us in an old temple. A succession of acts involving the eating of domestic animals is one necessary condition causing a person to fall into hell.

The *Jodo-shu* sect has been popular in Japan during the sect's thousand-year history. Traditional Japanese did not consume the products of livestock and looked down upon livestock husbandry. Japanese people who work in the livestock industry have to be conscious of the *Jodo-shu* concept of hell. In this way, Japan has a

distinctive viewpoint on the livestock industry drawn from Buddhism, especially the *Jodo-shu* sect. Scientists working in the livestock industry in Japan must think about Buddhist teaching as well as the industry's economic and scientific problems,

A Japanese cultural anthropologist wrote in 1976 that there is virtually no distinguished livestock culture in Japan. Regrettably, it seems that traditional Japanese people influenced by the *Ojoyoshu* agree with this opinion without observing the activity of the livestock industry with their own eyes. Japanese animal scientists including me will insist that if people watch the development of the livestock industry and the changing food habits of the Japanese with their own eyes and without the influence of Buddhist teachings, they would see that Japan is working to create a distinctive culture related to the livestock industry. After becoming active in Japan after World War II, the livestock industry is now taking on a large presence within agriculture and is establishing its own dietary culture that includes the *wagyu* beef dishes of *sukiyaki* and *shabushabu*. The livestock industry in Japan has the potential to create a new and original culture, including technology; this new culture is comparable to the livestock cultures of Europe, North America, and South America. The evolution of this new culture is being driven by the expanding activity of the livestock industry; it is causing the traditional culture based on rice growing to undergo a gradual change.

One organization that can stimulate the development of the Japanese livestock industry is the National Livestock Breeding Center (NLBC). The following sections describe the efforts of the NLBC towards this end.

## **The NLBC in the History of the Japanese Livestock Industry**

The history of the livestock industry in Japan can be understood through the history of the NLBC. Since marking its first step in 1872, the NLBC has been at work for more than a century; it has been involved in numerous changes to the industry. After starting as a horse stock farm, it was then reconstructed as a breeding stock farm in 1946, just after World War II. Under the guidance of the Ministry of Agriculture, Forestry and Fisheries, the NLBC has been focusing on improving the quality and breeding of dairy cattle, beef cattle, swine, and poultry to meet the demand from the Japanese people for a wider variety of food. Under close cooperation between the head office and its 11 stations, recently the NLBC has been fulfilling the role of a government agency in contributing to life in Japan by augmenting and improving animal breeding; producing and supplying seeds for forage crops; managing a cattle identification service; and promoting new technologies. The NLBC develops these initiatives, brings them into practical use, and spreads their adoption across Japan. Each footstep by the NLBC, taken year by year, marks a point in the history of Japan's livestock industry; this role will be handed down to future generations.

### **NLBC Activities in 2015**

**Economic and Scientific Issues Requiring the Efforts of the NLBC :** Since the establishment of the NLBC, Japan's livestock industry has undergone an extraordinary development in conjunction with the expanding consumption of livestock products such as meat and dairy foods. However, the industry currently faces several problems that need to be solved. First, production costs must be reduced and the quality of

livestock products enhanced in order to cope with the advance of internationalization at the World Trade Organization and economic partnership arrangement negotiations. Second, cost reduction and administrative oversight of producers, by means of improving yields from animal breeding and production control, is necessary in order to strengthen the production base during a period in which Japan's self-sufficiency in livestock products is declining. Third, domestic production of forage crops must be expanded in order to reduce production cost, make effective use of farmland, and establish a resource circulation model for agriculture. Fourth, outbreaks of bovine spongiform encephalopathy and the emergence of genetically modified organisms have awakened concerns about food safety. Lastly, domestic systems need to be maintained to improve the quality of animal breeds and their supply without relying excessively upon foreign animal resources; import of such foreign animal resources is dangerous when infectious diseases arise, such as highly pathogenic avian influenza.

**NLBC Activities in Response to Various Economic and Scientific Issues :** In order to deal with various economic issues, the NLBC, as an agency responsible for implementing government policy, is engaged in the following services.

**Improved animal breeds.** Advancing the improvement of animal breeds is the basis for reducing production cost and improving the quality of livestock products in order to strengthen the industry's international competitiveness. To improve the quality of Japan's staple species of animals, we produce and supply superb breeding stock, semen, and fertilized eggs. In dairy cattle, our efforts are focused on increasing the volume of milk produced, improving body structure,

and enhancing life-long productivity. In beef cattle, we seek to improve both the quality and quantity of meat and to preserve genetic diversity. In swine, our goals are the improvement of intramuscular fat, daily weight gain, and rib-eye area. In poultry, the NLBC is working on improved egg shell strength, elimination of meat spots, and decreased fat volume inside the abdomen.

**New technology.** Enhancement of breeding methods for higher efficiency can be achieved through practical use of newly developed technologies that focus on molecular genetic techniques. The NLBC is conducting studies to identify genes or linked genetic markers affecting economically important traits of farm animals for Japanese food production. Applications to livestock improvement are also being investigated. Thus far, the NLBC has identified the following genes: one involved in the resistance to mastitis in dairy cattle; one that causes diaphragm muscular syndrome in dairy cattle; one involved in the fatty acid composition in beef, a major taste component; one that causes claudin-16 deficiency, type-2 in beef cattle; and one involved in the litter size of swine. The NLBC also advances techniques for livestock husbandry, livestock production, and utilization of forage crops and pasture, and also demonstrates and exhibits these techniques.

**Forage crops.** NLBC activities include expanding domestic forage crop production through production and supply of high-quality seeds for forage.

**Progeny testing.** Through the arrangement of cooperative relationships among numerous parties, the NLBC is promoting a progeny examination in order to select dairy and beef sires that can be used all over Japan. Because artificial insemination is becoming the prevailing practice in the breeding of cattle, a large

variety of semen is in use, taken from top-rate sires. For this reason, it is important to select excellent sires by properly judging their capability. Because it is impossible to measure directly the capability to produce milk or meat embedded in an animal's genes, we have to make this judgment after the capability of the progeny is proven in a number of cases.

**Evaluation of genetic ability.** The NLBC offers information on dairy cattle, beef cattle, and swine from a standardized evaluation administered nationwide, so that producers can improve the quality of their animals by their own efforts. This information can also be used for progeny examinations. In the case of dairy cattle, we compare Japanese dairy sires with sires in leading dairy farming countries by taking part in the INTERBULL breeding and genetics program. However, genetic elements alone do not fully account for the milk or meat production of animals; production is also affected by environmental elements such as husbandry techniques and climate conditions. Therefore, to estimate genetic ability, we first eliminate the environmental elements by processing a vast amount of statistical data on animal capability, blood characteristics, and husbandry.

**Inspection of male breeding stock.** Only a small number of bulls, boars, and stallions are used for artificial insemination for all of Japan. Therefore, if a semen donor has contracted a disease, the disease could spread rapidly throughout the nation. To certify that donors of sperm used for reproduction are free from infectious and genetic diseases, the NLBC conducts inspections provided for under the Act on Improvement and Increased Production of Livestock.

**Preservation of genetic resources.** As a part of a gene bank service offered by the NLBC for agricultural fertility resources, a variety of genetic resources of livestock are preserved in the form of living animals, semen, and embryos.

**Cattle identification service.** Information on individual cattle as registered in accordance with the Beef Traceability Act can be used to help prevent the spread of bovine spongiform encephalopathy and to maintain the reliability of businesses involved in the livestock industry. The NLBC manages the individual identification registry (a computerized database), records the appropriate information, and also publishes information from the registry.

#### **2015 NLBC Agenda for Creating Distinguished Japanese Culture**

NLBC is working hard to improve the base of the livestock industry in Japan by developing and refining technology. The center is being asked to contribute its efforts to the following problems for making a strong livestock industry and for creating new and original culture.

**Rice-Growing for the Livestock Industry:** Because the country is encircled by sea and located in a monsoon area, Japan is a suitable area for fishing and agriculture. Agriculture here has developed with a focus on growing rice to feed its people. People first concentrated on rice, vegetables, and fish, and then later developed and refined the characteristics of Japanese food. However, after World War II, Japanese meals were influenced by American style food, and the Japanese diet started to become dependent on livestock products. This led to

the development of Japan's own livestock industry to supplement the import of livestock products from foreign countries. In recent years, livestock products including feed have been discussed for the purpose of increasing self-sufficiency in livestock production. In these discussions, growing rice as a livestock feed has become a hot topic. Rice growing lies at the root of much of what is unique in Japanese culture, a culture developed by the Japanese from antiquity until now. In recent years, however, Japan has faced the need to transform its thinking to the idea of raising rice as feed for cattle and pigs. In this way, the development of the livestock industry has led to changes in the traditional Japanese rice-growing culture. The NLBC is supporting this transformation by developing new seeds for growing rice for the livestock industry.

**Development of New technology from the Livestock Industry:** Novel technology has been developed in the livestock industry, which has influenced the development of science, technology, engineering, and medicine. Somatic cell cloning is affecting the development of regenerative medicine, production of pharmaceuticals, and organ production for use in xenotransplantation. The biology of sperm and oocytes and the biology of in vitro fertilization have stimulated the development of assisted reproductive technologies in humans. In these fields, distinguished achievements have been attained in Japanese animal science and researchers from this field have moved into medical science. In addition, the study of microorganisms in the rumen is a good model for studying the concept of symbiosis and parasitism; results of rumen research are influencing the study of intestinal flora in humans. In addition to medicine, this concept of microorganisms in the rumen has also influenced the development of social science and philosophy in Japan.

### **New Licenses and Occupations Affecting the Livestock**

**Industry:** The traditional occupation of veterinarian has been joined by a new licensed occupation that is making its own contribution to the development of the Japanese livestock industry: artificial inseminators of cattle and pigs. With about 1500 licensees operating nationwide under licenses issued in accordance with the Act on Improvement and Increased Production of Livestock, artificial inseminators are also able to work on fertilized egg transplantation in cattle after getting the license. The establishment of these new licenses has enabled the development of technologies including non-surgical embryo transfer of fertilized eggs and *in vitro* maturation, fertilization, and culture, which makes use of immature oocytes obtained from ovaries at slaughterhouses in Japan. Through these new livestock technologies, the NLBC continually strives to improve livestock performance. The NLBC is now focusing on research in ovum pick-up (OPU) and *in vitro* fertilization. It is hoped that the number of artificial inseminators involved in OPU increases in addition to number of the veterinarians in order to help develop the livestock industry in Japan. In addition to these licenses, about 300 holders of chief livestock consultant licenses approved by the Japanese Livestock Industry Association are working with various public organizations on developing farm management and spread of technologies in various fields within the Japanese livestock industry.

### **Livestock Production by Senior Citizens Using Minimal**

**Labor:** The Japanese agricultural sector faces a major problem with the aging of its working population and the increasing number of people who are giving up farming, especially in the upland areas between the plains and mountains. In addition, government land

management policy in rural areas, especially in these upland areas, is now recommending animal grazing in the lands abandoned by those who gave up farming. There is a growing need for the development of minimum-labor techniques involving the feeding of animals including cattle, sheep, and goats. Wild animals are damaging agriculture especially in these uplands, and the NLBC is being asked to join a group to control the number of wild animals in these areas. This is an important issue for establishing strong livestock husbandry and creating an attractive living environment and culture in rural areas.

The NLBC is being asked to become more involved in the various issues facing the livestock industry in Japan; we will do our best to develop this industry in response to requests from the government and its administrative agencies. In addition to these efforts, I personally wish to contribute to the creation of a distinctive culture, comparable to the rice-growing culture in Japan and the livestock culture found both in Europe, and in North and South America. As part of an international cooperative arrangement sponsored by the Japan International Cooperation Agency, the NLBC is in charge of training on new technology and practices in livestock farming, which were developed in Japan. The NLBC also dispatches staff overseas as technical cooperation experts. As the president of the NLBC, I hope that new suggestions and proposals will arrive at the offices of the NLBC ([kaigai@nlbc.go.jp](mailto:kaigai@nlbc.go.jp)) for programs involving international cooperation.

The head office of the NLBC is located in a small village in Fukushima, the site of the nuclear power plant accident that followed the tsunami in 2011. The grounds at our head office campus, 84.5 km from the power plant, were slightly contaminated by radiation. I

am glad to say that the contaminated surface was completely removed by the end of February 2015.

### NEWS FROM INDUSTRY AND SCIENCE

GLOBAL FOOD SECURITY ACT OF 2015 REINTRODUCED (by Clint Krehbiel, ASAS Public Policy Committee)

It's an exciting time to be a scientist working in an area related to the production of food. Recently, Congresswoman Betty McCollum (D-MN) and Chris Smith (R-NJ) joined forces across political lines to reintroduce the Global Food Security Act of 2015 (H.R. 1567). Congresswoman McCollum released the following statement regarding the legislation:

"Improving global health starts with having access to healthy, nutritious foods – especially for our children. The Global Food Security Act will continue to enhance global food security by assisting small-scale farmers in increasing yields, putting more food on their family's table, and selling more food in the market. This investment in agriculture development and nutrition will help the more than 800 million people worldwide who suffer from chronic hunger."

The organization CARE, a leading humanitarian organization fighting global poverty, applauded the introduction of the Global Food Security Act, stating this bipartisan legislation provides an important step forward in improving and solidifying the recent advancements in U.S. global food security programming. The Global Food Security Act would do a number of important things. First, it would permanently authorize the Feed the Future program, the U.S. government's flagship initiative to fight hunger, which operates in 19 countries around the globe and

emphasizes a country-driven approach to creating sustainable food security for families and communities. This measure would ensure that Feed the Future would continue to exist under subsequent administrations.

The bill would ensure that smallholder producers in the world's poorest countries, particularly women, have the tools, education and training they need to produce food for their families, communities and countries. Women farmers are a substantial part of the global agriculture workforce but do not have the same access to resources as men. Research shows that equal access to inputs, information and financing could result in 100 million to 150 million hungry people getting the food they need.

CARE Chef Ambassador Spike Mendelsohn, spoke on Capitol Hill about the importance of the bill making valuable U.S. investments to end hunger a law. "I'm thrilled at the introduction of the Global Food Security Act of 2015," Mendelsohn said. "It is a strong step forward toward codifying U.S. leadership around global food security and making sure U.S. programs are transparent and coordinated and that they reach women and smallholder producers that are in need." Mendelsohn is the owner of Good Stuff, We, the Pizza, and Béarnaise in Washington DC.

With more than 800 million hungry people around the world, the U.S. must have a smart approach for addressing global hunger. The act sets forth a comprehensive strategy for assistance to developing countries to increase sustainable and equitable agricultural development, reduce global hunger, improve nutrition and, ultimately, achieve food and nutrition security. With this act, the U. S. has a historic opportunity to help some of the world's poorest

communities get a hand up on developing sustainable solutions to poverty and food insecurity.

#### ALLTECH STRENGTHENS ITS PRESENCE IN THE ANIMAL FEED SECTOR

Alltech (Lexington, USA) has acquired Ridley Inc. (Mankato, USA), a worldwide leader in animal nutrition in North America. By this purchase, estimated at \$ 521 m, Alltech will take control of 100% of Ridley capital and its three subsidiaries. This will allow Alltech to benefit from Ridley distribution network and combine their expertise in animal nutrition technologies (complete feeds, premixes, supplements, ...) for livestock (poultry, cattle, pigs, ...) and pets, including horses. This purchase enters the Alltech growth strategy that has set the target of ensuring all industries, turnover (sales) of \$ 4 billion in a few years. The current CA Alltech is about \$ 1 billion, the combined turnover of the two companies reached 1.6 billion in 2014. Alltech is present in animal feed, crop protection and food. Alltech will increase from 48 to 77 food plants, all without-antibiotics.

#### NEWPROCEDURE TO TEST NEWCASTLE DISEASE VACCINES (by Sandra Avant, ARS Public Affairs Specialist)

U.S. Department of Agriculture (USDA) scientists have developed an improved Newcastle disease virus (NDV) vaccine evaluation procedure that could be used to select better vaccines to treat the disease.

Newcastle disease, one of the most important poultry diseases worldwide, can cause severe illness in chickens and other birds. Severe, or virulent, strains rarely occur in poultry species in the United States, but they are regularly found in poultry in many foreign countries.

Available commercial NDV vaccines perform well in chickens infected with virulent NDV under experimental conditions. They also perform well under field conditions where virulent virus is not common. However, they often fail in countries where virulent viruses are endemic.

At the Agricultural Research Service's (ARS) Southeast Poultry Research Laboratory (SEPRL) in Athens, Georgia, microbiologist Claudio Afonso and veterinary medical officer Patti Miller have updated the traditional vaccine evaluation method, which does not compare vaccines or take into account suboptimal field conditions.

Under perfect conditions, vaccines should work, but conditions are not always perfect in the field, according to Miller. Chickens sometimes get less than the required vaccine dose and don't always have the minimum amount of time required to develop an optimum immune response.

The improved vaccine-evaluation procedure compares vaccines made using genes from the same viral strain—or genotype—that the birds are exposed to in the field to vaccines made with a strain that differs from the virus birds are exposed to.

Using the improved procedure, scientists inoculated chickens with different vaccine doses before exposure to a high dose of virulent NDV. Birds given the genotype-matched vaccine had reduced viral shedding, superior immune responses, reduced clinical signs, and increased survival than the birds vaccinated with a different-genotype vaccine. By using genotype-matched vaccines, viral shedding and death were significantly reduced.

## PLATFORM FOR PASTORALISTS AIMS TO GIVE A VOICE TO MILLIONS

Millions of pastoralists will benefit from a new online knowledge hub that will help them raise their voices in international policy debates and share valuable information to strengthen their agricultural livelihoods.

The Pastoralist Knowledge Hub (<http://www.fao.org/pastoralist-knowledge-hub/en/>)

launched today by FAO, the European Union, Germany and other partners – will enable mobile livestock keepers to connect, to meet and discuss issues like agricultural innovations or land regulations and find shared solutions to common challenges. “Pastoralists are able to produce food where no crops can be grown. Yet, their concerns are poorly heard by the international community,” Helena Semedo, FAO Deputy Director-General, said on Monday. “This hub is an important platform to help them project their voices, share knowledge, and affect policy debates.” The hub also offers a growing database of research on pastoralism, contacts for a worldwide network of pastoral representatives, and discussion forums for pastoralist networks and partnering institutions. It also includes a mechanism that lets pastoral communities nominate and select representatives to global forums such as the Committee on World Food Security. Seven regional meetings with pastoralist networks to shape the initiative are being held until October 2015.

The several hundred million pastoralists who manage the world’s rangelands rely on a rich legacy of traditional knowledge and mobility to survive in the harshest environments on the planet. They remain important producers of livestock, meat, milk, hair and hides and in many countries produce more than half of

agricultural GDP. Livestock grazing on pastoralist rangelands also provides valuable benefits to ecosystems, including helping to recycle plants back into fertile soil and controlling the growth of bush and weeds. Examples of more well-known pastoral societies include the Bedouin of North Africa and the Arabian Peninsula, the Maasai in East Africa, the Navajo of North America, the Sherpa in Nepal, and Scandinavia's Sami people. Despite their importance to food production and ecosystems, pastoralists have traditionally been marginalized in decision-making on matters like the decrease of rangelands and the disruption of their mobility routes that negatively affect their lives and livelihoods. They have frequently been subject to attempts to alter their nomadic lifestyles and often find it hard to access health services and schools. Pastoralists are also still poorly represented in decision-making processes in high-level institutions such as the United Nations and their own national governments.

The hub brings together partner institutions including the African Union, the European Union, the International Fund for Agricultural Development, the International Union for Conservation of Nature, the United Nations Environment Programme, the World Bank and non-governmental organizations as well as pastoralist civil society groups. These organizations can share their work and resources on pastoralism and actively consult with pastoral networks. “The new Hub aims to bring all groups and organizations together to voice pastoral concerns to the international community,” said Lalji Desai, Secretary General of the World Alliance of Mobile Indigenous Peoples. The German Ministry for Food and Agriculture is contributing \$1.7 million to initiate the Hub.

## THE SCIENTIST'S ANNUAL TOP 10 INNOVATION COMPETITION

The magazine Scientist organizes the annual Top 10 Innovations competition. Submit your cutting-edge, life-science technology for consideration by a panel of expert judges. Ten winners will be highlighted online and in a feature article in the December 2015 print issue of The Scientist. The submission deadline is September 15, 2015. For more information, please visit [www.the-scientist.com/top10](http://www.the-scientist.com/top10).

## FEEDIPEDIA PASSED THE 3000 VISIT/DAY MARK!

Feedipedia ([www.feedipedia.org](http://www.feedipedia.org)) is a worldwide, innovative, open-access and on-line encyclopaedia that provides state of the art scientific information on the nature, occurrence, chemical composition, nutritional value and safe use of feed resources. Feeding recommendations are written by animal nutrition experts for all classes of farm animals (all ruminants and horses, donkeys and camelids, pigs, poultry and rabbits). Aquaculture species are also dealt with.

Feedipedia is an on-going programme held by INRA, CIRAD, FAO and AFZ (French association for animal production). It replaces the former AFRIS system of FAO and is a good complement to the "Tables of composition and nutritional values of feed materials", a joint programme by INRA, CIRAD and AFZ.

Opened in 2012, Feedipedia number of visits has been steadily growing and passed the 3000 visits/day mark in April 2015. Visitors come from all over the world.

We have upgraded Feedipedia and improved its design for better mobile friendliness: have a look at [www.feedipedia.org](http://www.feedipedia.org)!

## WAAP MEMBERS

### American Dairy Science Association (ADSA)

The 2015 JAM to be held from 12 to 16 July, 2015 in Orlando, Florida had a near record number of abstracts submitted. And the early registration fee by 19 June 2015 is the lowest in years at \$400. Similarly, hotel rates are as low as \$129 per night for a single room <http://www.jtmtg.org/JAM/2015/hotel.asp> To register and for further information, follow this link <http://www.jtmtg.org/JAM/2015/>

### American Society of Animal Science

#### **ASAS Western Section Meeting coming up**

The 2015 ASAS Western Section Meeting is 23 to 26 June, 2015 in Ruidoso, New Mexico. Early-bird registration ends June 1. Use the group code WSASAS15 when making housing reservations at The Lodge at Sierra Blanca. Registration, housing and program details can be found at:

<https://www.asas.org/membership-services/asas-sections/western-section/meetings>

#### **Innovate 2015**

Innovations in Education: An Animal Science Curriculum for the 21<sup>st</sup> Century is the theme of Innovate 2015, 31 May to 2 June 2015. Plan now to join us in Braselton, GA. Learn more at <https://asas.org/meetings/innovate2015/home>

#### **ASAS teams up with Hunger Fight at JAM**

During the 2015 Joint Annual Meeting in Orlando, attendees are invited to help package nutritional meals

for the Florida-based Hunger Fight organization on the evening of Tuesday, July 14.

Even if you are unable to attend the meal-packaging event, you can still participate by making a monetary donation to help purchase materials for the meal packets. For more information, visit <https://asas.org/meetings/hungerfightevent>

### **Join ASAS at SeaWorld!**

Make plans to join ASAS, friends, and family for an evening at SeaWorld during the 2015 Joint Annual Meeting (JAM). This event will take place on Wednesday, July 15 from 6:00 - 10:00 pm.

The evening will begin with a reception at SeaWorld Orlando's Ports of Call from 6:00 to 7:00 pm. Enjoy great food and time to unwind while visiting with colleagues, friends and family. There will be appearances by SeaWorld characters as well as a variety of animals in our private reception area. Access to the entire SeaWorld park will open at 7:00 pm.

Cost is just \$45 per person, which includes transportation to and from the park, great food, and park admission. Children under 10 are free with an adult. For more information, visit [asas.org](http://asas.org)

### **Australian Association of Animal Production**

The Australian Society of Animal Production and the New Zealand Society of Animal Production announce their Joint ASAP/NZSAP International Conference: Animal Welfare; Meeting Consumer Demands and Increasing Productivity. The conference will feature Dr. Temple Grandin and will be held July 4-7, 2016 in Adelaide, Australia.

### **Asociación Latinoamericana de Producción Animal (ALPA)**

ALPA is very busy to organize the 24<sup>th</sup> congress that, after 32 years will be held again in Chile, Puerto Varas, on November 9<sup>th</sup>-13<sup>th</sup>. The main title of the meeting "for sustainable livestock farming in harmony with the environment". For more information please visit the association website [www.alpa.org.ve/alpa](http://www.alpa.org.ve/alpa)

### **Canadian Society of Animal Science (CSAS)**

The Canadian Society of Animal Science (CSAS) recognized several award recipients during the 2015 Conference of the Canadian Society of Animal Science and the Canadian Meat Council, held this week in Ottawa, Ontario.

2015 CSAS Canadian Animal Industries Award in Extension and Public Service: Dr. Karen Schwartzkopf-Genswein. Karen obtained her Ph.D. at the University of Saskatchewan in Applied Animal Ethology in 1996 and accepted a research scientist position in Beef Cattle Welfare with Agriculture and Agri-Food Canada in Lethbridge in 2003. Her research interests include pain/stress assessment and mitigation strategies associated with routine management procedures such as transport, castration, dehorning, and lameness; and feeding behavior of beef cattle.

The award is sponsored by Dairy Farmers of Canada, Canadian Pork Council, Chicken Farmers of Canada and Canadian Cattlemen's Association.

2015 CSAS Young Scientist Award: Dr. Yuri Montanholi. Yuri was born in the southern region of Brazil. In 2001 he received his veterinary degree from the University of the State of Santa Catarina. He obtained a Master's degree in Animal Science, with focus on

the reproductive performance of beef heifers, from the Federal University of Rio Grande do Sul. He received the Tewolde Family Award from the World Association of Animal Production. Later, Yuri engaged in a post-doctoral project to further study beef cattle biology in the context of feed efficiency. In 2014, he joined the faculty at Dalhousie University and currently holds a faculty position there. The award is sponsored by Masterfeeds.

2015 CSAS Award for Technical Innovation in Enhancing Production of Safe Affordable Food: Dr. Janice Bailey. Janice is currently a professor of Animal Sciences and Vice Dean of Research at the Faculty of Food & Agricultural Sciences at Laval University in Quebec City. She earned a BSA and M.Sc. from the University of Manitoba, followed by a Ph.D. (Animal and Poultry Science) from the University of Guelph and postdoctoral research at the Université Laval as Assistant Professor. Janice was promoted to Professor in 2003. Her research focuses on the characterization of mechanisms of fertilization in farm mammals. The award is sponsored by Elanco Canada.

2015 CSAS Award in Excellence in Nutrition and Meat Science: Dr. Luigi Faucitano. Luigi obtained a doctoral degree in Animal Science at the University of Bologna (Italy) and conducted post-doctoral studies on pre-slaughter management of pigs in Spain and Brazil. Since 1999 he has been meat scientist at the Dairy and Swine Research and Development Centre of Agriculture & Agri-Food Canada in Sherbrooke (Quebec). He is currently one of only a few meat scientists to have a research program aimed at studying the impact of pre-slaughter handling on animal welfare and meat quality in North America. The award is sponsored by Nutreco Canada.

2015 CSAS Fellowship Award: Dr. Phil Thacker. Phil received his B.Sc. in 1974 and his M.Sc. in 1978 from the University of British Columbia and a Ph.D. in 1982 from the University of Alberta. In 1984, he was appointed Assistant Professor in the Department of Animal Science at the University of Saskatchewan, and promoted to Associate Professor in 1987 and Full Professor in 1991. Phil's main areas of research are in the area of evaluating new feed sources for use in swine production and in developing methods to increase the reproductive efficiency of the breeding herd. The award is sponsored by Alltech Canada.

#### The European Federation of Animal Science (EAAP)

EAAP Council elected the recipient of the Leroy award and of the Distinguished Service Award. The A.M. Leroy Fellowship highlights the work of an active scientist or professional whose activities and reputation are internationally recognized. The recipient of 2015 is Theo Meuwissen. Theo is Dutch origin geneticist currently working for the Norwegian University of Life Sciences located in Ås (Norway). Theo will make a lecture at the Plenary Session on September 1<sup>st</sup> in Warsaw during the annual meeting of EAAP. The Distinguished Service Award always go to senior persons in acknowledgement of their outstanding career and service to the livestock sector in general and to EAAP in particular, this year recipient are Michel Doreau (France), Andreas Hofer (Switzerland) and Pieter Knap (the Netherlands).

At the next annual meeting that will be held in Warsaw ([www.eaap2015.org](http://www.eaap2015.org)), EAAP will organize on September 1<sup>st</sup> a Plenary Session that will describe the current situation about general research and application in livestock industry of epigenetics. The Plenary Session is titled "*Reality and Promises of Epigenetics for Animal*

*Science*” and will be chaired by the EAAP President Philippe Chemineau and will have four selected invited speakers: Brian G. Dias (*Ancestral influences on descendant generations: a case study using the olfactory system in rodents*), Klaus Wimmers (*Epigenetic mechanisms and their implications in animal breeding*), Gerlinde A. Metz (*Ancestral exposure to stress epigenetically programs preterm birth risk and adverse maternal and newborn outcomes*) and Jean Paul Renard (*Importance of epigenetics and its consequences for animal farm production*).

#### South African Society of Animal Science (SASAS)

SASAS is proud to invite everyone at the 48th SASAS Congress that will be held on 21-23 September 2015 ([www.sasascongress.co.za](http://www.sasascongress.co.za)). The Venue is in Empangeni, a comfortable 1½ hours (130 km) north of the King Shaka Airport. Empangeni is approximately 600 km from Pretoria or from Bloemfontein. Please remember the deadlines for submission. The Early registration is May 31st, the submission of papers/posters abstracts is also on May 31st.

#### **JOB POSITIONS**

#### Dean of the Faculty of Agriculture and Environmental Sciences (McGill University)

McGill University is seeking an outstanding individual with demonstrated leadership, excellence in scholarship, and administrative abilities to become the next Dean of the Faculty of Agricultural and Environmental Sciences (FAES). McGill University has established a global reputation for academic and research excellence across a wide-ranging number of disciplines that distinguishes it as Canada’s most

international university and a leader in higher education. Information about McGill can be found at [www.mcgill.ca](http://www.mcgill.ca). FAES comprises the following academic units, all of which have both strong undergraduate and graduate programs: Agricultural Economics, Animal Science, Bioresource Engineering, Food Science and Agricultural Chemistry, Natural Resource Sciences, Plant Science, the School of Dietetics and Human Nutrition, and the Institute of Parasitology. In addition, the Dean of FAES presides over the multi-Faculty program housed in the McGill School of Environment. The Faculty has approximately 1400 undergraduates, 500 graduate students, over 100 tenured and tenure-track academic staff, as well as lecturers and other teaching staff, professionals, and administrative and support staff. This appointment is for a five-year renewable term, and will take effect 1 July 2015 or as soon thereafter as possible. Applications and nominations should include a letter of introduction, curriculum vitae, and the names of three references (who will not be contacted without consent of the candidate) and be forwarded electronically in confidence, to: [McGillFAES@lavernesmith.com](mailto:McGillFAES@lavernesmith.com)

#### Post-doc position in genomics of adaptability of chickens

The position is available at the Institute of Farm Animal Genetics, Friedrich-Loeffler-Institut, Neustadt (Germany). A three year post-doc position in the field of genomics of adaptability in chickens is available. The position will start August the 1st, 2015. The applicant should be enthusiastic and self-motivated with a special interest in scientific and experimental work, especially in chickens. One page cover letter of interest, a CV and contact information with two

references should be sent to Dr. Steffen Weigend (steffen.weigend@fli.bund.de) before May 31st, 2015.

#### UPCOMINGS CONFERENCES

##### ***System Approach for improving the sustainability of animal production, health and welfare Workshop***

This workshop will be held in Milan on 12<sup>th</sup> June 2015.

The workshop is part of a series of discussions that the EU Scientific Steering Committee supports for Milan EXPO 2015. The workshop will be designed to promote discussion and networking between the experts and special interest groups attending. The worldwide growing demand for animal products with a simultaneous demand for improved sustainability and animal welfare and health will require a system approach perspective. The security of Food of animal origin must be strictly linked to an environmentally-friendly use of lands, respect of animal welfare and the mitigation of the use of pharmaceuticals, mainly antimicrobial and antiparasitic drugs. The meeting will be organized into three sessions that will address the above mentioned topics. The Italian society of animal science (ASPA), the European Federation of Animal Science (EAAP) and the Italian Ministry of Agriculture jointly organize the workshop. For more information about the programme: <http://www.aspa2015.org/ScientificProgramme.pdf>

##### ***Course on statistical models for genomic prediction in animals and plants***

The course will be held on 15-19 June 2015 in Aarhus (Denmark).

The lecturers will be Luc Janss, Ole Christensen and Daniel Sorensen. The course is a 1-week PhD course with additional home-work on a course project (count on a total load of approx. 2 weeks) that is awarded with 5 ECTS credits when successfully completed. The course focuses on the quantitative genetics and statistical background of different genomic prediction models (including single step methods) and may be broader than other courses in this area, covering also estimation of variance components, theory on genomic heritabilities, Bayesian statistics, estimation of hyper parameters in Bayesian models, multitrait models and simple genomic feature models. Use of all models will be trained in computer practical using R and our DMU and bayz software. The lecturers also include Ole Christensen ('parallel' developer of single step GBLUP) and Daniel Sorensen (on theory of genomic heritabilities). Recommended pre-requisites: background in linear models (regression, multiple regressions) and preferably in mixed models (random effects, variance components). Registration must be done before 15 May 2015 (registration requires payment of course fee by credit card) on: <https://auws.au.dk/default.aspx>

##### ***The value chain in Mediterranean sheep and goats. Industry organization, marketing strategies and production systems***

The seminar will take place in Montpellier (France), from 16 to 18 June 2015.

The EAAP-FAO-CIHEAM Mediterranean Working Group organizes this workshop. The activities of the working group are devoted to dealing with specific scientific and development issues related to animal production in the Mediterranean area, enhancing collaboration between

scientific communities and technical sectors. The objective of the seminar is to encourage participation and interaction among scientists and technicians involved in small ruminant production systems, with a view to: (1) introduce the concepts and methodologies for value chain studies; (2) analyze the production systems enhancement; (3) to show the different options regarding the segmentation of the value chains into different "sub-chains"; and (4) to study the impact of sector governance models on the value chain.

The conference will be hosted by the INRA/SupAgro/CIRAD Joint Research Unit, "Tropical and Mediterranean Animal Production Systems" (Systèmes d'élevage méditerranéens et tropicaux, SELMET), with the collaboration and funding of the Mediterranean Agronomic Institutes of Zaragoza and Montpellier – CIHEAM, the FAO, the International Center for Agricultural Research in the Dry Areas (ICARDA), Agropolis International, the Spanish Ministry of Economy and Competitiveness and the EAAP-FAO-CIHEAM Mediterranean WG. Updated information can be found at <http://www.iamz.ciheam.org/montpellier2015/>

### ***JAM - ASAS and ADSA annual joint meeting***

The meeting will be held in July 12<sup>th</sup>-16<sup>th</sup> in Orlando (USA).

The Late-breaking abstracts will again be part of the Joint Annual Meeting (JAM) this year. The deadline for submitting late-breaking abstracts is 11:59 P.M. (CDT) on May 22, 2015.

Late-breaking abstracts of original research highlight a broad spectrum of work, including cutting-edge, high-tech research that was completed recently and is important to the species or discipline. Up to eight abstracts will be accepted from those submitted for the session. The authors of these abstracts will present their data at the Late-Breaking Abstract Session from 3:00 to 5:00 p.m. on Sunday, July 12. Authors of accepted abstracts are required to prepare both an oral and a poster presentation for this session. Oral presentations will include the speaker introduction, presentation, and question time in the usual 15-minute time slot. Posters of these presentations must be posted by 2:00 p.m. on Sunday (before the start of the oral session) and will remain on display for the duration of the meeting. This session is scheduled early in the program to allow networking with the presenting scientists and to avoid subject-matter conflicts. Late-breaking abstracts can be submitted at <http://www.jtmtg.org/2015/call.asp>.

### ***2015 Transgenic Animal Research Conference***

The Conference will be held from August 9<sup>th</sup> through 13<sup>th</sup> in Tahoe City (USA).

There will be an added one day program on "The Application of Modern Genetic Tools to Livestock - A One-Day Program for the Livestock Industries" on August 13<sup>th</sup> sponsored by Recombinetics. A list of confirmed speakers and topics, as well as additional information, registration and poster submission forms may be found on the conference web site <http://conferences.ucdavis.edu/transgenic>.

### ***2015 Applied Reproductive Strategies in Beef Cattle Symposium.***

The Symposium will be hosted by the University of California, Davis on August 17-18 in Davis (USA).

The conference is an annual Beef Reproduction Task Force event that is held in a different location every year. The task force is a multi-state extension activity in cooperation with the North Central Agricultural and Natural Resources Program Leaders Committee and the Cooperative State Research, Education and Extension Service. The program will include six general sessions which will cover a variety of topics, from physiology to genetics to management, and will present the latest information on reproductive technologies in beef cattle. Prior to the conference on Sunday, August 16, there will be a one-day tour of a buffalo artificial insemination facility, and a beef cattle ranch/winery in the Napa valley.

Key goals of the Beef Reproduction Task Force include promoting widespread adoption of reproductive technologies among cow-calf producers, educating producers in management considerations that will increase the likelihood of successful breeding of animals through artificial insemination and educating producers about marketing options to capture benefits that result from use of improved reproductive techniques. Anyone seeking information about the 2015 ARSBC conference should visit the conference website <http://www.appliedreprostrategies.com/>. This conference is partially supported by a conference grant from USDA NIFA, the UC Davis College of Agricultural and Environmental Sciences, and the Department of Animal Science.

**8<sup>th</sup> International Conference on Farm Animal Endocrinology (ICFAE)**

The conference will take place on August 27-29, 2015 in Billund (Denmark).

Billund (BLL) has an international airport with several flights to European destinations. In the following week the 66<sup>th</sup> annual EAAP meeting will be held in Warsaw, Poland.

There will be scientific sessions for two days (27-28) and a social tour Saturday (29).

Scientific Sessions are: Endocrine Control of Metabolism; The Gut: New Critical Control Points for Endocrine-Immune-Metabolic Targeting; Animal Health and Stress. Consequences and Strategies; Endocrine Control of Lactation; Reproduction and Health

A total of 25 international well recognized speakers. The majority of the submitted abstracts will be presented as posters. A few submitted abstracts might be presented as short communications. The invited talks will be published in Domestic Animal Endocrinology. All abstracts will be published in a proceedings published by Aarhus University.

Registration is now open, the fee is € 350 (for PhD students € 250). The post Conference tour on Saturday cost additional € 55. The registration fee includes all meals, coffee/tea, water etc. for two full days - Thursday and Friday - including a conference dinner on Thursday night. Free access to spa/gym and to the LEGOLAND amusement park is also included. Deadline for registration and payment is 15 June 2015. The meeting is sponsored by: Evonik, Pancosma, BASF, Amelgo, USDA-ARS, Aarhus University, and ASAS. More information are available at <http://anis.au.dk/en/icfae-2015/>

### **EAAP annual meeting**

The meeting will be held in August 31<sup>st</sup> – September 4<sup>th</sup> in Warsaw (Poland).

Around 55 scientific sessions and 1000 presentations, both theatre and posters are planned at this major animal event. The Discovery Plenary Session that will be held on Tuesday September 1<sup>st</sup> is about “Reality and Promises of Epigenetics for Animal Science”; lecturers will be Brian G. Dias, Klaus Wimmers, Gerlinde A. Metz and Jean-Paul Renard. At the Plenary Session there will also be the lecture of the 2015 Leroy Award winner, Theo Meuwissen, “Genomic selection: the use of genomic information in animal breeding”. Polish colleagues are also organizing a very attractive social program. We would like to remind you that the deadline for the early registration of the EAAP Annual meeting is May 31<sup>st</sup>. for more information please visit [www.eaap2015.org](http://www.eaap2015.org)

### **12th International Symposium on Milk Genomics & Human Health**

The symposium will be held in October 26-28, 2015 in Sydney (Australia).

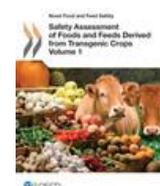
The International Milk Genomics Consortium (IMGC) has issued a call for presentation, poster abstracts and student travel award applications for the 12<sup>th</sup> International Symposium on Milk Genomics & Human Health. The three days event will bring together international experts in nutrition, genomics, bioinformatics and milk research to discuss and share the latest research. This year's theme is Translation of Omics into Production and Health. Topics will include: Dairy, Nutrition and Health in Asia; Microbiomics and

immunity; Milk and species diversity; Omic technologies and milk analytics; Milk complexity and bioactives; Neonatal health and epigenomics; On-farm Omics; Other topics related to lactation and genomics. There will be oral and poster presentations. More info on <http://milkgenomics.org/>

### **NEW PUBLICATIONS**

Safety Assessment of Foods and Feeds Derived from Transgenic Crops, Volume 1

The volume I of this series compiles the science-based consensus documents of the OECD Task Force for the Safety of Novel Foods and Feeds from 2002 to 2008. They contain information for use during the regulatory assessment of food/feed products of modern biotechnology, i.e. developed from transgenic crops. Relevant information includes compositional considerations (nutrients, anti-nutrients, toxicants, allergens), use of the plant species as food/feed, key products and components suggested for analysis of new varieties for food use and for feed use, and other elements. These documents should be of value to applicants for commercial uses of novel foods and feeds, regulators and risk assessors in national authorities for their comparative approach, as well as the wider scientific community.

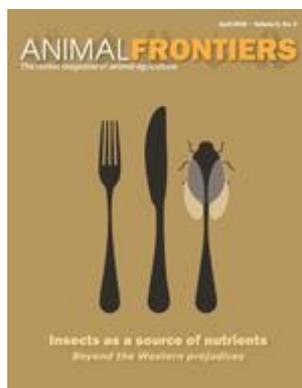


#### Animal science for sustainable productivity program

It is an open access book produced by ILRI (International Livestock Research Institute). ILRI's research program on Animal Science for Sustainable Productivity (ASSP) is a global program working to increase the productivity of livestock systems in developing countries through high-quality animal science (breeding, nutrition and animal health) and livestock systems research. The program aims to increase the supply and quality of animal feed from forage and crop residues, developing animal breeding strategies that are suitable for small scale farmers and identification and control of diseases that impair animal health. The book is part of this program. More info can be found at:

<https://cgspace.cgiar.org/handle/10568/33940>

New issue of Animal Frontiers: "Insects as a source of nutrients: Beyond the Western prejudices"



Animal Frontiers is a joint venture of the American Society of Animal Science (ASAS), Canadian Society of

Animal Science (CSAS) and the European Federation of Animal Science (EAAP). Each issue of Animal Frontiers will consist of a series of invited, peer-reviewed articles that present several international perspectives on the status of a high-impact, global issue in animal agriculture today. The articles will be in the form of discussion or position papers. Every issue will explore a theme of broad and current interest within animal science and animal agriculture.

The current issue of Animal Frontiers is "Insects as a source of nutrients: Beyond the Western prejudices", the guest editor is Christiane L. Girard and is, like always open access, everyone can download each of the eight interesting articles of this issue.

This international effort to provide source documents concerning scientifically important issues in global animal agriculture will meet the needs of a diverse community of scientists and, through an implications section in each paper, the needs of policy makers, educators, and the general public. For more info: <https://www.animalsciencepublications.org/publications/af>

The editors wish to thank ADSA, ASAS, CSAS, EAAP, FAO, ILRI, SASAS, and all other organizations providing info to make this Newsletter.

The **World Animal Science News** is the Official WAAP Newsletter. This interesting update about activities of the global animal science community presents information on leading research institutions in the entire world and also informs on developments in the industry sector related to animal science and production. The Newsletter is sent to all WAAP member organizations and to their associates.

You are all invited to submit information for the newsletter. Please send information, news, text, photos and logo to [waap@waap.it](mailto:waap@waap.it)

**WAAP Secretariat is located at the following address:** Via G. Tomassetti 3, A/1 - Rome (Italy)  
Tel.: +39-06-44 20 26 39; E-mail: [waap@waap.it](mailto:waap@waap.it)

**Production staff:** Jim Sartin, Andrea Rosati, Eleonora Azzaro.

**Graphics design and layout:** Danilo Domenici