GSD President’s Letter

by Marie Lawton, Cornell University

Hello!

I hope everyone is having a great start to the spring semester! The GSD has been working hard to schedule some great programming for the 2019 ADSA Annual Meeting in Cincinnati, Ohio, so don’t forget to register! A description of the GSD events can be found in this newsletter. If you are a graduate student, we hope to see you there.

The GSD communications committee has once again put together a great newsletter! Included in this newsletter are the following articles:

GSD Events at the 2019 ADSA Annual Meeting
International Spotlight: South Korea Dairy Industry
Student Spotlight: Yizhou Ben Ma
Student Spotlight: Clarissa Strieder-Barboza
Industry Spotlight: Peter Løvendahl

Have you checked us out on social media?

If you haven’t done so yet, please renew your ADSA membership to continue receiving great member benefits and join our Facebook page for GSD updates and other interesting dairy-related articles. Be sure to check out the Facebook live videos that our officers have shared!

Additionally, we will soon be accepting 2019–20 GSD Advisory Council officer nominations. Be on the lookout for more information in your inbox in the coming months. We highly encourage all interested graduate students to consider running for available positions!
GSD Events at the 2019 ADSA Annual Meeting

During the 2019 ASDA Annual Meeting registration, make sure to sign up for the many GSD events. Don’t forget to encourage other GSD members to sign up as well.

**Saturday, June 22**
12:00–5:00 pm: SAD and GSD Tour Young’s Jersey Dairy, Yellow Springs, Ohio. Tickets: $15

**Sunday, June 23**
2:00–4:00 pm: GSD Workshop: Grant Writing
4:15–5:00 pm: GSD Business Meeting and Open Forum
7:30–9:30 pm: GSD Mixer at 16 Bit Bar and Arcade. Tickets: $10

**Monday, June 24**
12:30–2:00 pm: GSD Career Insights Lunch. Tickets: $10

**Tuesday, June 25**
2:30–3:30 pm: GSD Three-Minute Thesis Challenge
6:00–8:00 pm: GSD Mix and Mingle with Professional Members
International Spotlight: South Korea Dairy Industry

by Usuk Jung

Author’s note: I am from South Korea and am a matriculated PhD student for the fall 2018 semester at the University of Tennessee, under Agustin G. Rius.

South Korea is located in eastern Asia between Japan, North Korea, and China. In South Korea (Figure 1), most farmers are breeding Holstein cows, and they supply TMR. The most common type of barn is layered with sawdust with straw below the sawdust, with open sides (Figure 2). Although the use of robot milking is increasing, pipelines are the main type of milking machine. Currently, as reported in 2018, there are 407,000 dairy cows milking in South Korea. Even though large-scale farms are increasing, the number of animals is decreasing annually due to a policy of reduced raw milk output.

The dairy industry in South Korea is fairly new. It started about 70 years ago, but it has significantly developed in this short period. In the 1960s National Dairy Promotion and Research was encouraged by the government to make mass importations of dairy cows and increase development of milk processing and technology, such as pasteurization of milk. With those efforts, Seoul Dairy Cooperative was established in 1962, and now, several companies are competing to sell their dairy products. In 2016 dairy accounted for 11.6% of the livestock in-
industry because consumption of dairy products per capita is increasing.

Currently, average milk production per dairy cow is 13,395 kg. Among the countries looked at by the International Committee for Animal Recording, this production comes in third place. In addition to milk production, milk quality is very good. The percentage of milk with less than 200,000 somatic cells/mL surpassed 58% and with less than 30,000 bacteria/mL surpassed 92%. The fat content of milk has also increased continuously since 2000; in 2017 fat was around 3.8 to 3.9%. The dairy industry in Korea is trying to accelerate exports to China, the Southeast, and the Middle East based on the high quality of milk and processed dairy products.

The dairy industry in South Korea is facing several problems. Milk consumption has been decreasing because of population decline and an aging society. Most Koreans (75%) do not have lactase, which might also be one of the factors. However, imports and consumption of dairy products such as cheese, ice cream, and yogurt are increasing. Moreover, the higher price of milk could reduce in milk consumption. Because of poor infrastructure, the low rate of self-sufficiency with regard to feed (being able to produce feed to meet the consumption needs of your own dairy cattle), and the milk pricing system being based on milk fat, milk production costs more in South Korea than it does anywhere else in the world. Also, the anti-milk movement has recently emerged as a social issue, and there is low competitiveness through the Free Trade Agreement.

Industry and academia are working hard to solve these problems. Several research studies have been carried out that focus on topics such as the production of functional milk, improvement of milk protein, and heat-stress reduction. Milk companies are trying to receive milk containing more oleic acid, conjugated linoleic acid, vitamin A, and vitamin E. Some experts have suggested switching from Holsteins to Jerseys to produce milk with higher levels of milk protein and milk fat.

Sources
Korea Dairy Committee: http://www.dairy.or.kr/english/english.html
KDIA (Korea Dairy Industries Association): http://www.koreadia.or.kr/_eng/index.html
Student Spotlight: Yizhou Ben Ma

Country of origin: China

Current school: Kansas State University

Degrees: Bachelors of Science in food science, Masters of Science at the University of Minnesota

Year in school: Second year

Area of specialization: Dairy foods and processing

Research focus: Rapid detection and chemometric modelling in dairy food production

Future plans: I would like to obtain a PhD in food science and technology and work in the food and beverage research sector

Advice for future graduate student poster competitors: Clear visualization of experimental data is the key to communicating research findings. Also, making sure that your poster is readable from eight feet away.

Just for fun, what is your favorite dairy food? Extra-sharp Cheddar cheese

Award won: Leprino Foods Graduate Student Poster Presentation Contest in Dairy Foods Research
Student Spotlight: Clarissa Strieder-Barboza

Country of origin: Brazil
Current school: Medical School, University of Michigan
Degrees: DVM, MS, PhD
Year in school: First year postdoctoral research fellow
Area of specialization: Metabolic diseases and adipose tissue biology
Research focus: Cellular mechanisms of adipose tissue dysfunction during metabolic diseases
Future plans: In the future, I see myself in an academic position developing independent research that will benefit both animal and human health, while contributing to the training of animal and veterinary science professionals.

Advice for future graduate student poster competitors: Be enthusiastic when presenting your research and find applicability with your work. Be confident!

Just for fun, what is your favorite dairy food? Cheese!!!
Award won: Purina Animal Nutrition Graduate Student Poster Contest in Dairy Production: PhD Division
Industry Spotlight: Peter Løvendahl

Hometown
Copenhagen, Denmark

What degrees do you hold and from where?
I have a master’s and PhD from the Royal Veterinary and Agricultural University, Denmark.

Where do you work and what is your position/title and duties?
I am a senior scientist at Aarhus University. My duties include research in quantitative genetics among dairy cattle, teaching a bachelor’s course in Genetics and Animal Breeding, and seeking funding for further projects.

What is your favorite part about your job?
1. Analyzing data
2. Visiting with farmers
3. Doing applied research

Have you held any previous jobs or did you do a postdoc? Would you recommend a postdoc?
I started at Aarhus University immediately following a PhD. I would recommend a postdoc if someone is unable to get a faculty job right away.

Why did you choose academia versus industry?
I like to do research based on my own ideas and have always felt like I was an experimenter before anything else.

If you could give advice to your younger self during graduate school, what would it be?
1. Follow your instincts to do things that you find interesting
2. Keep learning new things

What is your favorite thing about the dairy industry or academia in general?
My favorite thing about the dairy industry is the welcoming attitude of the farmers. My favorite thing about academia is the possibility to dive deeply into theoretical and biological problems.

Just for fun, what is your favorite dairy food?
Cheese
Have you checked us out on social media?

- Don’t miss learning about dairy foods and production research happening at different universities. Select GSD members are showing our community their labs and facilities, through a social media takeover!

- Do you need to keep updated on ADSA annual meeting events? We will be posting all of the upcoming meeting events specific to GSD members and any deadlines.

Be sure to follow our Instagram @ADSAGSD and ask to be a member of our private Facebook group—just click on this link: https://www.facebook.com/groups/adsagsd/.