FAO/INFOODS Food Composition Database for Biodiversity: Partnering with IOWA State University Students to Share more Data on Foods of Animal Origin

Steven M. Lonergan, Shelly Taylor, Joe Colletti

Background

The Iowa State University College of Agriculture and Life Sciences Dean's Global Agriculture and Food Leadership Program empowers students to explore topics that affect food security and distribution across the world. These topics include technical components of food production, cultural realities, ecology, political economy, biodiversity, and intellectual property rights. Students in this program have worked with Dr. Ruth Charrondiere in 2012 and 2014 to contribute data to the FAO/INFOODS Food Composition Database for Biodiversity.

Improve evidence base and programme implementation

In 2012, Dr. Paul Boettcher of FAO (Animal Genetic Resources Branch) came to Dr. Ruth Charrondiere with a proposal to work with the Iowa State Program. Dr. Boettcher suggested that the 2012 program could assist in contributing data on the composition of beef breeds. At that time the FAO/INFOODS database was lacking entries related to meat, making this contribution especially important. After the project, 210 food entries were added for beef breeds and a scientific article was published, making the collaboration a great success. Again in 2014 ISU students working with Dr. Charrondiere contributed close to 250 food entries for pork breeds into the FAO/INFOODS database. A key component of the student training has been the application of technical skills learned through the e-Learning course coordinated by Dr. Charrondiere.

Success

This FAO-ISU partnership is an example of how university students, under faculty and FAO supervision, can provide important research data that meet FAO needs. Not only does the FAO benefit from such a collaboration, but the students gain firsthand science-based experience working closely with a prestigious, scientific international organization.

The relationship between FAO and Iowa State University has the potential to serve as a model for future collaborations with other universities that can add valuable data and knowledge to this database and identify even more livestock breeds in need of conservation efforts.

The efforts of the students have been documented in a peer reviewed journal article that summarized the findings of the team that conducted the beef research (Barnes et al., 2012), and a poster presentation that summarized the work of the team that conducted the pork research (Kerns et al., 2015). Most importantly, students gain a special awareness of the importance of food production, food composition, and the contributions of genetic diversity on these systems.

Sources

Barnes, K., T. Collins, S. Dion, H. Reynolds, S. Riess, A. Stanzyk, A. Wolfe, S. Lonergan, P. Boettcher, U.R. Charrondiere, and B. Stadlmayr. 2012. Importance of cattle biodiversity and its influence on the nutrient composition of beef. Animal Frontiers 2 (4): 54-60.

Kerns, M., B. Rossman, S. Liewer, M. Powell, S. Herr, S. Taylor, J. Colletti, S. M. Lonergan, P. Boettcher, and R. Charrondiere. 2015. Documentation of factors that contribute to the variation of pork nutrient composition. J. Anim. Sci 93(Suppl. 2):72