

Learn how a Goat Dairy Can Help a Hospital Save Lives



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Coery Spies and Brianna Parsons with Community Leaders in the Gambia



Goats supply milk and milk products to the undernourished/malnourished people of the Gambia

This past summer 2 veterinary students, Brianna Parsons and Corey Spies, from the University of Pennsylvania School of Veterinary Medicine, spent eight weeks in The Gambia, West Africa conducting research to determine the feasibility and sustainability of developing a goat dairy. If feasible, the project would expand both nutrition and healthcare to this impoverished area. Funding came from Rotary grants (*Paoli-Malvern-Berwyn Rotary Club, Gundaker Foundation and International District 7450*), a Penn Abroad Global Grant and two Food Animal Fellowships from Penn Vet.

Mr. Kebba Badgie, the CEO of the Sulayman Junkung General Hospital (SJGH) initially envisioned creating a goat dairy at his hospital in rural Gambia. Badgie spoke with Mrs. Lynn McConville, the director of Power Up Gambia, a nonprofit organization based in West Philadelphia that provides renewable energy solutions to health care facilities in The Gambia. PUG was founded by Dr Kathryn Hall, a former Penn medical student, who volunteered at SJGH and realized the need for electricity, particularly in the maternity wards. Badgie mentioned to McConville that a small herd of goats living on the hospital property provide meat for staff and patients. There is, however, no formal herd health or animal husbandry program to efficiently raise and grow the herd. With proper husbandry and veterinary care, he believed the herd could provide a sustainable and affordable source of protein that the community desperately needs to combat an overwhelming prevalence of undernutrition.

Health care centers in The Gambia like the SJGH are often limited in their abilities to treat malnourishment due to insufficient funding that hinders medication access.

Given that low protein consumption is a major determinant of undernourishment, a number of Gambian organizations have emphasized the need for accessible, high quality protein.

By what can only be describes as a fortunate coincidence, McConville attended a Paoli-Malvern- Berwyn Rotary Club meeting where she introduced Badgie's idea of a dairy to Dr. Carla Chieffo, a Penn Vet Alumnus (V86, G98) with connections to the veterinary school. Dr Chieffo's connections allowed her to enlist the help of Dr. David Galligan, Professor of Animal Health Economics at the Veterinary School, to co-mentor the project. Together, they selected Spies and Parsons from a pool of student candidates for their unique backgrounds in international work, research and experience in goat rearing and animal husbandry.

The students working in collaboration with, Dr Carla Chieffo, Dr David Galligan and Mrs Lynn McConville, spent ten weeks in the Gambia at SJGH researching how to establish the infrastructure, advisory connections, regulatory clearances, and supply chains necessary for the Gambia Goat Dairy (GGD).

They met with government veterinary agencies and agricultural research organizations to determine the best rearing and weaning practices for goat kids in The Gambia. They consulted with feed manufacturers, growers and sellers to determine the price and logistical necessities of feeding their herd. They discussed the project with Gambian government ministers and other officials, seeking assistance and clearance to move forward with the project. They developed relationships with local poultry farmers and other small businessmen to better understand the economic milieu in which the GGD would operate. They even conducted consumer surveys to measure Gambians' openness to goat dairy products and reasonable price points.

After weeks of heavy research, they compiled their findings into a preliminary project proposal and presented them to Gambian stakeholder organizations for feedback. Then the pair organized and conducted a seminar, assembling an unprecedented level of expertise by bringing together over 20 key Gambian stakeholders. These farmers, veterinarians, academics, and government officials from the Gambian Department of Livestock and the International Trypanotolerance Center brought together knowledge regarding every aspect of a dairy from start to finish; from goat-rearing to milk-selling.

Their expertise allowed for an unprecedented level of discourse, constructive criticism, and exchange of ideas. Spies and Parsons presented a comprehensive power-point, detailing the specifics of the dairy, particularly including infrastructure, husbandry, nutrition, veterinary care, revenue generation, comprehensive budgets, operation sustainability and future directions. The stakeholders, in turn, gave feedback and critiqued the plan, both as a large group, and as three specialized focus groups, with concentrations on dairy husbandry, community outreach and finance. Their insights to the GGD proposal allowed Spies and Parsons to work through and plan for even the most minute problems, including some previously unforeseen.

Spies and Parsons used the feedback to refine their proposal and budget for the project. The group is applying for further grants and funding to return to The Gambia to implement those plans. Rotary has already committed money for 2017, and they will be applying for the Student Inspiration Award, a prodigious honor from the University of Pennsylvania School of Veterinary Medicine, which offers funding to projects of Public Health importance.

The major goal of the project is to improve community nutrition and health care by generating a local supply of affordable, safe, high quality animal protein that also generates a sustainable source of revenue for the hospital. The initial phase of the project will involve the construction of the structures, enclosures and other necessary dairy infrastructure, as well as training staff members tend to and manage the herd.

When the GGD becomes productive, profitable and sustainable, it will begin to focus on greater community outreach. Workshops will be assembled for local smallholder farmers to learn ways to replicate the model of the GGD on their own farms. In this phase, we hope to increase the productivity of all animals in the community, thereby increasing local milk production to exceed the protein needs of families in the area. When complete, we

expect GGD to serve as a model for other communities interested in increasing their milk production to replicate.

If you are interested in learning more please contact (Carla Chieffo, chieffo.carla@gmail.com) or are interested in donating, donations can go to (PMB Rotary Vanguard Charitable Endowment Program). In the by-line include GGD (Gambia Goat Dairy) Project