

AG2PI SEED GRANT - PROJECT FINAL REPORT

PROJECT NAME	Goat Together: Partnerships to Advance Goat Genome to Phenome Research to Ensure Food Security
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PROJECT PRINCIPAL INVESTIGATOR	TODAY'S DATE	PROJECT START DATE	DATE OF COMPLETION
Lihong Chen	9/27/2023	04/01/2023	08/31/2023
TEAM MEMBERS (co-PI, co-I, personnel)		COLLABORATORS	
Dr. Erdogan Memili, Dr. Juan Romano, Dr. William Foxworth		Dr. Ben Rosen, Dr. Brenda Murdoch, Dr. Curt Van Tassell, Dr. George Liu, Dr. Heather Huson, Dr. Olanrewaju Morenikeji	

ACCOMPLISHMENTS

Please provide a short summary of the conclusions (both successes and failures) made from your project. Include a description of how this project will provide benefits to the agricultural genome to phenome community and, possibly, to a broader audience. You should include both qualitative and quantitative details, as necessary, to support your conclusions. Include a short accomplishment statement in non-technical language and do not include names.

This is not a technical report. Please keep to no more than 6-8 sentences (e.g., 1-2 sentences per point, above).

The project aimed to establish a network of researchers and stakeholders to address the challenges and opportunities in goat production through genome to phenome research. The project resulted in several outcomes, such as: 1) Hosting a Goat Research Summit at PVAMU, which brought together experts and practitioners from across the country to discuss the challenges and opportunities in goat production through genome to phenome research. The summit featured presentations, discussions, tours, and networking opportunities for the participants; 2) Submitting three collaborative research proposals to different funding agencies. These proposals aim to address the knowledge gaps and research needs in goats, as well as to build the capacity and infrastructure for goat research and education at PVAMU; and 3) Building a strong partnership among researchers and stakeholders to advance goat genome to phenome research. We also explored opportunities in using precision livestock technologies in goat genome to phenome research with the help of the Agricultural Innovation Technology Center at PVAMU. The project enhanced the capacity of PVAMU in goat research and education. It will benefit the agricultural genome to phenome community by fostering collaborations, generating new knowledge, and developing tools and strategies for improving goat health, welfare, and productivity. The project will also benefit the broader audience by contributing to food security, environmental sustainability, and economic development, especially for small and minority farmers. Accomplishment statement: This project built a strong partnership among researchers and stakeholders to advance goat genome to phenome research for ensuring food security.

(HINT: You can expand sections as necessary by pulling down on the square in the lower right corner of each box)

Products

Please list any products from this project. This may include (but not limited to) publication, concept/white paper, workshop, conference presentation, website, publicly available data or pipelines, etc. Reminder: you are required to make your products available to the broader stakeholder community using standard USDA practices, open source, FAIR, or other models. Metrics may include number of participants or times accessed, etc. Include links to recordings, DOI, etc. when possible. For presentations and posters, provide authors, date, location and presentation title.

ACTIVITY / PRODUCT	DESCRIPTION (include URL, if applicable)	OUTCOME / METRICS
Goat Research Symposium at PVAMU	https://www.youtube.com/watch?v=ZN6NtLwXvnY	Five speakers presented topics related to goats at PVAMU. Over thirty people attended this symposium.

Audience

With whom has this work been targeted to and shared? Please describe how this project and its products have been disseminated to a community of interest. Include any outreach activity or information sharing as well as training or professional development opportunities provided in this project.

This work has been targeted to and shared with a diverse community of interest, including researchers, stakeholders, industry representatives, students, and the general public. The project and its products have been disseminated through a Goat Research Summit at PVAMU, which brought together experts and practitioners from across the country to discuss the challenges and opportunities in goat production through genome to phenome research. The summit featured presentations, discussions, tours, and networking opportunities for the participants.

CONTINUATION OF WORK

Next steps

How do you/your team plan to continue moving this project forward? Include how AG2PI can assist in your forward momentum.

We will continue to strengthen the network of researchers and stakeholders by adding new expertise in the field of goat genome to phenome research, such as omics, bioinformatics, precision livestock technologies, and artificial intelligence. In addition, we will identify new opportunities and collaborations in goat genome to phenome research with other institutions, organizations, or industry partners. Moreover, we will seek additional funding from various sources, such as the USDA National Institute of Food and Agriculture (NIFA), or the National Science Foundation (NSF), to support our research activities and infrastructure development at PVAMU. Finally, we will work with the goat industry to fill the gaps between research and application by providing practical solutions and recommendations for improving goat health, welfare, and productivity using genome to phenome approach.

AG2PI can assist in our forward momentum by providing us with access to a network of researchers and stakeholders who share a common vision and interest in goat genome to phenome research, and continue to provide opportunities to participate in various events and activities organized by AG2PI, such as field days, conferences, training workshops, and seed grants.