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| **Expected Outcomes** | **Inputs (What you’re investing)** | **Outputs (What’s produced – activities and information products)** | **Evaluating/Monitoring Plan; Measurement Methods** |
| 🞏 Increased awareness of synthetic anthelmintic parasite resistance  🞏 Understanding condensed tannin level required to reduce parasite load, effectiveness in goats, and management strategies  🞏 Development of strategies for use on producer farms  🞏 Producer education in the use of natural replacements for chemical anthelmintics | 🞏 Intellectual resources: 1 scientist, 1 technician, 1 graduate student and 1 undergraduate student  🞏 Support: 1 research and teaching farm (LU) and 2 producer farms  🞏 Producer participation (2 farmers) in dosing field trials  🞏 Education: 2 hands-on workshop demonstrations | 🞏 Farmer participation in projects, demonstrations, and conferences  🞏 Graduate research reports and presentations  🞏 Newsletter article and guide sheets  🞏 Parasite reduction program using natural anthelmintics  🞏 Additional experiments designed in natural anthelmintic use  🞏 On-farm demonstrations | 🞏 Initial project evaluation meeting  🞏 Interim project evaluation meeting  🞏 Workshop participant knowledge and evaluation  🞏 Producers’ associations website hits  🞏 Farm inspections and animal parasite load evaluations |
| **Action Outcomes:**  🞏 Reduction in resistant parasitic conditions in goats  🞏 Reduction in goat losses in production due to gastrointestinal parasitic infection  🞏 Increased profitability for producers due to more productive livestock  🞏 Adapted techniques that replace synthetic anthelmintic use in goat herds  🞏 Improve animal welfare, well-being, and sustainable small ruminant production | 🞏 1 treatment trial  🞏 Management and use of NCR-SARE funds (request $10,000.00)  🞏 New research, education, and project initiations | 🞏 1 paper, 2 abstracts, and thesis published  🞏 Animal welfare and well-being improved  🞏 Data collected and analyzed; abstract and project reports submitted and published  🞏 Producer adoption of natural anthelmintic based on findings of the research and demonstrations | 🞏 Scientific abstracts and journal article publications  🞏 Producer participation in demonstrations and hands-on activities  🞏 Producer adoption of new practices  🞏 Prevention and reduction of resistant and persistent parasitic infection by natural anthelmintic use |