SBAR OVERVIEW
2020
Retreat – July 27-29, 2020
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Sustainable Bioeconomy for Arid Regions (SBAR)

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SBAR (Year 3)
Feedstock Development

- Bridgestone Americas, NMSU, UA, USDA-ARS (ALARC and WRRC)
  - 11 key collaborators, 92 students, postdocs, technical staff

- Areas
  - Biomass quantity and quality (traditional breeding and genetics)
  - High-throughput phenotyping (remote-sensing and interactive database/tools)
  - Agronomic production (herbicides, growth modeling, density)
  - Irrigation
  - Soil quality and health (microbiome)
  - Flowering

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SBAR (Year 3)
Characterization and Co-products

- Bridgestone Americas, NMSU, UA
  - 5 key collaborators, 40 students, post docs, technical staff
- Guayule resin, tissue, and bagasse; Guar nodules
- Areas
  - Bagasse characterization
  - HTL; conversion review paper
  - Guayule and guar biochemical analysis
  - Resin component separation (distillation, accelerated solvent extraction, supercritical fluid)
  - Metabolites, chemical and microbial transformations

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SBAR (Year 3)
System Performance & Sustainability

- Bridgestone Americas, Colorado School of Mines, Colorado State University, NMSU, Oregon State, University of Arizona
  - 7 Key Personnel, 17 students, postdocs

- Areas
  - Integrated TEA and Sustainability modules
  - Farm Level Economics – Integrated model
  - Data Integration
  - Enterprise budgets
  - Logistics optimization – transportation
  - Social sustainability

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Sustainability Team Overview

Arid Southwest U.S. → Transportation → Conversion

Primary Product → Co-Product(s)

Model System Boundary

Economic Feasibility, Environmental Impact, Sustainability

Social Responsibility

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SBAR (Year 3)
Extension and Outreach

- NMSU, UA, Bridgestone Americas
  - 7 key collaborators, 36 students, professional staff
- Areas
  - Outreach to growers (field days, site visits, workshops)
  - Newsletters
  - 4H (virtual summer)
  - FFA
  - Project Puente

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SBAR (Year 3)

Education

- **UA, NMSU**
  - 4 key collaborators, 27 students, professional staff

- **Areas**
  - Graduate student-teacher mentor teams in both states
  - Educators in Native American communities
  - Refining lesson plans – web based
  - Moving to virtual
  - Assessment

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Accomplishment Summary

- 147 Active Participants (25 Key collaborators, 42 Professional staff, 5 Postdocs, 34 Graduate Students, 41 Undergraduate students, 10 Fellows)
- 65 Past Participants
- Three awards for Presentations
- 9 peer-reviewed publications
- 13 conference proceedings
- 99 presentations (number does not include internal SBAR presentations)
- 2 Herbicide registrations for guayule
- 31 tabling events
- Received Haury Grant – 4H
- Bridgestone and NMSU submitted grant
Diversity and Inclusion

- **Strength of SBAR Group**
  - *Team itself*
  - *Education, Extension and Outreach Activities*

- **University, college and department level webinars - VPs for Diversity and Inclusion**

- **Key personnel involved in committees**
  - *Arizona Institutes for Resilience - Diversity and Equity Committee*
  - *Presidential Faculty Fellow for Access, Attainment and Diversity – CSM*
  - *Chair Mechanical Engineering Diversity and Inclusion committee – CS*
  - *Facilitators and Committee Members for RII Racism in Research Series – UA*
  - *Member of the NMSU Diversity Council*

- **Always room for improvement and we can share best practices**