



SUSTAINABLE BIOECONOMY
FOR ARID REGIONS

Extension & Outreach Newsletter

June 2022; Volume 3, Issue 2

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SBAR Summer Outreach

The SBAR project is looking forward to a busy summer of outreach, internships, and presentations.

Our NMSU team will continue to host middle and high school students throughout the summer. These events utilize science curriculum developed by SBAR to deepen understanding of bioeconomy processes and concepts. Students will also explore STEM careers with the career videos on the SBAR YouTube Channel. Highlights of a recent TRIO event at NMSU, which included an Excel for Agribusiness class, are on page 3.



Our UA team will be hosting two in-person internship programs: SBAR Explorer Internship and SBAR Research Internship. Bookmark the SBAR website to stay up to date: (<https://sbar.arizona.edu/>).

Welcoming SBAR Summer Interns to UA Campus

The SBAR Youth Development team is looking forward to welcoming 12 high school and college interns to campus this summer.

The SBAR Explorer Internship Program is 2 weeks of real-world STEM. Interns will attend seminars, work in a soil science lab, and visit Bridgestone Americas facilities. Dr. Seavert will lead interns on BENCO (Break-Even for New Crop Options) modeling.

The SBAR Research Interns will be working one-on-one with faculty. We are excited to be hosting an in-person, on campus internship this summer.

SBAR at WAEA in Santa Fe Come say hello!

SBAR research and extension efforts will be highlighted in Santa Fe this June at the Western Agricultural Economics Association Meeting.

Monday, June 27th: Dr. Maryfrances Miller and colleagues will present "AgriScience Contests to Connect High Achieving Rural Youth to University Faculty".

Tuesday, June 28th: Luis Ramos and Oluwatobi Omotayo will be presenting during the Paper Session and Symposium.

Planting Dates for Guayule

Identifying the optimal planting date for guayule is a key factor for crop establishment. Guayule is a crop that requires warmer soil temperatures to germinate. As most crops in the region are planted on raised beds, guayule growers can plant guayule on raised beds with the use of specialized planting equipment for small-seeded crops. Bed spacing can range between 36 inches to 40 inches.

Guayule plants can achieve maximum germination when planted in spring (April and May) or fall (September and October) in Arizona. Poor germination, seedling vigor, and seedling disease can be an issue if planted too early in spring or too late in fall due to cold soil temperatures. If planted too late in the spring or too early in the fall, seedlings can fall victim to extreme high temperatures. Planting too late in the fall can lead to stand loss due to frost damage. During either planting window, keeping the seed bed moist with irrigation water for 5-7 days is key for establishment.

Blase Evancho, Assistant in Extension



Guayule Field, J Bruhn

Growing Guayule: Processing and Contracts

Chemical extraction of the rubber and resin from ground up guayule plants occurs in a large processing facility similar to the Bridgestone experimental extraction facility.

Simultaneous extraction occurs with acetone, hexane, and pentane to extract resin and rubber utilizing what is known as the Bridgestone/Firestone process. This results in raw natural solid rubber and resin. A third coproduct, bagasse, remains after the chemical extraction process is complete. This material is being researched for use as fuel or fiberboard feedstock.



*Bridgestone experimental extraction facility in Mesa, AZ
Bridgestone Americas*

As production of guayule is ramping up, all contracts to grow guayule will initially be made through Bridgestone Americas. Currently they are increasing production acres throughout Central Arizona and are looking for additional growers. If you are interested in learning more, contact Bridgestone Americas for contracting details and information associated with growing guayule.

Blase Evancho, Assistant in Extension

Economic Impacts of Guayule Processing Plant in Southwest Arizona at Western Agricultural Economics Association Meeting



SBAR NMSU Fellow, Oluwatobi (Tobi) Omotayo, will be presenting his paper on characterizing the economic contribution to the regional economy from a guayule processing plant in Southwest Arizona. His paper considers the potential economic impacts of shifting production to drought-tolerant guayule to address declining water availability. The analysis includes impacts from both the construction and operation of a plant to process guayule into rubber. Tobi will be presenting at WAEA on Tuesday, June 28th.

Youth Development Updates

Hatch Valley Students Learn Excel for Agribusiness at NMSU

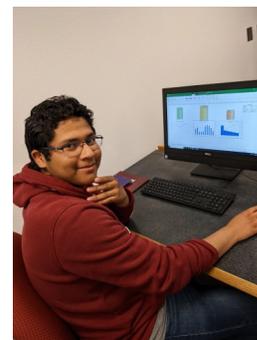


A group of high school students from Hatch Valley public schools spent May 17th exploring the NMSU campus with a particular focus on the Department of Agricultural Economics and Agricultural Business. It was the first time most of these first generation students had visited the campus.

As part of their day on campus, SBAR Fellow and AEAB Graduate Student Luis Ramos taught an Excel for Agribusiness class. Excel is an important program for agribusiness management. When asked about ways students would use what they

learned, one student wrote on their evaluation “[Excel] could be helpful for me and my family on the farm to help us calculate the cost of crop production and other data.” When asked what was the most informative part of the day, a student shared “It was totally the Excel adding thing where it adds all your numbers quicker than using a calculator.”

Luis is developing a series of Excel for Agribusiness video lessons with case studies based on agriculture in New Mexico. The lesson materials, including videos, will be available on the SBAR website this summer.



AgriScience Contests Connect Rural Youth to University Faculty

In the past two years, New Mexico has implemented a number of youth contests. These contests include AgriScience and Agricultural Public Speaking contests held in conjunction with state and regional agricultural fairs. To date, almost \$20,000 of scholarships and prizes have been awarded. Even more importantly than the direct scholarships, the contests have provided a way to connect rural and agriculturally-focused youth to university faculty. Dr. Maryfrances Miller has been coordinating and envisioning these contests for the New Mexico State Fair, the Southern New Mexico State Fair, and Eastern New Mexico State Fair. Join Dr. Miller and the other panelists at WAEA in Santa Fe on Monday, June 27 to learn more about supporting science education for rural youth.



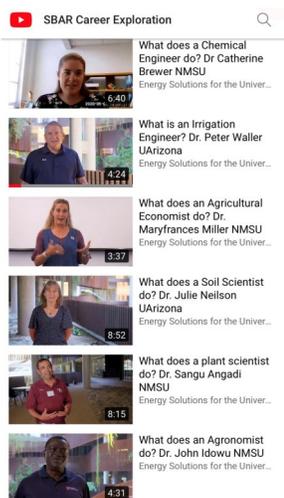
Education Update

SBAR YouTube Channel: Career Exploration Playlist

The SBAR Education team continues to add content for our website and YouTube channel. A variety of curriculum pieces will be added to our website over the summer.

Visit our YouTube channel and check out our Career Exploration Playlist (https://www.youtube.com/playlist?list=PL2ukdZd2g_FXZ-eZc0nFSG_arOwo06ghC). This playlist features 15 videos that highlight careers relating to the bioeconomy, sustainability and arid lands. Most videos are under 5 minutes, with some longer interviews. SBAR faculty, researchers, extension agents, and students share their passion for their work as well as how they found their career path.

Use this link to find the many curriculum resources available: <https://sbar.arizona.edu/education/educational-resources/lesson-plans>.



Connect with SBAR

Recruiting: Growers for Guayule Trial Plots

Contact: Blase Evancho

Recruiting: AgriScience Advisory Committee

Dr. Miller is seeking members for a statewide Agricultural Science Committee.

Contact: Dr. Miller

Plant Guides for Guar and Guayule on SBAR website

Check our website for updates.

<https://sbar.arizona.edu/extension/growers-producers>

SBAR Agronomics on Guayule

Available 2022

Contact: Blase Evancho

SBAR Whole Farm Analysis Tool for Evaluating the Adoption of Guayule into Your Current Operation

Available 2022

Contact: Clark Seavert or Blase Evancho

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We would love to hear from you! Contact our team directly at the email addresses provided.

Check out the SBAR website for more information about the program, research, and resources: <https://sbar.arizona.edu>

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SUSTAINABLE BIOECONOMY
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United States
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National Institute
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Colorado State University



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