



SUSTAINABLE BIOECONOMY
FOR ARID REGIONS

Grower Extension Newsletter

December 2019; Volume 1, Issue 1

ANNOUNCEMENTS

- > **Whole Farm Analysis Tool**
Available March 2020
Contact: Trent Teegerstrom
- > **SBAR "Arid Regions" Educator Training**
Online workshops start June 2020
Contact: Torran Anderson
- > **AZ Guayule Field Trials**
Contact: Blase Evancho
- > **NM Guar Field Trials**
Contact: John Idowu
- > **FFA Train the Trainer**
Workshops February 2020
Contact: Paul Gutierrez
- > **Online Education Resources**
Arid Regions Lessons available in January 2020
sbar.arizona.edu/education
- > **Congratulations Melissa Wilburn**
Middle School Science Teacher of the Year Honorable Mention!



SBAR Fellow Arisbeth Ibarra Nieblas with SBAR Educator Melissa Wilburn at Quail Run Elementary in Tucson, AZ

SAVE THE DATE

March 10, 2020

Alternative Crops Conference
Portales, NM

sbar.arizona.edu/resources/events

GUAR IN NEW MEXICO

SBAR has been moving ahead with research and extension focused on guar and guayule. Research activities include agronomic optimization of both crops for different agro-ecosystems in Arizona and New Mexico. Guayule research is more focused towards Arizona while guar research is more directed toward New Mexico.

Multiple demonstration trials for both crops have been set up in New Mexico and Arizona, testing different aspects such as irrigation, fertility and cultivar evaluations.

Guar demonstration trials are currently being hosted in New Mexico. In 2018, trials testing the effect of different rates of phosphorus and inoculum application on growth and yield of guar were conducted at Los Lunas Ag. Science Center and Clovis Ag. Science Center. The result of this trial showed that the inoculum applied was not effective as there were no significant differences in guar yield between inoculated and uninoculated treatments. Additionally, phosphorus rates did not affect guar yield. No nodules on guar roots were evident at either site (Los Lunas and Clovis, NM). Guar bean yields were low, averaging 1000 lb./ac in Clovis and 800 lb./ac in Los Lunas. We suspected that the guar may not be getting enough nitrogen given the problems with nodulation in some soils.

Therefore, in 2019, the study was changed to include testing different rates of nitrogen and phosphorus together at four sites in NM. These sites were Leyendecker Plant Science Center, Los Lunas Ag. Science Center, Clovis Ag. Science Center, and Tucumcari Ag. Science Center. These trials have been harvested from the field and we are still processing the different treatments to evaluate the final yields. Results will be shared as soon as they are available.



< Guar trial in
Tucumcari, NM,
August 2019



> Guar trial in Los
Lunas, NM,
August 2019

We continue to share information about SBAR at agricultural meetings and events in both New Mexico and Arizona, we are always happy to visit with you if you have any questions.

~ John Idowu, Extension Agronomist, New Mexico State University

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

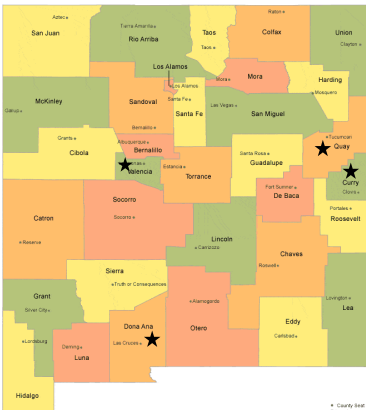
To effectively evaluate the potential adoption of these two crops within your existing operation, the SBAR/Sustainability Economic Team is adding the final touches on a Whole Farm Analysis Tool they developed which will allow producers to evaluate the net returns to the operation given varying levels of acreage adoption, crop mixes and changes in production inputs, thereby allowing for a more informed decision about the economics and overall fit of the crops into their operation.

Available March 2020. Contact: Trent Teegerstrom (520) 621-6245 or tteegers@email.arizona.edu

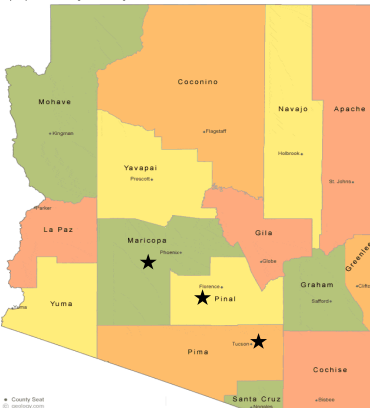


SBAR presents at US Congressional Research Exhibit in Washington DC

★ Guar field trials in New Mexico



★ Guayule plots in Arizona



Guayule in Arizona

With the close of the year we have the opportunity to review the field events of 2019 and preview the new experiments for 2020 that make working with guayule and the SBAR Center of Excellence such an exciting endeavor. With our focus on guayule in Arizona, and access to work with Bridgestone, our major industry backing partner, we held a field day for farmers and agriculture professionals to tour the Bridgestone Guayule Research farm and rubber extraction facilities. This event was collaboratively hosted by Bridgestone, University of Arizona Cooperative Extension and SBAR to provide an in depth look at the experiments and advancements that are being made through research associated with this partnership. Attendees had the opportunity to hear about Bridgestone's long term goals, their agronomic research, SBAR weed management and irrigation research as well as Cooperative Extension research in insect management. Results from the trials exhibited at the field day have led us to some new experiments to better manage this experimental production system.

Our irrigation trial of applying water at 50%, 75%, 100% and 150% of predicted irrigation water requirement left us with questions about the true irrigation water threshold of this production system. This led us to a new experiment where we further reduced the irrigation water inputs and changed the way in which we are irrigating by applying water only when the plant is actively growing. We hope this experiment will bring us closer to the point where economic yield and irrigation water conservation meet.



Dr. David Dierig of Bridgestone discusses Guayule production.

We will complete new weed control trials in 2020. While we have an early seedling weed control program that is very effective, the focus of the new trials will be to collect data for pre-emergent herbicides specifically on sandy soils. We will also look at herbicides for weed control in stands that have been established but have not yet closed their canopy.

These new trials will be valuable as we travel the road toward commercial production of guayule. We look forward to sharing more experimental results in 2020.

~ Blase Evancho, Extension Agent, University of Arizona

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