



SUSTAINABLE BIOECONOMY FOR ARID REGIONS

RESEARCH

Researchers, farmers, and industry representatives are partnering to explore the ecological, social, and economic sustainability of alternative crops for the arid regions of Arizona and New Mexico.

Guar is studied due to the multiple bioproducts it provides. If these bioproducts can be processed, marketed, and utilized, guar can contribute to a more sustainable bioeconomy in arid regions.



GUAR NATURAL HISTORY

Guar is a desert-adapted annual crop mainly grown in India and Pakistan. Guar was introduced into the United States in 1903 and has been commercially grown in Texas and southwestern Oklahoma for more than a century.



DID YOU KNOW?

GUAR GUM

- A sugar derived from the guar seed
- Improves texture and shelf life of baked goods
- A food thickener in dairy products
- A binder, preservative, and lubricating agent in meat products
- Due to the viscosity of guar gum in water, it is used in hydraulic fracturing to extract oil and natural gas from the subsurface rocks.



GUAR MEAL

- The germ and husk left over after the guar gum is extracted from the seed
- A concentrated protein source in animal feed
- A binding agent for pelletizing animal feed



GUAR HARVEST RESIDUE

- Is left in the field for soil health improvement

