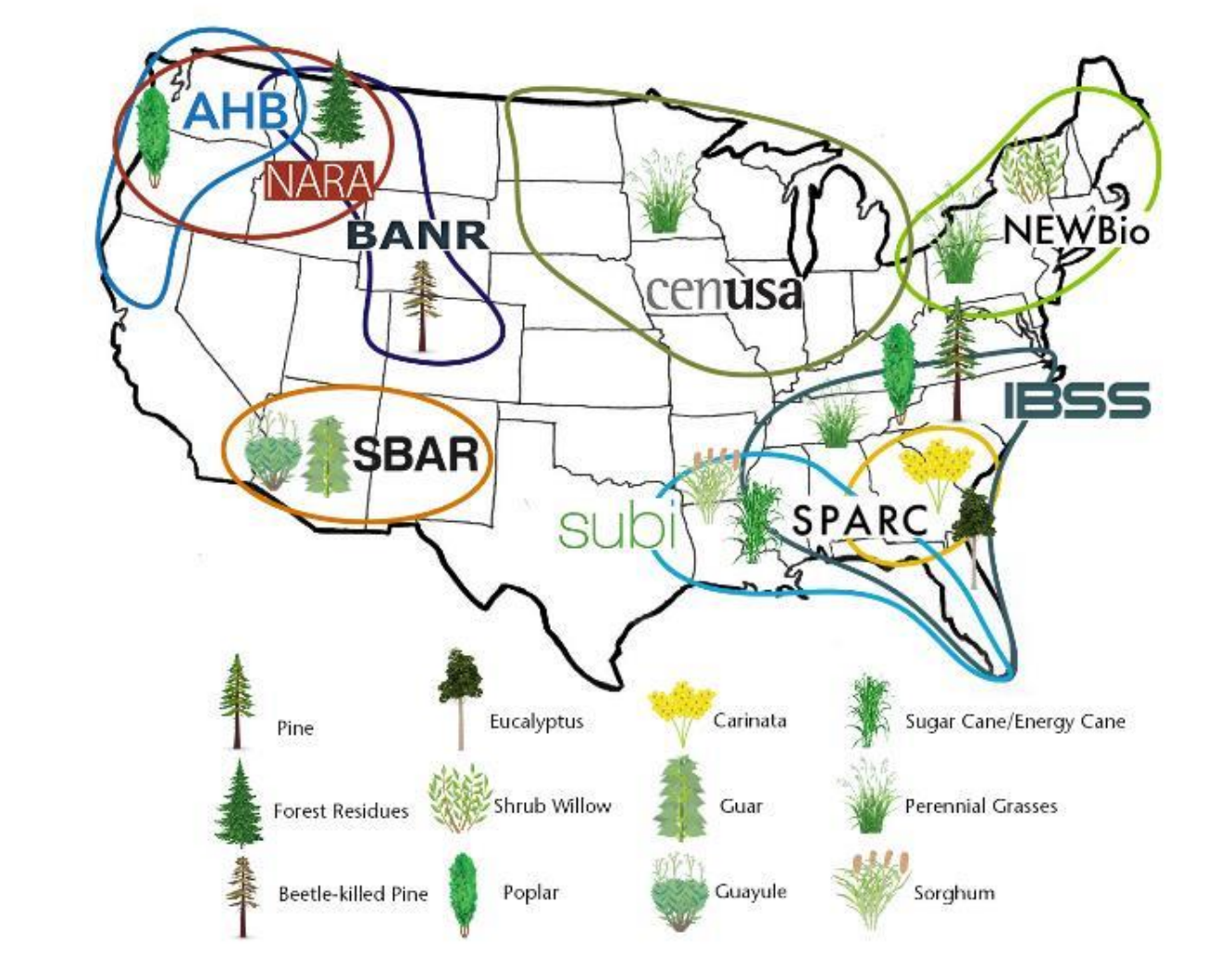
OVERVIEW & EVALUATION PLAN

Kim Ogden

USDA-NIFA Network

(CAP coordinated agriculture projects)



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Partners

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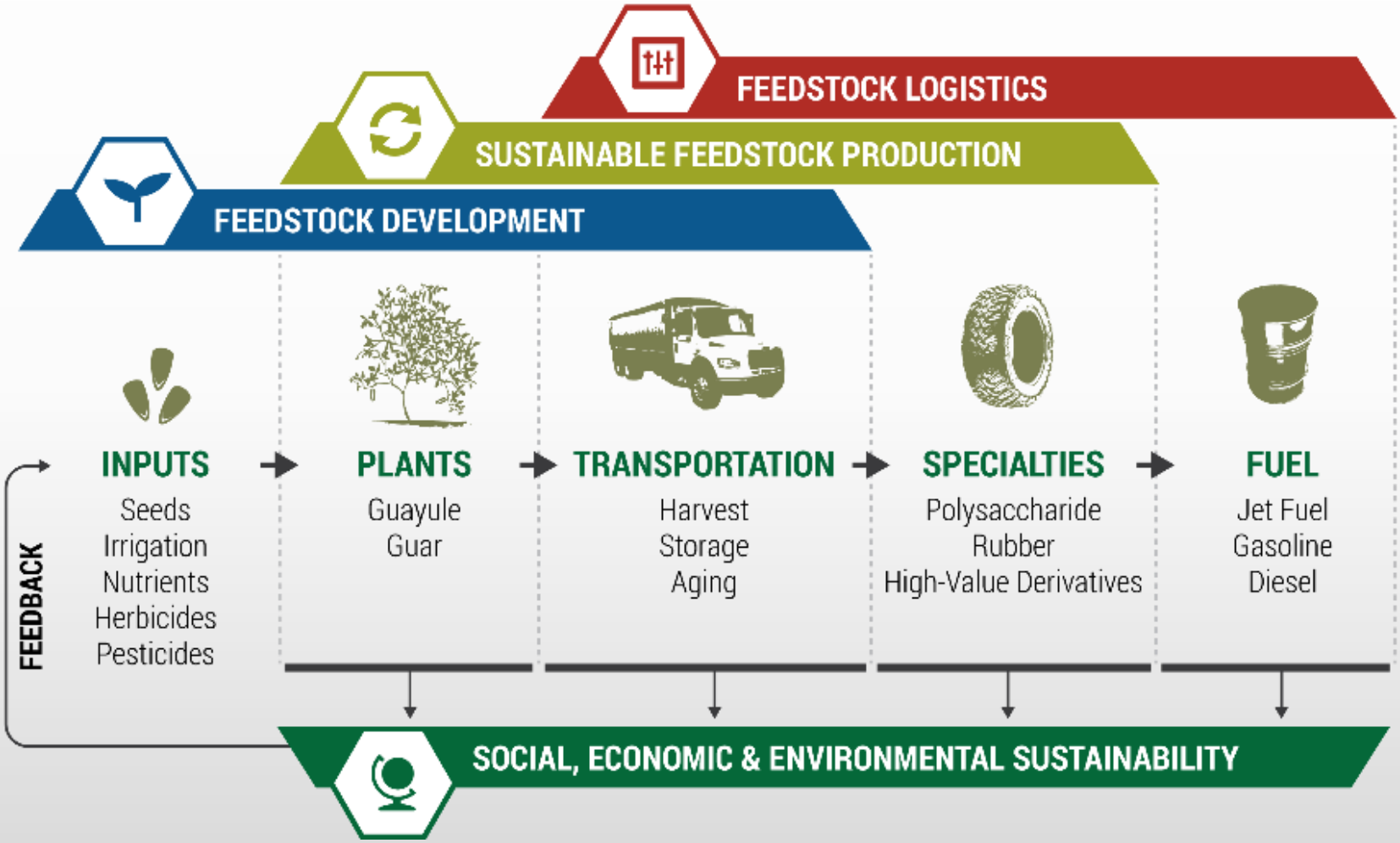
Overview



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Management Team

- Alix Rogstad – Project Director
- Colleen McMahan – Associate Director
- Dennis Ray – Feedstock Development & Production
  - *Pete Waller*
- Catie Brewer – Post-Harvest Logistics & Co-products
- Jason Quinn – System Performance & Sustainability
- Sara Chavarria – Education
- John Idowu – Extension & Outreach

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Major Accomplishments

- Updated Goals
- Developed Reporting and Evaluation Plans
- Formed Advisory Board – still a work in progress
- Presented project overview to various groups
- Developed website
- Hired outstanding people

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Three Levels of Excellence

Evaluation Level – description and purpose	Person(s) Responsible	Frequency
Level 1 / Self-evaluation - Ranking of current progress (Green, Yellow, Red; issues and risks) - Minor adjustments	PI/Co-PI	Quarterly (Quarterly Reports)
Level 2 / Detail program evaluation - Specific activity evaluation; education, extension and outreach - Debrief after action; document progress, change or improvement	PI/Co-PI; Evaluator as needed	On-going
Level 2 / Peer Review - Presentation and evaluation of progress - Medium to Major adjustments	PI/Co-PI	Annually (Annual Meeting)
Level 3 / Big Picture - Target/Mission evaluation… is the project meeting main target - Major adjustments; re-aligning project direction to meet current conditions	Advisory Board	Annually (Annual Meeting)
Level 3 / 360° Review - Feedback received - Adjustments and realignment suggestions	PI/Co-PI	Annually (After annual meeting)

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Program Process (Administrative)

- Was the project adapted to address Advisory Board suggestions?
- Are project accomplishments adequately tracked and reported?
- Are project results disseminated widely?
- Are component results being integrated throughout the project?
- Are we looking for ways to collaborate with others and sustain the project?

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Feedstock Development & Production

- Has biomass quantity and quality been improved through genetics and traditional breeding?
- Does changing flowering affect yield in guayule?
- How is high throughput phenotyping supporting crop expansion?
- Are superior genotypes of guayule and guar being identified?
- How is information of irrigation, salinity, herbicide and nutrients provided to growers?
- Are there new production practices for guayule?
- What is the tolerance of guayule to preemergence and postemergence herbicides?
- How is soil health affected by different cultural practices?

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Post-Harvest Logistics & Co-Products

- Are the methods in place for characterization and evaluation of bagasse for fuel feedstock potential?
- Is the state-of-the-art for transportation of guar and guayule understood and ready to be implemented?
- Are the methods in place for characterization of plant matter and guayule resin for identification of high-value co-products?
- What are the major and biologically active metabolites of guayule and guar waste products that can be converted into value-added co-products?

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System Performance & Sustainability

- Are the energy and mass requirements for the production and processing of guayule/guar defined in support of TEA and LCA?
- Does the proposed production and processing pathway for guayule/guar meet environmental goals?
- What is the economic viability of a guayule/guar-based bio-economy?
- What are the impacts of distributed production and centralized processing incorporating regional resolution?
- Does modeling work present a pathway for development of tools to support de-risking production of guayule/guar?

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Education

- What approaches were successful in preparing graduate students to become better communicators of research and to translate their scientific knowledge in educational spaces and activities to diverse audiences (teachers, K-12 students)?
- What professional development approaches are successful in assisting teachers to incorporate bioenergy and bioproduction topics into existing STEM curriculum?
- Which elements of the activities impacted K-12 student awareness and interest in bioenergy topics and careers?
- Has a Sustainable Bioeconomy Certificate Program been established at the University of Arizona?

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Extension & Outreach

- How many people did we reach in Arizona and New Mexico during the first year?
- Are additional advisory committees needed and/or formed?
- Did we establish an on-station demonstration trial for guar/guayule?
- How is SBAR-related training creating awareness in the next generation of scientists on bioenergy research?
- What lessons and activities were the most effective and usable during the 4-H Biofuel summer camp?

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