

2021 CleanSEED Grant Planning Workshop

“Establishing a Tradition of Excellence”

Mission

Improve and sustain the sweetpotato industry

- By increasing awareness and adoption of technologies to increase profitability
- By addressing issues of labor and mechanization, and
- By research and Extension programs to reduce problems caused by viruses, insects, and pathogens, weeds, and other pests.

Identified Priority Goals of the Sweetpotato Stakeholders

- **Genetics and Clean Plant Adoption** - Utilize epigenetic genetic research and propagation strategies to increase efficiency, viability, affordability, and access to clean seed (Identify best practices for maintaining genetic quality, educate stakeholders about best practices, and promote adoption of best practices across the U.S. Sweetpotato Industry).
- **Uniform Terminology** - Increase the viability of the sweetpotato industry by improving awareness and increasing adoption of clean seed through uniform terminology, development of best management practices, Extension education, and marketing of new technology to the sweetpotato industry stakeholders.
- **Labor and Mechanization** - Address labor challenges with mechanization and technology improvements as well as improve labor effectiveness through workforce development (Train farm managers in best practices for epigenetics and incorporate English as a second language focused publications and graphics depicting best practices and uniform technology).
- **Reinfection Reduction, Virus Reduction, and Pest Management** - Improve the sustainability and profitability of the sweetpotato industry by developing integrated pest management strategies to minimize virus reinfection rates in the field.

Action Steps to Address Specialty Crop Research Initiative Priority Needs

<p>Need 1. Research in plant breeding, genetics, genomics, and other methods to improve crop characteristics, such as:</p> <ul style="list-style-type: none">c. climate adaptation, environmental responses and tolerancesd. nutrient management, including plant nutrient uptake efficiencye. pest and disease management, including resistance to pests and diseases resulting in reduced application management strategies	<p>Priority Goal 1. Genetics and clean plant adoption</p> <ul style="list-style-type: none">1. Identify best practices in producing clean plants and roots.2. Identify best management practices in maintaining genetics.3. Identify the economic costs and benefits of producing clean seed and adopting its use in sweetpotato production.4. Develop standard operating manual revealing best management practices.5. Use Extension resources and publications to educate growers and increase production and adoption.6. Evaluate impacts of adoption to industry using survey.
<p>Need 3. Efforts to improve production efficiency, handling and processing, productivity, competitiveness in trade, and profitability over the long term (including specialty crop policy and marketing)</p>	<p>Priority Goal 2. Uniform terminology</p> <ul style="list-style-type: none">1. Develop and define national terminology standards.2. Create a review panel of industry stakeholders and state based certifying agencies such as bureaus of plant industry, growers, packers, that will review the suggested standards and approve their use in regard to clarity and understandability.3. Submit new stakeholder approved standards to AOSCA for approval.4. Develop educational materials regarding generational and clean seed terminology and clean seed uses.5. Launch an Extension Outreach program increase knowledge of terminology, standards, benefits, and costs of clean seed.6. Increase clean seed knowledge, understanding, and use.7. Measure the rate of adoption of clean seed knowledge and how adoption has impacted production and revenues.

<p>Need 4. New innovations, data-driven predictive tools using Artificial Intelligence, and technology, including</p> <ul style="list-style-type: none"> a. mechanization and automation of labor-intensive tasks in production and processing d. improved monitoring systems for agricultural pests 	<p>Priority Goal 3. Labor and mechanization</p> <ol style="list-style-type: none"> 1. Identify processes within commercial operations that can be mechanized to reduce labor and be integrated into an automated system. 2. Create an agricultural engineering team of scientists and industry partners to identify equipment used in other crop's production that could be modified for the sweetpotato industry. 3. Develop mechanization equipment and strategies to Improve production efficiency, handling, and processing, productivity, competitiveness in trade, and profitability over the long term. 4. Create a team of industry, scientists, producers, and Extension to test new strategies and education producers about results.
<p>Need 1. Research in plant breeding, genetics, genomics, and other methods to improve crop characteristics, such as:</p> <ul style="list-style-type: none"> e. pest and disease management, including resistance to pests and diseases resulting in reduced application management strategies 	<p>Priority Goal 4. Reinfection reduction, virus reduction, and pest management</p> <ol style="list-style-type: none"> 1. Identify the most important insects and weeds that are critical to virus protection. 2. Monitor and determine reinfection rates in grower fields and sampling methods. 3. Examine practices to control these pests.

*Each of these goals addresses a sustainable, economics, and profitability perspective which was the overall priority need from producers. Addressing the economics perspective is vital due the contribution of the sweetpotato industry to the viability of rural community. **The needs assessment survey indicated that smaller growers are not adopting clean seed due to financial barriers and access to clean seed. Small farms cannot afford to justify the input costs.***

