



AGRICULTURE AND NATURE RESOURCES-ANR
PRESENTED BY BRIAN K. PHILLIPS, PHD.

Southern University
Cooperative Extension Program

Utilizing New and Emerging technologies by Small, Disadvantaged, Minority Farmers and Landowners to Increase Production Yields and Save Time.





SOUTHERN UNIVERSITY COOPERATIVE EXTENSION PROGRAM AGRICULTURE AND NATURAL RESOURCE IMPACT STATEMENTS

Agriculture and Natural Resource unit is in the business of providing technical assistance to small family farmers and landowners in parishes around the state of Louisiana. We believe that our clientele are hard workers and have been producing food for the Ag industry and their families for decades. We are here to encourage and to help our clientele to visualize their plans for the future. In 2019 – 2021, we facilitated instruction by providing 200 educational programs totaling 500 hours of instruction which directly reached 1000 adults through our certification program initiatives in small business development, sustainable urban agriculture, food and farm safety, USDA informational meetings, field days, Louisiana Small Farmer Conferences and the Annual Livestock Shows. The snapshots below show our engagement with the clientele and partners

The ANR team worked with USDA and state and federal representatives (Cedric Richmond, Troy Carter, and Dewayne Goldmon) to inform over 2500 residents of Louisiana about governmental programs. This information was broadcast over WAFB, TWLA and FOX but was also covered in the Advocate newspaper. This type of coverage reached over 25,000 Louisiana citizens.

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When COVID 19 shut down farm site visits. The ANR team went to virtual programming. The team have graduated over 750 graduates, zoom being viewed by 3500 followers, Facebook has 1500 viewers, YouTube has 1200 followers and twitter 500 viewers.

The ANR Team collaboration with 4 community base organization and 1 academic program which assistance us with providing technical assistance. These groups recruited over 650 participants to take part in our workshops, training and to join our database. The SULC will be providing legal assessments to 100 producers to develop Wills while 50 producers soon to be processed.

Note the partners are as follows: Morehouse Black Farmers and Landowners Association, Community Cattle Enterprise, St. Helena Cattle Company, Louisiana Growers and Ranchers, and the Southern University Law School.

SMALL FARM INSTITUTE

Cultivating Small Farm Dreams

About Us

Overview:

The Southern University Agricultural Research and Extension Center's (SUAREC) Small Farm Institute (SFI) is housed within the Cooperative Extension Program's Agriculture and Natural Resource (ANR) Unit. The Cooperative Extension Program operates in 34 parishes across the state of Louisiana. These parishes are comprised of small limited-resource and underserved farmers and landowners. SFI's goal is to educate, provide technical assistance and outreach while fostering sustainability among Louisiana's small farm communities.

Mission Statement:

The Small Farmer Institute's mission is to serve new and beginning, underserved, women, and veteran farmers in Louisiana; through outreach, education, demonstrations, and technical innovations to manage risk and make sound decisions for a successful agricultural business.



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PARTNERSHIPS/COLLABORATION AND SUPPORTERS (24)



Morehouse Black Farmers and Landowners Association

Community Cattle Enterprise

St. Helena Cattle Company LLC.

Louisiana Grower and Rancher Association

Tri Parish Community Farmer Association

Scotlandville Garden Guild

LSU Ag Center

Agro Men

SARE

National Black Growers Association

Louisiana Department of Agriculture and Forestry



The ANR staff worked with these agencies and community base organization-cbo to bring technical assistance to our small farm clientele. ANR have reached over 700 family farms this year virtually, farm visits, workshop and training.

IBM – Liquid Prep	USDA (NIFA/OPPE)	Gallilee Cattle Company
New Orleans Black Chambers of Commerce	Kentwood Cooperative	Purnia
John Deere	Conteva Agriscience	BASF
Syngenta	Federal Land Bank	Ross Irrigation
Spellers Oil	Farm Supply Center	Delta Ridge Implement

PROGRAMS/SPECIAL INITIATES/FIELD DAYS

Enhancing Capacity of Small Farms and Businesses

Small Farm Academy

Wisteria Alliance-Women in Agriculture Programs

Annual Livestock Show

Annual Fall Garden Workshop

Annual Spring Garden Workshop

Louisiana Small Farmer Conference



ANR VIRTUAL PROGRAMING

Commercial Cut Flower Production

Fall Garden Workshop

Spring Garden Workshop

USDA Small Farm Informational SU/Alcorn Uni

USDA Debt Relief Update

USDA Debt Relief Roll Out Plan

Connecting Small Farmer with Retail Outlets

ECP Graduations Ceremonies

Sustainable Urban Agriculture

Food and Farm Safety

Small Business Development

USDA-NRCS Informational Meeting

Community Cattle Enterprise Small Farmer Videos



AGRICULTURE AND NATURAL RESOURCES IMPACT STATISTICS



GOVERNMENT AWARDS

- Total Awarded
- \$2.3 Million

TRAINING

- 12 Workshops
- 600 Attendees

LOCATION SITES

- 34 Parishes

ANR AWARDS to CBO/Partners

- Community Cattle \$10,000
- Morehouse Black Farmers & Landowners \$45,000
- St. Helena Cattle Co \$30,000
- SU Law Center \$60,000

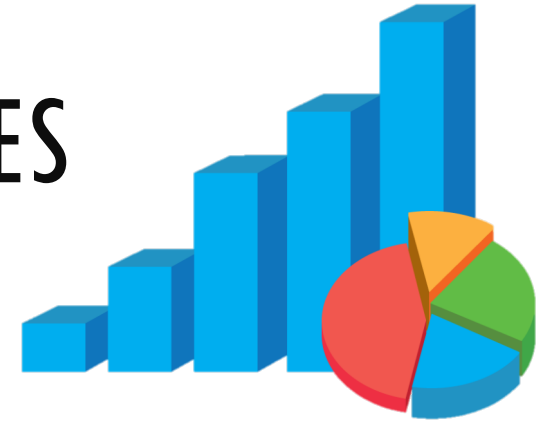
Database

- 650 Small Family Farms
- 250 Women Farmers

Funders

- NIFA
- OPPE
- OCD
- SARE

AGRICULTURE AND NATURAL RESOURCES IMPACT STATISTICS



Certifications Awarded(Informal)
<ul style="list-style-type: none">• 2,550 Graduates
YouTube
<ul style="list-style-type: none">• 1 200 Followers

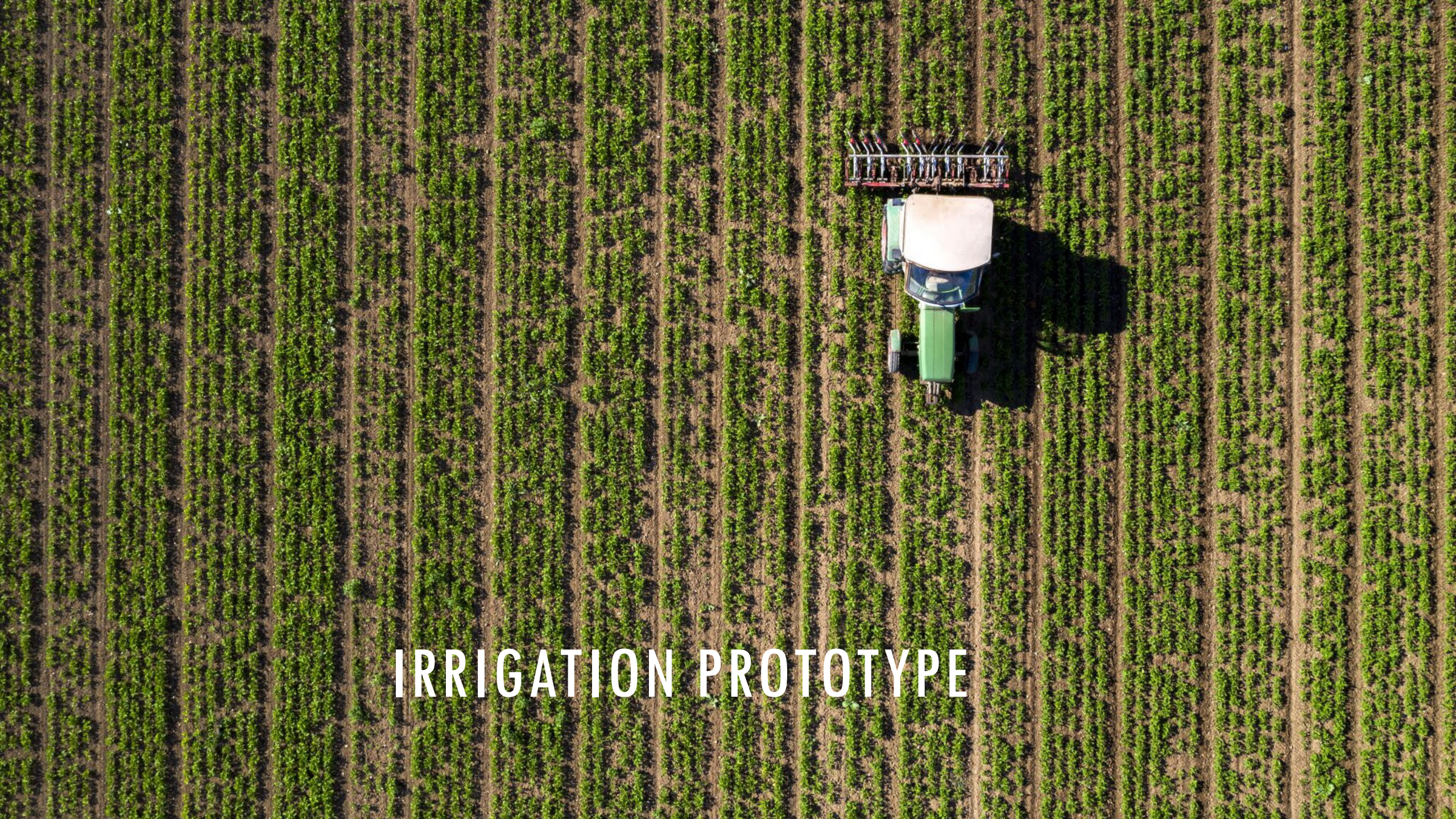
Online Present
<ul style="list-style-type: none">• 3500 Views
Twitter
<ul style="list-style-type: none">• 500 Followers

Facebook
<ul style="list-style-type: none">• 1 500 Followers
Hard Copy Distribution
<ul style="list-style-type: none">• 6,500 Flyers

NEW TECHNOLOGY ADVANCEMENT FOR SMALL FARMERS

The Southern University Agricultural Extension Center and the Southern University Baton Rouge (SUBR) Mechanical Engineering Department have embarked on a new initiative to create new and needed technologies that will enhance the production of small farms in Louisiana. This partnership is a perfect marriage of outreach and design to help the disadvantaged farmer achieve increased profitability efficiency, greater yields, and better manage resources on their farms. There is a need to create products that will increase productivity for the small, disadvantaged farmer. Innovations have become more important in modern agriculture, especially after COVID and the world supply of goods such as agricultural products have suffered from supply chain issues worldwide. Along with the world supply chain issues, the population is expected to increase to 7.949 billion by 2030, and the small farmer's success is vital to feeding them (Population Division, 2015). This initiative will seek out gaps in farming operations and attempt to solve these ills through technology.





IRRIGATION PROTOTYPE

TYPES OF IRRIGATION

Sprinkler Irrigation

Water is delivered similarly to natural rainfall
High Cost, Distribution wind effects water supply, Water evaporation at high temperatures, Pipe clogging

Drip Irrigation

Water drips slowly to the root-zone of crops
High cost, May need court approval, Tube clogging, Requires more maintenance

Surface Irrigation

Water is distributed across the land by gravity.
Lower cost rate, More water distribution



IRRIGATION PROCESS

Use a furrower to dig a trench

Mount poly-pipe on an unspooling bracket so it is ready to roll out

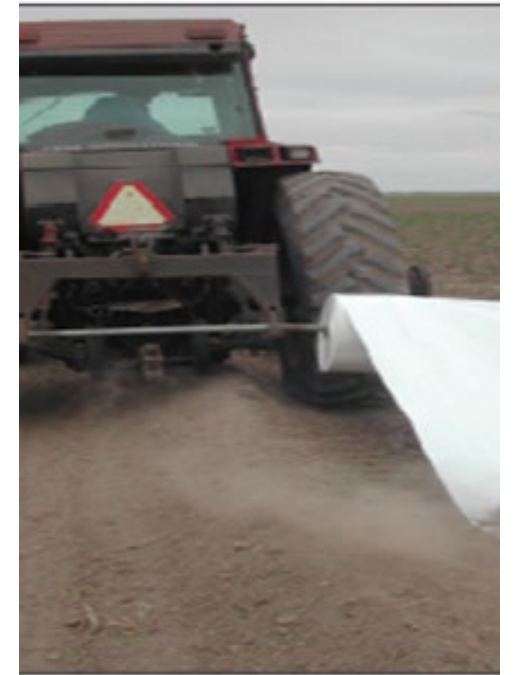
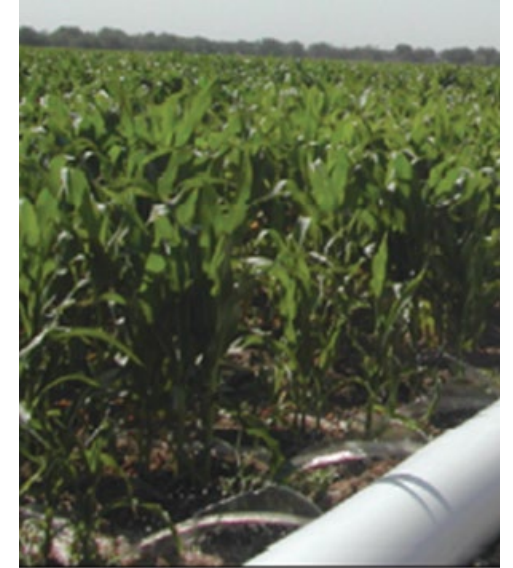
Stretch the poly-pipe into its trench while someone holds onto it at the supply-pipe end.

Use shovel to place dirt on top of the poly-pipe to prevent it from moving in the wind.

Use rubber straps to connect the poly-pipe tightly to supply-pipe fittings

Filling can now begin by open valves slowly

Once the poly-pipe is completely full, punch holes in front of each row to be irrigated with the hole puncher



CURRENT COSTS FOR IRRIGATION PROCESS

Material	Material Cost	Overall Cost Per Year
Lay Flat Poly-Pipe	\$275 per crop row	$\$275 \times (15 \text{ rows}) = \$4,125$
Poly-pipe Roller Big-Iron	\$3,461	-
Utility Tractor	\$9,000	-



Theoretical annual cost of poly-pipe material on a 1,000-acre land



Estimated cost of irrigation equipment



Our plans to optimize the irrigation process will:

- Reduce labor time
- Reduce costs of Poly-pipe
- Reduce the amount of equipment needed during layout process

REELING SYSTEM REDESIGN

- **Digging Attachment** – plow through the dirt and have shift it slightly to form a channel.
- **Anchoring Attachment** – using the motion of the pipe being unraveled for a simple gear & crank system to shift the dirt on the side on top of the pipe.
- **Puncturing Attachment** – while being unraveled, have the water or air would flow through the pipe to lift the top of the pipe to be punctured.

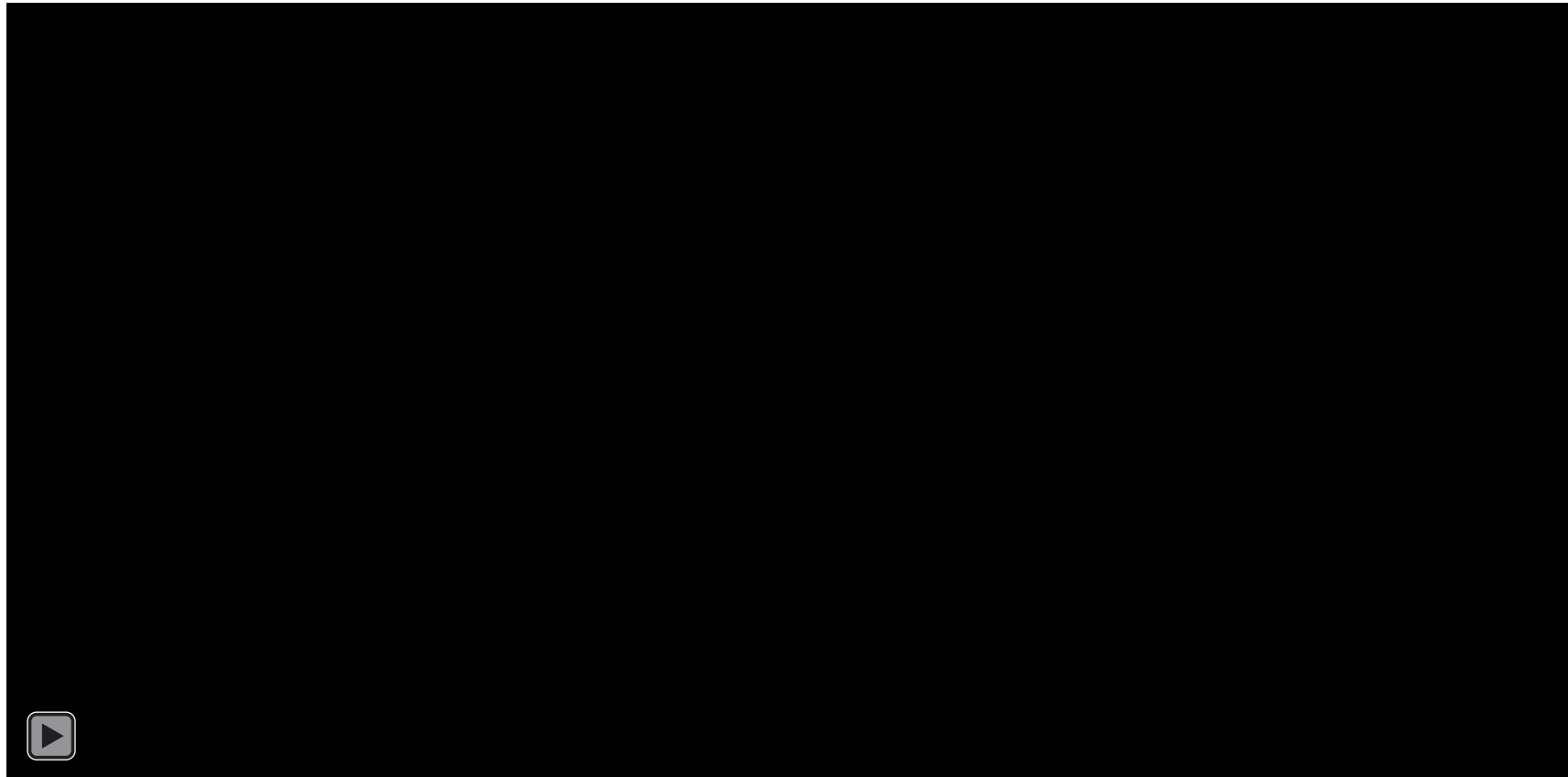




FINAL RESULTS OF THE PROJECT

Currently the prototype is in the testing phase!!!

MENTORING THE FUTURE OF AGRICULTURAL SCIENTIST IN LOUISIANA THRU AGRI-TECH



CONTACT INFORMATION....

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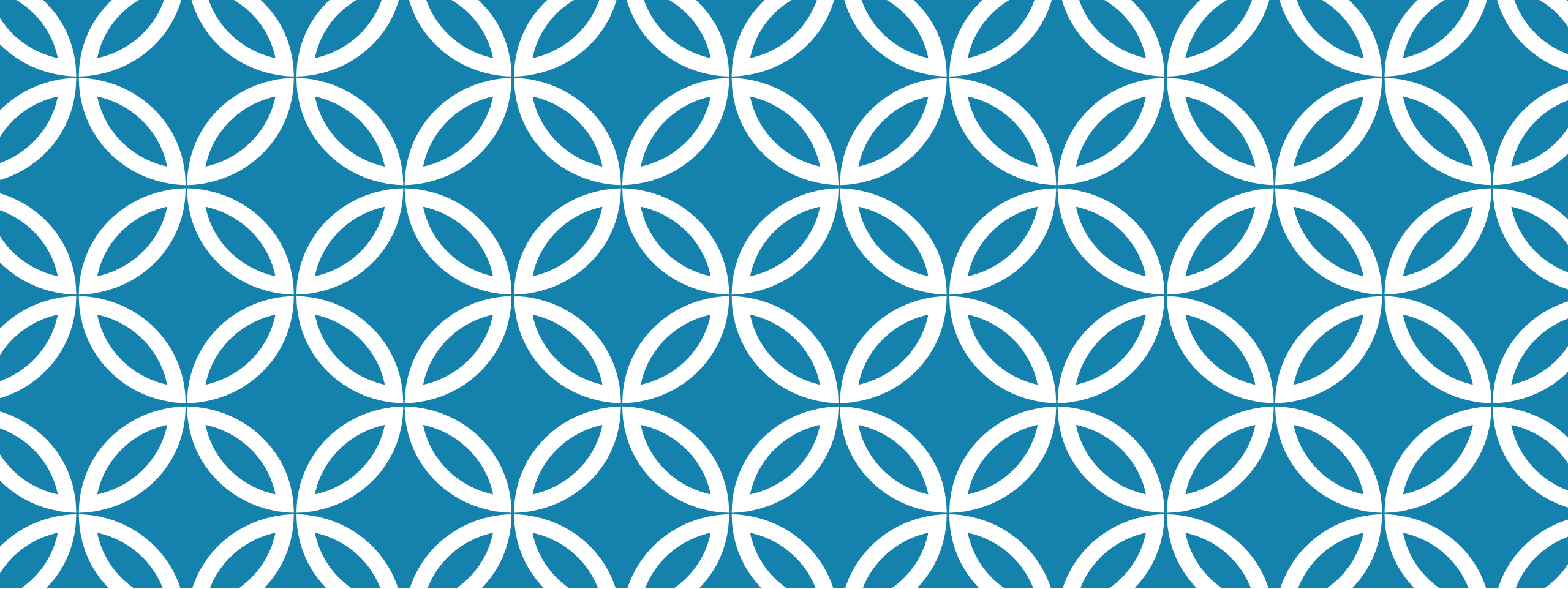
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QUESTIONS ! |