

CLEMSON UNIVERSITY ORGANIC CERTIFICATION PROGRAM

SC Farmer Resource Rodeo February 7, 2019

Stephen Nix
Organic Certification Program Coordinator
Department of Plant Industry

"Regulation Through Education"







Certified Organic Operation in SC

- 101 certified operations
 - 60 Crops, 43 Handlers, 6
 Livestock
- Clemson University certifies 68 operations
 - 49 Crops, 24 Handlers, 4
 Livestock









Certified Organic Operation in SC

- Our clients include:
 - Produce growers
 - Ranchers
 - Greenhouses & Nurseries
 - Millers & Bakers
 - Breweries & Distilleries
 - Coffee roasters
 - Food processors
 - Cosmetic manufacturers

- And produce:
 - Row crops
 - Diversified vegetables
 - Seed
 - Sprouts
 - Hay and forage
 - Cattle & Poultry
 - Lamb & Swine
 - Rabbits & Quail
 - Eggs







Organic Certification Program

- Initial certification is \$750 per scope
 - Includes all activities—no additional travel fees or expenses
 - Recertification each year is \$200 plus 0.5% of gross organic sales previous year
 - Fees are capped at \$7,500 per year (\$1,500,000 in gross organic sales)
- National Organic Certification Cost Share Program
 - Renewed in the Agricultural Improvement Act of 2018 ("Farm Bill")
 - Reimburses operation 75% of annual certification costs up to \$750
 - Contact local FSA offices







Organic Certification Process

- Contact OCP to acquire necessary forms
- Submit application materials: Organic System Plan, supporting documents, fee
- OCP will review application and if operation appears to comply with regulations, schedule an inspection
- Certification may be granted provided no significant Issues of Concern or Noncompliances
- Certification generally takes 45-60 days







Contact Information

Organic Certification Program
511 Westinghouse Road
Pendleton, SC 29670

www.clemson.edu/organic

Program Coordinator Stephen Nix

organic@clemson.edu 864.884.7054 Administrative Coordinator Sandy Verderame

sandrav@clemson.edu 864.646.2131



Food2Market South Carolina Food Safety & Regulation Education for Entrepreneurs

Adair Hoover Food Safety Agent









The Food2Market Program exists to provide guidance through 9022 of the Safety and regulation requirements for producing and selling food-based products in South Carolina.

Our goal is to help make those aspects of the start-up process as smooth and easy as possible.









Food2Market SERVICES

Food entrepreneur assistance:

- DIRECT CONTACT
- PRODUCT TESTING
- NUTRTION FACTS SHEETS
- WORKSHOPS
- TRAININGS







Direct Communication

Food entrepreneur assistance:

- Deliver food safety education related to producing safe food products for sale. Available through:
 - Email
 - Phone







Food Regulatory Information

Direct entrepreneurs to the correct regulatory







South Carolina Department of Health and Environmental Control









Product Testing

Food entrepreneur assistance:

Product testing with faculty in the Clemson Food, Nutrition and Packaging Science Department

Primarily for shelfstable foods

- Canned
- Baked
- Dried







Product Testing

Food entrepreneur assistance:

Lab Services:

- pH
- Water activity (A_w)
- Shelf life testing

Classifications may include:

- Acid
- Acidified
- Low acid
- TCS food
- Non-TCS food





Provides additional information to produce product safely







Food entrepre Neutral signan Feacts Pa

Nutrition fact sheets

Vitamin A 4%

Calcium 15%



Vitamin C 2%

Calories pergram: Fat 9 . Carbolydone 4 . Frotein 4

Iron 4%

Amount Per Se	rving		
Calories 20	Ca	lories fro	m Fat
		% Da	aily Value
Total Fat 0			0%
a urated	Fat 0g 0g		0%
Cholesterol	0mg		0%
Sodium 140)mg		6%
Total Carbo	hydrate	5g	2%
Dietary Fi	ber 0g		0%
Sugars 4g			
Protein 0g			
Vitamin A 09	% · '	Vitamin (0%
Calcium 0%	•	Iron 0%	
*Percent Daily V diet. Your daily v depending on yo	alues may b	e higher or	
Total Fat	Less than	65g	80g
Saturated Fat Cholesterol	Less than Less than	20g 300mg	25g 300mg
Sodium	Less than	2.400mg	2.400m
Total Carbohydr	ate	300g	375g

INGREDIENTS: Vinegar, Sugar, Worcestershire Sauce (Vinegar, Molasses, Water, Sugar, Onions, Anchovies, Salt, Garlic, Cloves, Tamarind Concentrate, Natural Flavorings and Chili Pepper Extract), Ketchup, Mustard, Seasoning salt, Black Pepper, Spices, Artificial Smoke Flavor.



CONTAINS ANCHOVIES



Food Safety Workshop

Food entrepreneur assistance:

- 8 week online study and one day in-person meeting
- Comprehensive training for entrepreneurs who wish to learn more about producing safe food products for sale in the marketplace.

Topics include:

- State and Federal regulations of food products
- What is an approved facility?
- Food safety planning
- Product testing
- Nutrition labeling
- Food processing 101
- Food packaging
- Documents and record keeping

Traceability and recall



CERTIFIE



Industry Trainings

Food entrepreneur assistance:

Team assists in delivering industry trainings

- HACCP Certification
 - Meat and Poultry
 - Seafood
- Better Process Control School
- Preventative Controls for Human Foods
 - Preventative Controls for Animal Feed





CLEMSON DEPARTMENT OF PLANT IN DISTRIGUIDATION OF PLANT IN

Type of Product Regulatory Agency Retail Prepare and serve product onsite (restaurant) SC DHEC Food Safety Division Prepare and sell product directly to the public (retail) only SC DHEC Food Safety Division *SCDA or SC Meat and Poultry Inspection Dept. may be involved depending on the product type Wholesale Contains >3% raw or >2% cooked beef, pork, chicken or lamb SC Meat and Poultry Inspection Department Cheese, grade A dairy, soft drinks or water products SC DHEC Dairy Division Seafood products SC Department of Agriculture Contains >7% alcohol Alcohol, Tobacco, Firearms Tax and Trade Bureau All other food products SC Department of Agriculture			,
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cooked beef, pork, chicken or lamb Cheese, grade A dairy, soft drinks or water products Seafood products Sc DHEC Dairy Division Sc Department of Agriculture Contains >7% alcohol Alcohol, Tobacco, Firearms Tax and Trade Bureau		directly to the public (retail)	*SCDA or SC Meat and Poultry Inspection Dept. may be involved depending on the
drinks or water products Seafood products SC Department of Agriculture Contains >7% alcohol Alcohol, Tobacco, Firearms Tax and Trade Bureau	Wholesale	cooked beef, pork, chicken	SC Meat and Poultry Inspection Department
Contains >7% alcohol Alcohol, Tobacco, Firearms Tax and Trade Bureau			SC DHEC Dairy Division
Bureau		Seafood products	SC Department of Agriculture
All other food products SC Department of Agriculture		Contains >7% alcohol	·
		All other food products	SC Department of Agriculture



CURRENT FOOD TRENDS

- Elderberry Syrup
- Black Garlic
- Fermented Vegetables
- Wild Yeast
- Kombucha and SCOBY
- Cold Brew Coffee
- Barbecue Sauce
- Breads and Cakes
- Gluten Free Foods



QUESTIONS?







The Clemson University Sustainable Agriculture Program offers sustainable agriculture training and outreach services with support from Clemson Extension and the USDA Sustainable Agriculture Research and Education programs (SARE).





CLENSON RAMPARTINGS DEPARTMENT OF PLANT INDUSTRY RAMPARTMENT OF PLANT INDUSTRY RAMPARTMENT























Program Staff:

Dr. Geoff Zehnder, Professor of Entomology, SARE State Program Coordinator **Kelly Flynn**, SARE Model State Program Assistant







PRIORITY AREAS FOR TRAINING ARE DETERMINED BY STAKEHOLDERS THROUGH ANNUAL PUBLIC OPEN FORUM AND ADVISORY COMMITTEE MEETINGS.

THE ADVISORY COMMITTEE IS COMPRISED OF FARMERS, 1862 AND 1890 EXTENSION PERSONNEL, GOVERNMENTAL AGENCY AND NGO REPRESENTATIVES, AND OTHERS WITH AN INTEREST IN SUSTAINABLE AGRICULTURE DEVELOPMENT.

MINUTES FROM PAST MEETINGS CAN BE FOUND ON THE SUSTAINABLE AG PROGRAM WEBSITE.







EXAMPLES OF PAST EVENTS







Cover Cropping for Weed Management



Mark Schonbeck



Buz Kloot



Nishanth Tharayil



Dave Robb





Oil Seed Crops & On-farm Processing of Edible and Non-edible Oils (SARE Energy Training)

- David Thornton (CU)
- Matt Rudolf (Virgin Oils)
- Kim Baker (CU)









ORGANIC FRUIT AND NUT TREE PRODUCTION



Curt Rom



Juan Melgar



Cory Tanner



Mark Arena



Panel Discussion







Irrigation 101: Concepts and Tools



CERTIFIED





Plans for 2019! Grant funded trainings...

Pest Management

- Conservation Biocontrol Practices (12 votes)
- Comprehensive Weed Management (9 votes)
- Cover Cropping/No Till for Pest management (7 votes)
- Invasive Species (plants & animals) (4 votes)

Soil Health

- Alternative Soil Testing Options & Application of Organic Soil Amendments (12 votes)
- Soil Microbiology and Effective Microorganisms (12 votes)
- Economic and Social Impacts of Soil Health Practices (11 votes)

Other

Crop Production Planning; Succession Planting (10 votes)
 Integrating Grazing Animals into Production Systems (6 votes)







PLEASE CONTACT US!!





Website:

http://www.clemson.edu/public/sustainableag

Geoff Zehnder <u>zehnder@clemson.edu</u> Kelly Flynn <u>kgilker@clemson.edu</u>

Facebook:

https://www.facebook.com/clemsonsustainablea g/



More info on the table!!!!





CLEMSON

AGRICULTURAL SERVICE LABORATORY

Who we are

- Analytical laboratory, part of Clemson's Public Service and Agriculture programs
- Staff: 9-12 staff members- 2 scientists, 2 chemists, 2 other lab staff, 3 office staff, and 1-3 student workers

What we do

- Provide analytical testing and information for agricultural samples
- Individual clients, commercial dealers, crop consultants, Cooperative Extension personnel, and researchers may submit samples to the laboratory.









AGRICULTURAL SERVICE LABORATORY

Soil-testing at Clemson

By 1938: The South's first public soil-testing program was established at Clemson University testing 1,983 soil samples.

Today: We test ~50,000 samples/year from all over the state.









<u>CLEMSON</u>

AGRICULTURAL SERVICE LABORATORY

Why soil test?



Collect soil sample



Analyzed on instruments for nutrients and pH



Receive soil report

Make decisions for best crop yield

CERTIFIED

You will receive recommendations about lime for pH adjustment and nutrient requirements based on your specific crop(s).





LABORATORY

What else do we test?

- Feed/forage- to improve feed and forage quality and strengthen feeding programs
- Plant tissue- for fertilizer application guide, or to diagnose nutrient problems







AGRICULTURAL SERVICE LABORATORY

What else do we test?

3. Manure/waste/compost-to determine the nutrient content as initial step in utilizing the nutrients for crop production

4. Irrigation water- test for salinity if suspected, or to check the plant nutrient content of water









AGRICULTURAL SERVICE LABORATORY

Lab Certifications

- ALP- soil, water, and plant
- AAFCO- feed, pet food
- MN DA- manure













CLEMSON

AGRICULTURAL SERVICE LABORATORY

To send us samples

- Drop off at your local County Cooperative Extension office
- Mail directly to us

Address: 171 Old Cherry Rd.

Clemson, SC 29634

Email: agsrvlb@clemson.edu

Phone: 864-656-2068

Website:

https://www.clemson.edu/agsrvlb

Facebook:

https://www.facebook.com/agsrvl





CLEIVE EXTENSION







PROGRAM AREAS

4-H & Youth Development

4H Youth Development programs provide educational information and resources that empower youth to become healthy, productive, and contributing members of society.

Agribusiness

Agribusiness programs provide educational information and technical assistance to communities and businesses to build a prosperous and sustainable future by leveraging the capacity of existing, physical and natural resources.

Agriculture | Agricultural Education | Agronomy | Horticulture Livestock & Forages

Agriculture programs provide educational information and resources on production practices that enable producers to improve their economic







Program Areas

Food, Nutrition and Health | Food Systems and Safety | Rural Health

Food, Nutrition and Health programs provide educational information and resources to businesses, consumers and communities that ensures post-harvest food safety, food quality, human nutrition and economic development opportunities.

Natural Resources | Forestry & Wildlife Resources | Water Resources

Natural Resources programs provide educational information and resources to improve the quality and economic potential of land, water, wildlife and other natural resources.



Clemson Extension agents are located in all 46 counties and at the university's six Research and Education Centers.







https://www.clemson.edu/extension/index.html



https://hgic.clemson.edu/







Will Culler CLEMSON UNIVERSITY

Lexington County Extension Coordinator Regional Agribusiness Agent Lexington, SC 803.206.9795

wculler@Clemson.edu





South Carolina State University 1890 research and Extension

Small Farm Assistance and Outreach Program (Orangeburg Cluster)

Orangeburg, Calhoun, Dorchester and Bamberg Counties

South Carolina Farmer Resource Rodeo
Mark Nettles
SCSU 1890 Extension Agent, Ag.
The River Center at Saluda Shoals Park
Columbia, SC

Four Program Areas

Sustainable Agriculture

Commercial Vegetable Production

Sustainable Animal Production

Risk Management





Sustainable Agriculture

MATWORK!!!



Bowman Town Hall 131 Popular Street Bowman SC, August 9, 2018









Commercial Vegetable Production





USDA



2018 Fall Squash Trial, Orangeburg County on Small Farm, A joint effort with local Clemson Agent.





Production



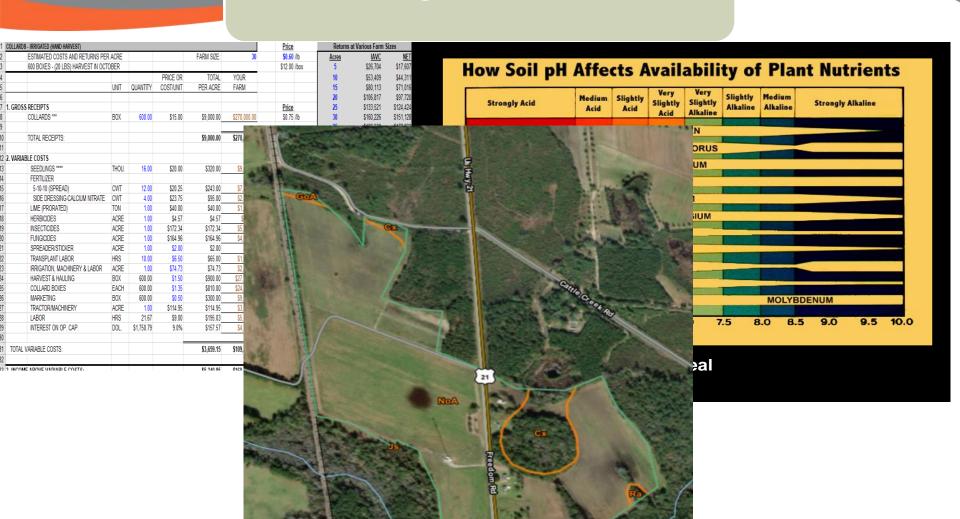








Risk Management









EXTENSION- "DON'T LISTEN TO EXTENSION OR THEY WILL BREAK YOU."

At our core, we in Extension provide

RESEARCH-BASED, NON-BLASED INFORMATION.

From there, the growers decide how to take it to the field, and find success.

Bob Kemerait, Georgia Extension Plant Pathologist, From the December 19, 2018 Southeast Farm Press "Tailgate Talk"







SC State University









Sustainable Agriculture

Sustainable Agriculture at Greenville Technical College

 Agriculture is housed in the Culinary Institute of the Carolinas.

 Interaction between chefs and farmers deepens the education.

 Culinary and agriculture students are cross-pollinating.



Why offer a certificate program in sustainable agriculture?

- Little training for new farmers at 4-year institutions, in traditional degree programs.
- Continued growth in demand for local products, which already has outstripped supply.
- We saw a need for agribusiness training in general.



Components of Microfarm

- ¾ acre of tiered growing areas
- Additional space for herb garden
- Beehives





Farm contributions to ecological health of our campus:

- Managing cover crops to improve the soil.
- Using low-till system.
- Providing beneficial insect habitat.
- Using drip irrigation.







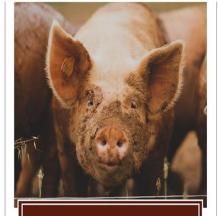
Supporting you to GET GROWING



Home Growers

We support home-growers to build the confidence, skill, & experience to "Get Growing"

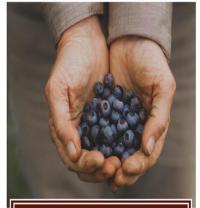
- · One-on-one Consulting
- · Hands-on Education
- · Inspiration
- · Supportive Connections



Farmers

We offer a path to success for emerging & expanding farmers by providing,

- · Training & Assistance
- · Peer-to-Peer Networks
- · Skill Sharing
- · Mentoring for Success



Organic Living

We advocate sustainable living approaches & eating organically through,

- · Celebrating Food & Health
- · Workshops & Conferences
- · Community Engagement
- · Regional Partnerships



The Farming Journey

Step 1: EMERGING - Farm Learning Opportunities & Farm Dreams

> Field days/Skill Sessions/Farm Tour Conferences/Workshops Practice growing where you live.

7

Step 3: START-UP - Farm Beginnings & Farm Pathways

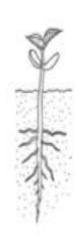
Year-long training program
Whole Farm & enterprise planning
Connection to a farmer network
Growing season learning plan
On-Farm Field days & workshops



Step 2: IN-TRAINING - On-farm Training Activities
Work Exchanges/Internships/Farm Employment
Field days/Skill Sessions/Farm Tours
Conferences/Workshops



Step 4: SEASONED - Technical Assistance
Individualized syllabus
Production, marketing and financing assistance
Address land access/Equity building opportunities
Mentorship with an experienced farmer



OGS Farmer Programs













Spring Conference



March 8–10, 2019 Mars Hill University Community Food
Cooking
Earth Skills
Beginning Farmers
Experienced
Farmers
Gardening
Herbs
Homesteading

Livestock

Mushrooms
Permaculture
Pollinators
Poultry
Soils
Sustainable
Forestry
Sustainable
Living
Thinking Big

Keep In Touch!



Cameron Farlow

Farmer Programs Director

cameron@organicgrowersschool.org

www.organicgrowersschool.org

South Carolina State Beekeepers Association

Rosalind Severt --- Midlands Regional Representative

Glenn Severt --- President Wateree Beekeepers Association

Danny Cannon --- President Elect of the South Carolina State Beekeepers Association

Mission

Our mission includes public education as we strive to provide individuals, and public and private organizations with factual and up to date information about the honey bee, beekeeping, and its importance to our food supply.

We have 24 local beekeeping associations in South Carolina with members who are ready willing and able to talk to you about beekeeping in our state and if you ask, might be willing to tell you where you can get good, wholesome, local honey.



Why should the SCBA matter to YOU?

"If you kill a beneficial insect, you inherit its job."

Never spray plants (including weeds) with contact insecticides when blooms or pollinators are present. Instead, select friendlier practices and products, like handpicking and using horticultural oils and insecticidal soaps. Spray when plants are not in bloom and when pollinators are not active.

- Apples
- Plums

Peaches

- Nectarines
- Rose Hips
- Pomegranites
- •Pears
- Black and Red Currants
- Alfalfa
- •Okra
- Strawberries
- Onions
- Prickly Pear
- Apricots
- Lima Beans
- Kidney Beans
- •Adzuki Beans
- · Green/Beans
- Gustard Apples
- Cherries
- •Walnut
- Cotton
- •Flax
- Sunflower Oil
- Buckwheat
- •Figs
- •Fennel



- Without insect pollination, many fruits and vegetables will not produce quality fruit.
- With just a few bees, you may get inadequate pollination, since most flowers need more than one bee visit.
- As an example --- Unless a cucumber flower gets at least **nine** visits, its fruit will either fall off or become misshapen.

South Carolina's LOCAL Associations . . . here for you . . .



- The best way to get to know other beekeepers in your area, and to increase your knowledge about beekeeping, is to get involved in a local beekeeper association. Local associations sponsor monthly meeting, open-hive session, educational events, and guest speakers.
- Each Association meets monthly and serves their region. The South Carolina Beekeepers Association is governed by a Board of Directors, and meet regularly to make decisions that guide SCBA forward in beekeeping and honey bee education.

Aiken County Beekeepers



2724 Whiskey Road
Aiken, 29803
803-645-6725
www.aikenbeekeepers.org
Robert Abshire, President

Meets Fourth Tuesday Monthly

Lancaster Beekeepers

Association 1982 Evans Dr Lancaster, SC 2972 803-577-7871

www.lancastercouners.com

Dale Starnes --- President

Meets the First Thursday of every month



(Lexington, Richland, Calhoun Counties)

6505 Saint Andrews Road
Columbia, SC 29212
803-360-7978
www.scmidstatebeekeepers.org
Luther Lown --- President

First Tuesday --- monthly

Ridge Beekeepers Association (Edgefield County)



Meeting Monthly at the Edgefield County Chamber of Con 416 Calhoun Street Johnston, SC

President --- Sheryl Brousseau

ridgebeekeepersbuzz@gmail.com

(Calendars at the back table, With contact information)



Wateree Beekeepers Association

Summet Computings ate 803-900-4891

www.watereebeekeepers.com
Glenn Severt --- President

Meets the First Thursday of every

(Flyers at the back table with contact information)

What you can do

- Join the State Association as well as a local Association
- Anyone with an interest in bees and pollinators in South Carolina is encouraged to join the South Carolina Beekeepers Association.
- SCBA publishes a monthly newsletter, provides continuing education through the Certified Beekeeper Programs and seminars, offers educational programs throughout the state, and supports the important work of local chapters.
- The level of experience of our members does not matter. Every beekeeper started somewhere, and we believe that strong beekeeper mentoring is critical in supporting the future of our bees.
- A one year membership to the association is only \$10. We encourage members to also be members of a local association near you. As you become a member of a local bee club, you can pay your state dues at the local level.