



Plan. Produce. Profit.

Workshops in Arkansas

Food Manufacturing in Arkansas

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**Arkansas Food Innovation Center
UA System Division of Agriculture**



What is the Arkansas Food Innovation Center?

Arkansas Food Innovation Center (AFIC)

- Located at the UA System Food Science Department
- Created to assist local food industries in Arkansas
 - Encourages agribusiness through the establishment of new food manufacturing companies
 - Provides a certified/inspected facility for product development and processing products for commercial markets
 - Uses a fee-based service center to assist clients



ARKANSAS FOOD
INNOVATION CENTER

Arkansas Food Innovation Center
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AFIC Clients & Products

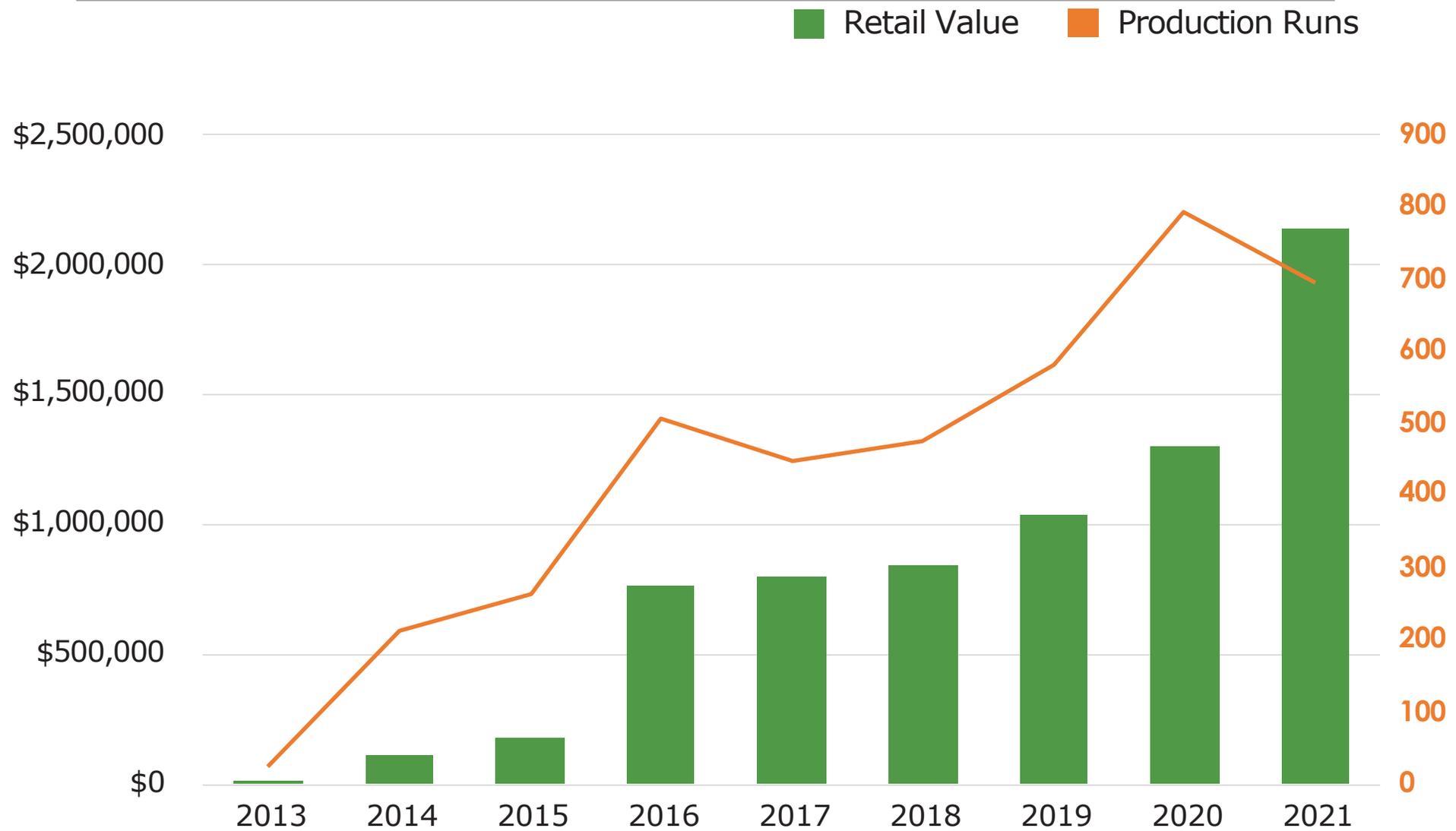
Assisted hundreds of clients with food product development at various stages



Examples of AFIC Products

- Tomato Sauce
- Salsa
- Dehydrated mushrooms, herbs and fruits
- Cider and juices
- Hot sauces
- Apple Sauce
- Apple Butter
- Simple Syrups
- Fermented Cabbage
- Fermented Jalapeno Slices
- Kombucha
- Pesto
- Hummus
- Salad Dressings
- Baked Cookies
- Barbecue sauce

AFIC Production





**How do you
get started with a
food processing
business?**

Market Research

- **Evaluate market demand and profitability**
 - Visit local markets and interview retail market managers
 - Research trends in the packaged food industry: www.specialtyfood.com
 - Compare competitor prices
- **Determine your target consumer and how to market to them**
- **Gather information on costs**
 - Ingredients, Packaging, Shipping



Business Planning

- **Business Formation**

- Business license, permits, incorporation, EIN application, bank account, tax requirements, etc.

- **Goal Setting**

- **Initial Capital Investment**

Contact your local Arkansas Small Business & Technology Development Office for free services:

www.asbtdc.org



Initial Costs for AFIC Clients

Food liability insurance	\$300
Nutrition label	\$30
Jar label design	\$200
State manufacturing permit	\$85
COGS (rent, labor, labels, jars, raw materials)	\$965
Total	\$1580



**How do you
get started as an
AFIC client?**

Schedule Meeting with Facility Manager

- Review equipment to manufacture your product safely
- Discuss packaging and preservation methods
- Determine allergens and other considerations
- Start a binder to retain all mandatory documentation

Prepare a Test Batch

Prior to test batch, submit recipe and process

Work with facility to establish and evaluate:

- Safe processes
- Food preservation method(s)
- Testing, quality control

Record initial ingredient list by weight for product label and nutrition facts panel

Product Scale Up

Work with facility manager to determine:

- Equipment choices
- Recipe changes
- Product quality and taste

Revise ingredient list as needed



**How do you
produce food
products at AFIC?**

Good Manufacturing Practices (GMPs)

- GMPs as defined by the Food and Drug Administration are the minimum sanitary and processing requirements for food companies and processing facilities.

(<http://www.fda.gov/food/guidanceregulation/cgmp/>)

- Standards of Identity

(<https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/CFRSearch.cfm?CFRPart=130>)

Standard Operating Procedures (SOPs)

Specific operational details for your product based on GMPs

The SOP should be written so anyone can make your product safely.

Simple SOP for Plain Yogurt

- Ingredients:
 - Milk
 - Stabilizer
- Standardize mix to:
 - 0 – 2% fat
 - 10.5% milk solids
- Pasteurize at 97°C (207°F) for 10 min.
- Homogenize at 60°C (140°F), 1500 psi
- Mix in holding vat at 45°C (113°F)
 - Add yogurt starter
- Package in 8 oz cups
- Incubate in containers at 45°C (113°F) to pH 4.5
- Blast chill to 5°C (41°F)
- Label and place in storage at 5°C (41°F)

Standard Operating Procedure

1. Put on hairnet (and beard net).
2. Wash hands thoroughly with soap and hot water.
3. Put on gloves.
4. Wash and sanitize one large table, using the method outlined in SSOP A.
5. Wash and sanitize 8 five-gallon buckets, using the method outlined in SSOP B.
6. Wash and sanitize Hobart machine, 1/5 inch blade, dicer, and push feeder, using the method outlined in SSOP C.
7. Fit Hobart machine with 1/5 inch blade, dicer, and manual push feeder.
8. Wash and sanitize bucket with small holes, using the method outlined in SSOP B.
9. Fill bucket with small holes with vegetables.
10. Use pressure hose to wash vegetables with cold water.
11. Hang a washed and sanitized five-gallon bucket on Hobart machine so that the bottom of the bucket is not touching the ground.
12. Transfer vegetables from the bucket with small holes to the hopper of the Hobart machine.
13. Use the lever on the hopper to push the tomatoes through the Hobart machine.
14. When the five-gallon bucket is full, place it on the sanitized table, being careful not to let the bucket touch the floor.
15. Repeat steps 8-14 until 200 lbs of vegetables are diced.
- 15a. Measure pH of juice to ensure it's 4.4 or lower.
16. Wash and sanitize finisher, including the 5 mm screens, using the method outlined in SSOP D.
17. Wash and sanitize two large metal trays, using the method outlined in SSOP B.

Sanitation Standard Operating Procedures (SSOPs)

Sanitation SOPs (SSOPs) should be considered to reduce the likelihood of occurrence of some food safety hazards.

For example, the SSOP may address washing and changing gloves after touching a door, cabinet or your clothing to reduce potential contamination with pathogens.

Or how to properly remove biofilm from tables.

Recall and Allergen Plans

Recall plan

(<https://www.ifsh.iit.edu/sites/ifsh/files/departments/fspca/pdfs/recall-plan-template-09-01-16.docx>)

Allergen Plan

- Shared-use facility
- Milk, Eggs, Fish, Crustacean shellfish (cricket), Tree nuts, Peanuts, Wheat, Soybeans

US Food and Drug Administration

FDA Biosecurity Act of 2002

Register your business with the FDA:

(www.fda.gov/Food/GuidanceRegulation/FoodFacilityRegistration/default.htm)

Acidified foods require form 2541e

Employee Training Schedule

		GMP	SOP	SSOP	Allergen
Employee	Date				
John Doe	12/7/2019	x	x	x	x
					.

Food Package Label

- Develop your food label based on FDA requirements
- Scout products similar to yours
- AFIC can create nutritional facts panel based on scale up version
- Label review with facility manager

Food Liability Requirements

Prior to commercial production, you must obtain product liability insurance with a minimum of \$1,000,000 coverage. Example: FLIP (flipprogram.com)

Your insurance must show the facility as a certificate holder.

Procedures & Paperwork Review

Schedule meeting with Facility Manager

Bring completed binder for review

Arkansas Department of Health

Plan Review & Food Permit Application

You must submit your plan review and permit application to the Arkansas Department of Health.

The information you need is at:

https://www.healthy.arkansas.gov/images/uploads/pdf/MFGPlanReviewGuideline.docx_Nov_2019pdf.pdf

Production Scheduling

Pre-schedule production date and time with facility manager

Upon arrival and departure, check-in with facility manager to cover SSOP monitoring.

Product Storage

Your product must be labeled with a lot code and expiration date prior to removing from the facility.

Discuss your storage options with the facility manager.

Your Responsibilities

You are responsible for all aspects of your company:

- Regulations related to your product(s)
- Product safety
- Liability
- All work activities; cleaning, processing, etc.

View a commercial kitchen only as a rental facility where you process your product.

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