



Plan. Produce. Profit.

Workshops in Arkansas

Creating and Processing Value Added Food Products in Arkansas

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Presentation Outline

- Food Systems and Production
- Creating Food Products
- Commercial Food Regulations
- Facilities for Food Production
- Equipment for Food Production
- Food Packaging
- Food Labeling



Food Systems and Production

What is a Food System?

All the components including production, processing, distribution, sales, purchasing, preparation, consumption, and waste disposal

- Local systems support local economy



What is Value-added Production?

- Taking a raw commodity and changing its form to produce a high-quality end product.
 - Diversifies businesses
 - Maintains food supply throughout the year
 - Easy to store and distribute in commercial markets





Creating Food Products

Food Entrepreneurship

Knowledge necessary to develop a food product, restaurant/food retail businesses, and other miscellaneous food-related endeavors from the initial idea through early growth



Creating Food Products

- Are you a grower or entrepreneur that wants to add value or diversify a business operation?
- Do you have an idea or concept for a food product?
- Do you have investment capital (\$500-1,000)?
- Do you have time?



Skills for Food Entrepreneurship

- Passion for your product or business
- Ability to follow directions
- Organizational skills
 - Paper work and record keeping
- Good work ethics
 - Love to clean



Concepts for Your Food Product

- Have you finalized the recipe at home?
- Will the product change when produced commercially?
 - YES!





Commercial Food Regulations

Food Products Sold to Consumers

- In Arkansas, some food made at home if *products fall under the Arkansas Food Freedom Act*
- Most food made in licensed, inspected facilities



Who Regulates Food Production?

- United State Food and Drug Administration
 - Regulates most food and beverages, except meat and poultry
- United State Department of Agriculture
 - Regulates meat and poultry
- Arkansas Department of Health
 - Regulates food safety in the state
 - Ensures the food sold is wholesome and represented honestly





Facilities for Food Production

Permitted Facilities

- Facilities that have been inspected and approved by Arkansas Department of Health.
- New or remodeled facilities will require a Plan Review by Arkansas Department of Health

What to Look for in a Facility

- Providing a certified and inspected facility for production
- Offering support for the development of product
 - Convert recipes to commercial production quantities
 - Information on ingredients, packaging and labeling
- Assisting with food processing regulations and documents

Regulation Assistance

- FDA registration forms
- Arkansas Department of Health License to operate a food processing operation
- Recall and allergen control plans
- Process authority for required certification for acidified and low acid products
- Food Safety Modernization Act (FSMA) safety plans
- Product liability insurance

Licensed and Inspected Kitchens

- Church kitchen
- School kitchen
- Restaurant
- Private facilities
 - Co-packers, own, rent
- Public facilities
 - Hubs, incubators, other



Arkansas Commercial Kitchen Facilities

Facilities inspected and approved by Arkansas Department of Health



Little Rock



Rison



Fayetteville



West Memphis



Equipment for Food Production

Utilities

- The utilities available in the facility dictates the type of equipment needed to purchase for your business.
 - Water (hot and cold)
 - Natural gas
 - Steam (boiler)
 - Electricity (120, 240, 480V)
 - Compressed air



Equipment Capacity

- Determine capacity of the equipment needed (bottles per minute, kg/hour)
- Small (e.g. restaurant): widely available for a reasonable cost
- Medium (e.g. average startup company): not commonly available, *but what is often needed*
- Large+ (e.g. established food processor): available, but extremely expensive and may be too large



New Versus Used Equipment

➤ New

- Built to order
- Expensive
- Long service life
- No prior product history
- Up to date safeguards and operator protection

➤ Used

- In stock
- Lower cost (about ½)
- Service life unknown
- Prior history with products that may be dangerous or incompatible
- Safety protection could be outdated, missing or disabled

Equipment Types

- Size reduction
- Blanching
- Finishing
- Cooking
- Pasteurization
- Drying



Equipment Types

- Mixing
- Baking
- Filling
- Package sealing
- Labeling



Final Thoughts on Equipment

- Choose equipment that fits your needs
 - Make sure the equipment works for you
 - Do research
- Equipment is the largest capital investment.
- Design a process flow chart identifying all the steps in your process
 - For each step identify equipment that maximizes throughput and minimizes labor



Food Packaging

Types of Food Packaging

- Jars
- Cans
- Pouches and vacuum packages
- Plastic cups, trays
- Bottles
- Clam shells
- Plastic bags
- Overwrap PVC film on tray



Functions of Food Packaging

- Preserve the product
- Protect the product from physical damage
- Protect the product from environmental contamination
- Limit the oxygen around the product
- Limit the loss of moisture in the product

Cost of Packaging

- Jars \$0.50- \$1.60/each
- Cans \$0.97- \$2.37
- Bags \$0.08-\$.10 each; Cook-in bags higher
- Trays \$0.05 - \$0.30
- Cups \$0.80
- Labels Black and white \$0.12; Color \$0.18
- Box label \$1.12- \$2.30

Final Thoughts on Packaging

- Packaging is very important to your product shelf-life and location.
- Packaging can be very expensive.
- Packaging is used to communicate with consumer and serves to promote your product.



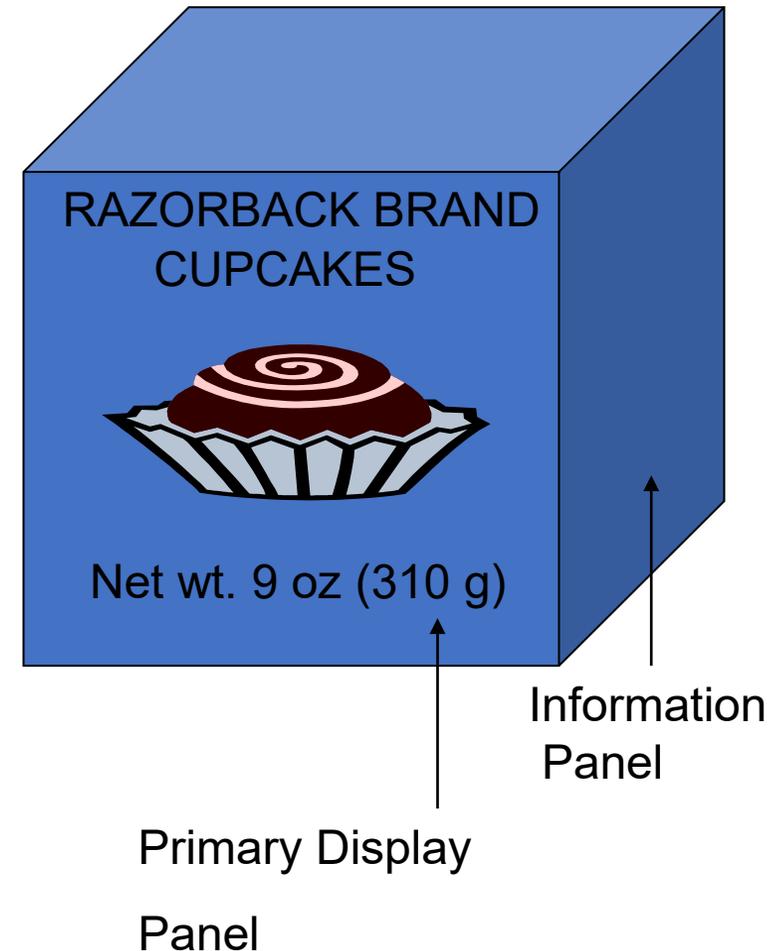
Food Labeling

Federal Requirements of Labels

- Statement of identity
- Net quantity of contents
- Nutrition facts panel
- Ingredient statement
- Name and place of business of the manufacturer, packer or distributor

Anatomy of a Label

- Principal Display Panel
 - Most likely to be seen by the consumer at the time of purchase
 - Includes statement of identity and net quantity of contents
- Information Panel
 - To the right of the Principal Display Panel
 - Name and address of manufacture, ingredients statement, and nutrition facts panel



Nutrition Facts Panel

Servings and Calories

Serving Size is based on the **amount of food that is customarily eaten at one time**. All of the nutrition information listed on the Nutrition Facts Label is based on **one serving** of the food.

Servings Per Container shows the **total number of servings** in the entire food package or container. One package of food may contain more than one serving.

Calories refers to the **total number of calories**, or “energy,” supplied from all sources (fat, carbohydrate, protein, and alcohol) in one serving of the food.

Calories from Fat are not additional calories, but are **fat’s contribution to the total number of calories** in one serving of the food.

% Daily Value

The **% Daily Value (%DV)** shows **how much of a nutrient** is in one serving of the food. The %DV column doesn’t add up vertically to 100%. Instead, the %DV is the percentage of the Daily Value (the amounts of key nutrients recommended per day for Americans 4 years of age and older) for each nutrient in one serving of the food.

Nutrients

The Nutrition Facts Label can help you learn about and compare the **nutrient content** of many foods in your diet. The Nutrition Facts Label must list: total fat, saturated fat, *trans* fat, cholesterol, sodium, total carbohydrate, dietary fiber, sugars, protein, vitamin A, vitamin C, calcium, and iron.

Footnote with Daily Values

The standard footnote at the bottom of the Nutrition Facts Label indicates that some of the %DVs are based on a **2,000 calorie daily diet**. However, your Daily Values may be higher or lower depending on your calorie needs, which vary according to age, gender, height, weight, and physical activity level. If there is enough space available on the food package, the Nutrition Facts Label will also list the **Daily Values and goals** for some key nutrients.

Nutrition Facts	
Serving Size 1 package (272g) Servings Per Container 1	
Amount Per Serving	
Calories 300	Calories from Fat 45
% Daily Value*	
Total Fat 5g	8%
Saturated Fat 1.5g	8%
<i>Trans</i> Fat 0g	
Cholesterol 30mg	10%
Sodium 430mg	18%
Total Carbohydrate 55g	18%
Dietary Fiber 6g	24%
Sugars 23g	
Protein 14g	
Vitamin A	80%
Vitamin C	35%
Calcium	6%
Iron	15%
* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs:	
	Calories: 2,000 2,500
Total Fat	Less than 65g 80g
Saturated Fat	Less than 20g 25g
Cholesterol	Less than 300mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g

Final Thoughts on Labels

- Hire a graphic designer with experience with food labels to design your label
- Find a printer with experience with food labels
 - Use standard label stock to minimize costs
 - Print in larger quantities to reduce costs



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