

# Adding Value To Your Farm/Orchard

William C. Morris

Department of Food Science &  
Technology

# Where To Begin?

## The Raw Commodities

- **What commodities do you have or want to grow on your farm?**  
(vegetables, fruits, meats, etc.)
- **Do you want to grow all your raw commodities or do you wish to contract with other growers?**

# Who Regulates What?

- **Poultry, meat, eggs – USDA/FSIS**
- **Fish, caviar – FDA/TDA**
- **All other All foods – TDA/FDA**

# Where Will You Process?

- **Build a new processing room or remodel an existing room**
- **Use a contract manufacturer**

# How To Meet Federal and State Requirements

- **Tennessee Department of Agriculture approves and inspects food manufacturing facilities**
- **Plans should be submitted to TDA before building/remodeling**

# Good Manufacturing Practices GMPs

## Address the following:

**Plant and grounds**

**Equipment and utensils**

**Sanitary facilities and controls**

**Sanitary operations**

**Processes and controls**

**Personnel**

*Code of Federal Regulations Title 21, Part 110*

# What's The Process?

- **Baked**
- **Frozen**
- **Canned**
  - **Acid – fruits**
  - **Low acid – vegetables**
  - **Acidified - pickled vegetables, relish, pumpkin butter**

# Measure of Acidity - pH



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## Food



High Acid

Low Acid

(Hot fill/water bath)

(Retort)

# Regulations of Canned Foods Based on Acidity

*Clostridium botulinum* - the main concern

pH  $\leq$  4.6 *C. botulinum* will not grow

# Acid Foods

- **Berries**
- **Cherries**
- **Peaches**
- **Apples**
- **Pears**
- **Oranges**
- **Grapes**
- **Apricots**
- **Tomatoes ??**

**pH < 4.6**

# Low Acid Foods

- **Green beans**
- **Beets**
- **Okra**
- **Cabbage**                      **pH >4.6**
- **Peppers**
- **Mushrooms**
- **Corn**
- **Beans**

**Any of these pickled become "acidified foods"**

# “Acidified Foods”

**A low acid food that has had its pH dropped below 4.6 with an acid (usually vinegar but may use other types of acids) or has been combined with another high acid food (i.e. tomatoes) to drop the pH below 4.6 (i.e. tomato & okra) or has a water activity  $\leq 0.85$**

# Water Activity

$a_w$  = a measure of water available for biological and chemical reactions

Scale: 0 – 1.0

Microbial tolerance - bacteria < yeasts < molds

Most bacteria require water activity of > 0.90 except for *S. aureus* (0.86)

# Fresh Is Best!

**Direct marketing of fresh produce can be a value added business.**

**GAP/GHP**

**GMP**

# HACCP Plans

## Who Needs Them?

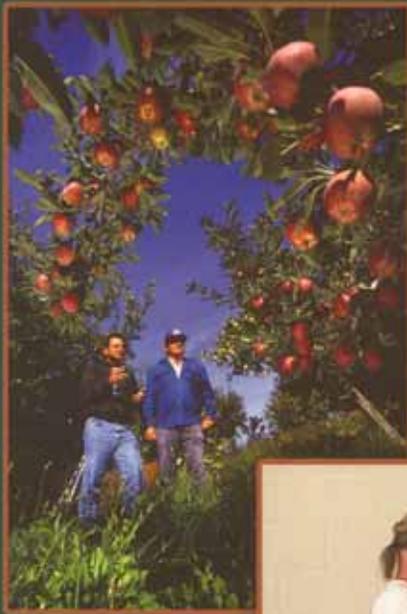
- **Fish Processors**
- **Apple Cider Processors**
- **Meat and poultry processors**
- **When your customer demands it!**

# Getting Started in a Food Manufacturing Business in Tennessee



# How Will Your Food Be Regulated?



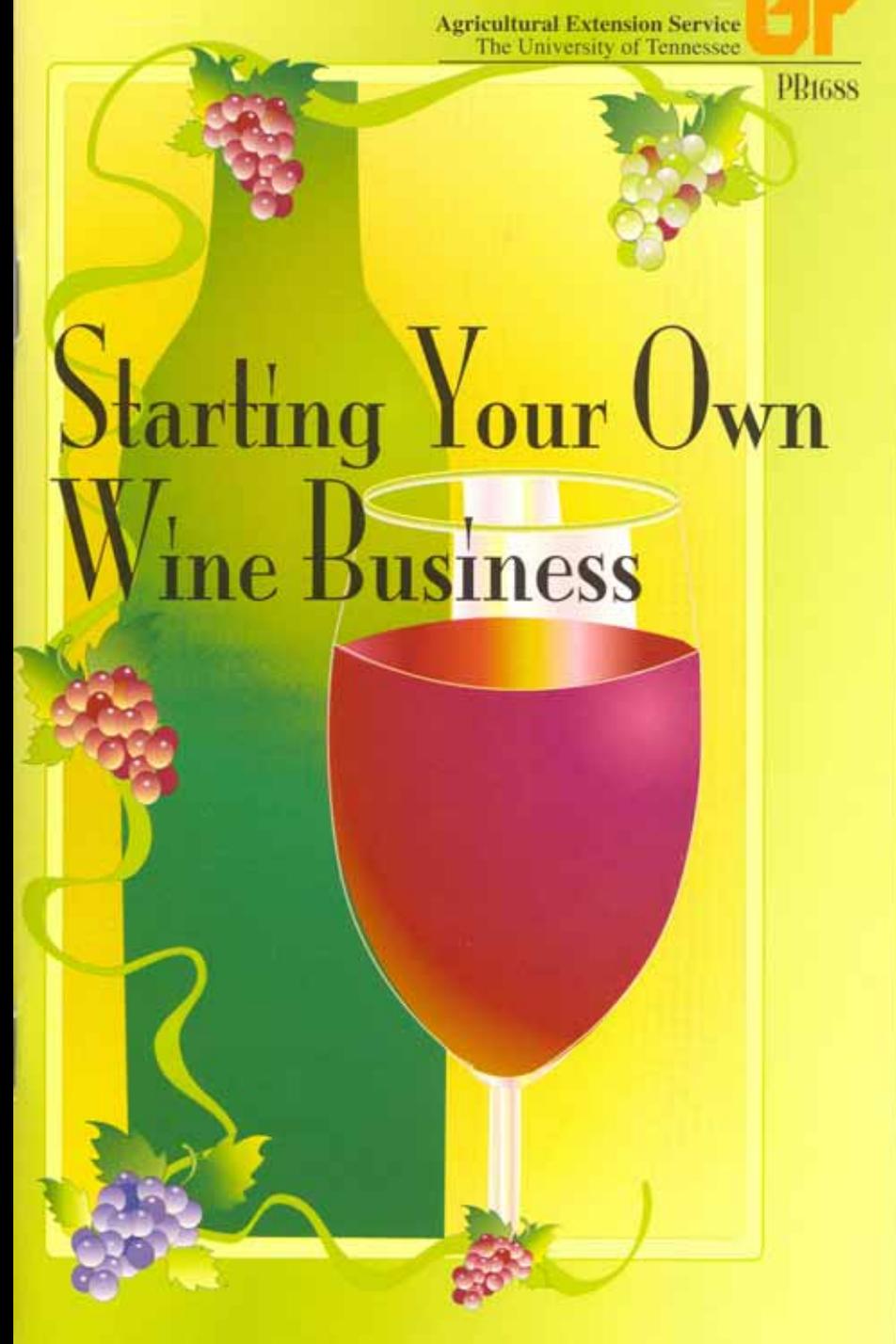


# ADDING VALUE TO TENNESSEE AGRICULTURE THROUGH COMMERCIAL FOOD-PROCESSING ENTERPRISES

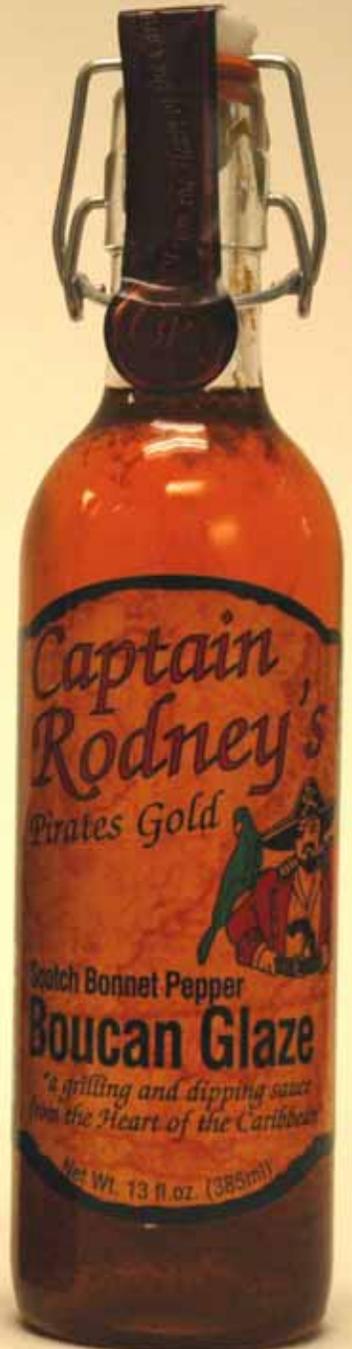
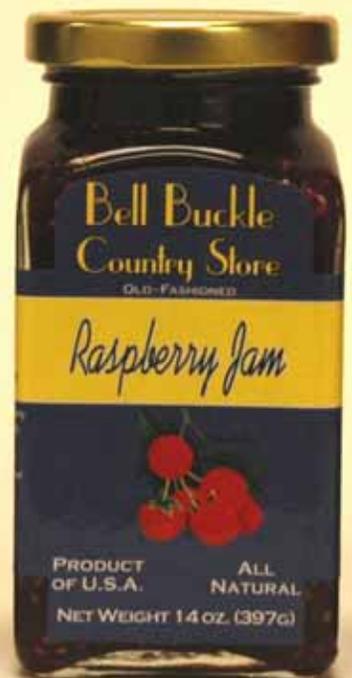


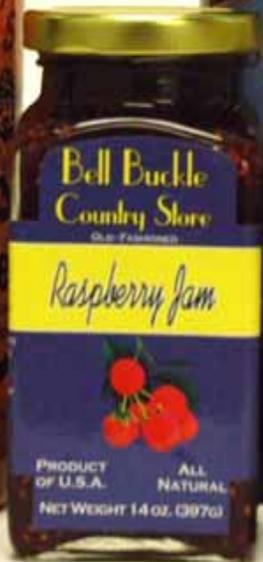
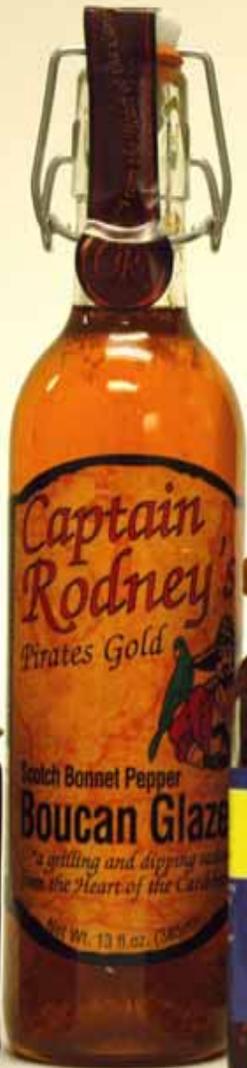
AGRICULTURAL DEVELOPMENT CENTER

This project was funded in part under an agreement with the Tennessee Department of Agriculture.



# Starting Your Own Wine Business







Summertime

GOURMET

Salsa

CHUNKY

Enjoy the heat without the burn!™

MEDIUM



CLINCH MOUNTAIN FARMS

TENNESSEE ORIGINAL

GARLIC MARINADE

Fine Quality Foods  
Fresh From The Mountains Of  
Tennessee

CLINCH MOUNTAIN FARMS

TENNESSEE ORIGINAL



GARLIC MARINADE

*Spicy*

Fine Quality Foods Fresh From  
the Mountains of Tennessee

Net 12 FL OZ (355 ML)



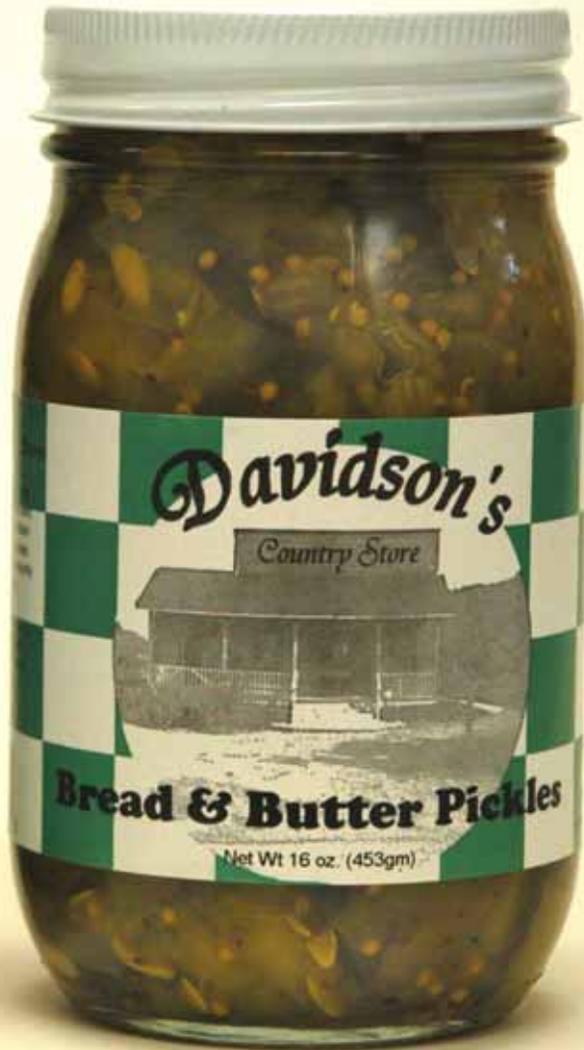
**Davidson's**

Country Store



**ZUCCHINI SQUASH RELISH**

Net Wt 18 oz. (510 gm)



**Davidson's**

Country Store



**Bread & Butter Pickles**

Net Wt 16 oz. (453gm)



From Our Farms to Your Table

Appalachian Spring  
Cooperative

**Sweet Potato Butter**

Net Wt 10 Oz. (284 g)



From Our Farms to Your Table

Appalachian Spring  
Cooperative

**Bread & Butter Pickles**

Net Wt 16 oz. (453gm)



**Becky's Heavenly  
Cherry Wine  
Sauce**

Ingredients: cherries, brown sugar, beef broth, cooking wine, raisins, corn starch, honey, vinegar & spices. Keep refrigerated after opening.

The sweet fruit flavors of the South  
make this a prize winning sauce.  
Serve over any meat - hot or cold.

Net Weight 9.5 oz. (15g)



