


## Food Safety Basics for Value-Added Products

Alexis M. Hamilton, Ph.D.

2024 Eastern Shore Small Farm Workshop  
Thursday, March 21, 2024



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### You probably have a lot of questions...



- What is “value-added”?
- Who can help me?
- Is there a training I can do to help me get started?
- What do I need to know about food safety?
- How does this work in Virginia?



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## What is “value-added”?

Let's start with a definition



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**The government has a definition for it**  
A “value-added agricultural product” is



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**The government has a definition for it**  
A “value-added agricultural product” is

- “Any Agricultural Commodity produced in the U.S. (including the Republic of Palau, the Federated States of Micronesia, the Republic of the Marshall Islands, or American Samoa), that meets the requirements specified in paragraphs (1) and (2) of this definition.”
  - (1) The Agricultural Commodity must meet one of the following five value-added methodologies:
    - (i) Has undergone a Change in Physical State;
    - (ii) Was Produced in a Manner that Enhances the Value of the Agricultural Commodity;
    - (iii) Is Physically Segregated in a manner that results in the enhancement of the value of the Agricultural Commodity;
    - (iv) Is a source of Farm- or Ranch-based Renewable Energy, including E-85 fuel; or
    - (v) Is aggregated and marketed as a Locally-Produced Agricultural Food Product.
  - (2) As a result of the Change in Physical State or the manner in which the Agricultural Commodity was produced, marketed, or segregated:
    - (i) The customer base for the Agricultural Commodity is expanded and
    - (ii) A greater portion of the revenue derived from the marketing, processing, or physical segregation of the Agricultural Commodity is available to the producer of the commodity.”

Source: 7 CFR 4284.922(a)



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**Let's simplify...**



- A value-added product is one that is
  - Produced in the U.S.
  - Made with a value-added methodology
  - Which increases the consumer base and/or revenue for producer



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### What is a value-added methodology?



- The product must be made in **at least one** of these ways:
  - Change in physical state
  - Produced in a way that enhances value
  - Physically segregated in a way that enhances value
  - Is a source of farm- or ranch-based renewable energy
  - Aggregated/Marketed as locally-produced agricultural food product



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### Change in physical state

<p><b>What it is</b></p> <ul style="list-style-type: none"><li>• Irreversible processing activity</li><li>• Examples<ul style="list-style-type: none"><li>• Fish fillets</li><li>• Diced tomatoes</li><li>• Bio-diesel fuel</li><li>• Cheese</li><li>• Jam</li><li>• Wool rugs</li></ul></li></ul>	<p><b>What it isn't</b></p> <ul style="list-style-type: none"><li>• Postharvest process that primarily works to preserve the product for later sale</li><li>• Examples<ul style="list-style-type: none"><li>• Pressure-ripened produce</li><li>• Raw bottled milk</li><li>• Container grown trees</li><li>• Young plants, seedlings, plugs</li><li>• Cut flowers</li></ul></li></ul>
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### Produced in a way that enhances value

<p><b>What it is</b></p> <ul style="list-style-type: none"><li>• Recognizably coherent set of agricultural practices in the growing or raising of the raw commodity that results in a different market identity</li><li>• Examples:<ul style="list-style-type: none"><li>• Sustainably grown apples</li><li>• Eggs produced from free-range chickens</li><li>• Organically grown carrots</li></ul></li></ul>	<p><b>What it isn't</b></p> <ul style="list-style-type: none"><li>• <i>Nothing listed in the definition to explain what would not count in this category</i></li></ul>
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### Physically segregated in a way that enhances value

#### What it is

- Separation on the same farm from other varieties of the same commodity/product on the same farm during production/harvesting with assurance of continued separation during processing and marketing
- Examples
  - Non-GMO corn separated from GMO corn

#### What it isn't

- *Nothing listed in the definition to explain what would not count in this category*



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### Source of farm-/ranch-based renewable energy

#### What it is

- Used to generate renewable energy on the farm or ranch on which the commodity is produced and the producer can show expanded consumer base and increased revenue
- Examples
  - Biodiesel fuel

#### What it isn't

- On-farm generation of energy from
  - Wind
  - Solar
  - Geothermal sources
  - Hydro sources



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### “Locally-Produced Agricultural Food Product”

#### What it is

- An agricultural food product that is raised, produced, and distributed in
  - Locality/Region in which final product is marketed so that total distance product moved is less than 400 miles from product origin or
  - State in which product is produced
- Examples
  - Raw, cooked, or processed edible substances, beverages, or ingredients intended for human consumption

#### What it isn't

- Animal feed
- Live animals
- Non-harvested plants
- Fiber
- Medicinal products
- Cosmetics
- Tobacco products
- Narcotics



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**This is "value-added"**



- A value-added product is one that is
  - Produced in the U.S.
  - Made with a value-added methodology
    - Change in physical state
    - Produced in a way that enhances value
    - Physically segregated in a way that enhances value
    - Is a source of farm- or ranch-based renewable energy
    - Aggregated/Marketed as locally-produced agricultural food product
  - Which increases the consumer base and/or revenue for producer

Virginia Cooperative Extension

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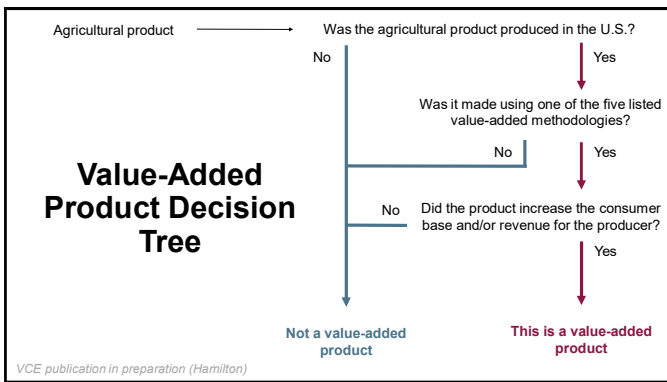
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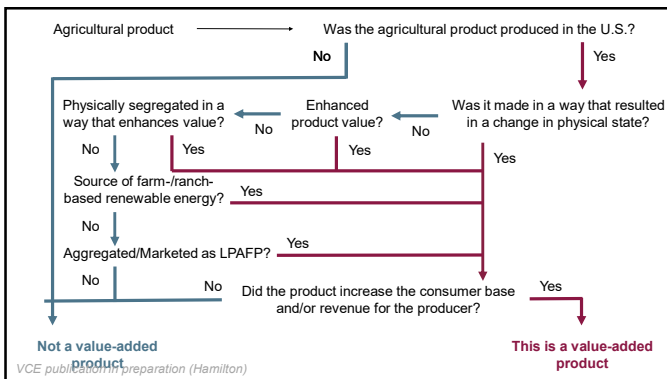
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## Who can help me?

Resources for making and selling value-added products in Virginia



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## What resources are available to me to help me with my food business?

- VaABC
- VDACS
- VDH
- Virginia Farmers Market Association
- Virginia Specialty Food Association
- Virginia Tech and Virginia Cooperative Extension

**and more!**



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## Virginia Alcoholic Beverage Control Authority

<https://www.abc.virginia.gov/>

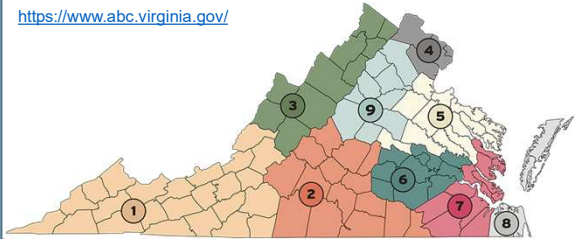



Photo credit: VaABC



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### Virginia Department of Agriculture and Consumer Services

<https://www.vdacs.virginia.gov/>




Photo credit: VDACS

Virginia Cooperative Extension

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### Virginia Department of Health

<https://www.vdh.virginia.gov/>

Commonwealth of Virginia - Department of Health  
Division of Disease Prevention




Photo credit: VDH

Virginia Cooperative Extension

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### Additional value-added help

Virginia Farmers Market Association  
• VIRGINIA • FARMERS • MARKET •



• ASSOCIATION •

<https://vafma.org/>

Virginia Specialty Food Association



VIRGINIA SPECIALTY FOOD ASSOCIATION

<https://www.specialtyfoodva.com/>

Virginia Cooperative Extension

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### Eastern Shore Extension Agents



**Theresa Pittman**  
Unit Coordinator, ANR  
Accomack

**Erin Morgan**  
Unit Coordinator, 4-H  
Northampton

**Hélène Doughty**  
Extension Agent, ANR  
Northampton



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### Food Safety Area Specialized Extension Agents



**Stuart Vermaak**  
Northeast

**Andrea Haubner**  
Southwest



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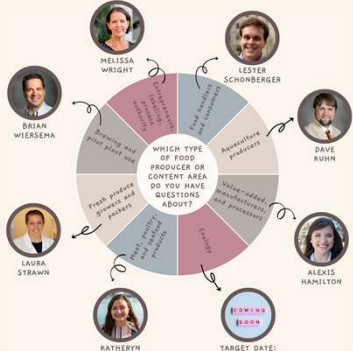
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### Food Science and Technology department



**WHICH TYPE OF PRODUCER OR CONTENT AREA DO YOU HAVE QUESTIONS ABOUT?**

- Fresh produce, berries, and nuts
- Meat, poultry, and seafood products
- Value-added, fermentation, and processing
- Aquaculture products

**TARGET DATE: FALL 2024**



Extension specialists available to help

Program flyers/trainings

Assistance and trainings offered in Spanish

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### What about the "...and more!"?

- [Value-Added Producer Grants](#)
  - Up to \$250,000 toward
    1. Generating new products,
    2. Increasing producer income, and
    3. Creating/Expanding marketing opportunities
  - Funds used for planning activities or processing and marketing
    - Developing business plans
    - Processing costs



Committed to the future of rural communities.

**Deadline to apply: April 11, 2024**



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### Is there a training I can do to help me get started?

Food Safety School



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### Introducing...Food Safety School!

- An introduction to food safety and regulatory compliance
  - Especially for businesses that want to **grow** into regional markets
- Hybrid course
  - Online modules about VA regulations on your own
  - In-person workshop about food safety



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### Join us at the Carver Center



- Register through Destiny
- Watch the online modules
- Complete the pre-test
- Lunch and snacks for the 6-hour in-person workshop
- If interested, email me: [ahamilton@vt.edu](mailto:ahamilton@vt.edu)



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### Research to improve food safety education and outreach

Please take this anonymous survey

There is also a copy in your packet you received at registration



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### What do I need to know about food safety?

Food safety basics



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## Food safety is all about...

Preventing food safety **hazards** from entering a food **product** or **environment** to minimize the **risk** of causing **illness** or **injury** as a result of consumption



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## Hazards and risk

- **Hazard**: biological, chemical, or physical agent that could cause illness or injury
- **Risk**: the likelihood of a hazard causing an illness or injury



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## Types of hazards

1. Biological: foodborne pathogens
  - *Listeria monocytogenes*
2. Chemical: allergens, cleaning agents
  - Sesame
  - Bleach
3. Physical: harvest or processing environment
  - Glass



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## How can I manage food safety hazards?

### 1. Prevent a hazard

- Keep it from entering a food product, ingredient, or environment

### 2. Reduce a hazard

- Reduce the amount in a product, ingredient, or environment to an acceptable level

### 3. Control a hazard

- Keep from getting worse (e.g., growth)



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## Examples of hazard PREVENTION

- Antibiotic treatments
- Employee hygiene (prerequisite programs)
- Food safety programs (like Seafood HACCP)
- Sanitation (cleaning and sanitizing)



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## Examples of hazard REDUCTION

- Cooking/Heat (not available in raw products)
- Fermentation (pH)
- Non-thermal processing (e.g., high pressure)
- Pressure canning



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### Examples of hazard CONTROL

- Preservatives
- Prevent cross-contamination of product, equipment, etc.
- Salt
- Sanitation (cleaning and sanitizing)
- Temperature control
- Water activity control



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### A note about foodborne pathogens

- In general, pathogens need to grow/replicate to be able to make someone sick
  - However, sometimes pathogens that aren't growing but are present in high enough numbers can still make someone sick
- Pathogens can make you sick in one of three ways:
  1. Infection
    - Eating the pathogen is what makes me sick
  2. Intoxication
    - The pathogen grows in a food, produces a toxin, and eating the toxin makes me sick
  3. Toxicoinfection
    - I eat the pathogen, the pathogen grows in me and produces a toxin, and the toxin produced in my body makes me sick



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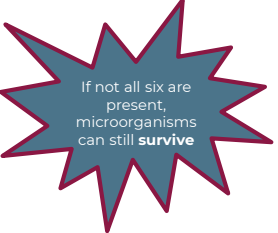
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### What do foodborne pathogens need to grow in a food product?

- Food (nutrients)
- Acidity (pH)
- Time
- Temperature
- Oxygen
- Moisture (water activity)



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### Controlling these factors can keep your product safe

#### Intrinsic

- Related to the food product or ingredient itself
  - Inside the food product
- Examples:
  - Acidity (pH)
  - Moisture content
  - Nutrient content
  - Water activity

#### Extrinsic

- Related to the environment the food product or ingredient is in
  - Outside the food product
- Examples:
  - Atmosphere/Packaging
  - Time
  - Temperature
  - Relative humidity



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### Controlling these factors can keep your product safe

#### Food (nutrients)

- The nutrients in a food product are not typically used as a factor that is controlled to make food safe because if it doesn't have nutrients, it isn't food, and we don't eat it
- But we can control how much is in the **environment** that organisms could use to grow (cleaning)



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### Controlling these factors can keep your product safe...with examples

#### Acidity (pH)

- Acid foods
- Acidified products
- Fermented products



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**Controlling these factors can keep your product safe...with examples**

**Time**

- Holding/Serving time
- Shelf-life



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**Controlling these factors can keep your product safe...with examples**

**Temperature**

- Baking/Cooking
- Cooling
- Drying with heat
- Freezing
- Heating
- Holding/Serving temperature



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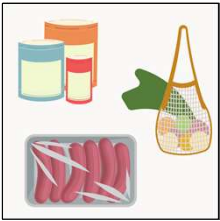
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**Controlling these factors can keep your product safe...with examples**

**Oxygen**

- Packaging
  - Canned/Hermetically sealed
  - Modified atmosphere
  - Perforated
  - Reduced Oxygen Packaging (ROP)



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### Controlling these factors can keep your product safe...with examples

**Moisture (water activity)**

- Drying
- Freeze drying
- Some baked goods
- "Water activity controlled"



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### What do foodborne pathogens need to grow?

- Food (nutrients)
- Acidity (pH)
- Time
- Temperature
- Oxygen
- Moisture (water activity)
- Other options like preservatives or competitive exclusion



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### How does this work in Virginia?

Overview of the Virginia Food and Drink Law



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## What are food regulations?

The primary goal of a food regulation is to ensure that products for sale are safe for consumption.

### Food



- Fresh produce
- Processed foods
- Ready-to-eat

### Activities



- No processing
- Some processing
- A lot of processing

### Size



- Large businesses
- Small businesses
- Exempt



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## What food regulations apply to me?

A food producer must adhere to regulations of all layers of government entities relevant to the location in which that business is operating and selling.

### Federal



- Foundational requirements
- Prioritize large producers

### State



- Can be equal to or more stringent than federal regulations
- Often includes small to large businesses

### Local



- Can be equal to or more stringent than state regulations
- Location-specific



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## Exclusions and exemptions

### Exclusions

- The rule **does not** apply
  - For example, someone who is making a food product in Colorado but does not intend to sell it in Virginia does not have to comply with Virginia food regulations

### Exemptions

- **Some** of the requirements of the rule do not apply
  - For example, someone who is producing cotton candy in their home and selling it will have to follow the Virginia Food and Drink Law but will not have to be inspected prior to selling their food product



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## Virginia Food and Drink Law

- Food establishments, including private homes, that manufacture, process, pack, or hold food for sale
- Must be inspected prior to operating
- Typically, you must also take food safety training that covers material included in the rule
- The goal of the regulation is to make sure only safe food is sold to consumers
  - Sanitary requirements
  - Adulteration, misbranding, and false advertising requirements
  - Seizures, prosecutions, penalties, and enforcement requirements
  - Hemp extract requirements



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## What do these sections mean?

- The goal of the regulation is to make sure only safe food is sold to consumers
  - Sanitary requirements
  - Adulteration, misbranding, and false advertising requirements
  - Seizures, prosecutions, penalties, and enforcement requirements
  - Hemp extract requirements



**How to prepare, maintain, and clean the environment that you store and produce food in**



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## What do these sections mean?

- The goal of the regulation is to make sure only safe food is sold to consumers
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  - Seizures, prosecutions, penalties, and enforcement requirements
  - Hemp extract requirements



**Ethically creating, labeling, and advertising your product**



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**What do these sections mean?**

- The goal of the regulation is to make sure only safe food is sold to consumers
  - Sanitary requirements
  - Adulteration, misbranding, and false advertising requirements
  - Seizures, prosecutions, penalties, and enforcement requirements
  - Hemp extract requirements

→ **What happens if something goes wrong**



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**What do these sections mean?**

- The goal of the regulation is to make sure only safe food is sold to consumers
  - Sanitary requirements
  - Adulteration, misbranding, and false advertising requirements
  - Seizures, prosecutions, penalties, and enforcement requirements
  - Hemp extract requirements

→ **If you are extracting and selling a hemp product as food**



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**What do these sections mean?**

- The goal of the regulation is to make sure only safe food is sold to consumers
  - Sanitary requirements
  - Adulteration, misbranding, and false advertising requirements
  - Seizures, prosecutions, penalties, and enforcement requirements
  - Hemp extract requirements

**The only way for VDACS to know if you are complying with the VA Food and Drink Law is for them to check...this is called "inspection"**



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### Virginia's Home Kitchen Food Processing Exemptions

- If you are producing a food in your private home that you hope to sell, you may be exempt from VDACS inspection if the food is:
  - Low Risk
  - Acidified
  - Honey
- There are some additional requirements and restrictions
  - No online sales



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### Virginia's Home Kitchen Food Processing Exemptions

- If you would like to make and sell a value-added product out of your private home kitchen and utilize the exemption from inspection, you **cannot** sell these products online.

↪ If you want to sell these products online, you **must** be inspected **prior** to selling your product(s) and cannot utilize the Home Kitchen Food Processing Exemption from inspection



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### VDACS Handbook for Small Food Manufacturers



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## Questions



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