# Marketing Agroforestry Products
# 2015 Agroforestry Academy


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University of Missouri
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# Agroforestry

- Sustainable agriculture
- Environmental benefits
- Habitat for wildlife
- **New market opportunities**
- **Diversified farm income**
  - **"Market-based conservation"**

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# In this presentation

- A framework to approach the marketing of agroforestry products and overcome some of the challenges associated with it.
  - Market research
  - Marketing strategies

# Agroforestry Products (Specialty/Niche)

## Edibles

- Mushrooms (shiitake, oyster, stropharia, truffles)
- Nuts (chestnuts, pecans, black walnuts, hickories, hazelnuts)
- Fruits (persimmon, paw paw)
- Berries (elderberry, aronia, other “blue fruits”)

## Herbal medicinals

- Ginseng, Goldenseal
- Witch hazel
- Elderberry

## Specialty wood products

- Diamond willow canes
- Red cedar closet liners
- Walnut gunstocks

## Florals and greenery

- Willow, dogwood, …
- Ferns
- Salal

## Recreation

- Fee hunting, Agritourism

# Agroforestry Specialty Products











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# Specialty Product Market Strategies

*The "Black Box" of Agroforestry Enterprises*

- Agroforestry enterprises often produce specialty products for markets about which little is known
- All that may be known about the market is that someone is growing the product and consumers are buying the product
- What happens to the product between producer and consumer is unknown, i.e., a "black box".

➢ **Challenge:** How to overcome the lack of market information

# Black Box

## Questions to Explore

- How do I get into the market?
- What are my costs ?
- Wholesale and retail prices?
- Where can I buy what I need for my business and for what price?
- Is the supply I need readily available?
- Who are my customers? What do they want?
- For how much can I sell my products?
- Who are my competitors? What are they doing?
- What can  I do differently?

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# Black Box

- These and many other questions complicate the decision to produce and market agroforestry (specialty) products
- Applying standard market research approaches and the Porter Five Forces Model to specialty products provides answers to these questions and enables development of sound marketing strategies

# Specialty “niche” product markets represent unique products with ‘a face and a place’


- Niche markets based on trust and authenticity
- Large firms cannot manufacture trust and authenticity
- Competitive advantage to smaller firms with a unique, personalized, customer-oriented approach

# Country Natural Beef – Buy Local

http://www.countrynaturalbeef.com/

- **A good story**
- **Savvy branding**
- **Fantastic product**

# Country Natural Beef – Buy Local

- A national leader in natural beef production.
- ✓ **"Our consumers know where the cattle come from, and they know the people who produce it"**
- ➢ **A Cooperative: 120 family ranches** located in Oregon, Washington, California, Nevada, Idaho, Wyoming, New Mexico, North Dakota, Colorado, Texas, Montana, Arizona and Hawaii.
- ➢ **Ranchers own +100,000 cows on 6.3 million acres of private and public lands.**
- Developed working relationships with leading restaurateurs and retailers across the nation.
- Pricing Strategy: Based on return on investment, cost of production and fair profit. Stable prices to customers.

# Market research

**Secondary** information sources

- Published reports and studies
- Online information
- Journals and magazines
- Business directories

**Primary** information sources

- Personal interviews
- Trade shows
- Farmers markets
- Grocers, etc.
- Observations
- Surveys
- Focus groups

# SWOT ANALYSIS***


## Strengths

Previous farming experience

Available land

Children returning to the farm

Location – close to a big city

## Weaknesses

Moderate finances

Seasonal and perishable product

Lack of marketing skills

**SWOT**

## Opportunities

New cultivars made available

Elderberry co-op

Increased interest in locally produced products

## Threats

Competition from imports

Increased federal and state regulations

Extreme climate events

***Example - farmer who would like to start growing elderberry

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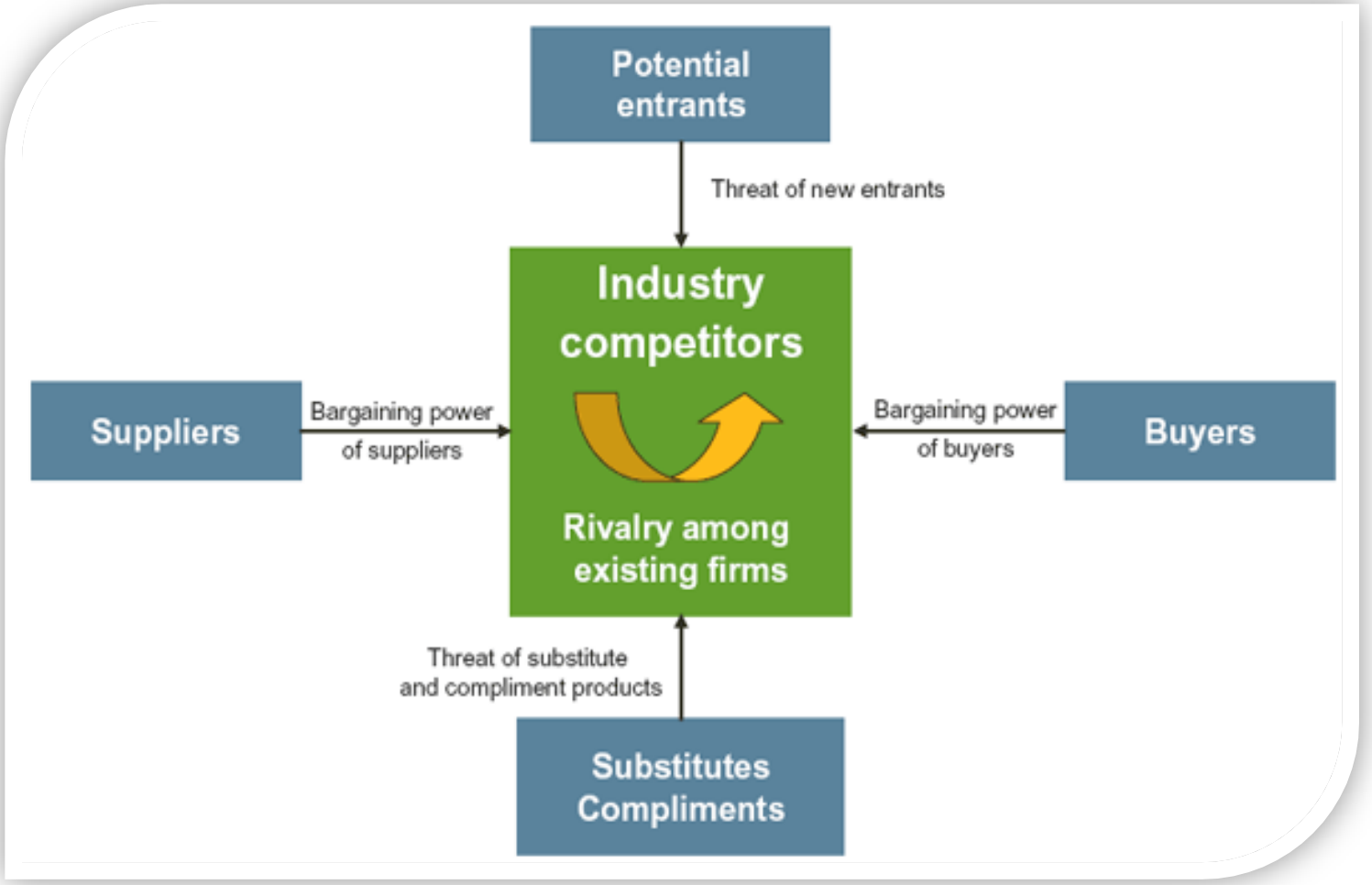
# Porter Five Forces Model




Porter, M.E. 1980. Competitive Strategy: Techniques for Analyzing Industries and Competitors. New York: The Free Press. 396 pp.

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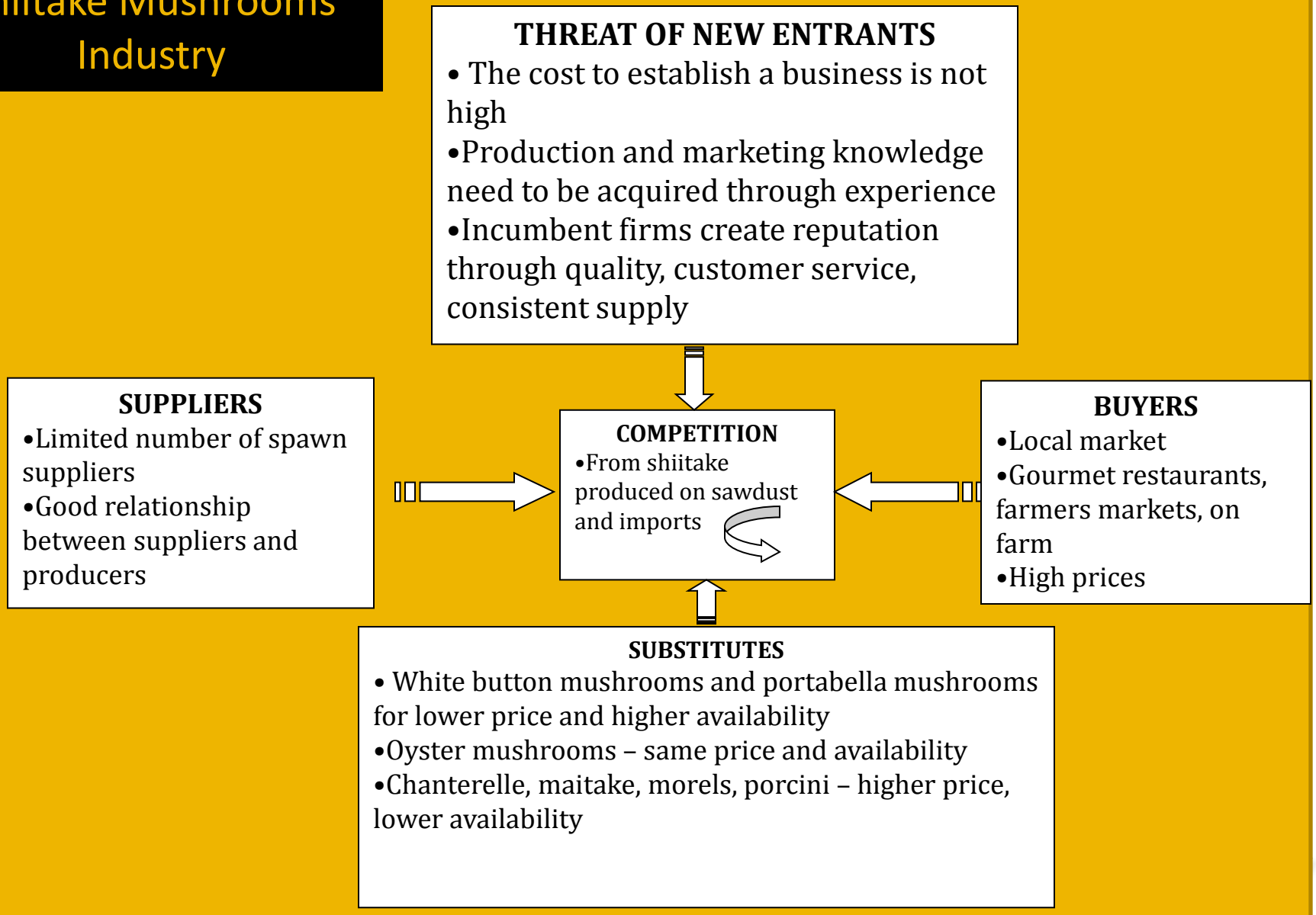
# 5 Forces Example Shiitake Mushrooms Industry



# Next steps

- Decide on what products to produce
- Identify who wants the product and under what conditions will they buy it (target market)
- Formulate marketing strategies to meet the needs of the target market

# Target market(s)

- Market segments

- Demographic characteristics (age, sex, religion, education, income)
- Geographic location (counties, states, regions)
- Psychographic characteristics (lifestyle, behavior, values, attitudes)

- Target market

# Market segments

- **Example:**

**Customer profile:**
Who are they?
Where are they?
What do they need?
How do they buy?
How large is the segment?

***Product**: Elderberry jelly*
Customer segments:
***1. Online customers***
Geographic: Nationwide (USA)
Demographic: Younger, moderate to high household income, high level of education
Psychographic: Price sensitive
Needs/Preferences: Like the comfort of shopping from home
***2. Health food stores customers***
Geographic: Regional area
Demographic: Older, higher household income, high level of education
Psychographic: Health conscious, less price sensitive
Needs/Preferences: Prefer healthy, high quality products

# Marketing strategies

- Product Strategy
  - ➢Differentiation

RIVER HILLS HARVEST

# Marketing strategies

**Differentiation = Adding Value**

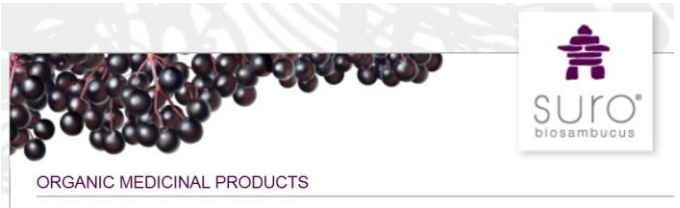
- Processing
  - Extend availability and shelf life
  - Potentially higher returns
  - Use lower quality products
  - Diversify market outlets
  - Higher investment
  - Financial resources and human resources/expertise
- Extra convenience
- Customer service
- Product image (healthy, environmental friendly, locally produced, organic)


# Marketing strategies

## Value-Added Strategy Implementation

- The difference between the cost of raw materials and the price received for the final product
  - Determine who your customers are
  - Identify the benefits the customer wants
  - Determine customer purchasing criteria
  - Assess sources of uniqueness in how you determine benefits
  - Identify the cost of providing the benefit
  - Choose value chain configuration that provides the most benefits for the cost (competitive advantage)

**http://www.suro.ca/en/**



# The Market Value Chain

## Eastern Redcedar

Producer

Processor

Wholesaler
(Distributor)

Retailer

Consumer


# Eastern red cedar products - $Value Added

| Product | Unit Price |
|---|---|
| **Logs** | **$120-250/MBF** |
| **Cants** | **$500/MBF** |
| **Paneling** | **$1,800/MBF** |
| | **(**grade 1, 2 1/4” clear boards) |
| **Cedar “moth” balls** | **$5.19** (3 oz. Package, 36 balls) |
| **Cedar boxes** | **$2.00/box** (5”x3”x2 1/8” - wholesale) |
| **Shavings** | **$5/cu yd** (poultry bedding) |
| **Shavings** | **$2.50/bag** (3 cu ft - retail) |

# EASTERN RED CEDAR PRODUCTS - $ VALUE ADDED

**Products** **Unit price**

- Cedarwood oil

| | |
|---|---|
| aromatherapy | $1.83 (5 ml)...$27.61 (16 oz) |
| | $7.95 (10ml) (on line store) |
| perfume and cosmetic | $6/lb drum quantity, $9/lb < one drum |
| industry and household use | |

(improve fragrance, moth resistance properties in closets, dressers)

- Animal bedding

Dog bedding compressed bail $22 /bail (retail price)
Premier Pet Red Cedar Bedding $9.99 (5 cu ft) (retail price)
L/M animal farms bedding $4.49 (700 cu in) (retail price)

- Mulch

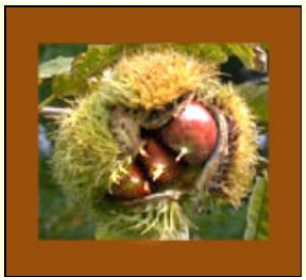
| | |
|---|---|
| Retail: | $30.95/cu. Yd. |
| Contractor: | $28.95/cu. Yd. |

# Marketing strategies

- Distribution Strategy - getting the products to the buyer
  - Direct marketing
    - Outlets: farms, farmers markets, PYO, CSA, Internet
      - » Capture larger share of consumer's spending
      - » Closer relationship with the consumer
      - » Higher risk


# Marketing strategies

- Distribution Strategy - getting the products to the buyer
  - Intermediary distribution
    - Wholesalers, distributors, cooperatives, retailers
      - » Provide constant dependable supply
      - » Maintain product integrity along the value chain
      - » Reduced risk

ROUTE 9 COOPERATIVE

*Growing Fresh Culinary Chestnuts for the Chestnut Lover*

# Marketing strategies

- Pricing Strategy
  - Pricing to the market
    - What others are charging for the same type of products
    - Power to set prices (differentiation, reputation, promotion)
    - Demand sensitivity to price changes
  - Pricing to your costs
    - Cover expenses
    - Make a profit

# Marketing strategies

- Communication Strategy
  - Message: freshness, local, sustainably produced, healthy
  - Tools: ads, flyers, press releases, tasting samples


# Marketing strategies

- Communication Strategy
  - Delivery: festivals, local radio, word of mouth, local media, social media
  - Frequency
  - Costs

# Marketing plan

## Structure of a Marketing Plan

- Introduction
- Market research and analysis
- Marketing and financial objectives and goals
- Marketing strategies
  - Product
  - Price
  - Distribution plans
  - Communication
- Marketing budget - estimated costs of the planned marketing strategies, the cost associated with market analysis and an explanation of the source of funds (e.g., borrowed, savings, percent of revenue).

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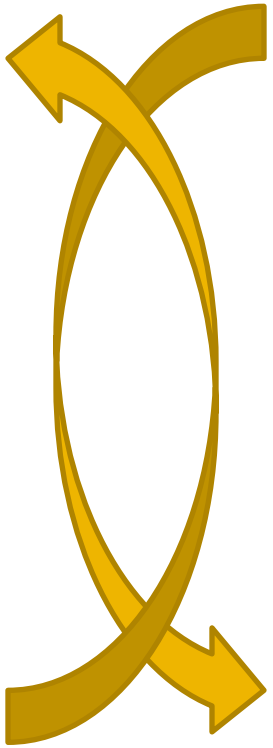
# Conclusion – The Framework

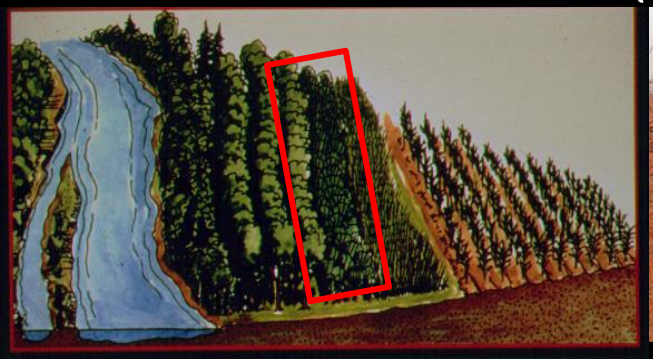
- Goals/objectives
- Site assessment
- List of potential “Best bets”
- Market research
  - Collection of information
  - SWOT Analysis
  - Porter Five Forces Model
- Refine “Best Bets”
- Marketing planning
  - Identify target market
  - Formulate marketing strategies (product, distribution, price, communication)
  - Finalize marketing plan



# Market Opportunity Woody Florals

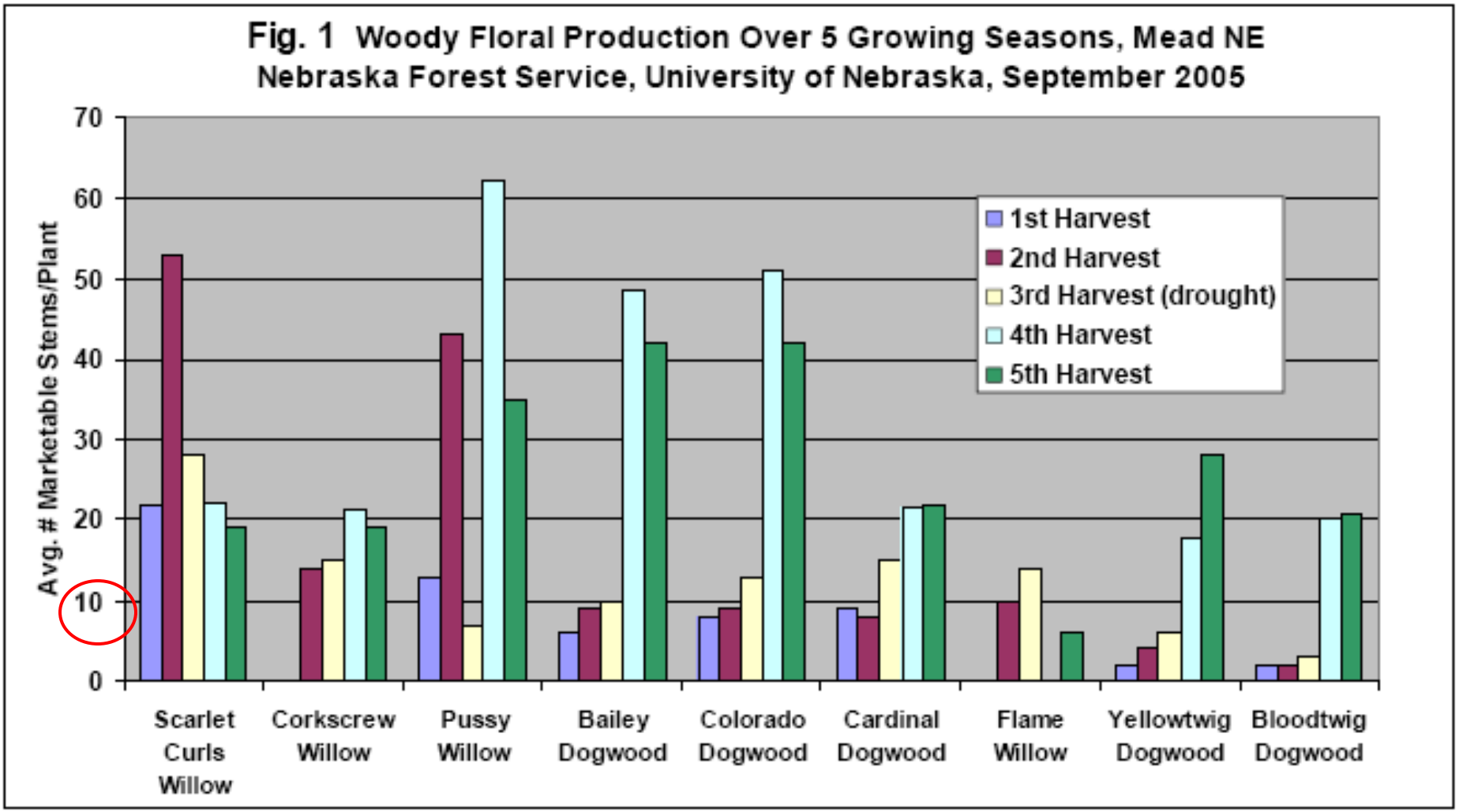
- **Woody florals** (e.g., scarlet curls willow) **in windbreaks, alley cropping or riparian forest buffer plantings**
- **Gross returns $800 to $2,000 per 1,000 linear feet**

**( http://nebraskawoodyflorals.com)**



Photos: Scott Josiah

# Production Data




FOR MARKETING PURPOSES, NOT NECESSARILY NATIVES, BUT CULTIVARS

**http://www.nfs.unl.edu/documents/SpecialtyForest/growersguideweb2007.pdf**

# COSTS

Table 3. Costs to establish and maintain 1000 linear feet of woody floral-producing plants[x]

| Cost item | Unit cost | Total cost at 6-feet spacing[y] | Total cost at 4-feet spacing[z] |
|---|---|---|---|
| **Year 1 costs (establishment year)** | | | |
| Site preparation per linear foot | $0.05 | $50 | $50 |
| Planting costs per plant | $0.40 | $67 | $100 |
| Plant material costs per plant | $0.70 | $117 | $175 |
| Weed control: three herbicide applications/year at $0.02/foot | $0.02 | $60 | $60 |
| **Year 1 total cost** | | **$294** | **$385** |
| **Year 2 costs** | | | |
| Replacement of mortality (20%) (plant material + planting cost) | | $33 | $50 |
| Weed control: three herbicide applications/year at $0.02/foot | $0.02 | $60 | $60 |
| **Year 2 total cost** | | **$93** | **$110** |
| **Total establishment costs, years 1 and 2** | | **$387** | **$495** |
| **Year 3 and thereafter** | | | |
| Weed control: two herbicide applications/year at $0.02/foot | $0.02 | $40 | $40 |

x Establishment costs from the 2004 Natural Resource District (NRD) Tree Program Survey
y 167 plants/1000 linear feet
z 250 plants/1000 linear feet

# $RETURNS$

Table 4. Woody Floral Estimated Gross Returns per Plant, Per Acre, & Per 1,000 Feet of Row Production Average of Five Harvests – 2000-2005

| | Scarlet curls willow | Flame willow | Pussy willow | Curly willow | Yellowtwig dogwood | Bloodtwig dogwood | Bailey dogwood | Colorado dogwood | Cardinal dogwood |
|---|---|---|---|---|---|---|---|---|---|
| Avg. # marketable stems/plant | 23 | 12 | 32 | 17 | 12 | 10 | 23 | 25 | 15 |
| **Avg. gross income produced/plant*** | **$10.35** | **$3.96** | **$9.60** | **$7.65** | **$3.6** | **$3.33** | **$7.60** | **$8.25** | **$4.95** |
| # plants per acre** | 605 | 907 | 605 | 907 | 907 | 907 | 907 | 907 | 907 |
| **Avg. potential gross income per acre** | **$6,262** | **$3,591** | **$5,808** | **$6,939** | **$3,265** | **$3,020** | **$6,893** | **$7,483** | **$4,490** |
| # plants per 1,000' of row | 167 | 250 | 167 | 250 | 250 | 250 | 250 | 250 | 250 |
| **Avg. potential gross income per 1,000' of row** | **$1,728** | **$990** | **$1,603** | **$1,912** | **$900** | **$833** | **$1,900** | **$2,062** | **$1,238** |

* The average number of marketable stems include 3-5' stems. Scarlet Curls and curly willow stems sell for $0.45/stem (wholesale), all others sell for $0.30/stem. Longer stems occasionally bring premium prices.

** Scarlet curls and pussy willow at 6 ft (0.91m) in-row spacing X 12' between rows (605 plants/ac), all others at 4 ft (0.45m) in-row spacing, 12' between rows (907 plants/acre)

**Gross income: $800-$2,000 per 1,000 linear feet**

# Market Opportunity – Woody Florals

VirginiaTech Invent the Future | Virginia Cooperative Extension | VSU Virginia State
www.ext.vt.edu

## Woody Florals for Income and Conservation

*Katie E. Trozzo, Forest Resources and Environmental Conservation, Virginia Tech*
*John F. Munsell, Forest Resources and Environmental Conservation, Virginia Tech*
*James L. Chamberlain, National Agroforestry Center, USDA Forest Service*

Woody florals (also known as woody cut stems) are tree and shrub species that can be grown, harvested, and sold to the floral industry or used in home arrangements for their colorful or unique stems, berries, buds, and/or flowers. Woody florals are good candidates for agroforestry plantings and home landscaping because of their high value in the floral industry and ability to protect water, air, and soil quality. Agroforestry is the intensive and intentional integration of trees and/or shrubs with crops and/or livestock and includes practices such as riparian buffers, windbreaks, and fencerows (for more information on agroforestry visit http://nac.unl.edu/).

Woody florals can add significant value to agroforestry plantings, make unique additions to home landscaping, or provide production opportunities on small or large scales. As an example, a demonstration at the Catawba Sustainability Center in Catawba, Virginia was planted in an old hay field near a creek (for more information visit http://www.vtrc.vt.edu/catawba/). The planting includes multiple woody floral species and was strategically placed to extend an agroforestry riparian buffer.

Woody florals are typically managed using a coppice system, which is a technique where certain tree or shrub species are purposively cut to encourage sprouting (Figure 1). In a coppice system, plants are allowed to grow for about 2 to 5 years at which point the stems are cut and sold. After being cut, new stems sprout and are allowed to regrow for 2 to 3 years when they can be cut and sold again.



**Figure 1.** Woody florals are managed as coppiced trees and shrubs. The stems are cut every 2-3 years and grow back.



**Figure 2.** Woody florals can be grown in rows with 4 to 6 feet between plant and enough space for mowing equipment between rows.

2012 Virginia Polytechnic Institute and State University ANR-22NP



http://pubs.ext.vt.edu/ANR/ANR-22/ANR-22NP_pdf.pdf

NFS01-2007

NEBRASKA FOREST SERVICE

Nebraska IANR

## A Grower's Guide to Producing Woody Floral Stems

Christine M. Meyer[1], Dr. Scott J. Josiah[2], Troy Pabst[3] and Becky Erdkamp[4]

### What Are Woody Florals?

Any woody species with a colorful or unusually shaped stem, bud, flower, fruit or bark can produce a decorative woody floral product. Floral designers use these products to enhance arrangements and profit margins by adding interesting color, texture or form and increasing width and height.

Fresh floral design with trellis made from yellow dogwood stems.

Forsythia branches in bloom

Plants that produce woody floral products include species such as curly or corkscrew willow, Scarlet Curls® willow, fantail willow, pussy willow, red and yellowtwig dogwood and red (sweet) birch. Holly is valued for its evergreen leaves (in some species) and bright red berries. Witch hazel, redbud, quince, forsythia, apple, cherry and plum, among others, are prized for their forced flowers.

### Woody Floral Markets

There are good opportunities in the Midwest to produce and market decorative stems for substantial financial returns. For example, wholesale prices (the price paid to a producer by a floral wholesaler) of pussy willow or curly willow stems (3 to 5 feet long) generally run around $0.37-$0.45 per stem (respectively), with larger stems bringing more (Table 1). Flowering branches have similar markets and command higher prices per stem. Fresh stems are sold to retail floral shops, wholesale distributors, directly to consumers at farmers markets and craft shows and for potted window displays used in commercial establishments, urban landscaping and other high-end locations. Extensive markets also exist for dried woody floral stems, particularly curly willow, pussy willow and dogwoods.

Floral greens are cut branches from coniferous trees, such as firs, spruces and pines, for use in wreathes and seasonal decorations. They are harvested from native forests, particularly in Minnesota and Wisconsin and from Christmas tree farms across the Midwest. The floral green industry in Minnesota alone generates $33 million per year in revenues.

Fresh woody florals conservatively comprise at least an $8 million market in the central and eastern United States, with demand increasing. Markets range from highly seasonal (e.g., holly) to year-round (e.g., curly willow).

### Woody Florals as a 'Third Crop'

Plants that produce woody floral products can be a profitable component of diverse agricultural systems because of their substantial markets, rapid growth, relatively quick returns, low capital costs and off-season labor requirements. Woody florals can be integrated into conventional farming systems, for example, by using marginal lands not well-suited to row crops. They provide a win-win for the producer by producing profitable low-input crops, while protecting and enhancing the environment.

Conservation plantings, such as riparian buffers and windbreaks, are good locations for profitable woody floral production. While possible, it is challenging to incorporate woody floral production into alley cropping systems due to the risk of damage from herbicide drift and farming activities.

While not likely to be a primary source of income, these commercially valuable specialty products can provide supplemental income. Depending on the number of plants and cultivars placed into production, woody floral operations can yield gross returns of thousands of dollars per acre (utilizing 2005 yield data). Diversification with woody florals as a 'third crop' also reduces financial risk by increasing the number of sources of income.

The Nebraska Forest Service: Improving peoples' lives by protecting, utilizing and enhancing Nebraska's tree and forest resources.

http://nfs.unl.edu/documents/SpecialtyForest/growersguideweb2007.pdf

**Caution:** Local/regional market demand – NOT well known, therefore - you must do you own market research to see if there is a market in your area

# Forest Farming Market Opportunity - Perennials

Cultivate perennial native spring flowers for urban shade landscaping – under shaded forest canopy

**Examples:**

- Trillium
- Wild geranium
- Bloodroot
- Mayapple
- Jack-in-the-Pulpit
- Bluebells

# Winning the Marketing Game

- Know what the consumer wants
- Distinguish yourself and your product
- Be a Price Maker
- Control the marketing chain, don't let the marketing chain control you

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# Selected Specialty Crop Market Studies


- Cernusca, M.M. and M.A. Gold. 2015. Breaking down market barriers for elderberry growers and producers. Acta Horticulturae 1061:269-277.
- Cernusca, M.M., M.A. Gold and L.D. Godsey. 2012. Using the Porter Model to Analyze the U.S. Elderberry Industry. Agroforestry Systems 86(3):365-377.
- Cernusca, M.M., F.X. Aguilar and M.A. Gold. 2011. Post-purchase Evaluation of U.S. Consumers' Preferences for Chestnuts. Agroforestry Systems 86(3):355-364.
- Aguilar F.X., M.M. Cernusca, M.A. Gold and C. Barbieri. 2010. Frequency of consumption, familiarity and preferences for chestnuts in Missouri. Agroforestry Systems 79:19-29.
- Aguilar, F.X., M.M. Cernusca, and M.A. Gold. 2009. A preliminary assessment of consumer preferences for chestnuts (Castanea spp.) using conjoint analysis. HortTechnology 19(1): 216-223.
- Valdivia, C., L. Zabek, J. Arbuckle, M. Gold and C. Flora. 2009. Human and Institutional Dimensions of Agroforestry. Chapter 13. In: Garrett, H.E. (ed). North American Agroforestry: An Integrated Science and Practice. 2nd Edition. Agronomy Society of America, Madison, WI.
- Gold, M.A., M.M. Cernusca and L.D. Godsey. 2009. Agroforestry Product Markets and Marketing. Chapter 11. In: Garrett, H.E. (ed). North American Agroforestry: An Integrated Science and Practice. 2nd Edition. Agronomy Society of America, Madison, WI.

# Selected Specialty Crop Market Studies


- Cernusca, M.M., M.A. Gold and L.D. Godsey. 2008. Influencing consumer awareness through the Missouri chestnut roast. Journal of Extension 46(6). Published online. 8 p. http://www.joe.org/joe/2008december/rb7p.shtml
- Gold, M.A., M.M. Cernusca and L.D. Godsey. 2008. A competitive market analysis of the U.S. shiitake mushroom marketplace. HortTechnology 18(3): 489-499.
- Gold, M.A., M.M. Cernusca and L.D. Godsey. 2006. Competitive Market Analysis: Chestnut Producers. HortTechnology 16(2): 360-369.
- Gold, M.A., L.D. Godsey and M.M. Cernusca. 2005. Competitive market analysis of eastern red cedar. Forest Products Journal 55(12): 58-65.
- Gold, M.A., M.M. Cernusca and L.D. Godsey. 2005. Update on consumers' preferences for chestnuts. HortTechnology 15(4):904-906.
- Gold, M.A., M.M. Cernusca and L.D. Godsey. 2004. Comparing consumer preferences for chestnuts with eastern black walnuts and pecans. HortTechnology 14(4):583-589.
- Gold, M.A., L.D. Godsey and S.J. Josiah. 2004. Markets and Marketing Strategy for Agroforestry Specialty Products in North America. Agroforestry Systems 61:371-382.


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