

Forest Farming in Virginia



Photo courtesy of Cathie Bukowski

Not a Ginseng talk...



Some harvested 2 and 3 times the rate of American Ginseng

Goldenseal*, Bloodroot*, Black cohosh*, Mayapple*, Virginia snakeroot*, Bethroot*, Blue cohosh*, False unicorn*, Wild yam*, Cranesbill*, Slippery elm*, Stone root*, Solomon's seal (True)*, Fringe tree *
Cherry (Prunus), Sassafras, True unicorn *, Prickly ash*, Reishi

Walnut (leaves, bark, hulls), Indian Turnip/Jack in the pulpit, Queen of the Meadow, Witch Hazel (leaves, bark), Spignet/Spikenard, Black Indian Hemp/Dogbane, Skunk Cabbage, Black Haw(bark), Patridgeberry/Squaw Vine (aerial), Chaga (fungi), Wild Ginger (root), Witch Hazel (leaves, bark) Butterfly Weed/Pleurisy (root), Hellebore (root), Hydrangea (root), Solomon's Seal (False, root), Yellow Dock (root), Fringe Tree (root bark), Sassafras (leaves, root bark) Sumac bark, Boneset (aerial) Ginseng (aerial). Mullein (aerial), Turkey Tail (fungi), Burdock (root), Dandelion (root), Hollow Joe Pye Weed (root), Paw Paw (bark), White Ash (bark), White Baneberry (root), Willow (bark), Bee Balm (aerial) Chestnut (leaves), Poison Ivy Leaf (leaves), Wild lettuce (root), Elderberry (fruit), Bellwort (root) Cicada Shells

It IS a talk about...

That and other non-timber products in VA and beyond
Opportunities to add value to woodlands through cultivation

Forest Farming and Non-Timber Forest Products

Current Situation

Opportunities and Constraints

Next Steps



















Blended...



Blended

Agroforestry... land-use that manages competition and optimizes benefits when trees are combined with crops and/or livestock (Garrett 1997)



Not...



Not...





Is...

National Agroforestry Center



Not...

Definitely not...



Is...



In the field...

Along creeksides...





In the woods...

Big farms...





Small farms...



In places near...

And far...

Why is agroforestry relevant?

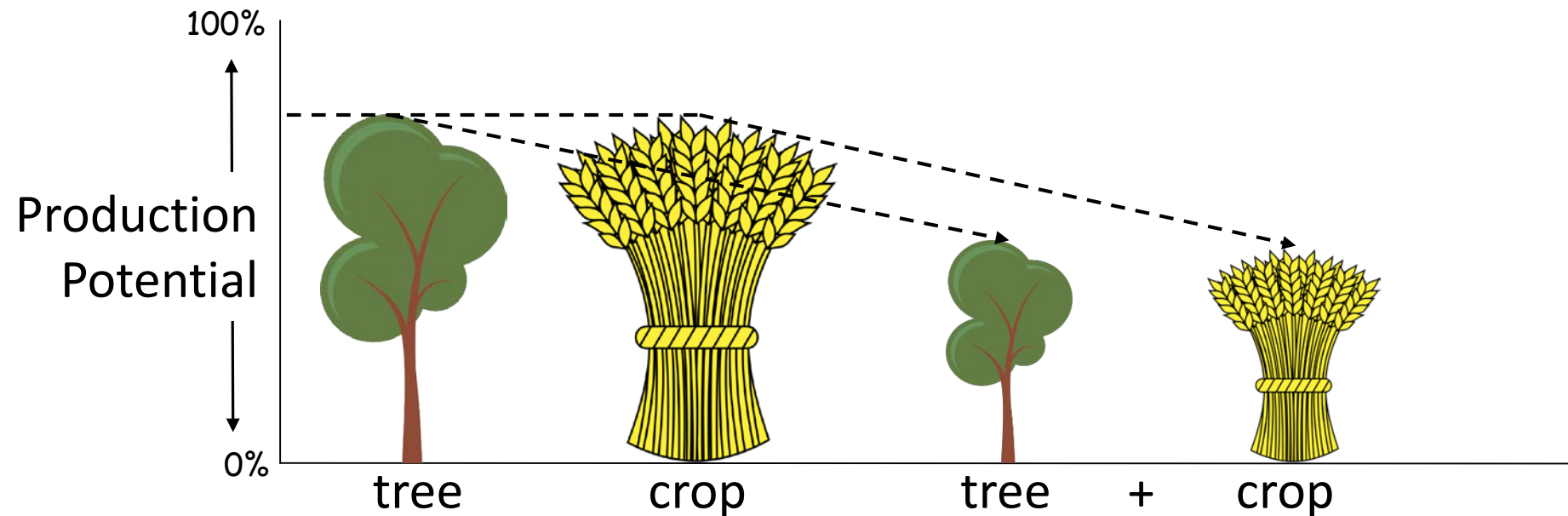
Total production from combinations of crops and trees exceeds the production of just one of those crops grown alone on the same site

Different species utilize resources at different times, various rates of efficiency, and assorted vertical and horizontal layers

Why is agroforestry relevant?

Total production from combinations of crops and trees exceeds the production of just one of those crops grown alone on the same site

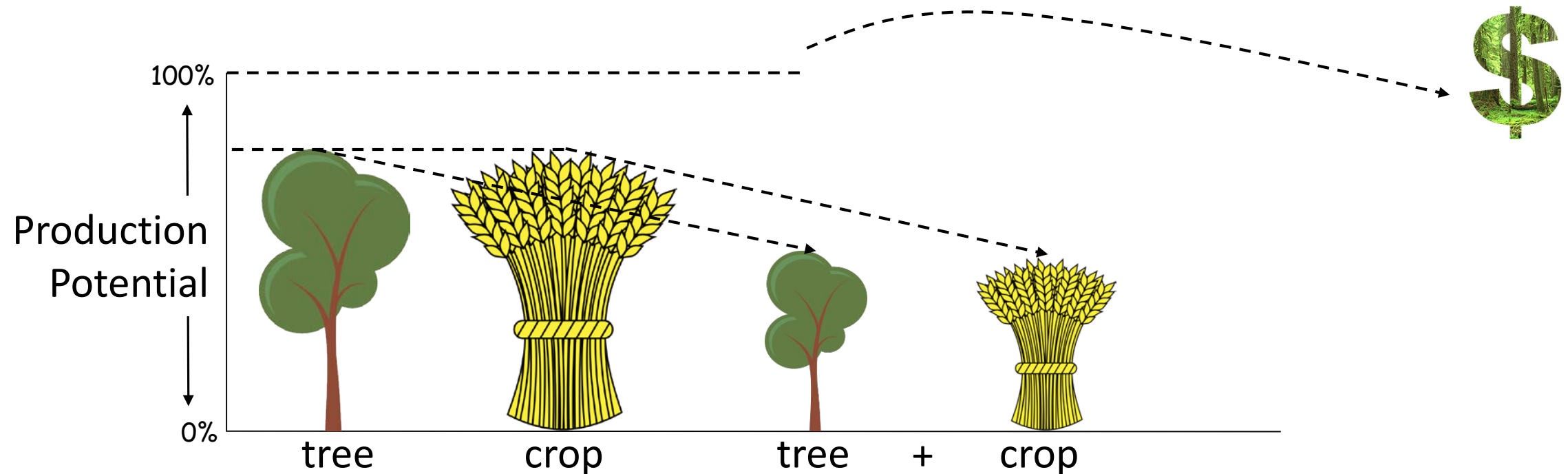
Different species utilize resources at different times, various rates of efficiency, and assorted vertical and horizontal layers



Why is agroforestry relevant?

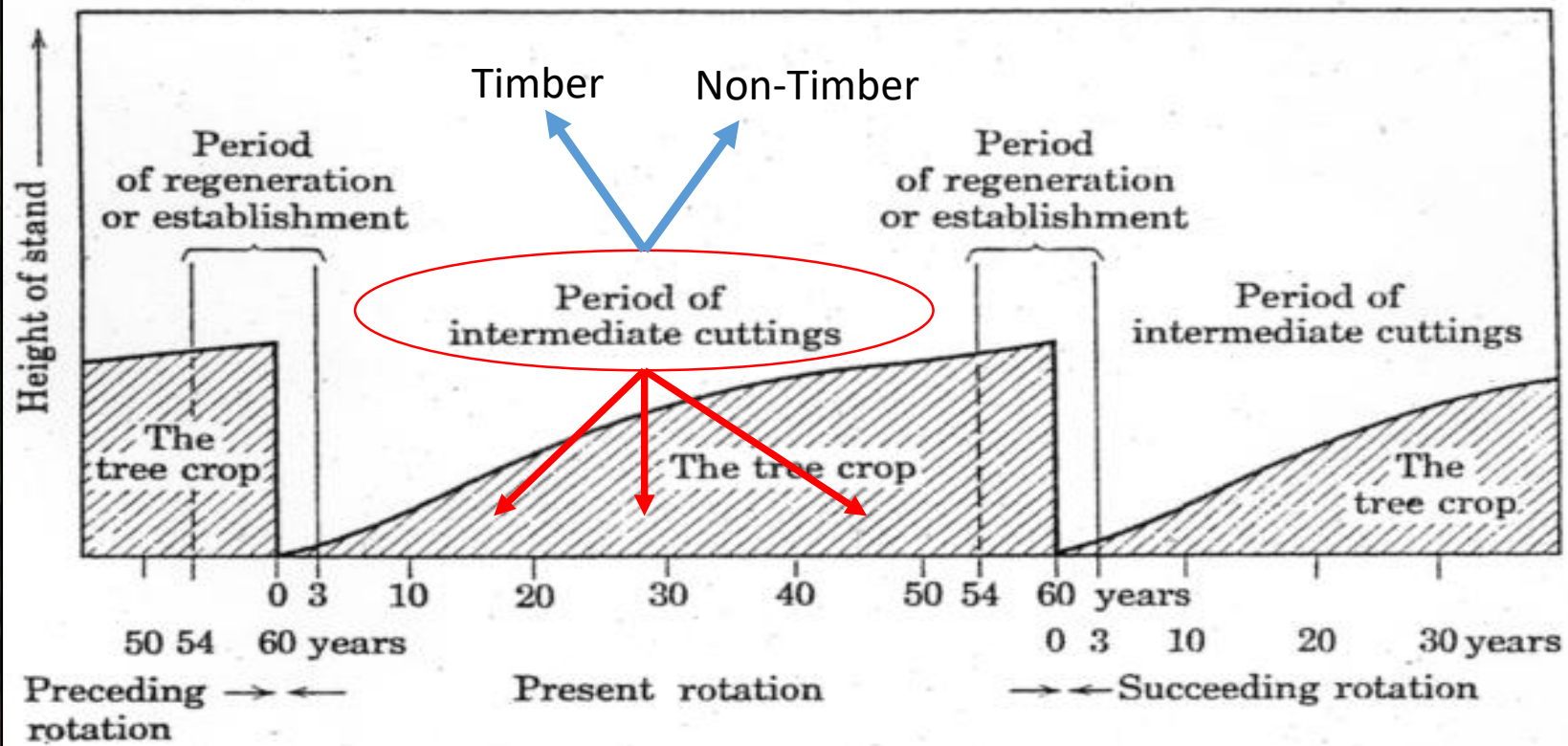
Total production from combinations of crops and trees exceeds the production of just one of those crops grown alone on the same site

Different species utilize resources at different times, various rates of efficiency, and assorted vertical and horizontal layers











Forest Farming

GROWING & MARKETING

Ginseng, Goldenseal & Other Woodland Medicinals

W. Scott Persons
Jeanine M. Davis



Farming the Woods

AN INTEGRATED PERMACULTURE APPROACH TO
GROWING FOOD AND MEDICINALS IN TEMPERATE FORESTS

KEN MUDGE AND STEVE GABRIEL

Foreword by John F. Munsell



With information on forest farming in a changing climate, mushrooms,
sugaring, ginseng, fruit and nut trees, and more . . .

A photograph of a forest floor. In the foreground, there is a dense patch of bright green, broad-leaved plants growing from a bed of brown, fallen leaves and moss. Several large, weathered logs are scattered across the scene, some lying horizontally and others at an angle. The background shows a dense forest of tall, thin trees with green foliage, suggesting a healthy, mature forest environment.

Non-Timber Forest Products (NTFPs)

Plants, parts of plants, fungi, and other biological material that are harvested from natural, manipulated, or disturbed forests and used for commercial or personal value

Non-Timber Forest Products

Medicinal

Edible

Floral and Decorative

Specialty



Bloodroot – *Sanguinaria canadensis* credit: Jeanine Davis

Medicinal

Nutraceutical

Holistic

Ethnobotanical

Wood (cedar oils)

Bark (slippery elm)

Buds (cottonwood)

Leaves (catnip)

Roots (goldenseal)

Fruit/flowers (St. John's Wort)

Pollen (ash)



Credit: Eric Burkhart

Edible

Mushrooms

Nuts

Honey

Syrup

Fruit, leaves, roots of plants and ferns

Berries for jams, jellies, juices, wines



Floral and Decorative

Greenery (galax)

Tips (balsam fir)

Berries (holly)

Flowers (rhododendron)

Straw/cones (pine)



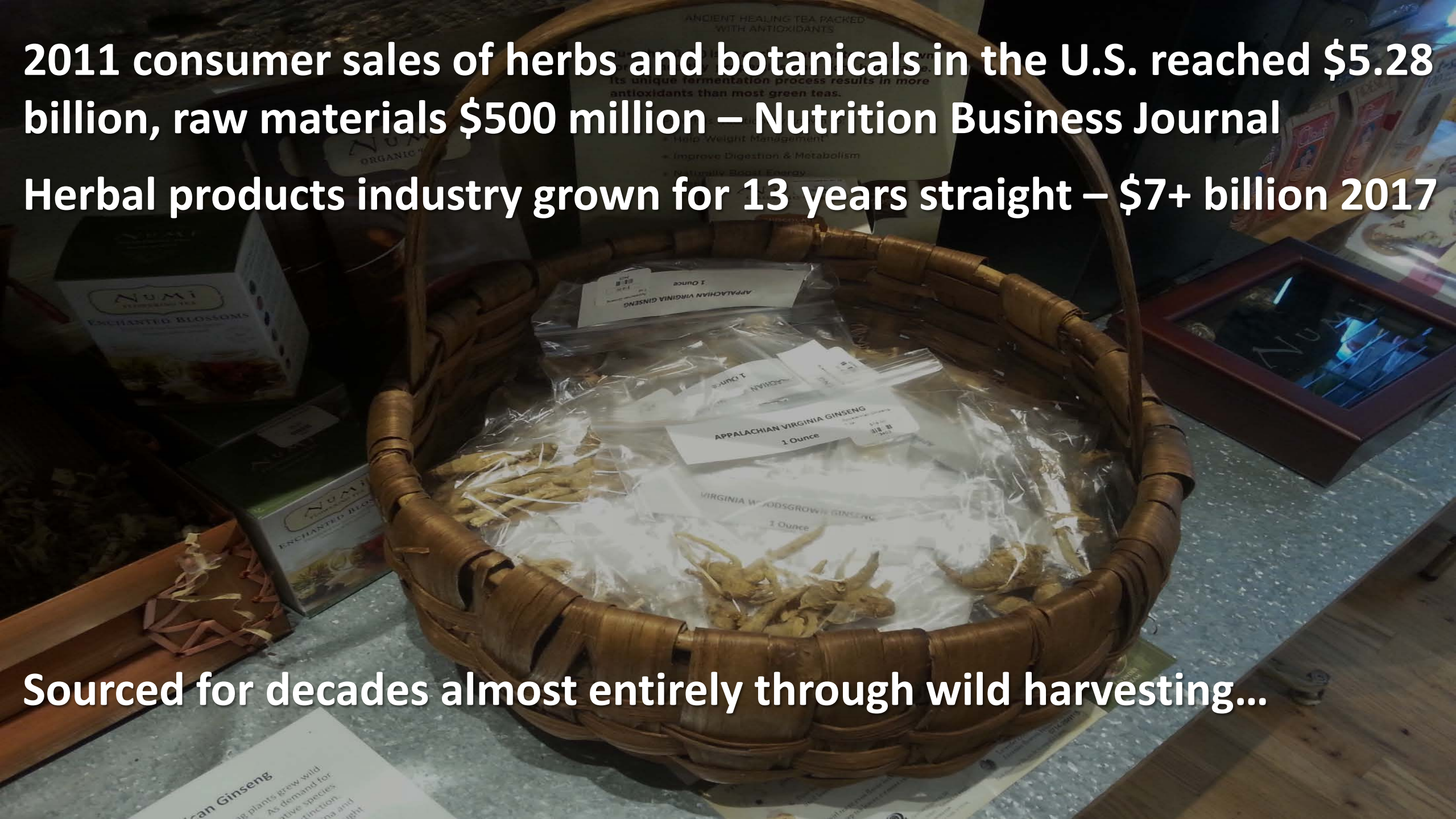
Specialty/Craft



Credit: Jim Chamberlain

2011 consumer sales of herbs and botanicals in the U.S. reached \$5.28 billion, raw materials \$500 million – Nutrition Business Journal
Herbal products industry grown for 13 years straight – \$7+ billion 2017

Sourced for decades almost entirely through wild harvesting...



WILDCRAFTING

TIPS AND TRICKS







Forest Farming

The intentional cultivation of high-value NTFPs under a forest canopy that is managed to maintain suitable growing conditions



Credit: Eric Burkhart



Woods Grown
Intensive – think gardening

Woods Grown

Intensive, think gardening





Wild Simulated
Less intensive



Wild Simulated
Less intensive



**Managed Wild Populations
Extensive but intentional**

Farming is one thing, sales is another



Fact of the matter is that forest farming is relatively rare... Why?

Current Situation

**Changing NTFP market focusing on traceable,
predictable supply and with teeth in terms of
revenue potential and monitoring for sustainability**

**Forest farming provides an opportunity to add value
to NTFP supply chains through chain of custody
which meets the needs of industry and consumers**

Leading Industry Association Speaks Directly to Nutrition Industry Executive Readers

A New Domestic, Sustainable Supply of Forest Cultivated Medicinal Herbs

quences of long-term wild harvests of slow growing forest medicinal plants, such as black cohosh, goldenseal and American ginseng, are increasingly in question and threats to native populations could lead to shortages in supply that affect the availability of these sought after herbal products. Additionally, attempts to source raw materials from elsewhere and internationally can create expensive quality control challenges, adding to increasing consumer concern and scrutiny.

The ABFFC has trained hundreds of new and aspiring forest farmers in Appalachia and beyond and connected stakeholders across the industry.

Many in the Appalachian forest region are interested in native medicinal herbs, but cultivation of these plants in their native forested settings for sale has been constrained by historically low prices paid for raw materials that are typically gathered from the wild. However, the situation is changing due to concerns about plant population sustainability and product quality combined with growing demand for products that are "Made in America."

Forest farming of native woodland medicinal plants allows for increased quality control and traceability across the supply chain, while keeping forest ecosystems intact and conserving wild plant populations, attending to main points of concern among the growing herbal products consumer base.

Additionally, a new and growing body of research supports the cultivation of herbs within their native environment and surrounded by companion species and associated flora and fungi for development of optimal chemical activity. Finally, forest farming also provides a new income opportunity for many in Appalachia, a region of historic economic distress, which has recently been further strapped in the face of a dwindling coal mining industry. **NIE**

Learn More:

ABFFC website:
www.appalachianforestfarmers.org/

ABFFC YouTube channel with nearly 200 videos on forest farming, ranging from growing, harvesting, processing, marketing and how to make value added products to stories featuring beginning and long-time farmers:
www.youtube.com/channel/UCAZP07pEpCzWuGGel1veWQ

Farmer feature videos:

Harding's Farm:
www.youtube.com/watch?v=JVal60N-v80
Equinox Botanicals:
www.youtube.com/watch?v=lp26gOfQheo
Eliana's Garden:
www.youtube.com/watch?v=g1eZ7WFMTNE&t=1s

Different forest farming methods:

www.youtube.com/watch?v=jcLVldmW34
www.youtube.com/watch?v=JnrgLZvewk



Michael McGuffin,
President and Board of Trustees,
American Herbal Products
Association (AHPA)

© 2013 American Herbal Products Association



October 2013 • www.nutritionbusiness.com

Evolving value chain Scaling?





Why farm in Virginia's forests?

Lots of forestland and forest owners
Iconic herbal products species in Appalachia

Forest farmed material historically small component of supply
Price point problem?

Growth and change in herbal products markets
Quality, sustainability and discriminating consumers game changers

Mr. A. P. Russell, deceased, sits beside a 1700-pound shipment of ginseng in his general store at Buckhannon. All the fabled roots were destined to China



Virginia leading the way

Cultivating Forest Medicinals, Creating Healthy Economy

By Eliza Laubach

Appalachia's forests feature an especially concentrated diversity of medicinal plants. From the famous ginseng to lesser-known false unicorn, many of these plants are valued in today's herbalism industry.

A traditional culture of harvesting plants like ginseng and ramps from the region's expansive forests has long helped to sustain area families. Now, a movement called forest farming is emerging to grow these plants in private forestland to decrease strains on plant populations and strengthen the market for Appalachian botanicals.

Cultivators Coalesce

Shafts of afternoon sunlight dapple the forest floor. A path bordered by partly rotten branches

Crops Research and Extension Center in Mills River, N.C., is a learning tool for extension agents, graduate students and members of the WNC Medicinal Herb Growers Club. All work together to plant the seeds and track the health of Appalachian forest medicinal plants.

Lorri Burra, a member of the club, first planted ginseng on her land seven years ago in an old box spring frame. For two years, she saw nothing, so she stopped looking. Then last year, she saw the ginseng.

"The plants move around," she says, "you can't even weed." Sure enough, a ginseng plant grows outside of the box.

Jeanine Davis, extension specialist and a teacher to Burra and many others, specializes in research and development for growing new crops,



Michelle Pridgen, above, dug black cohosh last fall. This autumn, she plans to harvest it again. Photo by Priya Jaishanker. Other plants are commonly misidentified as black cohosh, left. There are 23 temperate species in black cohosh's genus, Actaea. Photo by Eliza Laubach

the U.S. Department of Agriculture and consists of 14 partners: universities, nonprofit organizations, governmental agencies and a regional extension program. Members include herbal medicine processors and growers.

The most commonly tended roots like ginseng and black cohosh

woodland coves and is heavily dug in the fall harvest season. It has several lookalikes and is not always correctly identified when wild harvested.

Black cohosh often fetches a lower price than stinging nettle, according to Pennsylvania State University ethnobotanist and coalition partner Eric Burkhardt. Even though nettle, more like a weed and black



United States
Department of
Agriculture

National Institute
of Food
and Agriculture

APPALACHIAN
sustainable
DEVELOPMENT



Southern Regional
Extension Forestry



BLUE RIDGE WOODLAND GROWERS

PENNSYLVANIA STATE UNIVERSITY



NC STATE UNIVERSITY

BECOME A MEMBER or LOGIN



APPALACHIAN BEGINNING
FOREST FARMER COALITION

ABOUT CALENDAR RESOURCES ENGAGE

Appalachian Beginning Forest Farmer Coalition

Growing Opportunities Beneath the Canopy

BECOME A MEMBER



ABFFC Facebook



Appalachian Beginning Forest
Farmer Coalition

4 days ago

Are you interested in learning the
many techniques for adding value to

UPCOMING EVENTS

SORT OPTIONS

29⁻¹
SEP OCT

FOREST FARMING - A

14
OCT

GINSENG

20⁻²²
OCT

FROM HARVEST TO

1000+ Members



14 Forest Farming Training Programs
700+

Compendium



NC STATE UNIVERSITY

Black Cohosh

(*Actaea racemosa* L.)

Introduction

Botanical Information

Black cohosh [*Actaea racemosa* (L.) formerly *Cimicifuga racemosa*] is a member of the Ranunculaceae family. It is a native plant found in rich woodlands from as far north as Maine south to Georgia, and west to Missouri and Indiana. In NC can be found at elevations up to 4,000 ft and is most common in the western part of the state. It is an herbaceous perennial reach height of over four ft tall and can grow 18 to 22 inches per the growing season. The leaves are large with three pinnate divisions and irregularly toothed leaflets. Tall plumes of flowers, on wand-like flower stalks, bloom from May to June over six ft. From August to October, seeds develop in make a rattling sound when shaken. At this stage, the seed is ready to be harvested.



Dear Community Members,

Big changes are underway in our forest farming community given the USDA's recent award of almost \$650,000 to a forest farming alliance of non-governmental organizations, universities, and government agencies. The support is part of the Beginning Farmer and Rancher Development Program, which was launched in 2008 to invest in next-generation farmers and ranchers. The alliance includes many members of the forest farming community and will deliver an array of services to beginning forest farmers, connect key actors across the domestic medicinal forest plant supply chain, and bring the farming of plant populations to the forefront in Appalachia and beyond. This newsletter provides a brief overview of project activities and upcoming opportunities for this and other community member projects and initiatives. Also, Holly Chittum has taken over Forest Farming Footnotes responsibilities from Catherine Bokroski, who is working diligently to complete her graduate program. We all owe Cathie a great deal of thanks for her excellent work in the past. Kudos! It is good to be back at it and communicating. Hope you enjoy this issue!

John Russell Holly Chittum Priya Leishanker

TABLE OF CONTENTS

Who we are	2
Become a member!	3
Regional projects	4-6
Upcoming events	7
Project development	8
A look back at 2015	9

Become a Coalition Member

There are many things available to you as a member of the forest farming community. These include access to training, a farm-to-market program, opportunities for connecting with industry representatives, and access to seed programs and much more.

Regional Projects

Seed sharing happening in North Carolina, Pennsylvania, and Virginia with local partners. Some exciting developments are happening in the realm of forest seed collection.

12,000+ YouTube Subscribers, 2 million+ views

Technology

Forest Farming Site Evaluation Report

This report is provided by Virginia Tech's Center for Geospatial Information Technology for the PlantShoe project. The project is supported by the eXtension Foundation. The report serves as a siting tool that assesses habitat quality for plant species across a selected landscape broken out by 10 meter square grids. The ranking is expert-based and uses environmental criteria (e.g., percent forest cover, slope) identified in relevant literature. It is intended to help forest farmers and consultants when deciding where to establish forest farms. It is not a tool for "hunting" woodland plants, nor does it guarantee farming success. It is also not intended to replace on-the-ground feasibility assessments.



Figure 1: USGS Orthoimagery

Geographic Location: 39.6119, -78.1685

Planar Area: 19.38 acres



Black Cohosh

Weight scores (0-100) represent site suitability for each grid cell. Color codes can be used to reference site suitability across the associated maps.

Aspect

The aspect map shown in figure 2 is created from the USGS National Elevation Dataset. This data has a spatial resolution of 1/3 arc-second, ~ 10 meters. [Click here for more information](#)

Class	Weight	Percent of Site
North	100	24.89
Northeast	100	2.45
East	100	2.57
Southeast	50	3.5

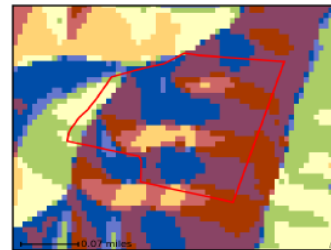
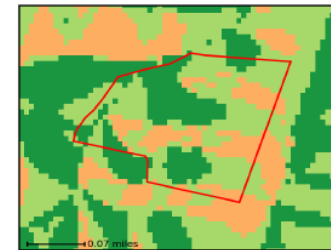


Figure 2: Aspect

Class	Weight	Percent of Site
South	30	5.37
Southwest	50	8.29
West	30	15.89
Northwest	50	37.03



Elevation

The contour map shown in figure 3 is created from the USGS National Elevation Dataset. This data has a spatial resolution of 1/3 arc-second, ~ 10 meters. The contours are generated dynamically at a 10 foot interval.

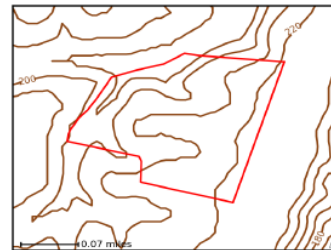


Figure 3: Elevation

Elevation Classifications

Class	Weight	Percent of Site
< 200	0	25.18
200 - 1200	100	74.82
> 1200	0	0.0



Species Summary

The sub-scores for the variables are accumulated to calculate a total score for each species. The total score for each species can be averaged to calculate an overall score that describes the overall suitability of the site. Possible scores range from 0-700.

Species	Aspect	Elevation	Slope	Soil Fertility	Soil Moisture	Soil Drainage	Forest Canopy	Total Score
Black Cohosh	42.238	74.82	87.46	6.27	46.69	39.94	56.5	353.918
Bloodroot	42.238	74.82	87.46	6.27	0.0	39.94	28.24	278.968
Goldenseal	42.238	74.82	87.46	6.27	0.0	39.94	28.24	278.968
Ramps	56.36	0.0	89.26	6.27	0.0	39.94	72.46	264.29
Average Score								294.036



Figure 34: Overall site suitability scores.

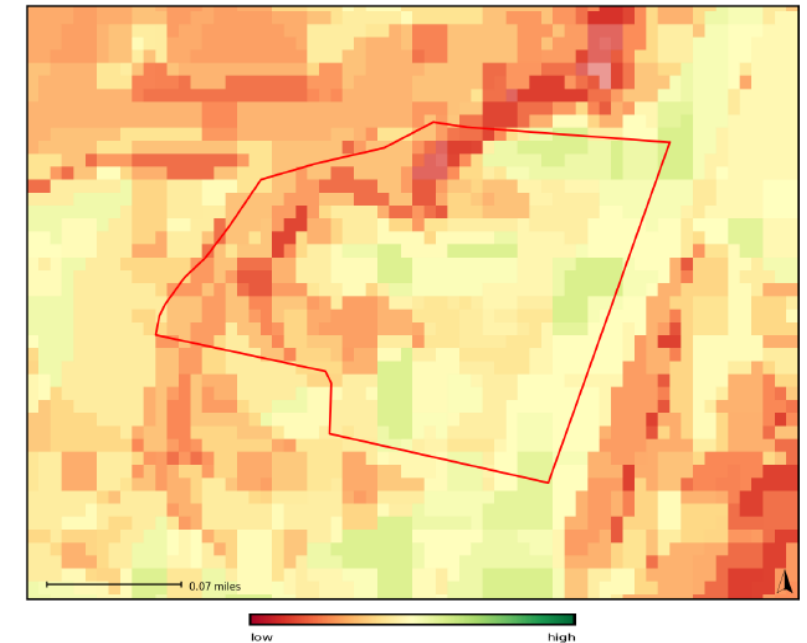


Figure 35: Overall site suitability.



United States
Department of
Agriculture

National Institute
of Food
and Agriculture

APPALACHIAN
sustainable
DEVELOPMENT



NC STATE UNIVERSITY



PENNSTATE.



YEW MOUNTAIN CENTER



Organic
Growers
School



PRESS RELEASES

Warner Secures More than \$590,000 for Project to Expand Forest Farming Coalition Efforts in Appalachia

Oct 18 2019

MARK R. WARNER
VIRGINIA

United States Senate
WASHINGTON, DC 20510-4806

May 15, 2019

COMMITTEES:
FINANCE
BANKING, HOUSING, AND
URBAN AFFAIRS
BUDGET
INTELLIGENCE
RULES AND ADMINISTRATION

Dr. J. Scott Angle
Director
National Institute of Food and Agriculture
305-A Whitten Building
Washington, DC 20024

Dear Director Angle:

I write today in support of Appalachian Sustainable Development's (ASD) grant proposal to the United States Department of Agriculture's (USDA) Beginning Farmer and Rancher Development Program (BFRDP) for the project titled "Seeded and Growing: Sustaining Appalachian Beginning Forest Farmer Education and Engagement."

I understand this project would continue a multi-state collaborative effort supporting education, mentoring, and technical assistance programs designed to foster and expand production and market opportunities for non-timber forest products (NTFPs) in Central Appalachia. The Appalachian region has some of the richest, most diverse forests in the country, capable of growing a valuable array of botanicals including ginseng, goldenseal, and black cohosh. The proposed work will mobilize essential resources to help increase raw material supply chains in the region, which are currently undervalued and underdeveloped.

This project furthers ASD's mission to create a more diverse and resilient economy in Appalachia through its support of local agriculture initiatives. The Appalachian Beginning Forest Farmer Coalition, funded in part through the USDA BFRDP, has played an instrumental role in improving agroforestry production opportunities in Appalachia by educating the public and creating a strong forest farming network in the region. However, continued investment in this initiative is needed to ensure that this project is able to reach its full potential. I am highly committed to finding ways to mobilize and sustain advancement of this agricultural opportunity in Appalachia.

I ask that you give this proposal every appropriate consideration. Should you or your staff have any questions, please contact Micah Barbour at 202-224-6291 or Micah_Barbour@warner.senate.gov.

Sincerely,

Mark R. Warner
Mark R. Warner
United States Senator

oth D-VA) announced \$593,056 in federal funding for a Virginia Tech Farmer Coalition (ABFFC) by increasing membership and improving allows a strong push by Sen. Warner, who has [urged continued](#) ulture (NIFA). The funding was awarded through the Beginning Farmer s grants to support education, mentoring, and technical assistance

st Virginia, I know the importance of forest farming for both our econon secure this funding, which will foster leadership and further strengthe

they face and how I can support their work at the federal level. One big ant to farm. I'm excited that this federal funding will help train the next

ple, decorative, and handicraft non-timber forest products (NTFP) under abitats that favor growth and enhance production. Forest farming allow ated, and sustainable. In 2016, consumers spent an estimated \$7.45 illion from 2013.

ental and non-governmental organizations that share a common goal o ilities among forest farmers. The project, "Seeded and Growing:

MARK R. WARNER
VIRGINIA

United States Senate
WASHINGTON, DC 20510-4806

COMMITTEES:
FINANCE
BANKING, HOUSING, AND
URBAN AFFAIRS
BUDGET
INTELLIGENCE
RULES AND ADMINISTRATION

March 19, 2019

The Honorable Vicki Christiansen
Chief
United States Forest Service
201 14th Street, SW
Washington, DC 20024

Dear Chief Christiansen:

I write today concerning the Forest Service's tracking and management of non-timber forest products (NTFPs). The United States has 766 million acres of forests that support local communities, states, and the economy. NTFPs are the plants, fungi, and other biological material that keep our forests healthy and productive. These products are harvested, processed, and sold throughout the nation – primarily in rural communities. Increased attention to these products by the Forest Service would lead to sounder management decisions for the nation's forests and support the people, communities, and industries that rely on NTFPs.

Dozens of herbal, edible, and decorative non-timber plants and fungi grow in our nation's forests, and hundreds of thousands of pounds of raw material are harvested each year and sold to supply a multi-billion dollar specialty crop market. Demand for these products is on the rise globally, and the implications for NTFP management and markets are substantial. Sales in the herbal products industry have increased 13 years in a row and over half of the woodland botanical species that supply herbal product manufacturers are native to the forests of the United States. However, many NTFP markets are underdeveloped because little standardized information is available on the volume, geographic distribution, and pricing for harvested non-timber products. In addition, the timing and quality of raw material are difficult to predict, leading to market-wide inefficiencies. This lack of data hampers business planning and makes long-term resource management impossible.

For decades, the Forest Service has generated an annual Timber Products Output (TPO) report as part of its Forest Inventory and Analysis (FIA) program. TPO reports publish standardized

APPALACHIAN HARVEST





NRCS CIG Grant expand verification in OH & WV



West Virginia Forest Farming Initiative Private Money



Outcomes and impacts

New Partners

Sustainable
Herbs
Program
AMERICAN BOTANICAL COUNCIL



Warren
Wilson
COLLEGE



**Post-harvest processing equipment
and sales assistance nested in
certified food handling facility**

**Aggregates supply from forest farmers
that are Forest Grown Verified**

**2017 1 herbal products company
purchased 50 pounds of 1 species;
2019 8-10 companies seeking
thousands of pounds of 4 species**

10-15+ times average price for wild

**Companies beginning to explore
contracts, standing up planting
stock supply programs**

**Demand currently exceeds supply,
there is room to grow with serious
economic implications**

Revenue? Tracking NTFPs and mapping markets

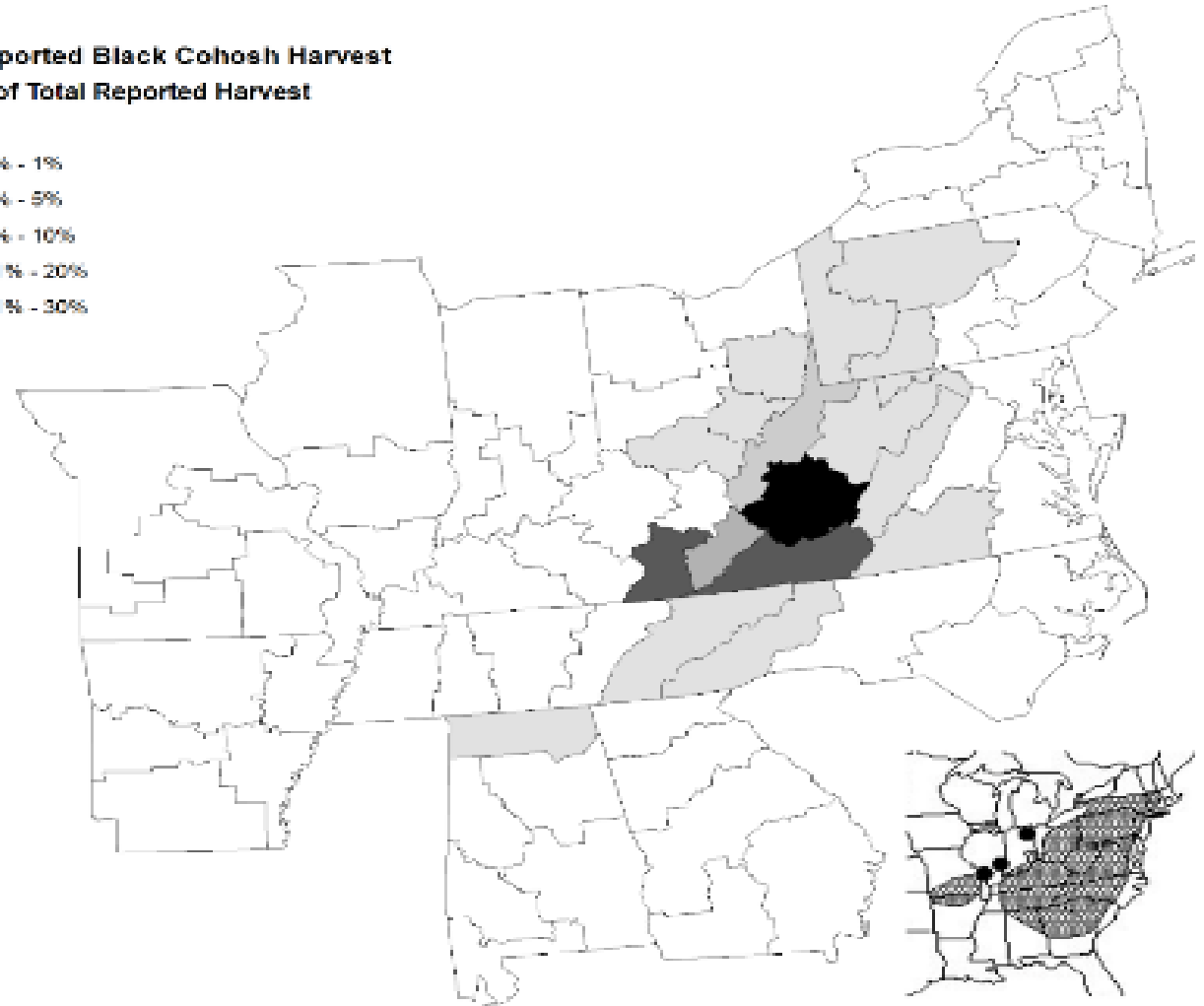
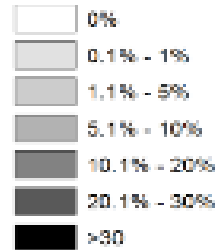


Annual volume, trade location, and average prices?
Primary buyers of iconic Eastern forest herbal plants

Track and map NTFP trade – Black Cohosh Example



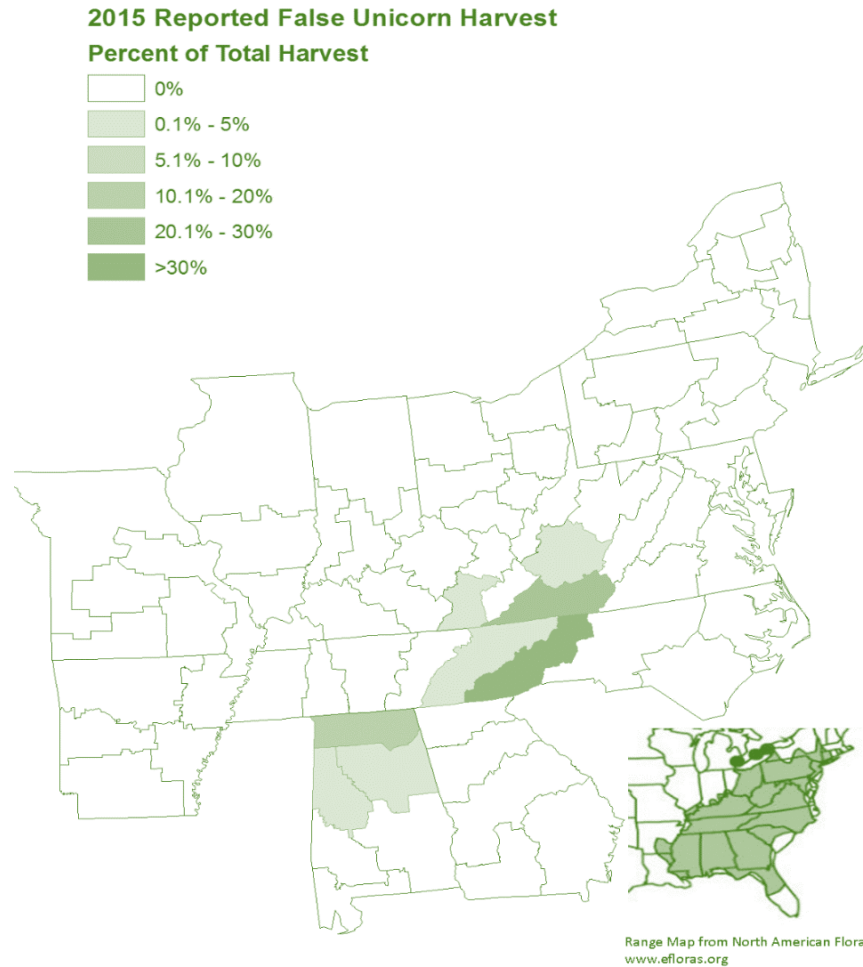
2015 Reported Black Cohosh Harvest
Percent of Total Reported Harvest



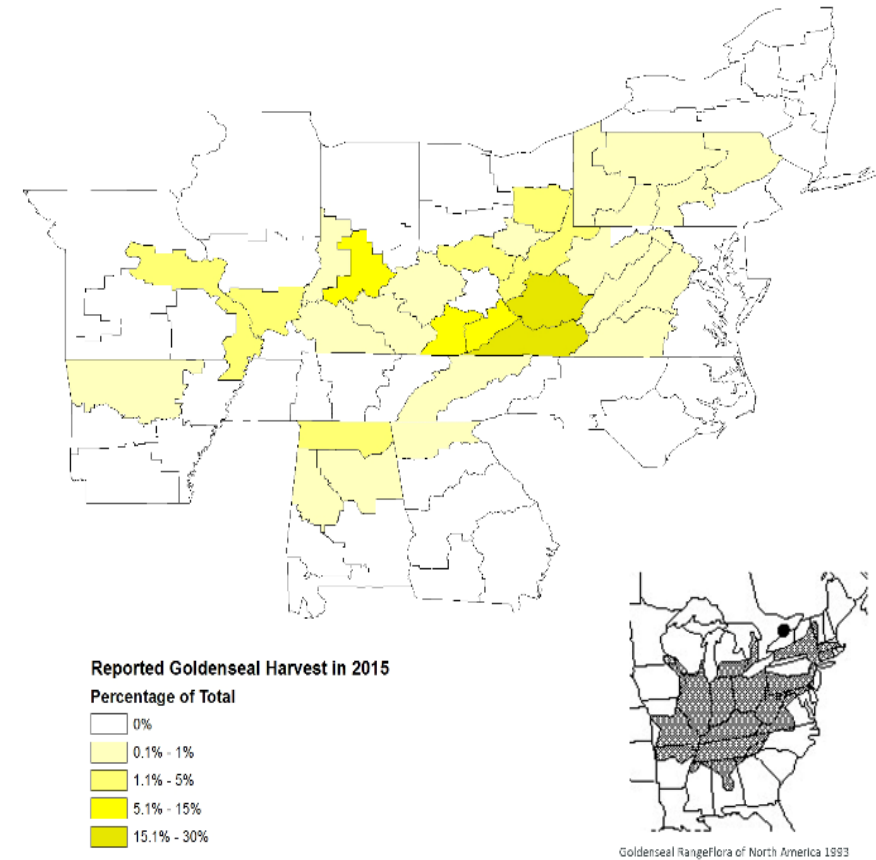
Range Map from North American Herb
www.naherbs.org

Black Cohosh (*Actaea racemosa*) by FIA Zone
Preliminary Projected Volumes – ~264,000 dry pounds

Revenue? Tracking NTFPs and their markets



False Unicorn (*Chamaelirium luteum*)



Goldenseal (*Hydrastis Canadensis*)

Primary Buyer Questionnaire

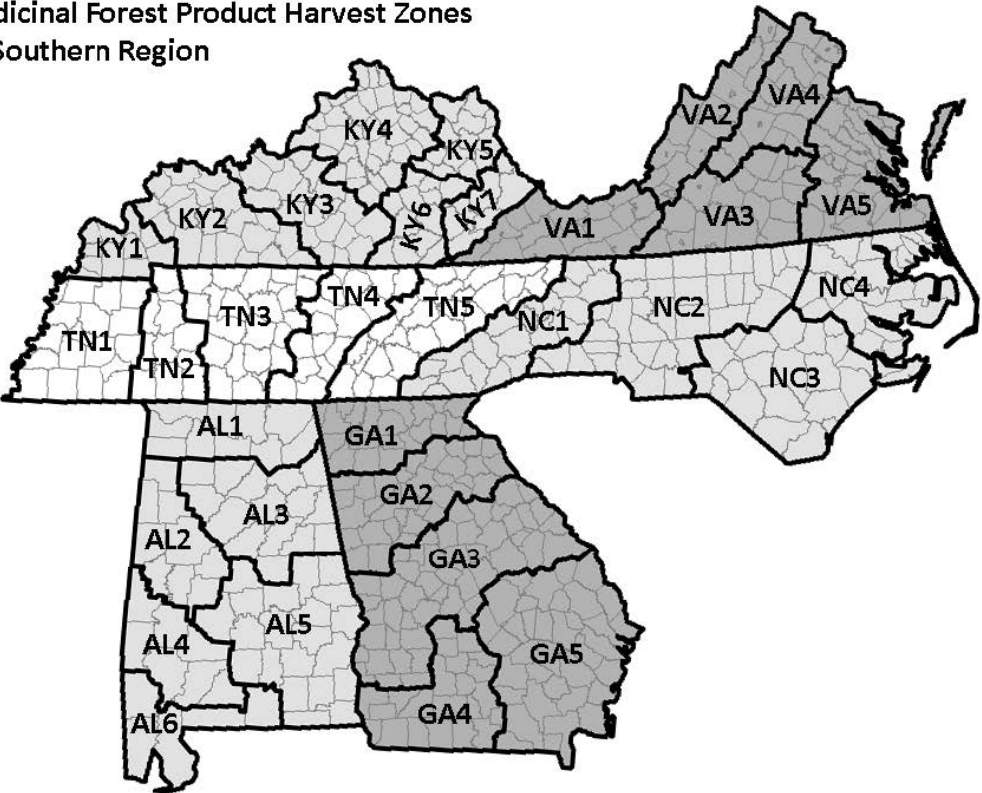
Business Characteristics and Spatial Trade

Virginia Tech RootReport Questionnaire

Part 1: The Business. These questions tell us about the different kinds of companies that purchase medicinal forest products. They allow us to create more accurate assessments of the market and more effective extension services. Questions about employment and whether you sell to other buyers or directly to consumers help us measure the botanical industry's contribution to the regional economy. **Any information you give throughout the survey is confidential and will not be shared.**

- 1) Which of the following was true in 2015?
- ☐ I only bought ginseng in 2015 ☐ I bought **other** medicinal products in 2015 ☐ I bought ginseng **and** other medicinal products in 2015
- ☐ I did not buy **any** medicinal forest products in 2015
- 2) Do you buy any **non-medicinal** forest products (edible plants or products for the floral or craft industry)? These include morels, galax, log moss, ramps, etc.
- ☐ Yes ☐ No
- If you answered **yes**, what non-medicinal forest products do you purchase?
- _____
- _____
- If you bought medicinal products other than ginseng in 2015, please continue. If not, you've completed the survey and can send it in.
- 3) What **percentage** of your medicinal products do you and/or your employees harvest? _____ %
- What **percentage** of your medicinal products are harvested by someone else? _____ % } Should total 100%
- 4) How many people (including yourself) are employed at your company (or the part of your company that works with botanicals)?
- _____ Part time _____ Full time
- 5) Do you manufacture your own consumer products from the plants you buy? (as packaged whole root, teas, tinctures, supplements, etc)
- ☐ Yes ☐ No
- 6) Approximately what percentage of your non-ginseng products do you sell to the following:
- Other Buyers _____ Manufacturers _____ Retailers _____ Consumers _____ Other(Please Specify) _____

Medicinal Forest Product Harvest Zones Southern Region

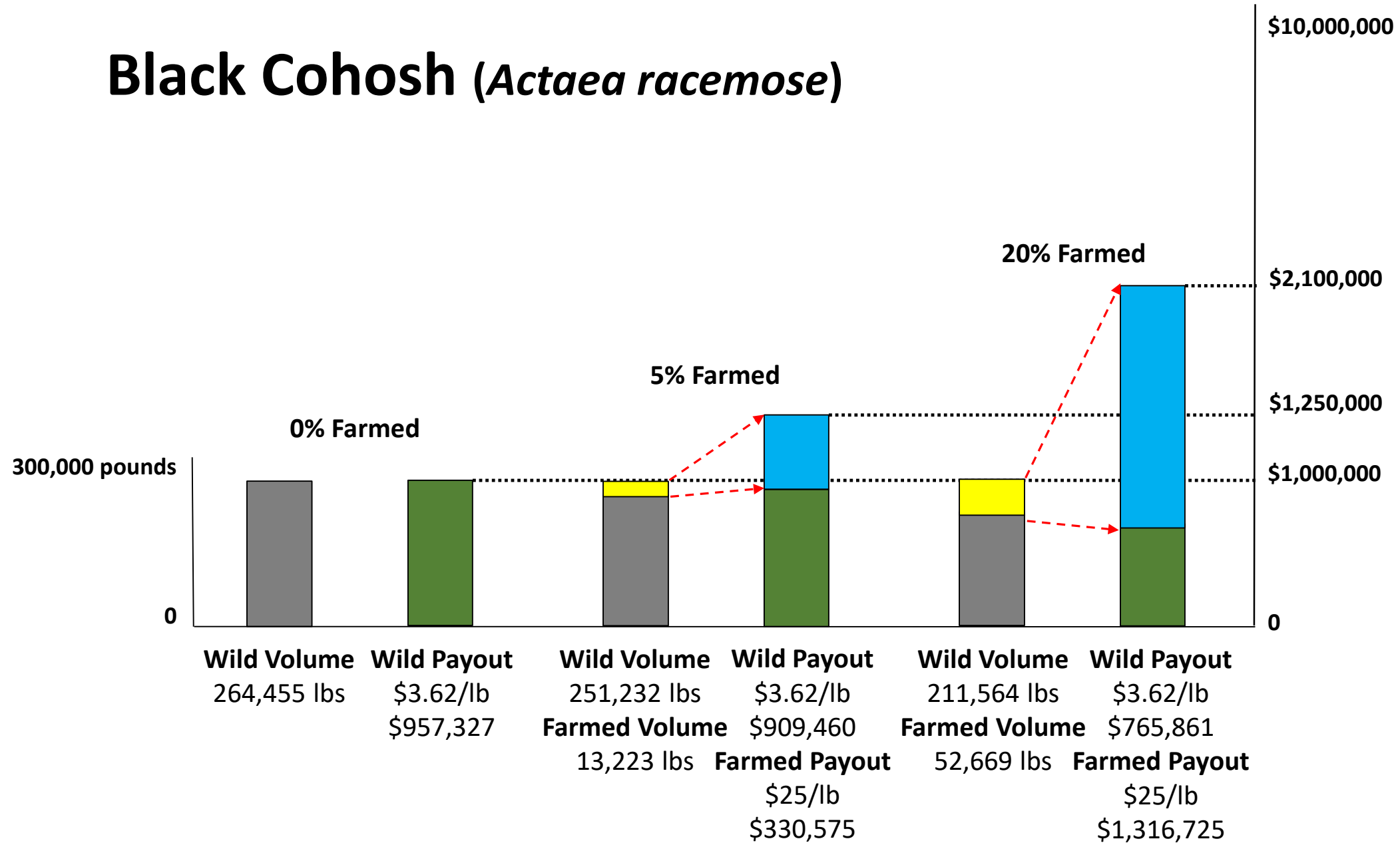


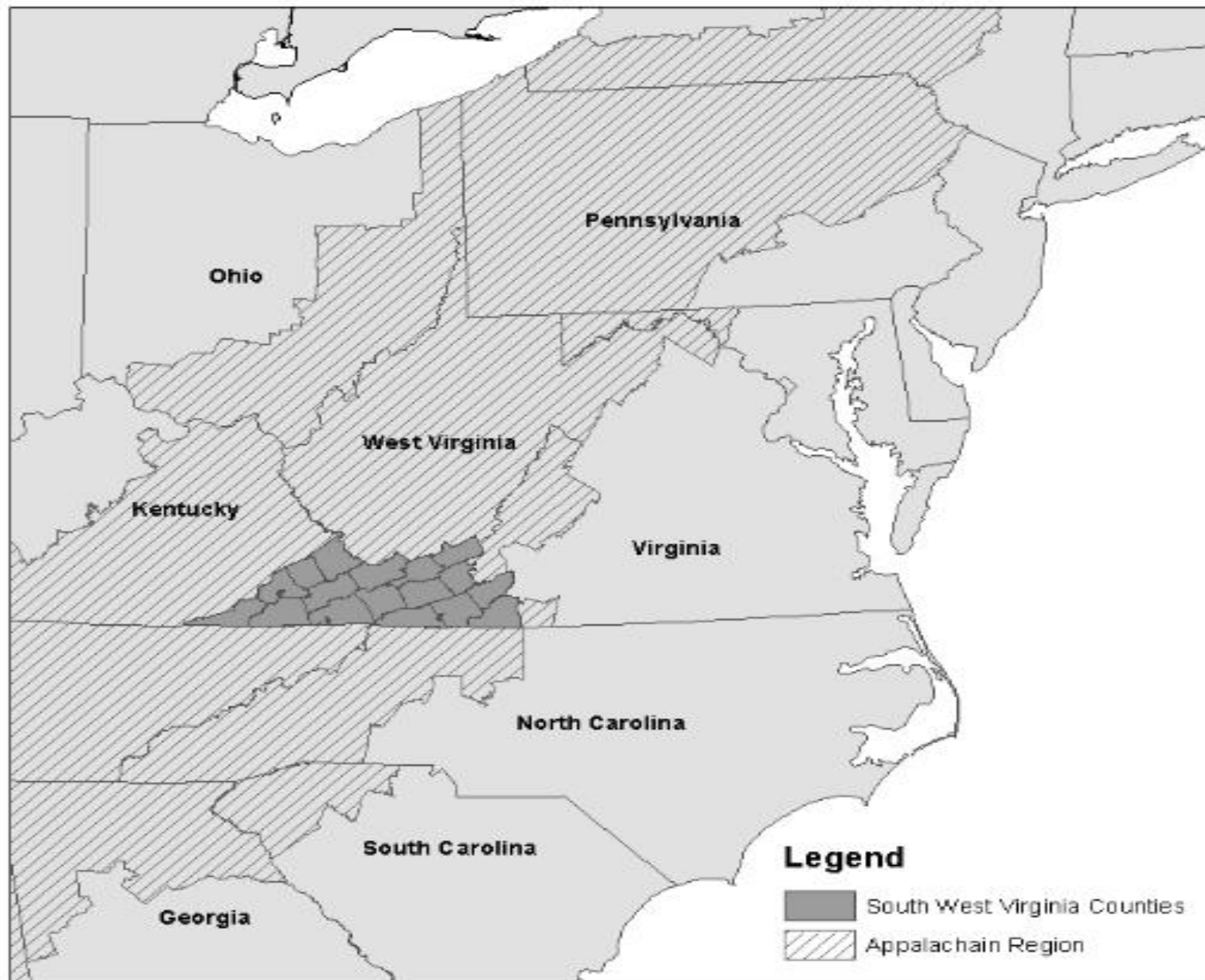
Species	Total Pounds	Mean Dry Price	% of Total Value	Total Value USD\$
Black cohosh	264,455	\$3.62	22%	\$957,327
Bloodroot	21,991	\$10.39	5%	\$228,486
Blue cohosh	3,701	\$2.62	0%	\$9,697
Cranesbill	581	\$2.73	0%	\$1,586
False unicorn	6,143	\$72.14	10%	\$443,156
Goldenseal	106,105	\$22.38	55%	\$2,374,630
Mayapple	13,616	\$3.14	1%	\$42,754
Slippery elm	78,121	\$2.68	5%	\$209,364
Trillium	1,338	\$3.11	0%	\$4,161
VA snakeroot	201	\$84.65	0%	\$17,014
Wild yam	16,675	\$2.44	1%	\$40,687
Sum				\$4,328,864

Species	Total Pounds	Mean Dry Price	% of Total Value	Total Value USD\$
Black cohosh	264,455	\$3.62	22%	\$957,327
Bloodroot	21,991	\$10.39	5%	\$228,486
Blue cohosh	3,701	\$2.62	0%	\$9,697
Cranesbill	581	\$2.73	0%	\$1,586
False unicorn	6,143	\$72.14	10%	\$443,156
Goldenseal	106,105	\$22.38	55%	\$2,374,630
Mayapple	13,616	106,105 * 400 plants/lb = 42.4 million plants		
Slippery elm	78,121			
Trillium	1,338	\$3.11	0%	\$4,161
VA snakeroot	201	\$84.65	0%	\$17,014
Wild yam	16,675	\$2.44	1%	\$40,687
Sum				\$4,328,864

Some preliminary comparisons indicate a 30-fold increase from first point of sale to retail

Black Cohosh (*Actaea racemose*)





Who will farm?

Survey on 3 things

- 1) Interested in forest farming?
- 2) Lease your land to a farmer?
- 3) How much do you need to make?

~1,000 owners

~300 responses

1/3rd interested in farming/leasing

5,000+ acres – farming

1,500+ acres – leasing

Forest Food and Medicine in Contemporary Appalachia

KATIE TROZZO

Virginia Tech

JOHN MUNSELL

Virginia Tech

KIM NIEWOLNY

Virginia Tech

JAMES L. CHAMBERLAIN

US Forest Service Southern Research Station

Forest food and medicine have a long history in Appalachian culture, but the region's social landscape is shifting from in-migration of amenity seekers and out-migration of multigenerational residents in search of economic opportunities. As a result, much of what we know about harvest and use has likely changed. We conducted 16 interviews with people involved in harvesting forest food and medicine in a Southwest Virginia community. Our study focused on participants' mo-

multigenerational participants, they were more inclined toward a broad suite of edible species (mushrooms, nuts, fruit, plants); however for medicinal forest species they limited harvesting to herbaceous plants. Shared motivators offer a starting point for regional programs that address the needs of both multigenerational residents and newcomers. As the future unfolds, residents are collectively shaping the next chapter in Appalachia's forest food and medicine culture in a

Next Steps



Continue with training,
expos, and mentorship

American Forest Farming Council

- Professional association and member services
- Advocacy and awareness platform
- Training and education
- Point of harvest program



AMERICAN
~~APPALACHIAN BEGINNING~~
~~FOREST FARMER COALITION~~
COUNCIL

American Forest Farming Council

3 years – end of 2022



APPALACHIAN BEGINNING
FOREST FARMER COALITION



AMERICAN
FOREST FARMING COUNCIL

Photo courtesy of Cathie Bukowski

American Forest Farming Council

- Professional association and member services
- Advocacy and awareness platform
- Training and education
- Point of harvest program



AMERICAN
FOREST FARMING COUNCIL

COUNCIL

A man wearing a light-colored baseball cap, a white t-shirt, blue jeans, and yellow work gloves is kneeling in a forest. He is using a long-handled tool with a red tip to harvest plants. The forest floor is covered with fallen leaves and green plants. In the background, there are many trees and a white pickup truck parked on a path.

Point-of-Harvest Program

Photo credit: Johnson City Press

Thank you, Questions?

Photo courtesy of Cathie Bukowski



John Munsell
Forest Resources and Environmental Conservation

