

The Agroforestry Academy: A Crash Course for Natural Resource Professionals and Landowners

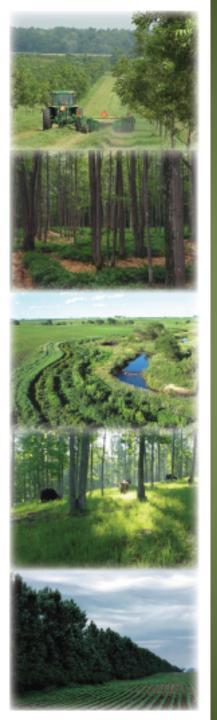
3rd Agroforestry Academy Columbia, MO

July 20-24, 2015

Michael A. Gold, Gregory O. Mori, Shibu Jose



The Center for Agroforestry University of Missouri

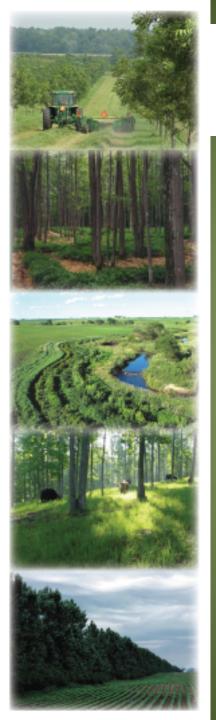


The "Get Smart" Analogy

- Experience over 25 years has taught us that multiple "doors" lie between the promise and the reality of widespread agroforestry adoption and utilization
- It is essential to identify the "doors" and work to open them ahead of time

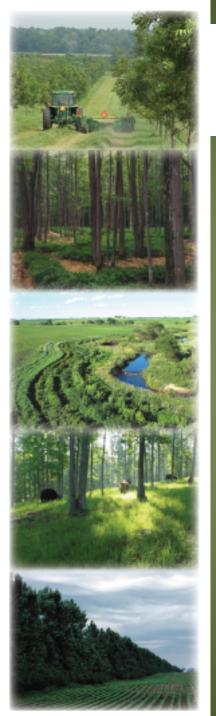


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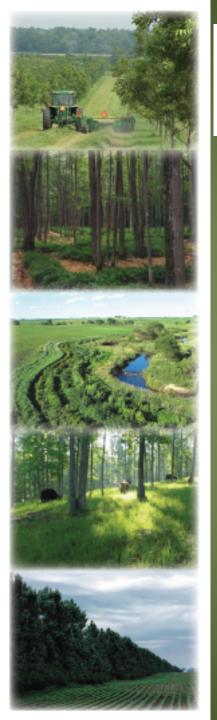


The Knowledge Infrastructure for Agriculture

- Huge information network supporting the landowner
 - Commodity groups (Farm Bureau, Corn and Soybean Growers Assns, Cattlemen, etc.)
 - Agribusiness (e.g., Cargill, ADM, Monsanto, seed and equipment dealers), Certified Crop Advisors (thousands), NRCS/FSA assistance widely available, Land Grant University research, education and extension
 - USDA funding programs abundant in supply
 - Farm Bill safety net to offset losses

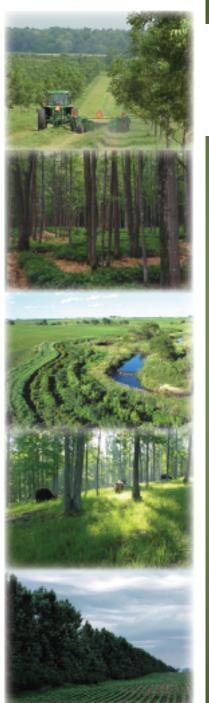




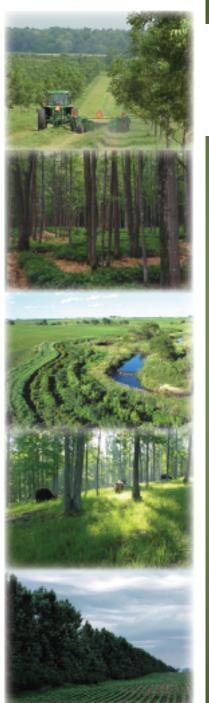


The Knowledge Infrastructure for Agroforestry

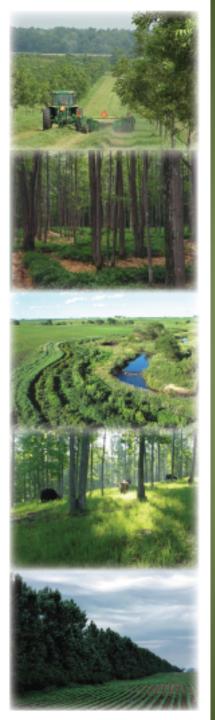
- Paper thin (but growing) information network supporting the landowner
 - No agribusiness or commodity group support;
 - Minimal Land Grant support in research, education or extension (<u>hoping for change</u>);
 - Very small network of "advisors";
 - Minimal USDA research \$\$\$, little policy support (hoping for change here too!)
 - No tradition, no culture, high financial risk, few farmer safety nets, little value given to non-market environmental benefits









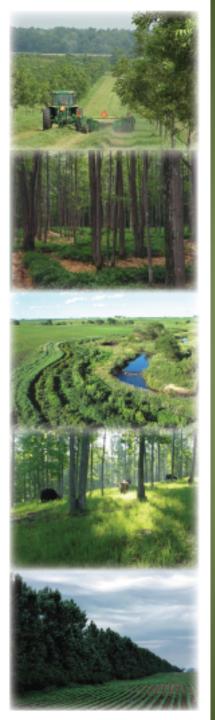


*Key Organizations Currently Supporting the Development of the Knowledge Infrastructure for Temperate Agroforestry

- **1. University of Guelph, 1st NAAC**
- 2. Iowa State University, Riparian Buffers
- 3. UMCA, University of Missouri
- 4. Virginia Tech, Forest Farming (eXtension.org)
- 5. Cornell University, Forest Farming, Mushrooms
- 6. CINRAM, University of Minnesota
- **7. University of Illinois,** Multifunctional Woody Polyculture
- 8. University of Nebraska-Lincoln, Windbreaks
- * List not intended to be complete, there are others...



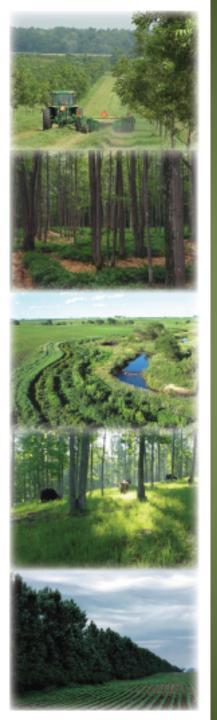
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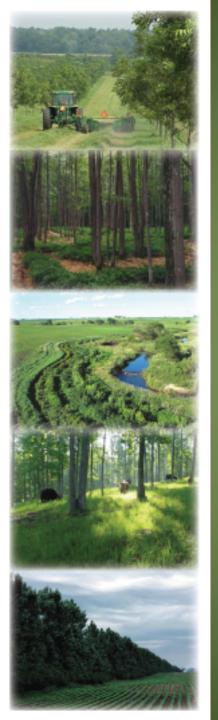
- 1. USDA NAC (National Agroforestry Center)
- 2. AFTA, Association for Temperate Agroforestry
- **3. Mid-American Agroforestry Working Group** (MAAWG) and **Iowa State University, Leopold Center**
- 4. Cornell Small Farms, Mushroom Listserv
- 5. USDA SARE
- 6. Green Lands Blue Waters
- 7. Chesapeake Bay Agroforestry Working Group
- 8. Pacific NW Agroforestry Working Group
- 9. 1890 AF Consortium

* List not intended to be complete



*Promising Recent Additions to the Knowledge Infrastructure for Temperate Agroforestry: Specialty Crop Organizations

- 1. Chestnuts
 - a) Chestnut Growers of America, CGA
 - b) Route 9 Coop, Ohio
 - c) Chestnut Growers, Inc., Michigan
 - d) USA Chestnuts Inc, Florida
 - e) Financial Decision Support Tools, UMCA and MI
- 2. Elderberry
 - a) Minnesota Elderberry Coop, MN
 - b) River Hills Harvest, MO
 - c) Financial Decision Support Tool, UMCA
- 3. Hazelnuts
 - a) Upper Midwest Hazelnut Initiative, WI
- 4. Aronia
 - a) North American Aronia Coop, NE
- 5. Eastern Black Walnut
 - a) Heartland Nuts 'n More, NE
- 6. Similar orgs exist for woody florals, pawpaw, etc.



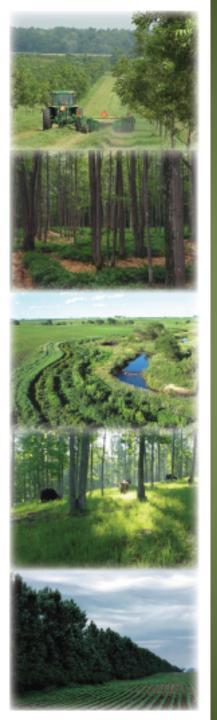
Agroforestry Academy Project Goal and Objectives

Goal

To achieve on-the-ground adoption of agroforestry

Objectives

- Create agroforestry knowledge networks
 Train individuals who deal with land management issues and/or interact with farmers and landowners.
 - Facilitate collaboration among researchers, extension personnel, and landowners, diverse disciplines, departments and colleges, and different agencies and organizations.



Agroforestry Academy - 2015

Trainers

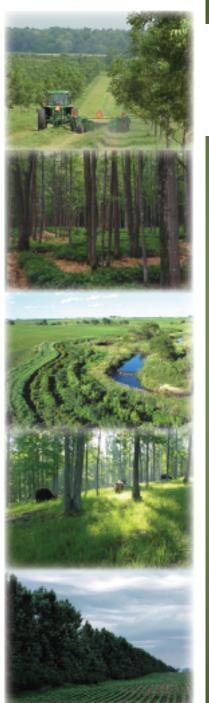
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- Shibu Jose:
- Gregory O Mori:
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- Bruce Wight:
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- Tricia Pollock:

Farmers

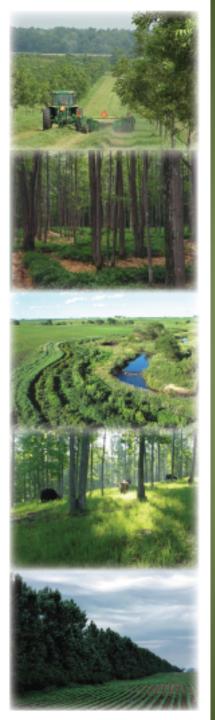
- Bill Stouffer:
- Dan Shepherd:
- Terry Durham:
- Greg Judy
- Luke LInnenbringer

University of Missouri, Center for Agroforestry University of Missouri (formerly UMCA) Missouri Valley College (formerly UMCA) Lincoln University, MO USDA Forest Service, National Agroforestry Center Versaland, Iowa USDA NRCS National Forester (retired) USDA NRCS, MO USDA NRCS, MO Agriculture and Agri-Food Canada

Cedar Hill Farm, MO Shepherd Farms, MO Eridu Farms, MO Green Pastures Farm, MO Linnenbringer Farm, MO





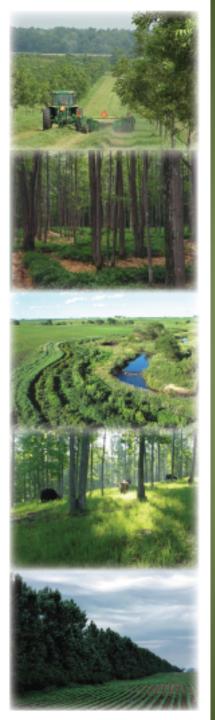


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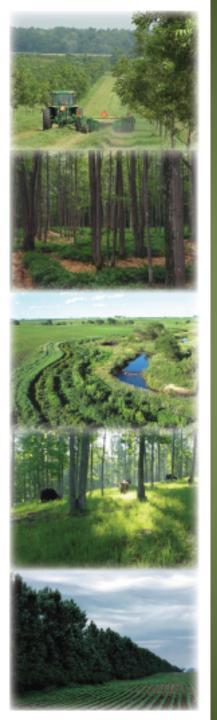
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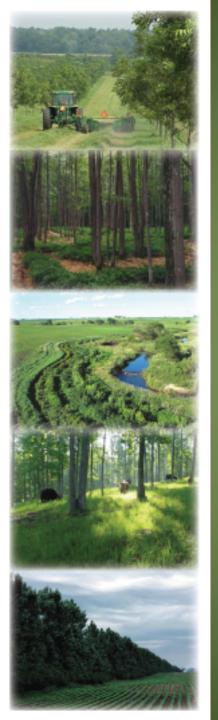
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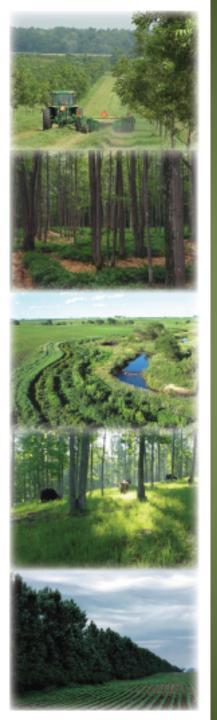
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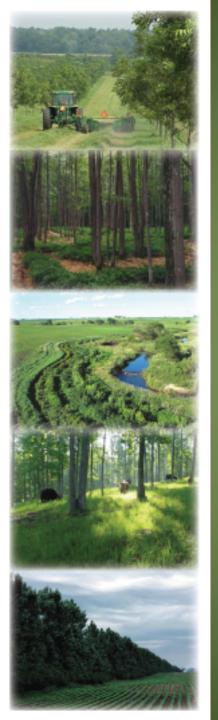
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Farmers

- Bill Stouffer:
- Dan Shepherd:
- Terry Durham:
- Greg Judy
- Luke LInnenbringer

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Cedar Hill Farm, MO Shepherd Farms, MO Eridu Farms, MO Green Pastures Farm, MO Linnenbringer Farm, MO



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Chapt Dusty
Chapt Dick S
Chapt Bruce
Chapt John N Jim Ch
Chapt Rebecc
Chapt Mihae
Chapt Agrof(<i>Larry</i> (
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Steps for Developing an Agroforestry Plan

Personal Assessment

Step 1: Initial Objectives and Priorities Step 2: Evaluate Personal Resources

Biophysical Site Assessment

Step 3: Identify Current Land Uses Step 4: Map Area(s) for Agroforestry Development Step 5: Climate Assessment Step 6: Soil Assessment Step 7: Physical Features (Terrain) Step 8: Timber and Non-Timber Forest Crop Inventory Agroforestry Development Ideas Step 9: Agroforestry Ideas – Brainstorming Step 10: Listing 'Best Bets' Evaluate the 'Best Bets' in the Context of the Industry Step 11: SWOT Analysis Step 12: Porter Five Forces Model Step 13: Revising Your 'Best Bets' Marketing Strategy for 'Best Bets' Step 14: Select and Describe Target Market(s) Step 15: Adding Value to Products Step 16: Getting Products to the Buyer Step 17: Setting the Price

Step 18: Promoting Your Products

Agroforestry Practice Design and Management

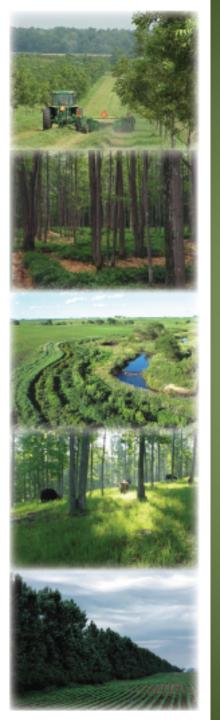
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The Agroforestry Development Plan Step 22: A Five-Year Management Projection Step 23: Yearly Activity Schedule

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Agroforestry Academy – Outputs

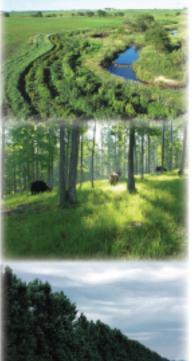
✓ Updated agroforestry training curricula included:

- a) 2015 Agroforestry Training Manuals; and
- b) Handbook for Agroforestry Planning and Design.

✓ Agroforestry Academies, 2013, 2014, 2015. 1st Academy, Aug. 2013, MO; 2nd Academy, July, 2014, MN/WISC; 3rd Academy, July 2015, MO

- > The Plan: Spin off trainings to other regions
- ✓ A total of 81 individuals from 15 states, DC, Canada trained during 2013 2015 Academies.
- Included Extension, NRCS, SARE, State foresters, Landowners, Military Veterans, Environmental nonprofits.
- Online learning community network for academy participants and graduates.
 - All Academy Content will be available online, UMCA website.





Agroforestry Academy Content – Online

THE CENTER FOR AGROFORESTRY UNIVERSITY OF MISSOURI A Global Center for Agroforestry, Entrepreneursbip and the Environment School of Natural Resources

College of Agriculture, Food and Natural Resources





Instructors

Training Description

Training Agenda

Who was Trained

Presentations

On-line Resources

UMCA on Facebook



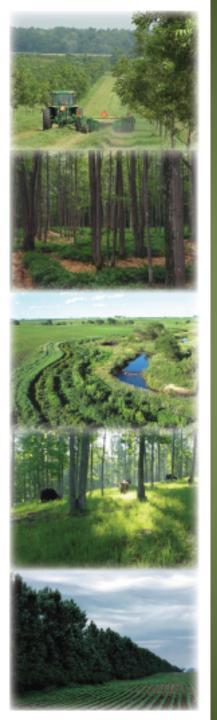
Agroforestry Accidency August 5 - 9, 2013

Agroforestry profitability on to future 20 years, a equipped to use, a week Nebraska, N and other a temperate z environmen will work in trainers and agroforestry

Instructors Video Additional Resources Who was trained Presentations Training Schedule Evaluation

combine productivity and ural systems that can be passed of US agroforestry over the past educators are currently not a cornerstone of productive land xperts from Missouri, Iowa, rrofessionals, extension agents, ovided on the five recognized economic, social dimensions, and design exercise. Academy trainees eeds of a working farm. Academy nce landowner adoption of agricultural system.

p and the Environment



2015 Agroforestry Academy Incorporates Evaluation Feedback and Lessons Learned from 2014 Academy

- ✓ Classroom sessions mornings only
- ✓ Includes 7 farm visits, afternoons
- ✓ NEW: Keyline Design
- ✓ NEW: Scholarships for Military Veteran Farmers



AGENDA

MONDAY, JULY 20TH

Biophysical Dimensions, Intro to Case Study, Farm Visits		
7:00 am - 7:45 am	Breakfast On Your Own @ Plaza 900	
7:45 am - 8:00 am	Early morning conversation - Coffee and Juice (*115 ABNR Bldg)	*123 Anheuser-Busch Natural Resources Bldg
8:00 am - 8:20 am	Agroforestry Academy Welcome	Shibu Jose (UMCA) / Richard Straight (NAC)
8:20 am - 8:30 am	Overview of the training program	Michael Gold (UMCA)
8:30 am - 9:15 am	Trainees Fill Out Pre-Academy Evaluation Survey Brief introductions of all in attendance	Participants and Trainers
9:15 am - 9:45 am	Planning and design for agroforestry Introduction to the case study	Michael Gold / Hannah Hemmelgarn
9:45 am - 10:00 am	Refreshment Break	
10:00 am - 10:55 am	Alley Cropping	Shibu Jose (UMCA)
11:00 am - 11:55 am	Forest Farming	Gregory Ormsby Mori
Noon - 1:00 pm	Lunch @ Plaza 900	
1:00 pm - 1:45 pm	Travel to Cedar Hill Farms, <u>Napton</u> , MO	
1:45 pm - 3:00 pm	Chestnut Alley Cropping	Bill and Sue Ellen Stouffer
3:00 pm - 4:00 pm	Travel to HARC Farm	
4:00 pm - 6:00 pm	Tour HARC – Specialty Crops, Forest Farming, Biomass, Buffers, Flood Lab, etc.	Gold, Mori, Coggeshall, Jose, Bardhan, etc.
6:00 pm - 6:45 pm	Return to Campus	
7:00 pm - 8:00 pm	Dinner in 115 ANBR Bldg	
8:00 pm - 9:00 pm	Sharing of Agroforestry Experiences	

* All Classroom activities take place in 123 Anheuser-Busch Natural Resources (ABNR) Bldg; Coffee/Juice and Dinners are across the hall in 115 ABNR Bldg.



AGENDA	١
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MONDAY, JULY 20TH Biophysical Dimensions, Intro to Case Study, Farm Visits 7:00 am - 7:45 am Breakfast On Your Own @ Plaza 900

✓ Key housekeeping items:

1. Fill out pre-Academy evaluation surveys

2. To help us create your groups for the planning and design exercise: by the end of the day today, turn in a brief bio sketch focused on your background training and skills

- 1	-		
	6:00 pm - 6:45 pm	Return to Campus	
	7:00 pm - 8:00 pm	Dinner in 115 ANBR Bldg	
	8:00 pm - 9:00 pm	Sharing of Agroforestry Experiences	
* All Classroom activities take place in 123 Anheuser-Busch Natural Resources (ABNR) Bldg; Coffee/Juice and Dinners are across the hall in 115 ABNR Bldg			



TUESDAY, JULY 21st

Biophysical Dimensions cont'd., Intro Case Study and Farm Visits		
7:00 am - 7:45 am	Breakfast On Your Own @ Plaza 900	
7:45 am - 8:00 am	Early morning conversation - Coffee and Juice	
8:00 am - 8:45 am	Silvopasture - Cattle	Gene Garrett/Dusty Walter
8:45 am - 9:30 am	Silvopasture - Goats	Charlotte Clifford-Rathert (Lincoln U)
9:30 am - 9:45 am	Refreshment Break	
9:45 am - 10:30 am	Windbreaks	Richard Straight (NAC)
10:30 am -11:15 am	Role of USDA in Support of Agroforestry	Richard Straight
11:15 am - Noon	Revisit planning and "hands-on case study" Break into groups to prepare for case study design exercise	Michael Gold/Hannah Hemmelgarn, Gregory Mori & Participants
Noon - 1:00 pm	Lunch @ Plaza 900	
1:00 pm – 1:30 pm	Travel	
1:30 pm – 3:30 pm	Green Pastures Farm / Keyline Design	Greg Judy / Grant Schultz
3:30 pm – 4:30 pm	Travel to Case Study Site – Linnenbringer Farm	
4:30 pm – 6:00 pm	Case Study Site: Linnenbringer Farm	Luke Linnenbringer
6:00 pm – 6:30 pm	On-site Brainstorming regarding the case study	Group Discussion
6:30 pm – 7:00 pm	Travel back to MU	
7:00 pm – 8:00 pm	Dinner in 115 ABNR Bldg	
8:00 pm – 8:30 pm	Open Discussion – Initial Ideas for Implementing Agroforestry on Case Study Site	Grant Schultz, Luke Linnenbringer



TUESDAY, JULY 21st

Biophysical Dimensions cont'd., Intro Case Study and Farm Visits

✓ Key housekeeping items Day 2-4:

- 1. Sit with your groups during lunch so that you can get to know one another and discuss your team's thoughts on the planning and design exercise Personal Assessment
- 2. After dinner discussion:

Day 2

6:00 pm – 6:30 pm	On-site Brainstorming regarding the case study
6:30 pm – 7:00 pm	Travel back to MU
7:00 pm – 8:00 pm	Dinner in 115 ABNR B
8:00 pm – 8:30 pm	Open Discussion – Initial Ideas for Implementing A

Step 1: Initial Objectives and Priorities Step 2: Evaluate Personal Resources

Biophysical Site Assessment

Step 3: Identify Current Land Uses

Step 4: Map Area(s) for Agroforestry Development

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- Step 5: Climate Assessment
- Step 6: Soil Assessment

Step 7: Physical Features (Terrain)

Step 8: Timber and Non-Timber Forest Crop Inventory



WEDNESDAY, JULY 22nd

Economics, Financial Decision Tools, Site Visits		
7:00 am – 7:45 am	Breakfast On Your Own @ Plaza 900	
7:45 am - 8:00 am	Early morning conversation - Coffee and Juice	
8:00 am - 9:00 am	Agroforestry economics	Larry Godsey (Missouri Valley and UMCA)
9:00 am - 10:00 am	Financial decision support tools	Larry Godsey
10:00 am - 10:15 am	Refreshment Break	
10:15 am - 11:00 am	NRCS Agroforestry Standards	Joe Alley/Lauren Cartwright (NRCS MO)
11:00 am - Noon	Elderberry – Emerging Specialty Crop	Terry Durham, Eridu Farms
Noon - 1:00 pm	Lunch @ Plaza 900	
1:00 pm - 1:30 pm	Travel to Elderberry Production Orchard	
1:30 pm - 2:30 pm	Elderberry Production Orchard	Terry Durham
2:30 pm - 3:30 pm	Travel to Chert Hollow Farms	
3:30 pm - 5:30 pm	Tour Chert Hollow	Eric and Joanna Reuter
5:30 pm - 6:15 pm	Return to MU	
6:15 pm - 7:15 pm	Dinner in Room 115 ABNR Bldg	
7:30 pm - 8:30 pm	Open Discussion – Additional Ideas for Agroforestry at Case Study Site	Terry Durham, Eric/Joanna Reuter







WEDNESDAY, JULY 22nd

Economics, Financial Decision Tools, Site Visits

✓ Key housekeeping items Day 2-4:

- 1. Sit with your groups during lunch so that you can get to know one another and discuss your team's thoughts on the planning and design exercise Agroforestry Development Ideas
- 2. After dinner discussion:
- Day 3





Step 9: Agroforestry Ideas – Brainstorming

Step 10: Listing 'Best Bets'

Evaluate the 'Best Bets' In the Context of the Industry

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Step 11: SWOT Analysis Step 12: Porter Five Forces Model Step 13: Revising Your 'Best Bets'

Marketing Strategy for 'Best Bets'

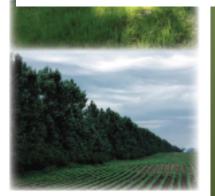
- Step 14: Select and Describe Target Market(s)
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THURSDAY, JULY 23rd

Continue building on knowledge on agroforestry practices

7:00 am - 7:45 am	Breakfast On Your Own @ Plaza 900	
7:45 am - 8:00 am	Early morning conversation - Coffee and Juice	
8:00 am - 8:45 am	Riparian and Upland Forest Buffers	Ranjith Udawatta
8:45 am - 9:30 am	Agroforestry and Wildlife	Dusty Walter
9:30 am - 10:15 am	A Snapshot of Agroforestry Research in Canada	Tricia Pollock (AAFC)
10:15 am - 10:30 am	Refreshment Break	
10:30 am - 11:15 am	Agroforestry, Biomass and Climate Change	Shibu Jose
11:15 am - Noon	Creating the Infrastructure for Agroforestry Adoption	Bruce Wight
Noon - 1:00 pm	Lunch @ Plaza 900	
1:00 pm - 1:45 pm	Marketing for agroforestry	Michael Gold
1:45 pm - 2:45 pm	1:45 pm - 2:45 pm Travel to Shepherd Farms	
2:45 pm - 5:00 pm	Tour Shepherd Farms	Dan and Jan Shepherd
5:00 pm - 7:00 pm	Dinner at Shepherd Farms (shop at farm store)	
7:00 pm - 8:00pm	Return to MU Campus	
8:00 pm - 9:00pm	Open Discussion – Groups Begin to Finalize Ideas for Agroforestry at Case Study Si	te





A Global Center for Agroforestry, Entrepreneurship and the Environment

Overview of the Training Program – Day 4



THURSDAY, JULY 23rd

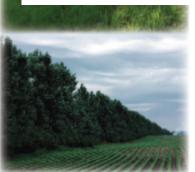
Continue building on knowledge on agroforestry practices

✓ Key housekeeping items Day 2-4:

1. <u>Sit with your groups during lunch</u> so that you can get to know one another and discuss your team's thoughts on the planning and design exercise

2. After dinner discussion:





Agroforestry Practice Design and Management

Step 19: Revisit Your Objectives and Priorities Step 20: Detailed 'Best Bets' Crop Information Step 21: Designing Your Agroforestry Practices

The Agroforestry Development Plan Step 22: A Five-Year Management Projection Step 23: Yearly Activity Schedule



FRIDAY, JULY 24th

Presentations and discussion on agroforestry designs, Evaluation, Academy wrap-up		
7:00 am - 7:45 am	Breakfast On Your Own @ Plaza 900	
7:45 am - 8:00 am	Early morning conversation - Coffee and Juice	
8:00 am – 10:00 am	Design agroforestry scenarios for hands-on case study with mentors	Participants in groups with mentor assistance
10:00 am - 10:15 am	Refreshment Break	
10:15 am - 12:15 pm	Presentation of agroforestry plans (20 minutes per group – 15 minute presentation, 5 minute discussion), with landowner attending	Participants (group leaders)
12:15 pm - 1:15 pm	Lunch @ Plaza 900	
1:15 pm - 1:30 pm	Next steps: Commitment for spin-off trainings	Michael Gold and Richard Straight
1:30 pm - 1:45 pm	Educational opportunities Online MS and Graduate certificate in agroforestry	Michael Gold
1:45 pm – 2:15 pm	Award academy certificates	Gregory Ormsby Mori
2:15 pm – 2:30 pm	Trainees Fill Out Post-Academy Evaluation Survey	Participants
2:30 pm	Adjourn	

MU – University of Missouri; CAFNR – College of Agriculture, Food and Natural Resources; UMCA – the Center for Agroforestry at MU; NAC – USDA National Agroforestry Center; AAFC - Agriculture and Agri-Food Canada





University of Missouri



FRIDAY, JULY 24th

Presentations and discussion on agroforestry designs, Evaluation, Academy wrap-up

- ✓ Key housekeeping items Day 5:
- 1. Sit with your groups and finish your case study planning and design exercise
- 2. Groups present ideas
- 3. Discussion of each group's case study
- 4. Fill out post-Academy evaluation survey
- **5. Receive Academy Completion Certificates**

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