



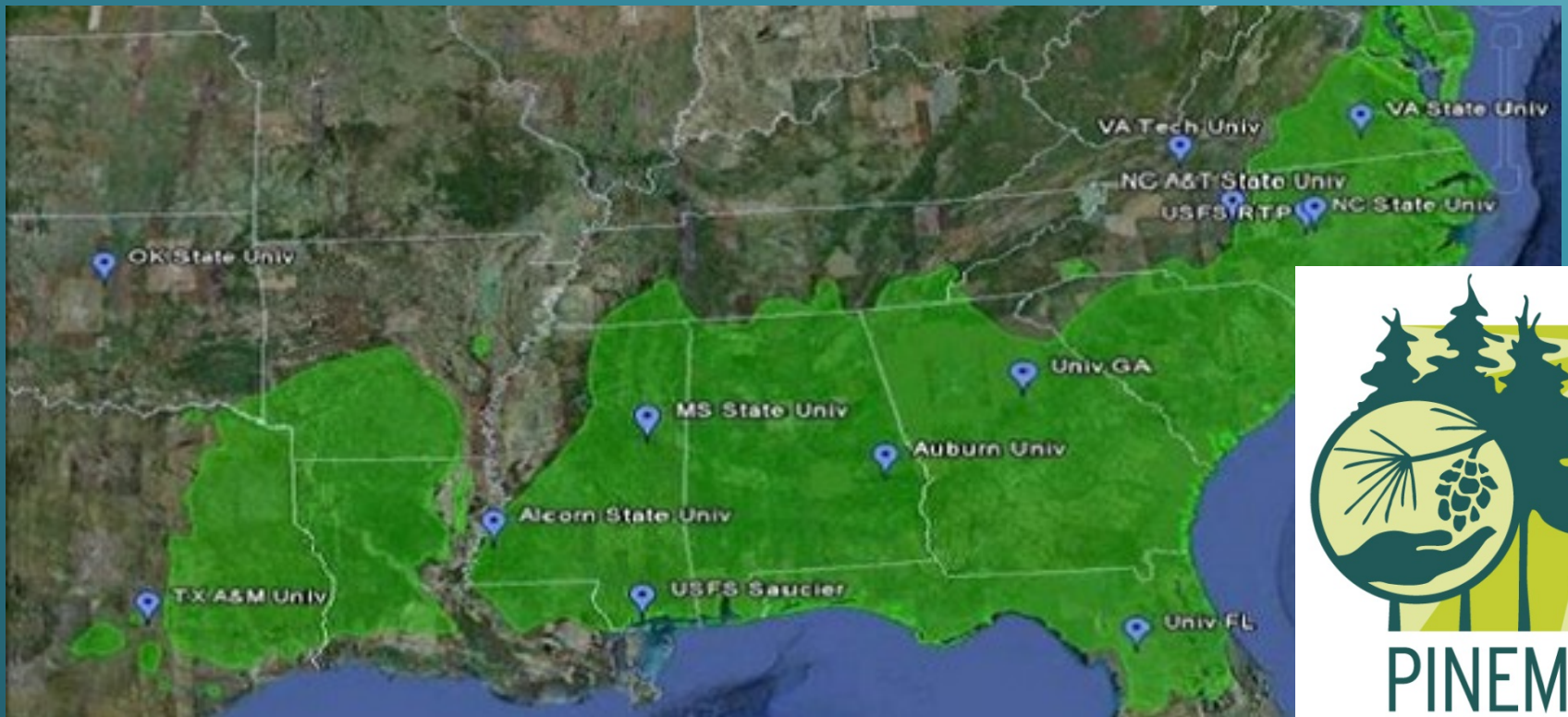
# ***The PINEMAP Intern Program:***

Integrating undergraduates into forest resource and climate change research, and education

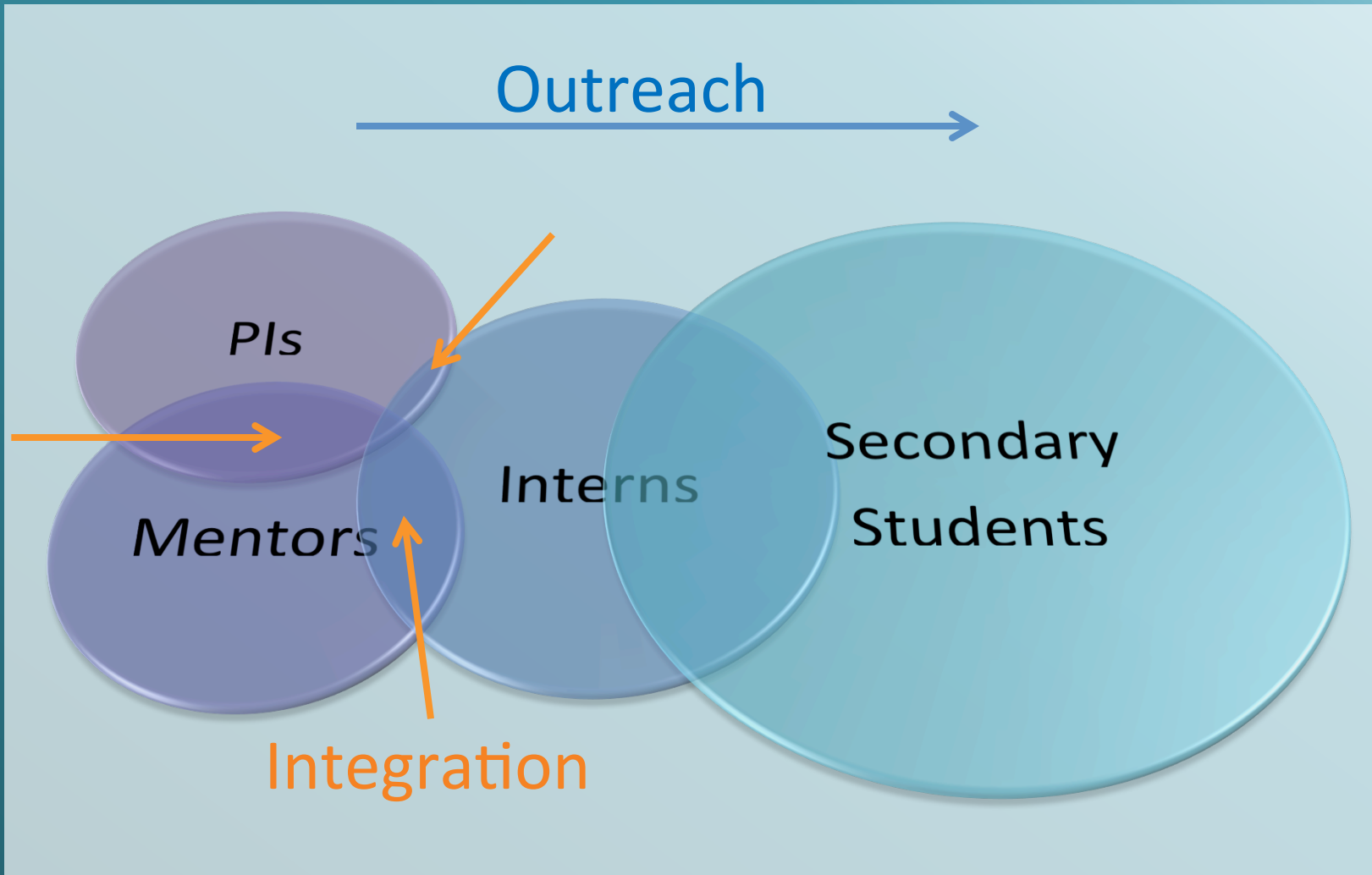
John B Kidd<sup>1</sup>, John R Seiler<sup>1</sup>, Martha C Monroe<sup>2</sup>, Shobha Sriharan<sup>3</sup>

# About PINEMAP

- Pine Integrated Network: Education, Mitigation, and Adaptation Project
- Coordinated Agricultural Project (CAP)
- Six research areas



# Justification



# *Program Goals*

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1. Engage undergraduate interns in research and teaching
2. Develop and deliver inquiry-based science lessons
3. Convey value and relevance of southern forests and climate change



# Marketing

- Two separate postings
  - Internship announcement
  - Call for proposals
- Eligibility Criteria
  - Undergraduates
  - Graduate students
- Distribution
  - Listservs, internal contacts, job boards
  - PINEMAP PI email



# Application Process

- Applying
  - Online only
  - Fillable form PDF
- Application Data
  - Standard Resume Data
  - Interest Area
  - Personalized Data
    - Essay for interns
    - Proposal for mentors

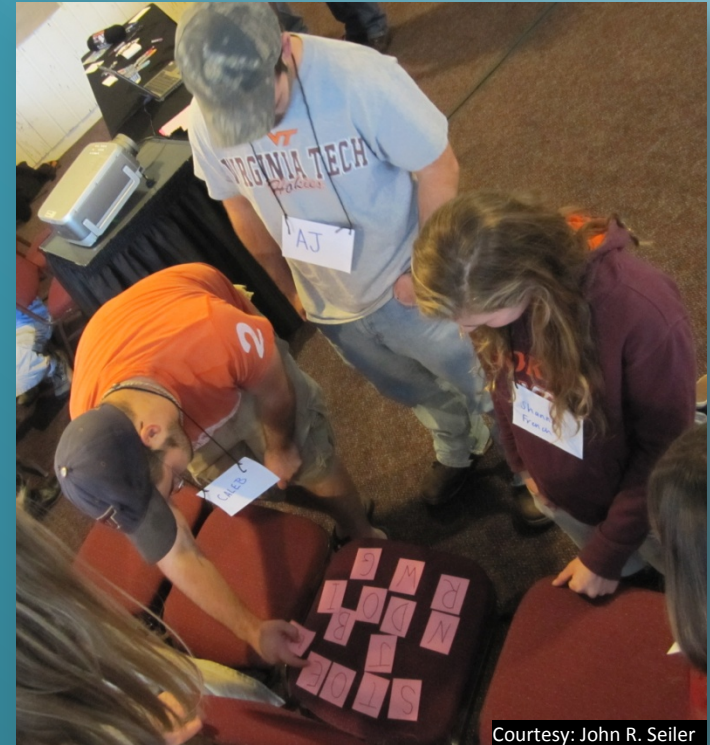
The image displays two overlapping application forms. The top form is titled "PINEMAP Intern Program Graduate Student Micro-Grant Application" and the bottom form is titled "PINEMAP Intern Program Undergraduate Internship Application". Both forms are fillable PDFs with various input fields for personal information, education, and contact details. The forms are set against a blue background with a yellow and red horizontal line at the top.

**PINEMAP Intern Program Graduate Student Micro-Grant Application**  
Applications are due on January 20, 2012. Clicking on the "Submit" button will submit your application. Required fields are outlined in red.

**PINEMAP Intern Program Undergraduate Internship Application**  
Applications are due on February 17, 2012. Clicking on the "Submit" button will submit your application. Required fields are outlined in red. Please note that clicking on hyperlinks may clear data entered in all fields.

# Selection Process

- 2012 year = 6 interns\*
  - 6 internships
  - 6 micro-grants
- Selection committee
  - Education Aim leaders
  - Program coordinator
  - PINEMAP PIs from other Aims



Courtesy: John R. Seiler

\*Increases to 12, then 18 total in subsequent years



# Program Awards

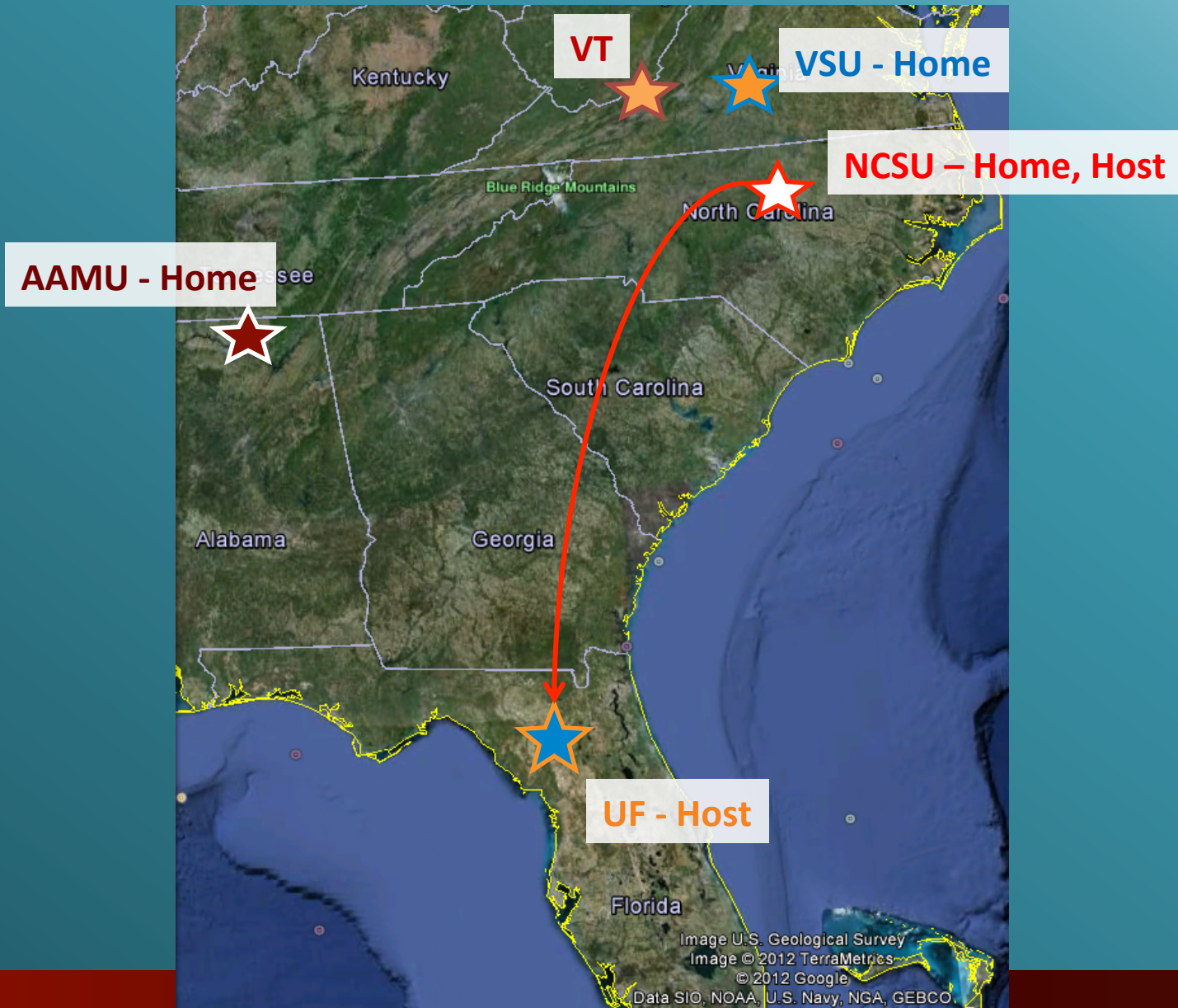
- Undergraduate Interns
  - \$4,800 stipend over 12 wks
  - \$2,200 housing and subsistence
- Graduate Mentors
  - Micro-grant
  - Intern assistant



Courtesy: John R. Seiler



# Internship Logistics



# Summer Internship

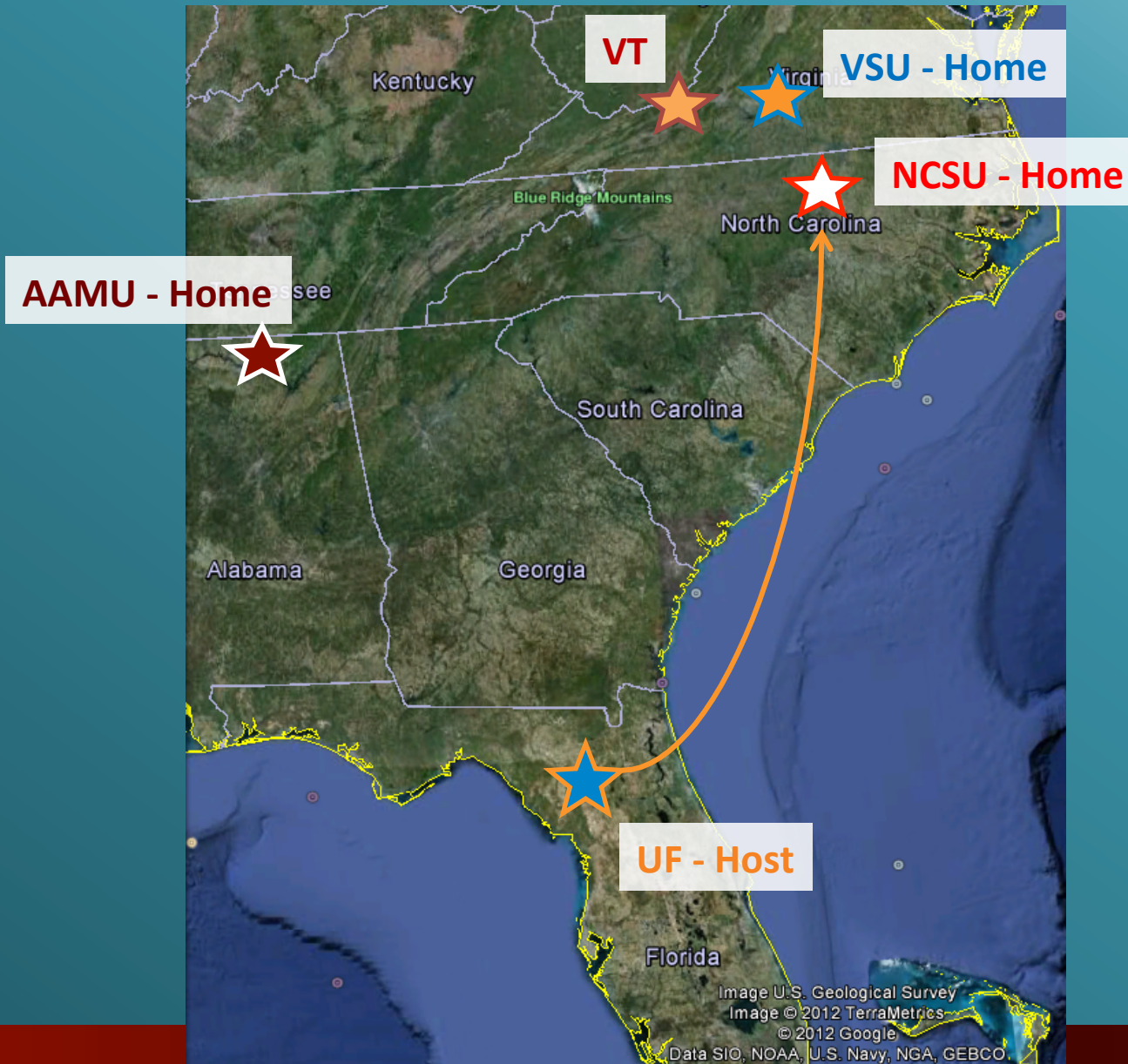
- Field work
- Lab work
- Attend lab meetings, etc.
- Journaling
- Intern program meetings



Courtesy: John R. Seiler



# Internship Logistics





# *Distance Course*

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- Distance-based Class
  - 3 Credits, Fall 2012
  - Independent study
  - Synchronously delivered
  - Twice per week in evenings
  - 3 units

# Distance Course

- Communication Skills
- Education
  - SOLs
  - Inquiry-based learning
  - Science ed. pedagogy
- Journaling continued



# Distance Course

- Developing Presentations
  - Learning experience for secondary students
  - Focus on internship project
  - Hands-on component
- Preparation!
  - Mentors will help
  - Practice runs during class

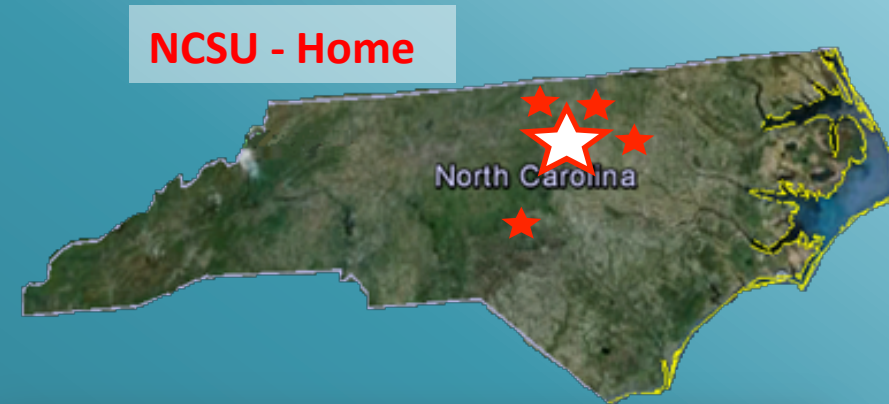


Courtesy: Lindsey McConnell



# Distance Course

- Presentation Deployment
  - Area public secondary schools
    - VT staff helps identify
    - Target Biology, Environmental Science
  - Multiple presentations
  - Presentation evaluations
    - Supervising teachers evaluate
    - Self evaluations



Courtesy: John R. Seiler

# Expected Outcomes

- Interns
  - Increased understanding of scientific research
  - Enhanced skills
    - Research
    - Communication & Education
  - Service learning experience
- Mentors
  - Supervisory experience
  - Promote importance of research
  - Better prepared for post-doc, etc.



# Initial Response

- Underwhelming
- 6/25 graduate students applied
- UG Responses
  - 1 undergraduate application as of 1/27
  - 2 as of 2/06
  - 7 applicants total



Courtesy: John R. Seiler



# Program Evaluation

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- Potential problems
  - Under marketing
  - 1<sup>st</sup> year grad students
  - Broken application process
- Improvements
  - Open up micro-grants to non-PINEMAP conifer research
  - Allow seniors to apply
  - Clarity on announcements
  - Increase recruitment in areas other than Aim 1

# Conclusions

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- Internship program for education/outreach
- Recruit interns into graduate studies
- Two components
  - Internship; focus on research
  - Distance class; focus on education
- Low number of applicants in year 1
- Evaluation to increase attractiveness and prospects

# Questions



United States  
Department of  
Agriculture

National Institute  
of Food and  
Agriculture



# Outline

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- I. About PINEMAP
- II. Intern Program
  - A. Justification
  - B. Goals
  - C. Application Process
  - D. Program Components
    1. Summer Internship
    2. Fall Distance Course
- III. Initial Responses
- IV. Expected Outcomes
- V. Conclusions



# ***PINEMAP Goals***

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Create, synthesize and disseminate knowledge enabling southern forest landowners to:

1. Harness productivity to mitigate CO<sub>2</sub>
2. More efficiently utilize fertilizer inputs
3. Adapt management practices to increase resilience

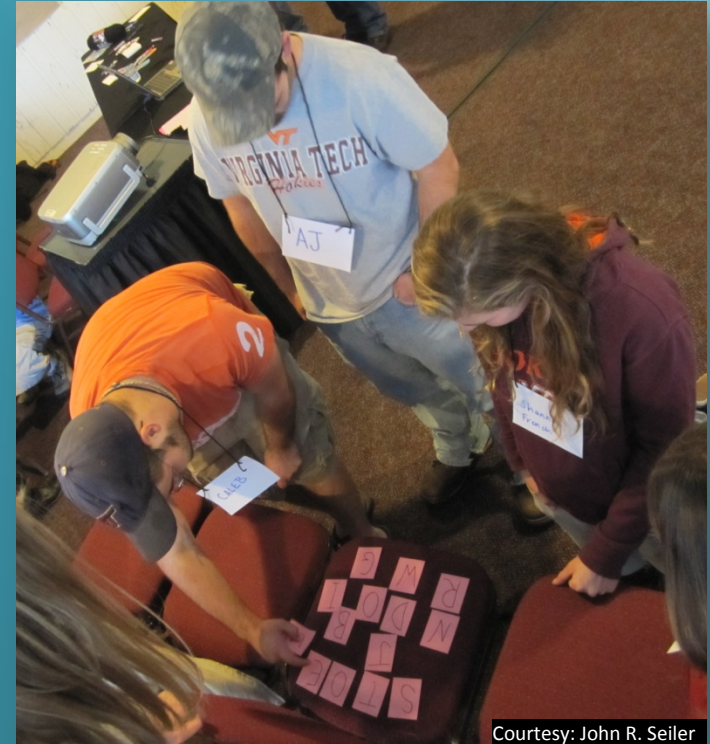
Education and Extension teams transfer research to stakeholders



Courtesy: Tim Martin

# Selection Criteria

- Undergraduates
  - Application strength
  - Academic standing
  - Aim interest essay
  - Reference letters
- Graduate proposals
  - Thoroughness
  - Clarity
  - Consideration for interns
  - Indication of future involvement



Courtesy: John R. Seiler