Forest Health Research and Education Center Accomplishments 2014-2015

### GENERAL
- Developed a prospectus and implemented functional and administrative structures placing key expertise/personnel in various positions.
- Developed a business plan, including a financial plan, and implemented key portions.

### FUNDING
- Developed and executed a USDA Forest Service Southern Research Station (USFS-SRS) Joint Venture Agreement: $560,000 total funds to support FHREC for 2 years ($350,000 USFS-SRS, $210,000 UK).
- Private support: ~$300,000 from Foundation for the Carolinas for *Phytophthora* root rot resistance research in chestnut. Seeking additional private funds for Endowed Chair position (a Forestry Development priority as discussed with Ms. Marci Hicks January 23, 2014). Also discussed organizing a meeting between Dean Nancy Cox and Mr. Brad Stanback.
- New Natural Resources building for UK #1 priority for CAFE. Partnering with USFS SRS to develop dedicated space for FHC in this facility with financial support from USFS.

### COMPETITIVE FUNDING (PROPOSALS SUBMITTED SINCE MARCH 2014)
- 3 USDA-AFRI proposals submitted: Two (each ~ $500K) were not funded, though one was ranked high priority. The third proposal is pending (~$100K).
- 1 NSF-PGRP proposal submitted with Washington State University; subcontract for the FHC Outreach and Education activities and bioinformatics (~$300K to UK).
- Collaborative Research: ABI Development: Enabling association mapping for tree biologists through advanced integration of genotype, phenotype, and geospatial data. 1 NIFA Exploratory Research Grant Letter of Intent
- 1 KSEF proposal selected for full submission (Chris Barton and Kenton Sena).
1 KY WRRI proposal “Toward rapid detection of *Phytophthora cinnamomi* and *P. ramorum* in Appalachian streams” Chris Barton and Kenton Sena ($15,000) (unofficially awarded)

1 CUAHSI Pathfinder proposal “Toward rapid detection of *Phytophthora cinnamomi* and *P. ramorum* in Appalachian streams” Chris Barton and Kenton Sena ($5,000).

### PERSONNEL/STAFFING

1 Senior Research Scientist (Dr. Albert Abbott) to serve as Biological Sciences Team leader and a leading scientist for FHREC on management team.

1 Postdoctoral scholar in Forest Economics on Social Sciences Team examining ecosystem services (1 yr, started July 2014) (Dr. Xiaoshu Li).

1 Postdoctoral scholar in Forestry Extension on Outreach/Education Team serving as Forest Health Specialist (2 yr, starting April 2015) (Dr. Ellen Crocker).

1 Postdoctoral scholar on Biological Sciences Team in Molecular Biology/Genetics (2 yr, starting July 2015) (Dr. Anna Conrad).

1 Postdoctoral Scholar in Bioinformatics/Outreach proposed in NSF-PGRP proposal submitted with Washington State University (pending).

1 Fullbright Scholar visiting scientist funded for September 1 – November 30, 2015 (Dr. Rita Costa, INIAV, Portugal)

Dr. Wendell Haag, freshwater stream ecologist with USFS-SRS planning to relocate to UK (currently on 1-yr sabbatical with KDFWR in Frankfort).

Potential for a USFS plant pathologist to be located at UK and be part of the FHC.

### STUDENT SUPPORT

1 undergraduate research project (Forestry major) on bioinformatics in collaboration with University of Tennessee.

1 MS student pending (possible Entomology or Forestry major)

1 PhD student from Portugal hosted for bioinformatics workshop and chestnut genetic mapping research

Letter of support for student grant proposal

Actively seeking additional opportunities to support students

### OUTREACH /EDUCATION /ENGAGEMENT

Sponsored a Forest and Fruit Tree bioinformatics meeting at UK for 20 scientists from around the world (led to the successful NSF-PGRP proposal)

**Presentation at Forestry Committee meeting during annual KY Farm Bureau conference.**

CAFE seminar in Cameron Williams Auditorium, November 2013
- IUFRO Forest Tree Breeding invited lecture, Prague, Czech Republic, August 25-29, 2014
- IUFRO Restoring Forest Conference, Purdue University, October 13-16, 2014.
- The Plant and Animal Genome XXIII meeting, San Diego, CA, January 9-14, 2015.
- Sustainability of white oak in the central hardwood region meeting for wood industry and bourbon distillers, Lexington, KY, March 25, 2015
- Executive Committee of LFUCG Tree Board, February 4, 2015
- LFUCG Tree Board, February 11, 2015
- Sponsoring and providing technical assistance to Forestry Extension industry workshop on White Oak Sustainability, March 25, 2015.
- Meeting at US Forest Service Southern Research Station with Dr. Tom Homes (Research Forest Economist), Dr. Jeff Prestemon (Project Leader, Forest Economics and Policy Research), and Dr. Evan Mercer (Research Economist) to discuss potential research projects (11/2014) – Sudden Oak Death project, EAB urban tree damage project, and others.
- Meeting at Virginia Tech with Dr. Thomas Ochuodho and Dr. Janaki Alavalapati and developed an input-output table for Kentucky from IMPLAN (11/2014). This will be used for analysis of the potential impact of Sudden Oak Death on Kentucky’s economy.
- Contacted urban foresters and arborists in Lexington, Louisville, and Cincinnati to assess the availability of data for ash tree damages from EAB (01/2015). Such information will be critical for assessing the economic loss associated with EAB.

**Related Research publications**

- Book chapter *Valuation of Agroforestry* has been submitted for peer-review (01/2015) for the USDA Forest Service Book, *Agroforestry and Climate Change: Reducing Threats and Enhancing Resiliency in Agricultural Landscapes*. (Authors: Evan Mercer, Xioshu Li, G. Andrew Stainback, and Janaki Alavalapati)
- Paper *Economic analysis of carbon sequestration under risks in forest management* is prepared for submission to the journal *Forests* (02/2015) (Authors: Lijiao Hu, Xiaoshu Li, and G. Andrew Stainback)
- Literature review and preliminary spatial data collected for estimating the value of ecosystem services from reclaimed mine lands in Kentucky/Appalachia. Paper will be prepared and paper presented at upcoming International Society of Forest Resource Economics Meeting to be held May 31st – June 2nd in Vancouver, BC. (Authors: Xiaoshu Li, G. Andrew Stainback, and Chris Barton)