Robert Bardon and Dennis Hazel visited Sweden the week of June 10-16, 2011. The following objectives were set for the trip.

- Develop a better understanding of the forest-based bioenergy research being conducted by Nate Osborne, a current graduate student of Robert Bardon and Dennis Hazel studying under the Atlantis program in Sweden.
- Meet with faculty from SLU that are a part of Nate Osborne’s committee to discuss his case study.
- To visit faculty and students at SLU to strengthen extension and research collaborations related to forest-based bioenergy.

**Trip Details**

**Friday June 10 “Depart for Sweden”**

**Saturday June 11 “Arrive Sweden via Copenhagen”**

**Sunday June 12 “Introduction to Forestry Practices in Southern Sweden”**

The day was spent with Eric Agestam, professor at SLU-Alnarp and project collaborator, to discuss silviculture and forestry in Southern Sweden. We visited the Snogelholm Forest Reserve. There is a lot of interest to convert spruce forest in Skane to hardwood forest. In Snogelholm we looked at the existing spruce forest that is typical for the region and hardwood plantations on old-fields. Looked at different field trials and discussed implications of species conversions.

We moved on from Snogelholm to Torup Forest Recreation Area. At this stop we discussed Southern Sweden’s diverse ownership structure compared to Finland and Northern Sweden. Here we visited a forest area cared for by nobility and discuss ownership and conservation in Southern Sweden.

**Monday June 13 “Forest Utilization With Energy Harvesting”**

The day focused on Nate Osborne’s research, touring research sites in Kullaskogen in Central Sweden. We visited harvest sites and discussed the affect of stand age on post harvest conditions in Sweden. We discussed why old growth forest conditions and management affect post-harvest residues and utilization

**Tuesday June 14 “Harvest Sites Without Energy Harvesting”**

On June 14 we continue to focus on Nate Osborne’s research. We met with Mats Karlsson, a forester with Hogesta (http://www.hogesta.se/). Hogesta is a land management group that manages the land of Carl Pippen, a Swedish nobleman. The land, which is managed, is and has been owner by the Pippen family for many centuries. More than 50% of the study sites were located on this expansive tract.
During this day we spent visiting active harvesting sites discussing harvest operations with field crews and with Matts. Discussion focused on the impact energy wood harvesting has on residuals. We visited field sites with energy wood harvest component and without energy wood harvest component.

After our visit with Matts and visiting the research sites we visited Stenshuvud National Park outside of Kivik. Here we looked at hardwood forest.

**Wednesday June 15 “Cultural Excursion to Helsingborg”**

The focus of this day was to learn some local history and visit a nature reserve on the coast of Sweden.

**Thursday June 16 “Departed for North Carolina”**

Outcomes from the trip included the following.

- Evaluated the forest-based bioenergy research being conducted by Nate Osborne.
- Formalized the collaboration between SLU faculty and NCSU faculty that form’s Nate Osborne’s graduate committee.
- Strengthened the relationships between faculty and student related to the work on forest-based bioenergy.