

# EXPERIENTIAL LEARNING ACTIVITIES TO ENHANCE PLANT MATERIALS COURSES

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## Introduction

- Plant materials courses are a major component of any horticulture curriculum
- Large amounts of information are disseminated and can provide to be challenging for many students
- Rote learning or memorization often becomes a common learning technique and often results in reduced understanding of the plant materials
- Learners' perceptions and responses in a learning environment can be influenced by cognitive, affective, and physiological domains (Keefe, 1979)
- Learning modes can be visual, auditory, and kinesthetic (VAK); often with one or two being dominant
- Taste, one of kinesthetic senses, is least used in classroom learning (Baines, 2008)

## Objectives

- Implement unique experiential learning activities in plant identification (ID) courses to encourage student engagement and diversify typical plant ID courses
- Include sense of taste as a learning tool or method to assist in learning plant materials

## Approach

- Fall course (HORT 374), several maple (*Acer*) species covered; including sugar maple (*Acer saccharum*).
- An activity conducted in an attempt to provide a more meaningful learning experience has been the *maple syrup taste test*
- An accompanying maple syrup production lecture is given, along with plant species review
- Students are provided with several grades of authentic maple syrup and a commercial maple flavored corn syrup to taste and compare
- Students record and describe the different syrup grades, providing comments of the experience



## Student Feedback and Responses

### Course Evaluation "TEVAL", Fall 2012

11 students (31%) provided positive feedback about activity based on end of semester TEVALS ( $n=35$ )

22 students (61%) had never tried/recollected trying authentic maple syrup ( $n=36$ )

"The maple syrup lecture was pretty cool. I had no idea that there were different grades of natural syrup—I thought there was only natural and 'synthetic' syrup."

"The maple syrup lab was really neat and informative."  
"I have a new view on syrup."

"Great class and way to educate about syrup."

## Conclusions

- Taste testing in the plant ID course provided a positive student learning experience, based on student evaluation responses
- A similar activity has been implemented in the spring plant ID course; a lecture on herb species with an accompanying lab, providing students with an opportunity to experience and reflect on a taste testing; i.e. cookies with lavender flowers (*Lavandula angustifolia*)
- In subsequent courses, we plan to implement these activities and evaluate if increased learning occurs with unique experiential learning activities in plant ID courses

### Literature Cited

Baines, L. 2008. A Teacher's guide to multisensory learning: Improving literacy by engaging the senses. Association for Supervision and Curriculum Development, Alexandria, VA.

Keefe, J.W. 1979. Learning style: An overview, p. 1-17. in: J.W. Keefe (ed.). Student learning styles: Diagnosing and prescribing programs. National Association of Secondary School Principals, Reston, VA.

