



# UTIA SYMPOSIUM ON HOPS

*August 15, 2018  
Knoxville, Tennessee*

*This project was made possible in part by the US Department of Agriculture, Agriculture Marketing Service through the grant USDA-AMS-SCBG-2017 to enhance the competitiveness of specialty crops through more sustainable, diverse and resilient specialty crop systems.*



# Overview

## ■ Thank you for your attendance

– *County Agriculture Agents – account number for travel*

- Hops is primarily used as flavoring agent in beer.
  - *Other minor/alternative uses exist.*
- Increasing number of local breweries (craft, hobby and specialty beer) in Tennessee have spurred interest in local hops (and barley) production.
- Germany is the leading producer of hops followed by US and China.
- 97 percent of domestic hops production is in the Pacific Northwest (Washington, Oregon and Idaho).
- Hops production is increasing in other states (California, Michigan, New York, North Carolina, Virginia, Florida(?)...).
- Hobby and small-scale hops production exists in Tennessee (small research trials of hops and malting varieties of barley at AgriCenter International in Memphis).



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# 45,488 Acres of Hops in the United States

<u>State</u>	<u>Portion of US Total Production</u>	<u>Acres</u>
Washington	70.8%	32,205 acres
Oregon	15%	6,807 acres
Idaho	10.9%	4,975 acres
Other States	2.7%	1,244 acres

(Source: Hop Growers of America. 2017.)





## *Hop Growers of America ...*

- The trade association for hop growers focused on industry support through technical, scientific research; trade promotion; educational outreach; and expansion of the industry.
- Host of the annual American Hop Convention.
- 889 plants or “hills” make up one acre of hops, if planted on a standard 3.5 foot by 14 foot spacing.
- In the Pacific Northwest, yields average about 2,000 pounds of dried hop cones per acre on mature hop yards, or a little over two pounds per hill (yields vary depending on variety and location).
- Hops are typically sold in 200-pound bales.
- A bale will yield between 135 - 800 barrels of beer (31 gallons each), depending on the recipe.



Source: Hop Growers of America.

# Hops and Barley Production in Tennessee

There was no commercial production of hops reported in Tennessee in 2007 or 2012.

Production of barley in Tennessee has traditionally been for use in *animal feeds*. According to the 2012 USDA Census of Agriculture (issued May 2014), there were *23 barley growers producing 2,101 acres (136,962 bushels) in Tennessee in 2012*. This represented an increase from 2007 when there were 18 growers, 997 acres and 45,265 bushels in Tennessee. Production of the crop is largely concentrated in two counties of upper middle Tennessee, Robertson County and Sumner County. In 2012, Robertson County led the state in barley production with 8 growers producing 1,423 acres (91,939 bushels) followed by Sumner County with 4 growers producing 109 acres (8,000 bushels). Eight other Tennessee counties reported two or less growers of barley in 2012, but production data was withheld to avoid disclosing data for individual farms. The eight counties with two or less barley growers reported were: Blount, Bradley, Gibson, Henry, Marshall, Monroe, Montgomery and White.

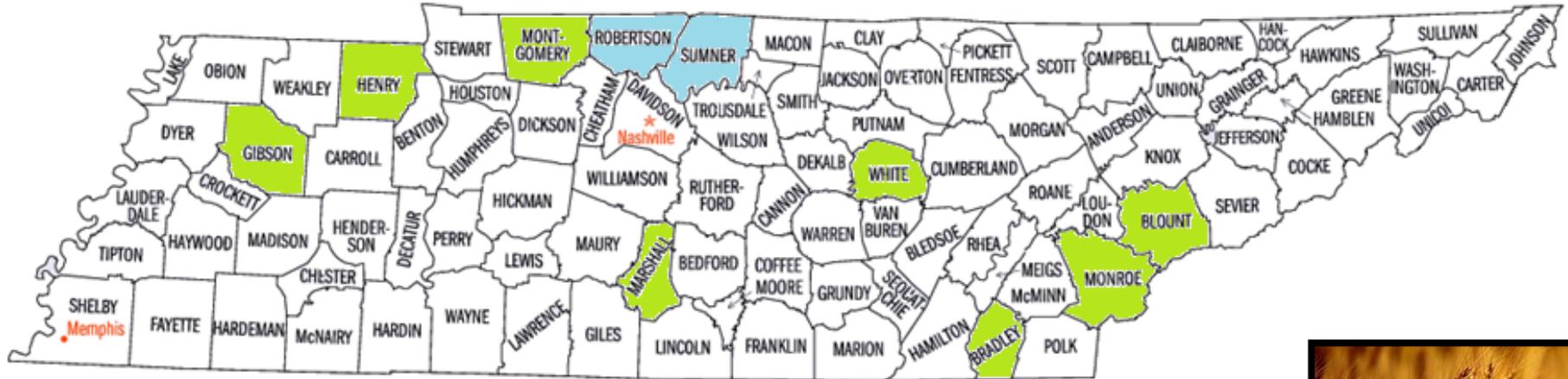
(Source: 2012 Census of Agriculture)

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(Source: 2012 Census of Agriculture)

# Barley Production In Tennessee (2012)



## Background

In recent years, Tennessee has seen a large increase in the number of craft brewing operations. *We estimate more than 90 local/craft brewers across the state in 2017.* Mostly small-scale operations located in cities, many of the craft brewers have inquired about sourcing locally-produced ingredients such as barley and hops. Interest from the brewers in sourcing locally seems to be two-fold: (1) *perceived savings on transportation costs*, (2) *marketing benefits of the “local” claim*. Barley, hops, rye and wheat are among the most-often requested ingredients. *The potential for Tennessee farmers to profitably produce hops for the expanding local market has not yet been analyzed nor have the long-term commercial production possibilities.*

(Source: TDA, SCBG Proposal. 2017)

# Opportunities for Specialty Crops in Tennessee: Focus on Hops for Brewing

- Proposal developed 2016-2017.
- Submitted to Tennessee Department of Agriculture and USDA Specialty Crop Block Grant Program



# Special Thanks...

## Funding:

- Tennessee Department of Agriculture
- USDA, Agriculture Marketing Service, Specialty Crop Block Grant

## Co-PI's

- David Hughes – UT Agriculture and Resource Economics
- David Lockwood – UT Plant Sciences
- Aaron Smith – UT Agriculture and Resource Economics
- Eric Walker – UT Plant Sciences
- Hannah Wright – UT Agriculture and Resource Economics

## Collaborators

- Tyson Raper – UT Plant Sciences
- Bruce Kirksey and John Butler – AgriCenter International
- Louis Buck and Debbie Ball – Tennessee Department of Agriculture
- Keith Harrison and Whitney Flatt – Tennessee Department of Agriculture
- Jai Templeton and Tom Womack – Tennessee Department of Agriculture



# Objectives of Opportunities for Specialty Crops in Tennessee: Focus on Hops for Brewing

- Conduct a preliminary evaluation of the potential for hops production and marketing by Tennessee farmers from a thriving craft brewing industry.
  - *Conduct an internal (UTIA) hops planning symposium – Smith, Holland and Wright.*
  - *Study, evaluate and summarize applicable hops production systems and experiences in other states – Lockwood.*
  - *Develop a publication/report to summarize the demand potential of specialty crops by Tennessee Craft Brewers (the craft brewers survey) – Hughes, Smith and Wright.*
  - *Develop Extension publication titled “General Overview of Hops Production in Tennessee” – Lockwood, Walker, Smith.*

# Goals of Symposium

- Share information about the project/grant...Phase I.
- Provide networking opportunity among those (UTIA) interested in the crop.
- Gain a better understanding of what is ongoing, planned and desired in UTIA (regarding hops).
- Establish linkages for future work.
  - *Research*
  - *Outreach*
  - *Publishing*
- Pave the way for greater collaborations and hops trials on UT RECs.

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# Symposium Agenda

August 15, 2018 – 10:00 am to 1:00 pm  
University of Tennessee, Brehm Animal Science Building, Lecture Hall 256

10:00 – 10:30 am – ***Overview of Tennessee Specialty Crop Block Grant -- Opportunities for Specialty Crops in Tennessee: Focus on Hops for Brewing*** – Rob Holland

10:30 to 10:45 – ***Thoughts on UTIA/Extension's Role in Specialty Crops*** -- Tim Cross

10:45 to 11:00 – ***Opportunities and Collaborations with TDA for Hops Production*** -- Whitney Fair

11:00 to 11:30 am -- ***Update on Cost of Production and Marketing Opportunities*** -- David Hughes and Aaron Smith

11:30 to 12:00 p.m. – ***Update on Production Opportunities*** -- Eric Walker

12:00 to 12:10 – ***Thoughts on Production Trials at Ag Research and Education Centers*** -- David White and Barry Sims

12:10 to 12:20 p.m.- ***Quick Break to Distribute Box Lunches and Drinks*** –

12:20 to 12:55 p.m. – ***Open Discussion and Lunch*** -- Aaron Smith

12:55 p.m. to 1:00 p.m. – ***Wrap Up*** -- Hannah Wright