

Getting Started

Site selection

Land preparation

Varieties/Plants





Search

NORTHEAST HOP ALLIANCE

MEMBER PLANET Member Portal

Member / Grower Map

Like 2

 Tweet

WELCOME

FOR GROWERS

FOR BREWERS

JOIN US

Connect with hop growers for flavorful, local hops

This list of hops available for sale is updated daily. You can sort by variety, location, type, or year and have easy access to the farm's contact information.

Search

	State	County	Website	Variety	Pounds Available	Type	Year	Price	Analysis Available	
	New York	Clinton	www.3eaglehops.com	chinook	1	Pelletized	2017	14	No	
	Maryland	Albany	www.bigtruckfarms.com	Cascade	None	Pelletized	2017	12	Yes	
	Maryland	Albany	www.bigtruckfarms.com	Chinook	None	Pelletized	2017	12	Yes	

WELCOME

FOR GROWERS

FOR BREWERS

JOIN US

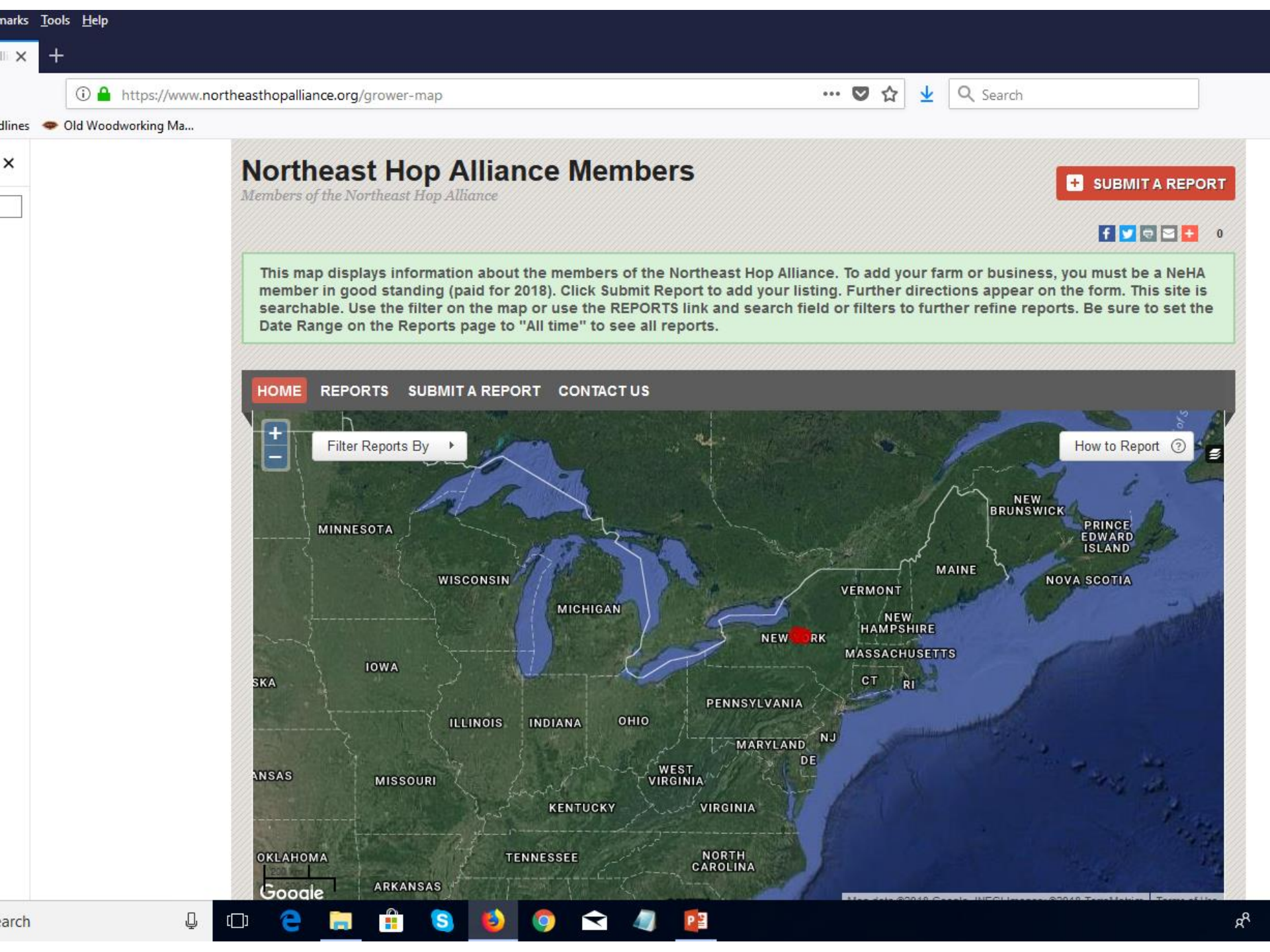
Resources for Growers

Whether you are just thinking about growing hops or already have an established hopyard, these resources will help you succeed!

Resources for Brewers

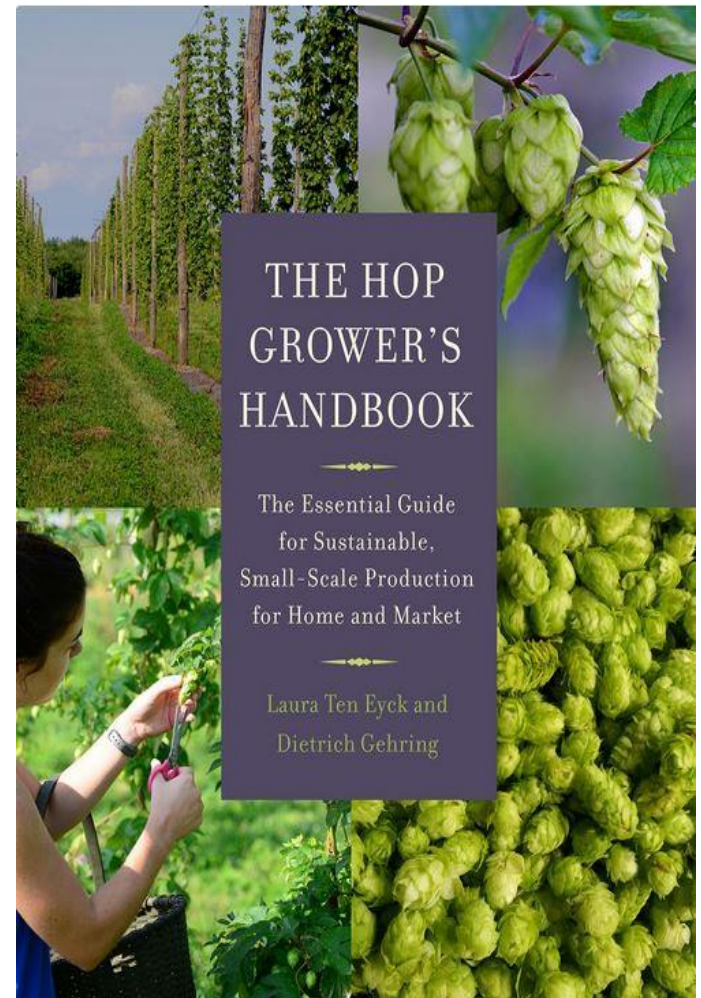
Looking for local hops? Curious how local hops compare? Check out these resources to learn more about what local hops can do for you!





Resources

- Northeasthopalliance.org
- UVM
- MSU
- New handbook















What to look for

Site selection

Only the best, hops are expensive to grow

Land preparation

Don't rush things, you'll regret it

Site Selection

soil type- well drained
depth to bedrock- at least 4 ft
full sun- no shade!
close to water- for irrigation
weed free- at least a year



Know Your Site

more detail

- Weed Species Present
- Drainage
 - Soil Types/Structure
 - Water Table
- % Organic Matter 4% and up
- pH 6.0 to 7.0
- Soil Testing Preplant and every 3 years

layout, wind direction and slope

- North – South is usually best why?
 - Must consider slope
 - Irrigation
 - Wind direction



accessibility

- Water for irrigation
- Storage of equipment
 - Tractor, sprayers
- Harvesting
 - Under cover and clean, electricity
- Drying and processing
 - Electric, Water, facility must be inspected by Ag & Mkts

Public access

- Parking and Drives
- Water and rest room
- Tours
- Retail
- Farm brewery
Tasting room

Air drainage

- need some slope
- distance from tree line
Esp in morning to dry off dew
- what about fog





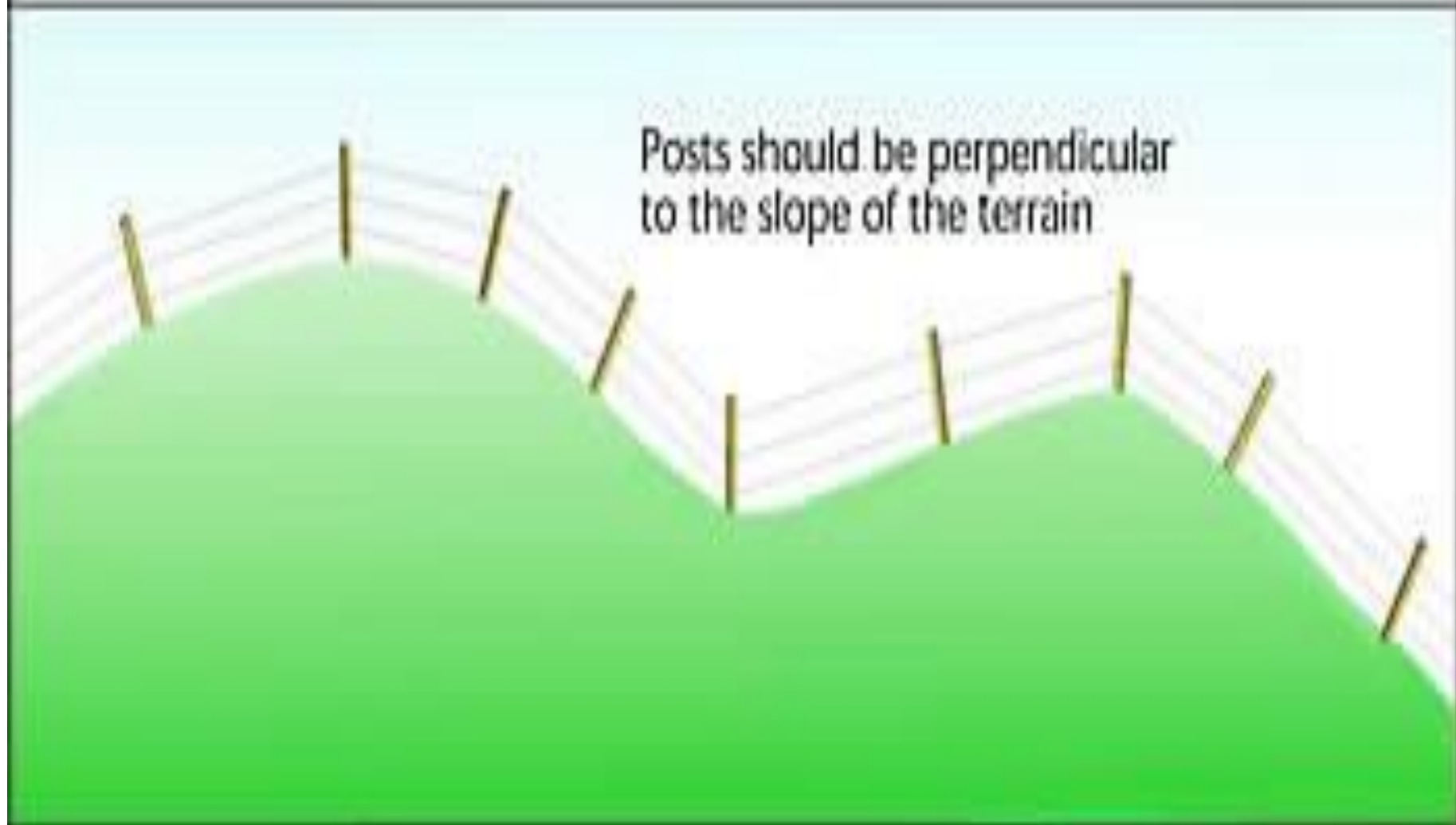


Slope and trellis construction

- Is it too hilly?
- Irrigation may have to go across the slope

Post Spacing on a Hilly Terrain

Posts should be perpendicular to the slope of the terrain





What's on the land now?

- Perennial weeds
- May be best to plow and plant a year before





15 10:08

Cover Crops

- Pros

- Smother weeds
- Addition of Organic Matter
- Protect soil from erosion
- Improve soil structure
- Potential Nitrogen Fixation
- **Provide solid footing for workers/equipment**
- Potential reservoir for beneficial insects

- Cons

- Competitive
- Cost, timing and difficult to establish
- Tall growth can change microclimate around crown

Cover Crops info-

- Cover Crops Decision Tool

[http://www.hort.cornell.edu/
bjorkman/lab/covercrops/
decision-tool.php](http://www.hort.cornell.edu/bjorkman/lab/covercrops/decision-tool.php)

Google: Cover Crops at
Cornell

Diversity is good, but...



Weed Mgt Options

- Plastic Mulches
- Cultivation
- Herbicides
- Sheep, but not goats!



Weed Mgt Options

- Herbicides
- Cultivation



Weed Mgt Options

- Sheep , but not goats!



Fertility Prep

- Consult USDA soil maps
 - NRCS or CCE or County Soil and Water
- Get a soil test!
 - Dairy one/ Agro One
 - Use the “F “ form for hops
 - Can also get a soil health test

Fertility Management

- Correct major issues before plant

Phosphorus, not very soluble
should be worked in 8-10"

Potash , more water soluble

Nitrogen will leach if done too early

pH

- Should be between 6.2 and 6.8
- Not a deal breaker/ relatively easy to change
lime to raise, reacts chemically
sulfur to lower, takes longer to work

Organic fertilizers

- Cover crops, clovers etc.
 - Only releases N when its killed
- Manures - cant get enough N by these alone
- Foliar and drip feeding
 - Damm and other companies have some available
 - Check with OMRI Organic Materials Review Institute

1st Year Requirements
PRODUCE 1750 LBS DM/acre

- 3.0% Nitrogen = 55 Lbs
- 2.0% Potassium = 35 Lbs
- 0.50% Phosphorus = 9 lbs

Fertilizer Nutrients

- Requirements for hops 2nd year

100 lbs N – 20 lbs P – 40 lbs K
200 lbs fertilizer - 20 – 10 – 20
40 lbs of N – 20 lbs of P – 40
lbs of K

Still need 60 lbs or more of N

Manure Value

- 10 lbs of N for each ton of manure applied
- 5,000 = 25 lbs of N

–30 to 50% available in first year

–15% in second year

–15% in third year

Boron and Zinc

- Common deficiencies in the Northeast
- 1 to 2 lbs per acre of Boron if low
- If Zinc is low add to 2 to 4 lbs per acre
- Will need to put through irrigation or blend with other fertilizer

Variety Selection

- Talk to your brewer
- Aroma vs bittering
- Disease resistance
- See our websites for variety updates



Cluster

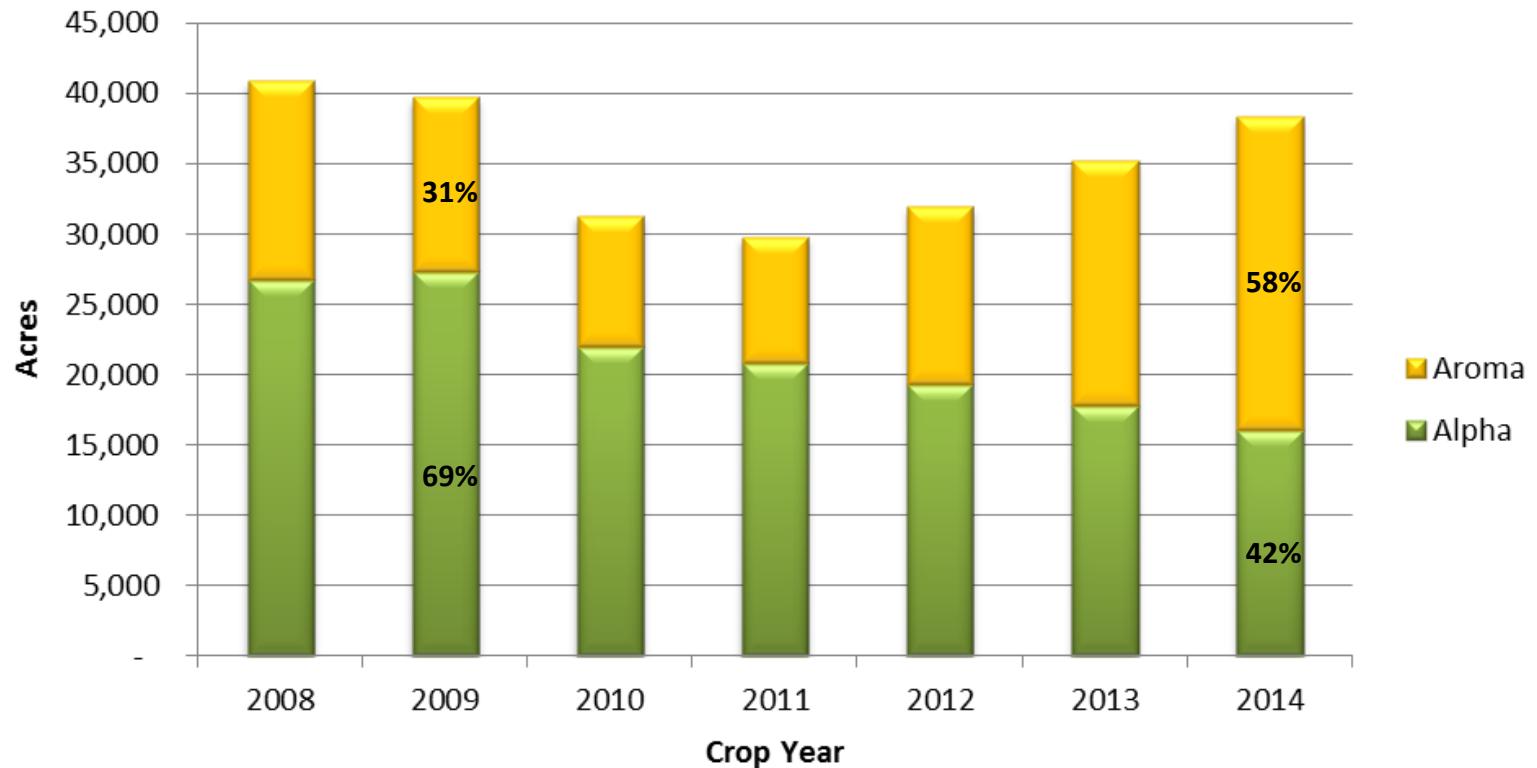


Perle



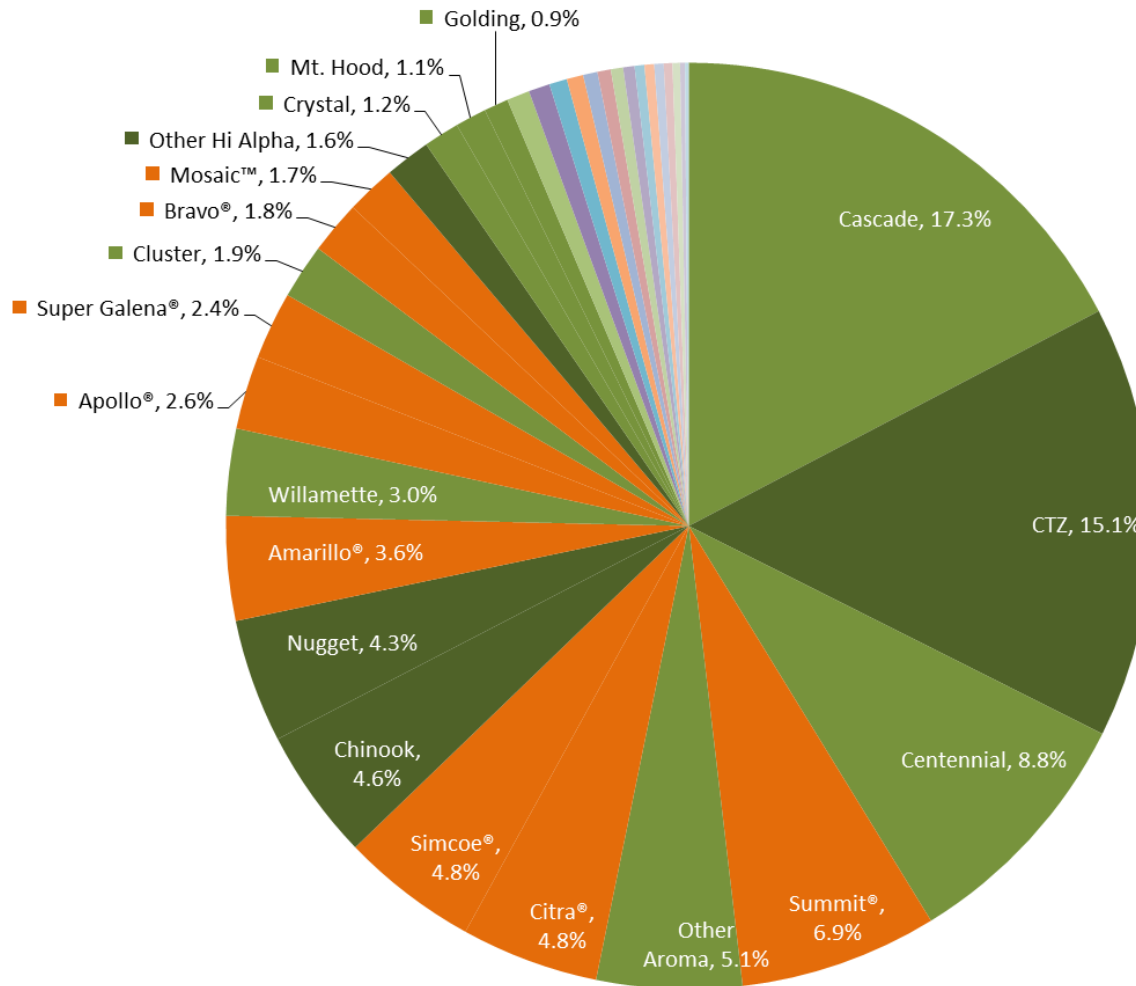
Cascade

US Hop Acreage Aroma vs. Alpha



- ✓ US acreage continues to shift away from high alpha hops into aroma/flavor hops to satisfy growth in the US craft segment and to reduce world alpha surpluses
- ✓ The 70/30 ratio of high alpha to aroma in 2009 is nearly reversed by 2014. This trend will continue.
- ✓ 2014 crop: 1,700 acre reduction of high alpha (-10%), 4,900 acre increase of aromas (28%)

2014 Acreage Proprietary vs. Public



✓ 31% of 2014 acreage planted to proprietary varieties. Trending upward.

Aroma Varieties Submitted for Sampling

Alpharoma/Rakau

Cascade

Cluster

Centennial

Crystal

Fuggle

Glacier

Hallertau

Liberty

Mt. Hood

Perle

Saaz

Sterling

Tahoma

Ultra

Willamette

Yakima Gold

(Feral hop)

Bittering Varieties Submitted for Sampling

Columbus/Zeus
Brewer's Gold
Centennial
Chinook
Galena
Horizon


Magnum
Newport
Northern Brewer
Nugget
Prohibition
Michigan Copper


Variety	Usage	Disease Susceptibility ^a		
		Powdery Mildew	Downy Mildew	Verticillium Wilt
Brewers Gold	Bittering	S	MR	MR
Bullion	Bittering	S	MR	R
Cascade	Aroma	MR	MR	MR
Centennial	Bittering	MR	S	U
Chinook	Bittering	MS	MR	R
Columbia	Aroma	MS	MR	S
Comet	Bittering	R	S	R
Crystal	Aroma	R	S	R
East Kent Golding	Aroma	S	S	MR
First Gold	Bittering	R	S	MR
Fuggle	Aroma	MS	R	S
Galena	Bittering	S	S	R
Glacier	Aroma	S	S	U
Hall. Gold	Aroma	MS	R	S
Hall. Magnum	Bittering	S	R	MR
Hall. Mittelfrüh	Aroma	MS	S	S
Hall. Tradition	Aroma	MR	R	MR
Horizon	Bittering	MS	S	MR
Late Cluster	Aroma	S	S	R
Liberty	Aroma	MR	MR	U
Mt. Hood	Aroma	MS	S	S
Newport	Bittering	R	R	U
Northern Brewer	Bittering	S	S	R
Nugget	Bittering	R	S	S
Olympic	Bittering	S	MS	R
Perle	Aroma	S	R	MR
Pioneer	Bittering	MR	MR	U
Saazer	Aroma	S	MS	S
Saazer 36	Aroma	S	MS	S
Spalter	Aroma	S	R	MR
Sterling	Aroma	MS	MR	U
Teamaker	Aroma	MR	MR	S
Tettnanger	Aroma	MS	MS	S
Tolhurst	Aroma	S	S	U
U.S. Tettnanger	Aroma	MS	MS	S
Vanguard	Aroma	S	S	U
Willamette	Aroma	MS	MR	S

The Right Time to Harvest Optimal Yield and Quality

A. Lutz, J. Kneidl, E. Seigner , and K. Kammhuber

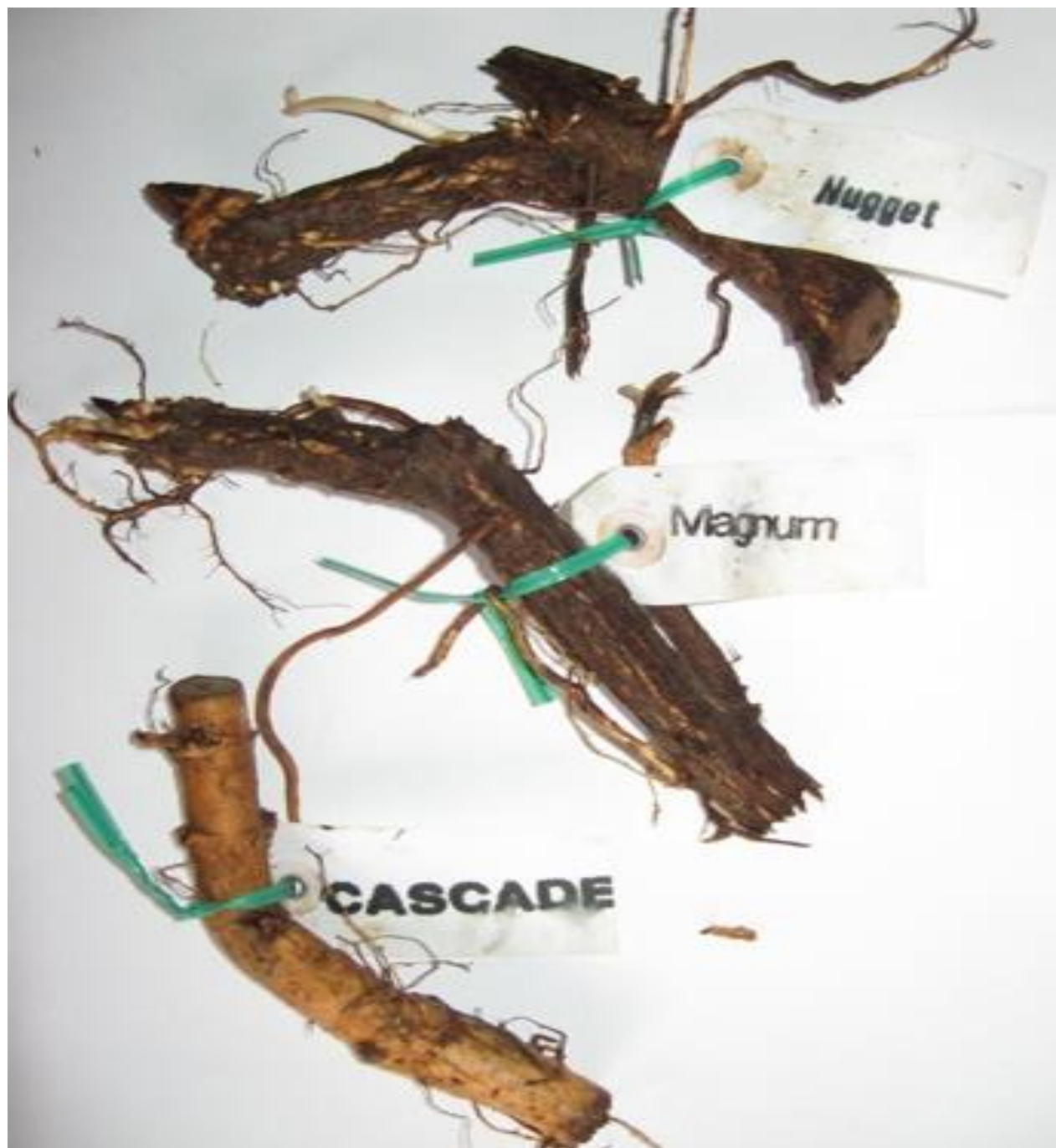
	August											September																				
	22	23	24	25	26	27	28	29	30	31	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22
Hallertauer Mfr.																																
Spalter																																
Northern Br.																																
Tettnanger																																
Hall. Tradition																																
Opal																																
Saphir																																
Perle																																
Spalter Select																																
Smaragd																																
Hersbrucker																																
Hall. Magnum																																
Hall. Taurus																																
Herkules																																
Nugget																																

 optimal harvest time

 harvest with restriction possible

Estimated costs per Acre

• Trellis establishment	\$5-6,000
• Drip Irrigation system	\$1,200
– (not including source)	
• Rhizomes or plants	\$2-4,000
• Land Prep (fert.,seed,coir)	\$1,000
• Labor	\$3-4,000
 Total	 \$12-16,000/A



Local Propagation of virus
free hop plants





Can we have
“N East “Varieties?

Locating New and Old
Varieties for Eastern
Growers



How much does a plant breeding
program cost?

\$250,000/yr for 8-10 years to bring
new varieties to market