

Nebraska Hops Seminar

An introduction to common hop
production and its use

Productivity and Performance

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<5% of flowering plants are dioecious



Female



Male



Incredibly Fast Growing

May 28th, 2015

July 30th, 2015



Desirable traits

Bitterness

Alpha acids

- Humulone
- Cohumulone
- Adhumulone

Beta Acids

- Lupulone
- Colupulone
- Adlupulone

Aromatics

Essential oils

- Humulene
- Myrcene
- Caryophyllene
- Farensene

Factors reducing quality

- Soils
- Fertility
- Variety selection
- Poor management
- Lack of water
- Exposed site
- Poor drainage
- Poor infrastructure

Factors reducing quality

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Erin Hodgson, Dept. Entomology



Factors reducing quality



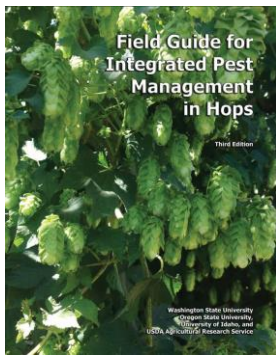
Factors reducing quality



Sterling – downy mildew and leaf hopper susceptible



Sorachi ace – deer candy!



<http://usahops.org/>



Desirable traits

Biotic and abiotic stress tolerance

Local adaptation

Yield



Well into burr stage as of June 23rd, 2016

Cultivar improvement

Multi-year process

Evaluation

Selection

Breed for local adaptation
and brewing quality



Hop Research Council

1st year plants (#s/Acre)

Variety	Yield	Variety	Yield
Brewer's Gold	447	Mt. Hood	200
Cascade*	342	Newport	295
Centennial*	181	Nugget*	342
Chinook*	219	Saaz	390
Columbus (CTZ)*	447	Sorachi Ace	238
Galena	228	Zeus (CTZ)*	428
Magnum	295		

* Important varieties in Pacific Northwest from 2013 - 2015
Yield data provided by Midwest Hop Producers

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Resources

- Michigan State University
<http://www.hops.msu.edu>
- USAHops
<http://www.usahops.org/>
- University of Nebraska
<http://agronomy.unl.edu/nebraska-hops>