

Introduction to Hops Seminar
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Presented by Alexander DeFrancesco,
President of the Connecticut Hop Growers Association

Hops-flowering herbaceous perennial that climbs with vines

- aromatic, bittering, flavor, medical uses
- typically reaching peak height around the summer solstice, then the laterals and cones produce
- water intensive- potential to grow a foot a day in the right conditions

Commercial cash crop -long history in New England and New York, then Washington and Oregon, around the World

Varieties

Native hops- wild ones that Native American tribes used for medical purpose

European hops- cultivation began

Heirloom/Grandfather varieties-European

Modern-arise from breeding programs and farms that are growing hops commercially

Yakama Valley, BHA, Michigan State, ADHA

Dwarfs, up and coming

Short Trellis

Hedge rows

Approximately 400+ varieties cultivated for commercial use

How to select hops- system

Great Lake Hops - <http://www.greatlakeshops.com/>

Hopyard- What to consider?

Cost -EXPENSIVE SET UP

"If you do not have money you raise apples and corn, if you have money you raise hops."

Approximately- \$10,000 – 12,000 set up/acre (2012 Michigan Study)

Soil -well drained, minimum two feet of growing soil

Sandy, silty loam

pH and nutrients dependent on varieties-still unknown for exactly each amount

-nutrients during off months-restoring the soils

¼ acre of larger

Water resource

-irrigation systems-approximately 15000 gallons/week for 900 plants/acre

Wind

Direction of setting up your rows -wind sails

Access to hop yard

- middle of woods
- previous use of land

Hopyard Layout

Trellis System

- V style or single style?
- Tall V -1/2 acre or greater to optimize yield
- Short V- traditional and dwarf varieties
- Plantings 3-3.5 feet apart depending on variety and layout
- Yakama, England

Materials

- Poles-cedar, black locust – 30 -40 dollars a pole
- Tar the bottoms, debark
- Cables-gauge for supports and growing lines will vary
- DO NOT GO CHEAP
- Anchors, High tension couplings, eye bolts, U clamps, caps
- Tools for setting up cables, poles, and tying
- Coir Wire-coconut material for stringing trellis for training
- W clips, W clip inserter

Steve Schmidt- <http://www.schmidthops.com/>

Instructive videos, link on CHGA page

Plants vs. Rhizomes

Rhizomes-

- Cheap
- Dormant
- All over
- Problems?
- Plant in April, but can start inside greenhouses

Plants

- Use to be expensive, but now affordable
- Living when shipped
- More readily available now
- Easy to detect issues
- Plant after frost in May

Maintaining hopyards

Spray regime -MUST

IPM system

Diseases-

Dr. James LaMondia

Downy and Powdery Mildews

Verticillium Wilt

Potato fields in England example

Fungus

Reference-Disease manual

Insects-

Aphids, Spider mites, leaf hoppers, Japanese beetle-(does not occur some places of the world)

England and Yakama Valley geographic examples

Weed control

A must to keep bugs and other issues away from plants

Examples of methods-

Manual

Spray regime

Fire

Animal

Harvest

August-October depending on location in the Northern Hemisphere

Machine vs hand picking

Types of machines-

Wolf, wolverine, hop harvester, UVM picker

YouTube videos

Do not pick too early or too late

UVM dryness calculator and variety specifics based on oil content

Drying hops

Oasts and Ovens

Must dry down to pellet

7 to 8% moisture content for when they go in a pellet machine

To dry and become powder, to wet and become oatmeal/mold

Moisture probes

ONE OF THE MOST DIFFICULT PARTS FOR NORTHEAST FARMS

Pellet vs Whole cone

Packaging

Mini compactor bales

European bags-125 lbs, 200 lbs standard in Yakama-railroad car dimensions

Pellets in mylar bags, nitrogen flush – (do you really need nitrogen?)

Moisture AGAIN – do not mold your harvest

Storage

Temperature

Moisture

Data Analysis

Sources

<http://www.greatlakeshops.com/>

<http://www.schmidthops.com/>

Dr. James LaMondia, Connecticut Agriculture Experimental Station