

# Farm History



- ❧ Test Plot of 17 varieties planted in 2009
- ❧ Trellis constructed and land prepared in 2010
- ❧ Main yard planted with 7 best performing varieties in 2011





# Farm Statistics



- ❧ 2/3 acre planted (2011)
  - ❧ 540 plantings
  - ❧ Additional 1/3 acre to be planted in 2012
- ❧ Vergennes Clay
- ❧ 14 foot cedar trellis with 11 rows
- ❧ 10 feet between rows
- ❧ 3.5 feet between plantings



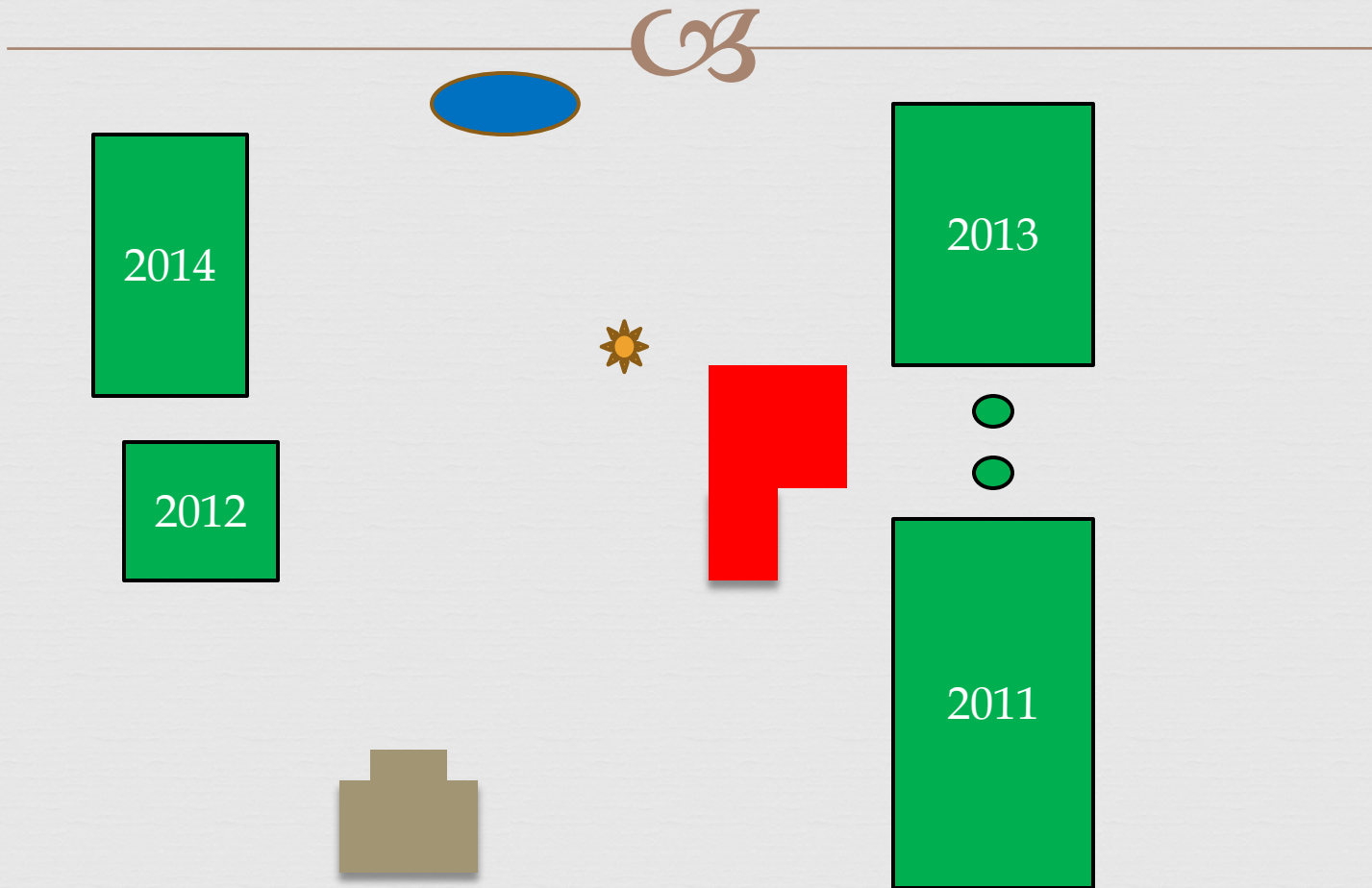
# Farm Statistics



- ❧ Varieties planted
  - ❧ Cascade
  - ❧ Columbus (CTZ)
  - ❧ Centennial
  - ❧ Magnum
  - ❧ Perle
  - ❧ Newport
  - ❧ Brewer's Gold



# Farm Layout





# 2011 Brewing Values



<u>Hop Variety</u>	<u>Dry Weight</u>	<u><math>\alpha</math> – Acid</u>	<u><math>\beta</math> – Acid</u>	<u>H.S.I.</u>	
Cascade	4 lb 2 oz	5.60%	4.80%	0.2	
Centennial	1 lb 12 oz	7.50%	3.90%	0.214	
Columbus	Irene	14.80%	5.00%	0.223	
Brewer's Gold	4 lb 4 oz	5.60%	4.80%	0.205	

Perle, Newport, Magnum all less then 1 lb production and  $\alpha$  and  $\beta$  below average range



# Production Issues



## ❧ Insects

❧ Leafhoppers > Mites

## ❧ Diseases

❧ Downey > Powdery Mildew

## ❧ Abiotic

❧ Rhizome failure due to wet soil

❧ Nutritional issues in isolated areas





# Hopyard Construction Costs

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<b><u>Material</u></b>	<b><u>Cost</u></b>
<b>Trellis</b>	
Cedar Poles (108)	\$2,724
Drainage Stone (1 3/4 ton)	\$257
Cabling Supplies / Anchors	\$2,078
<b>Drip Irrigation System</b>	
Drip Irrigation Tubing	\$1,558
Water Pump	\$1,300
Storage Tank (3000 gal)	\$2,000
<b>Land Preparation</b>	
Landscape Fabric	\$889
Compost (18 yards)	\$782
Organic Rhizomes (558)	<u>\$2,155</u>
	\$13,743





# Hop Processing



<u>Machine</u>	<u>Cost</u>
5 hp Pellet Mill	\$2,995
3 hp Hammer Mill	\$1,700
Nitrogen-Flush Vacuum Sealer	<u>\$1,500</u>
	\$6,195

## Not Included:

- Hop Harvester
- Oast Construction Supplies
- Baler
- Freezer
- Liquid Nitrogen Equipment



# Annual Hop Growing Costs

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<u>Product</u>	<u>Cost</u>
<b>Fertilizer</b>	
Peanut Meal (100 lbs)	\$49
Organic Compost (10 yards)	\$440
<b>Hopyard Supplies</b>	
Mulch (10 yards)	\$60
Coir Twine	\$144
<b>Organic Pesticides</b>	
Sonata	\$89
Regalia	\$198
PyGanic	\$183
Aza-Direct	\$42
<b>Processing</b>	
Mylar Bags (1000 bags)	\$99
Liquid Nitrogen	\$200/mo
Alpha Analytics (Hop Analysis)	\$280
<b>Other</b>	
Farm Insurance	\$790
NOFA Organic Certification	\$350
NeHA Membership	\$40
Intuit Website Hosting	<u>\$120</u>
	\$2,884

✧ Not included

✧ Fuel costs and electricity to run:  
Tractor, Oast, Drip Irrigation,  
Vacuum Sealer, Pellet Mill





# Breaking-Even



## Break-even Point for Annual Hop Growing Costs

	<u>Price / Pound</u>	<u>Pounds Sold</u>
	\$8	360
	\$10	288
	\$15	192
	\$20	144

### National average price / pound:

Web-based direct farm sales: \$10 - \$16 / lb

Max: \$25 / lb

Homebrew supply: \$32 - \$40 / lb

Commodity price for hops (2011): \$3.11 / lb





Questions?