

Hopping Around the Cost of Production

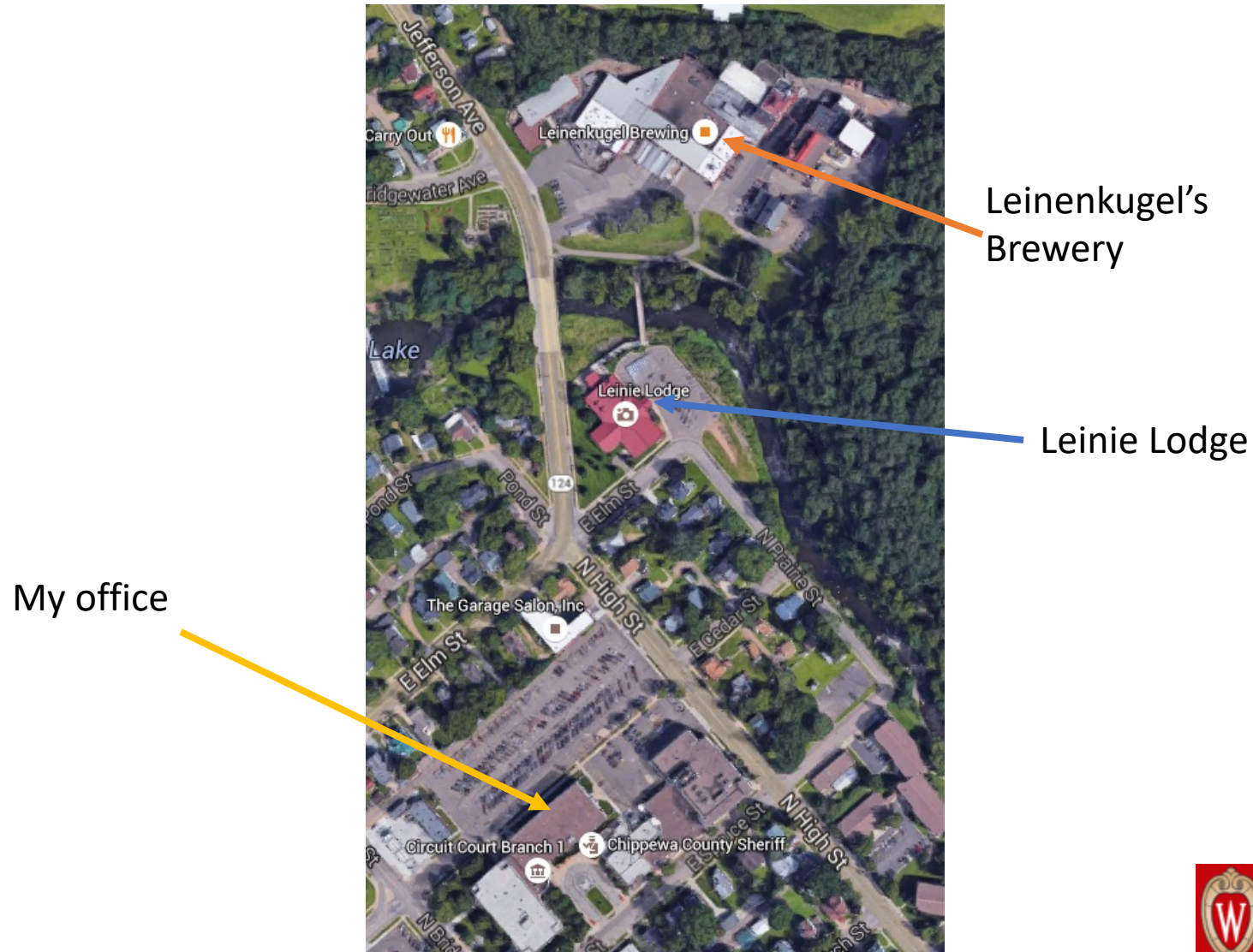
Minnesota Hop Growers Association
Uncommon Loon Brewery
Chisago City, MN

Jerry Clark
Regional Crops and Soils Educator
Chippewa, Dunn, Eau Claire Counties
Division of Extension UW-Madison



Extension
UNIVERSITY OF WISCONSIN-MADISON

Why research malting barley in Chippewa County?



Survey Input and Demographics

- 8 grower responses
- Ave. hop yard age = 6.5
- 7/8 growers dry their own
- Half pellet their own
- Total acreage = 14.29
 - Average = 1.8

- 8.9 acres older than 3 years
 - 710 plants/acre
- 4.5 acres less than 3 years
 - 964 plants/acre
- 1.7 acres new in 2020
 - 1135 plants/acre

Fixed Costs

- Those costs that exist whether you grow the crop or not.
- Need to know these to have the most detailed budget.

The “DIRTI Five”

- Depreciation
- Interest
- Repairs
- Taxes
- Insurance



Variable Costs

- Fertilizer
- Soil Amendment
- Plants
- Crop Protection
- Irrigation

- Land (Rent/Ownership)
- Machinery/Equipment
- Crop Scouting
- Soil Testing



Income

- Yield x Price
- 5/8 growers responded
- 1 grower provided 8 variety prices
 - Average \$8.40/pound
- Total pounds sold 4/8 farms
 - = 10.25 acres
 - 4953 lbs
 - 483 lbs./acre

So.....

How much income?

\$4,057/acre



Nutrients

Nitrogen

7/8 Farms	=14 acres
<u>Ave. \$N/acre</u>	<u>= \$135.46</u>

Potassium

2/8 Farms	= 8 acres
<u>Ave. \$K/acre</u>	<u>= \$ 82.26</u>

Other (lime, blended fertilizer)

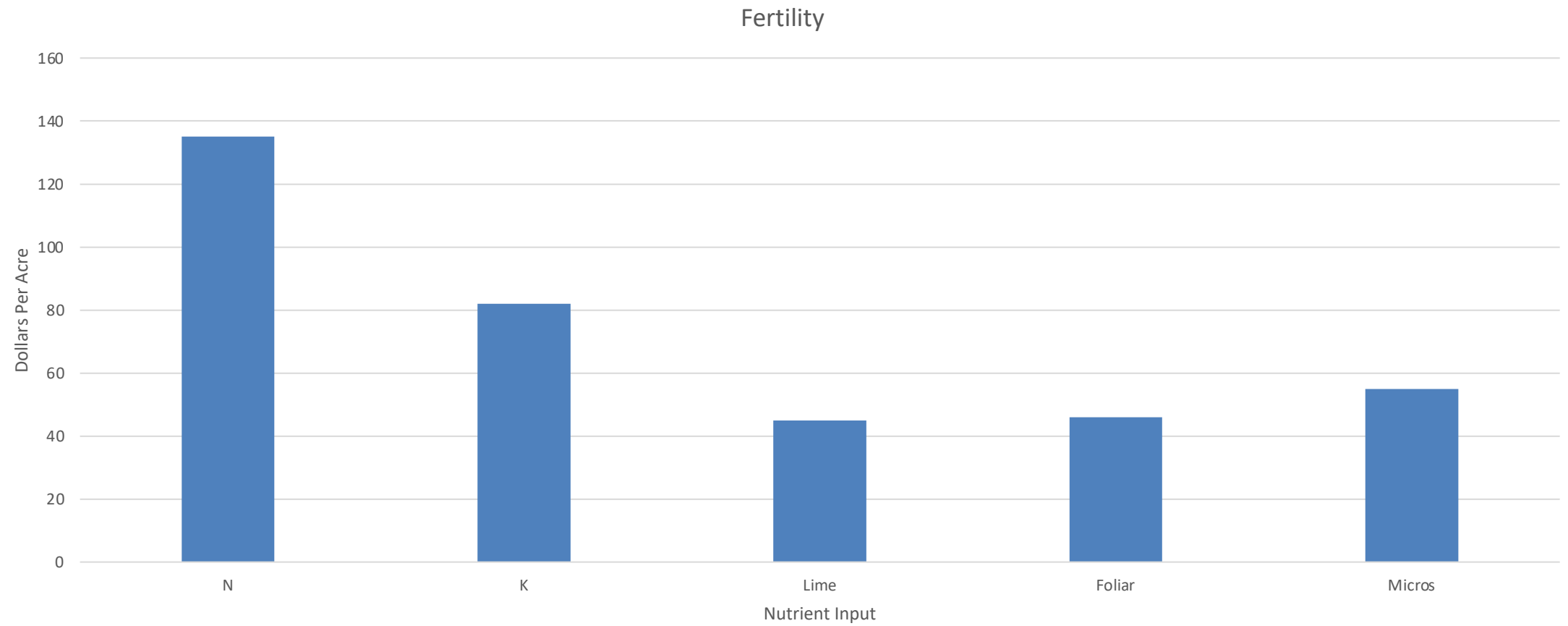
4/8 Farms	= 9.25 acres
Ave.\$/acre	= \$229.34

Micronutrients

3/8 Farms	=7.5 acres
<u>Ave \$/acre</u>	<u>=\$55.17</u>

Foliar	=4.5 acres
Ave. \$/acre	=\$46.00

Expenses



Chemical – 7/8 growers = 13.29 acres

Fungicides

\$94.87/application

\$515.54/acre

Insecticide

\$109.04/application

\$131.67/acre

Herbicides

\$76.23/application

\$189.87/acre

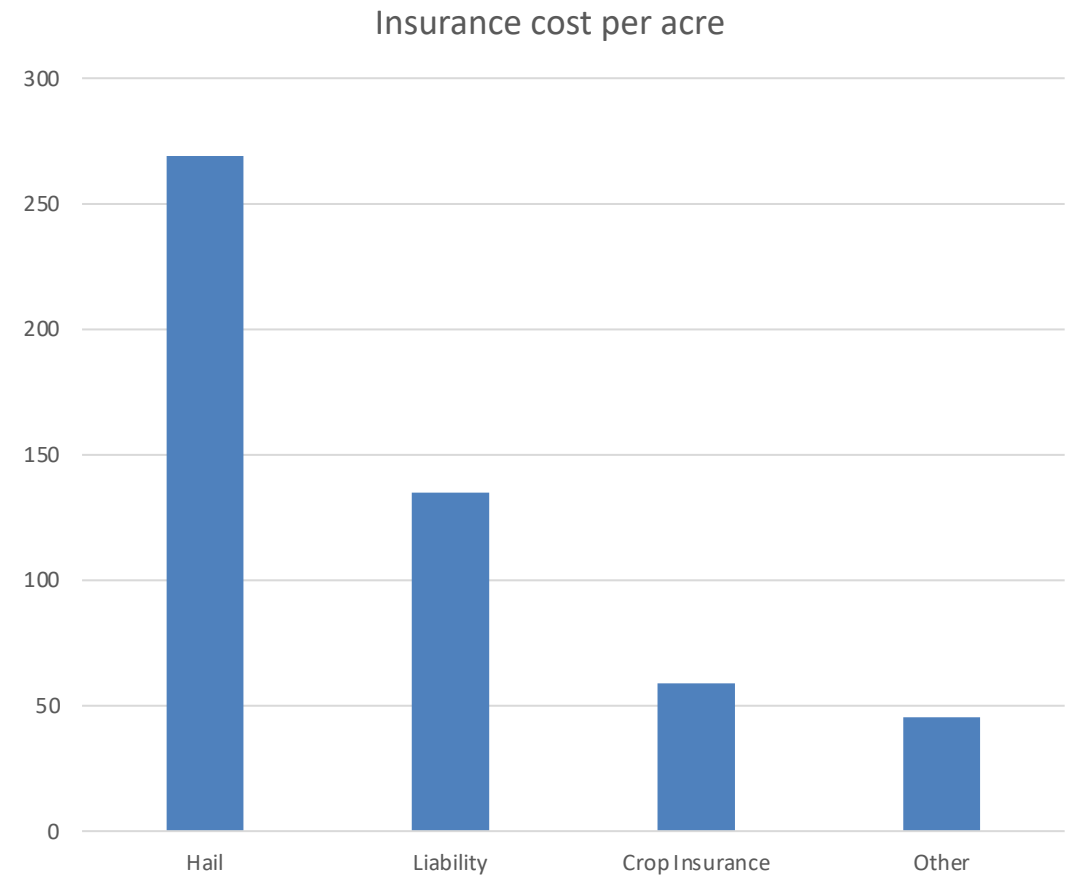
Other (1 grower)

\$50/acre



Insurance

- Hail
\$268/acre
- Liability
\$134/acre
- Crop Insurance
\$59/acre
- Other (equipment, farm, etc.)
\$45/acre



Labor

	Stringing	Spraying	Mowing	Stripping	Other (In)	Harvest	Other
Hours	29.3	27.5	31	6.67	300	101.4	38.5
\$/Hour	\$10.50	\$ 11.00	\$ 11.00	\$11.00	\$11.00	\$ 10.33	\$11.00
Unpaid Hrs.	47.5	42.25	49	16	160	127.5	51.25
\$/Acre	\$58.05	\$93.08	\$104.92	\$22.56	\$1,100.00	\$190.51	\$338.80

\$1,900/acre

\$/Acre based on acreage responses per grower

- Unpaid labor = return to management, 5% of gross returns
 - \$200.00/acre
 - \$0.40/lb.

Machinery

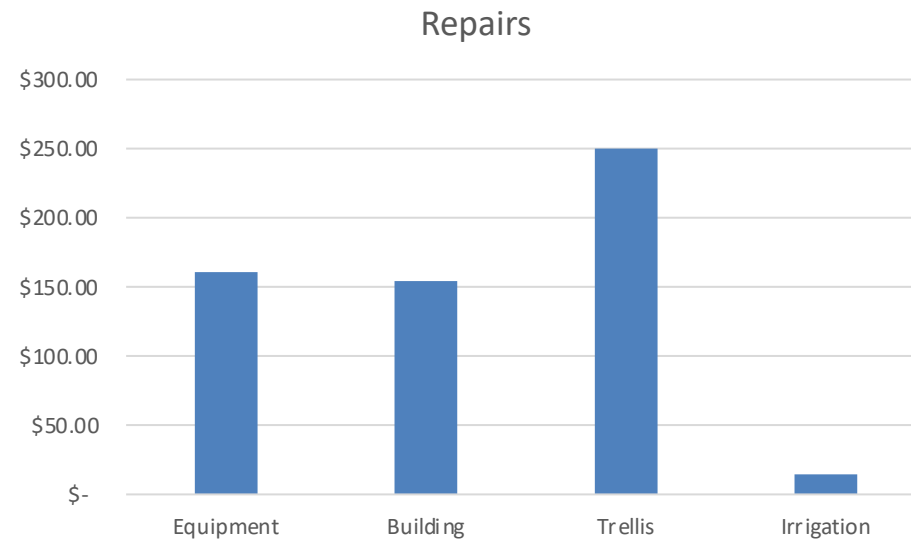
	Tractor	Sprayer Air Blast	Sprayer Ground	Truck	Brush Mower	Mower
Horsepower	48	-	-	-	-	-
Hours	40.8	45	25	14	39	29
Cost/pound	\$0.12	\$0.12	\$0.12	\$0.05	\$0.14	\$0.20

	Fertilizer Applicator	Harvester	Dryer	UTV	Harvest Trailer/Wagon
Hours	36	19	170	96	63
Cost/pound	\$0.04	\$0.26	\$0.05	\$0.10	\$0.02

Total machinery cost/lb.= \$1.10

Repairs

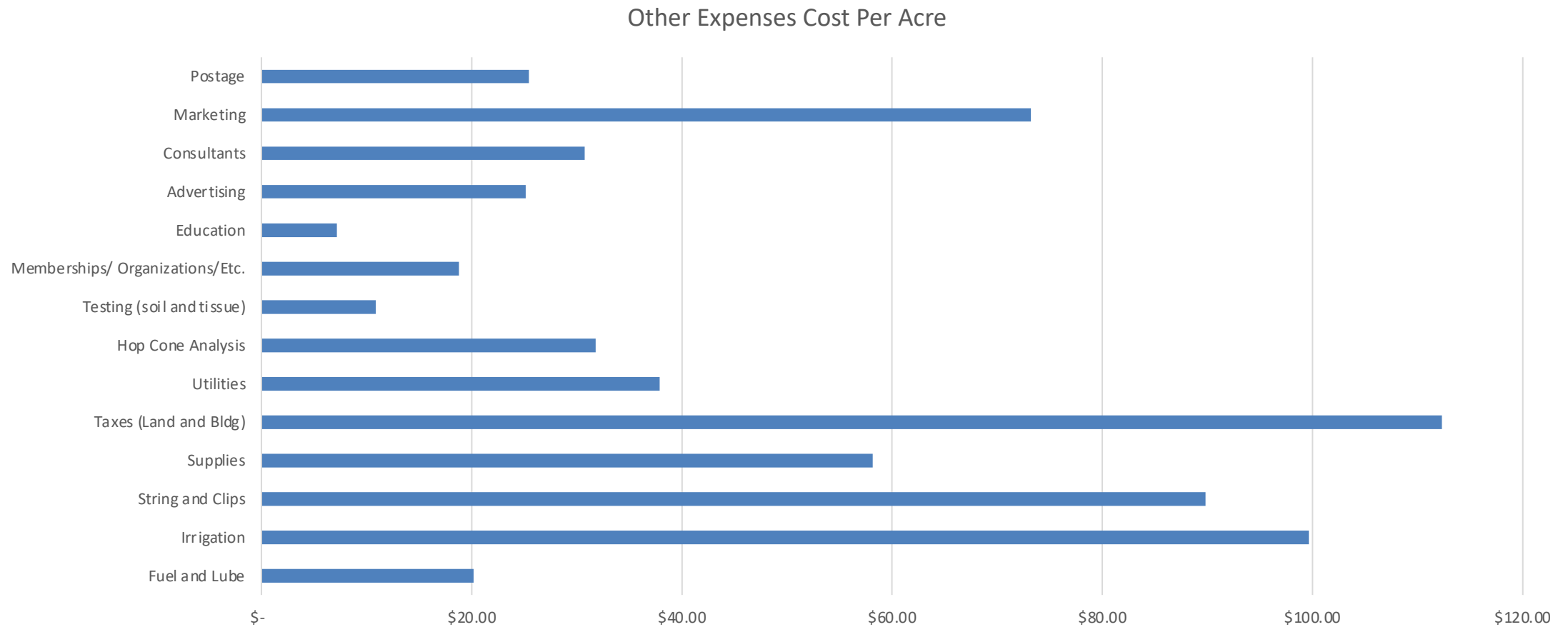
	Equipment	Building	Trellis	Irrigation	Other
Acres	9.5	4.5	1	7.5	2
Cost per acre	\$160.88	\$154.44	\$250.00	\$14.00	\$(10,000)



Other expenses

Expense	Cost per acre (\$)		Expense	Cost per acre (\$)
Custom Hire	13,000		Hop Cone Analysis	32
Fuel and Lube	20		Testing (soil and tissue)	11
Interest	640		Memberships/ Organizations/Etc.	19
Irrigation	100		Education	7
Utilities	38		Advertising	25
Storage	1400		Consultants	31
String and Clips	90		Marketing	73
Supplies	58		Postage	25
Taxes (Land and Bldg)	112		Trucking	43

Other Expenses



Back to this slide...

- Yield x Price
- 5/8 growers responded
- 1 grower provided 8 variety prices
 - Average \$8.40/pound
- Total pounds sold 4/8 farms
 - = 10.25 acres
 - 4953 lbs
 - 483 lbs./acre

So.....

How much income?

\$4,057/acre



Bottom line...(kind of)

	\$/acre	\$/lb.
N	\$ 135.00	\$ 0.28
K	\$ 82.00	\$ 0.17
Lime	\$ 45.00	\$ 0.09
Foliar	\$ 46.00	\$ 0.10
Micros	\$ 55.00	\$ 0.11
Fungicide	\$ 515.00	\$ 1.07
Insecticide	\$ 131.00	\$ 0.27
Herbicide	\$ 189.87	\$ 0.39
Insurance	\$ 127.00	\$ 0.26
Labor	\$ 1,900.00	\$ 3.93
Fuel and Lube	\$ 20.20	\$ 0.04
Irrigation	\$ 99.65	\$ 0.21
String and Clips	\$ 89.82	\$ 0.19
Supplies	\$ 58.15	\$ 0.12
Taxes (Land and Bldg)	\$ 112.32	\$ 0.23
Utilities	\$ 37.88	\$ 0.08
Hop Cone Analysis	\$ 31.81	\$ 0.07
Testing (soil and tissue)	\$ 10.88	\$ 0.02
Memberships/ Organizations/Etc.	\$ 18.81	\$ 0.04
Education	\$ 7.20	\$ 0.01
Advertising	\$ 25.15	\$ 0.05
Consultants	\$ 30.73	\$ 0.06
Marketing	\$ 73.19	\$ 0.15
Postage	\$ 25.44	\$ 0.05
Machinery	\$ 531.55	\$ 1.10

Cost per pound = \$9.10

- What about other inputs?
 - Initial investments
 - Trellis (add ??)
 - Plants (add \$0.50)
 - Unpaid labor (\$0.40)
 - Cooler
 - Pelletizer

Next steps

- Engage
 - UW-Madison Agriculture and Applied Economics Department
 - Dr. Paul Mitchell, Extension Agriculture Economist
 - Grad student???
 - More growers
- Use a different survey instrument
 - UW Qualtrics
- Michigan State survey

Questions?

Jerry Clark
Chippewa County
Extension UW-Madison
715-726-7955
jerome.clark@wisc.edu



Extension
UNIVERSITY OF WISCONSIN-MADISON