# Barley Supply Chain Survey Results





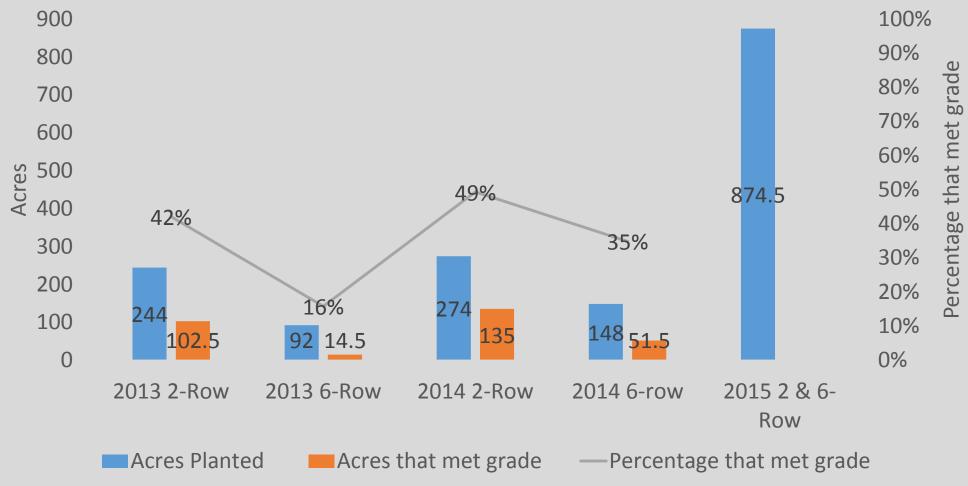
Photo Credit: wisegeek.com

#### Survey Administration

- Issued in Spring 2015
- Emailed:
  - 32 malting barley farmers
  - 8 malt houses
  - 250 breweries
- Response rate:
  - 28 malting barley farmers (88%) fully responded
  - 8 malt houses (100%) fully responded
  - 80 breweries (31%) some fully and some partially responded

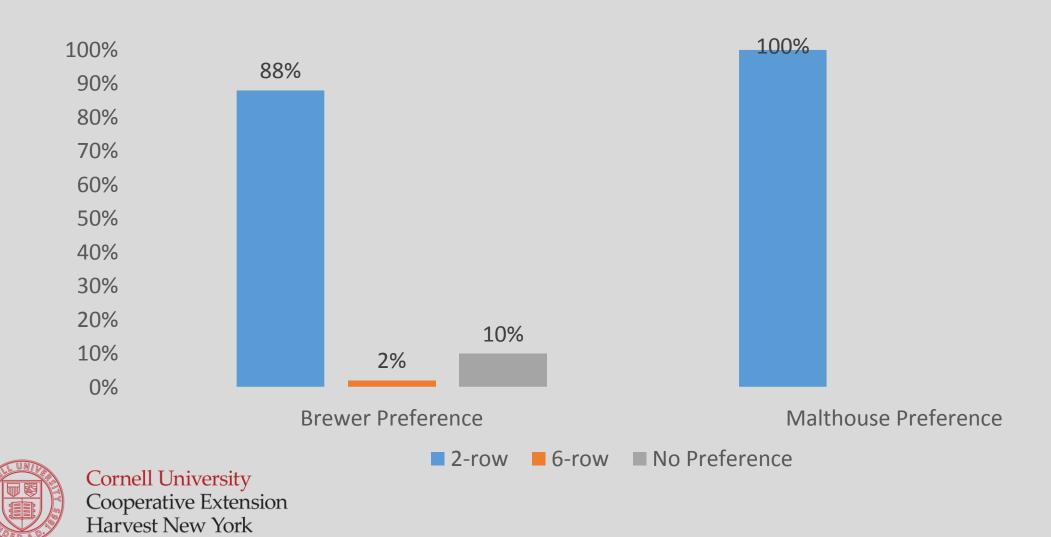


#### Malting Barley Acreage Across NY

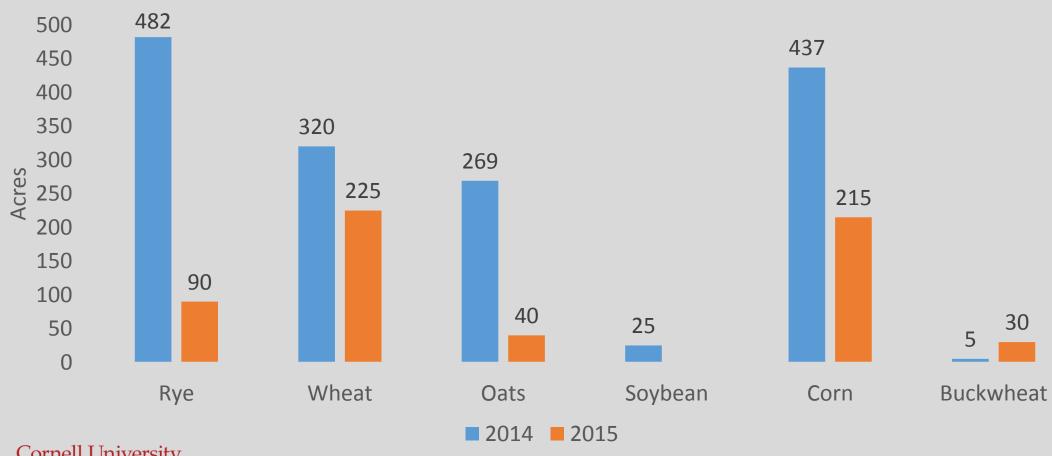




#### Brewer and Malt house Preference



#### Other Grains Grown for the Brewing and Distilling <u>Market</u>



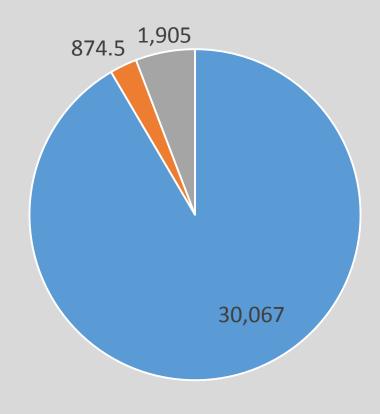


#### Biggest Barrier/Concern to Market Growth

| Rank | Barrier  |  |  |  |  |
|------|--|--|--|--|--|
| 1    | Uncertainty about market demand  |  |  |  |  |
| 2    | Uncertainty of your ability to grow a crop that meets quality standards of maltsters and brewers |  |  |  |  |
| 3    | Access to adequate amount of storage   |  |  |  |  |
| 4    | Access to seed   |  |  |  |  |
| 5    | Transportation and delivery  |  |  |  |  |
| 6    | Malting  |  |  |  |  |
| 7    | Cleaning and drying  |  |  |  |  |
| 8    | Other crops are more profitable  |  |  |  |  |
| 9    | Viability of the industry  |  |  |  |  |
| 10   | Weak desire by brewers to use local malts  |  |  |  |  |
| 11   | Off-farm infrastructure/malting facilities   |  |  |  |  |
| 12   | Access to local malt houses  |  |  |  |  |



#### Current and Potential Malting Barley Acreage





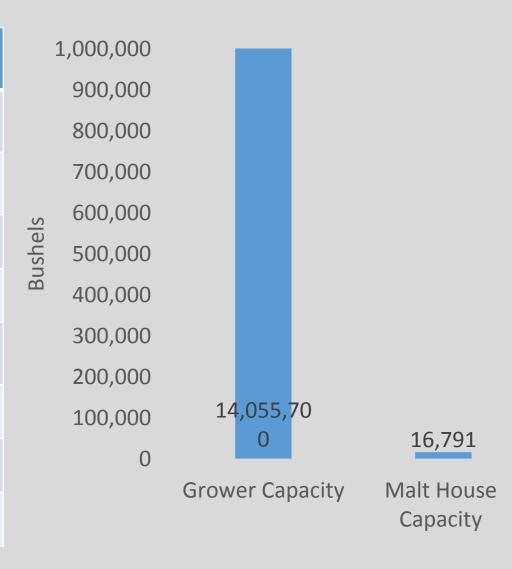
■ Total acres of malting barley

■ Potential acres of malting barley



#### Farmer Storage Challenges

| Ran | Barrier   |
|-----|---|
| k   |   |
| 1   | Need to hold malting barley for longer periods due    |
|     | to lack of demand                                     |
| 2   | Ability to store varieties separately, due to lack of |
|     | storage   |
| 3   | Cleaning  |
|     |   |
| 4   | Molds and mycotoxins                                  |
|     |   |
| 5   | Potential damage from moving the grain between        |
|     | different storage vessels                             |
| 6   | Drying  |
|     |   |
| 7   | Decreased grain viability                             |
|     |   |
| 8   | Insect damage   |
|     | W Cornen Omversity                                    |

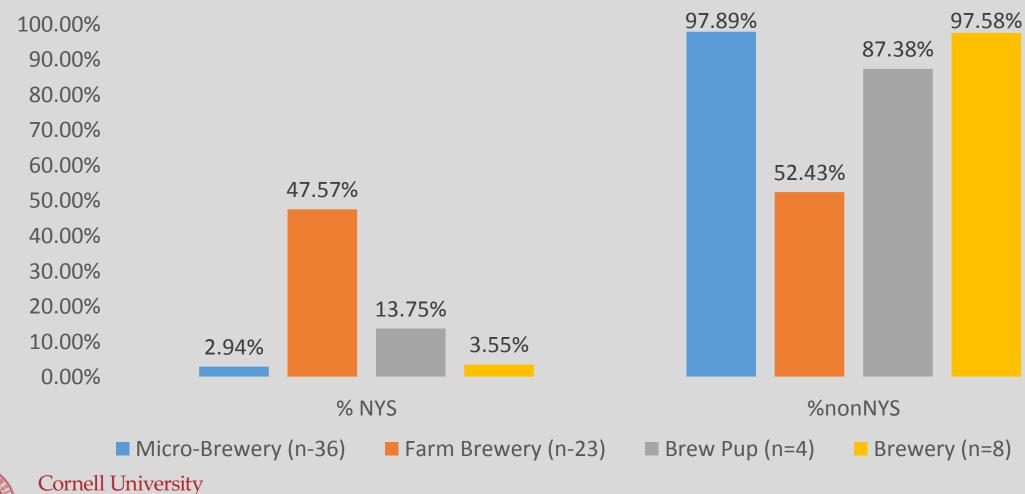




#### Price of Malting Barley (per pound) by Market

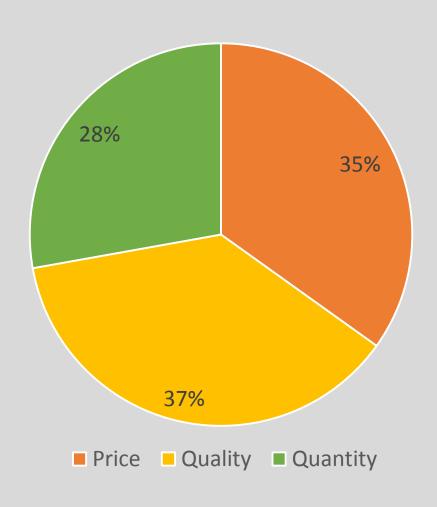
| Variable                      | Average | Std Dev | Minimum | Maximum |
|-------------------------------|---------|---------|---------|---------|
| Farmer                        |         |         |         |         |
| NYS Malthouse                 | 0.25    | 0.06    | 0.17    | 0.40    |
| Out of State Malthouse        | 0.25    | 0.08    | 0.17    | 0.33    |
| Distillery                    | 0.25    |         | 0.25    | 0.25    |
| Animal Feed                   | 0.16    | 0.05    | 0.1     | 0.23    |
| Malthouse                     |         |         |         |         |
| NYS brewery Price/lb          | 1.00    | 0.06    | 0.9     | 1.1     |
| Out-of-state brewery Price/lb | 1.00    | 0.00    | 1       | 1       |
| Home brewers/shops Price/lb   | 1.20    | 0.22    | 1       | 1.5     |
| Distillery Price/lb           | 0.93    | 0.14    | 0.75    | 1.1     |
| Brewery                       |         |         |         |         |
| Out of State Malt house       | 0.69    | 0.23    | 0.31    | 1.23    |
| NYS Malt house                | 1.11    | 0.31    | 0.44    | 2.00    |

#### Demand for NY Grown Malt (2015)





## Brewers Concerns with Sourcing NY Grown Malting Barley





#### 2014 Acres needed to Meet FBL 20% Requirement

| ı |            |                | Lbs In malt     |             |                 | Grain in      | Acres by    |
|---|------------|----------------|-----------------|-------------|-----------------|---------------|-------------|
| ı | 2014       | In Barrels (31 | (68 lbs of malt | Malt Lbs at | In Grain (1 lbs | Bushels (43.5 | Bushel (50  |
| ı | Production | Gallons in a   | per barrel of   | 20% NYS     | barley = .75    | lbs of grain  | bushels per |
|   | Gallons    | Barrel)        | beer)           | Grown       | lbs malt)       | per bushel)   | acre)       |
|   |            |                |                 |             |                 |               |             |
|   |            |                |                 |             |                 |               |             |
|   | 740,000    | 23,871         | 1,623,226       | 324,645     | 405,806         | 9,329         | 186.58      |

Production gallons based on 440,000 taxable gallons. Includes all farm brewers and if they have an additional license where they brew under 60,000 barrels. (7 farm brewer respondents carry another licenses).

### Malting Barley Acres Needed to Meet % of NY Grown Input Requirement for Farm Brewers with Legislatively Mandated Increases

| Year | In Barrels    | Lbs In malt (68<br>lbs of malt per<br>barrel of beer) | Malt Lbs NY Grown % Increasing with Legislation | In Grain (1 lbs<br>barley = .75 lbs | Grain in Bushels<br>(43.5 lbs of<br>grain per<br>bushel) | Acres by Bushel (50 bushels per acre) |
|------|---------------|---|---|-------------------------------------|--|---------------------------------------|
| 2018 | 38,750 (N=23) | 2,635,000   | 527,000   | 922,250                             | 21,201   | 424                                   |
| 2020 | 50,225 (N=20) | 3,415,300   | 2,049,180                                       | 3,586,065                           | 82,438   | 1,649                                 |
| 2024 | 81,580 (N=20) | 5,547,440   | 4,992,696                                       | 8,737,218                           | 200,855  | 4,017                                 |

#### Any Questions?

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