

## Profitable Head Lettuce Production

A DIRECT MARKETING NICHE

DEREK CHRISTIANSON  
BRIX BOUNTY FARM

[HTTP://WWW.BRIXBOUNTY.COM](http://www.brixbounty.com)

[DEREKCHRISTIANSON@GMAIL.COM](mailto:DEREKCHRISTIANSON@GMAIL.COM)

SEMAP AG & FOOD CONFERENCE  
SUNDAY FEBRUARY 25, 2018



## Head Lettuce Production - \$ - a current niche ?

Lettuce is Profitable ... if...

Profit = Income - Expenses

**Gross Sales Potential**

200' bed, 3 Rows, 1' spacing – 500 marketable heads (600)

500 x \$2.00 = \$1,000

500 x \$2.50 = \$1,250

**500 x \$3.00 = \$1,500**

500 x \$3.50 = \$1,750

500 x \$4.00 = \$2,000

## Production Costs – Labor, Labor, Labor

July 9, 2015  
At N.B. Market

- GH Seeding
- GH Care
- Transplanting
- Fencing
- Cultivation #1
- Cultivation #2
- Cultivation #3 (if necc.)
- Harvesting
- Post Harvest Wash
- Marketing

## General Production Tips – Levers for Profit

Consistent Transplant Production

“Variety Selection is HUGE”

Minimize Bolting and Field Losses

Harvest - What We Can Sell

Planting Plans:  
Heads in synergy with Mix

## Head Season: June, July, Aug, Sept, Oct

**Panisse**  
<<<<  
June 3  
2016

**Muir**  
>>>>  
Aug  
2015

### Common Challenges

#### Control Animals – Deer & Woodchuck !

**Spring** – The “Easy Season” - Fast Growth  
Weed Management  
and Potential for Bottom Rot – Rhizoctonia solani

**Summer** – Bolting

**Fall** – Downy Mildew

Aster Yellows < Leaf hoppers ... Frost & Cold Temps

### Variety Selection

Annual Trials to Determine Best Options at Different Points in the Season... i.e. Romaine Trials 2x year

**Summer** – Focus on Batavian aka French Summer Crisp types

**Magenta**, Nevada, New Red Fire, **Muir**, Panisse, **Starfighter**  
Romaines: Arroyo, Coastal Star, Salvius, Sparx

In the Past at Brix: Aneunue, Bergam's Green, Green Star, Jericho,  
*We'll trial some new types from Osborne in 2018...*

**Fall** – focus on ... Downy Mildew resistance  
Currently: Mirlo, Ruby Sky, Salvius, Starfighter

### August 13, 2015 – Magenta (tp 6/23)



Magenta offers tremendous bolt resistance which provides a long harvest window... can be stretched out in the field if necessary.

Opportunity to create your **demand** with your variety selection

### Are Pelleted Seeds Worth the Expense

#### Time and Cost Comparison – 3 rows 1' spacing

A ~200' bed = 600 transplants requiring 7x98 or 700 sds  
Cost of 700 pelleted seeds = \$5.41,

**Labor Cost to Seed** > \$10.50 (pelleted) vs. \$14 (raw)

31.5 minutes vs. 42 minutes (using \$20/hr for our labor rate)

**Comparison to transplant labor** = ~1 hour per bed (\$20)

**Comparison to cultivation labor** = ~1.5 hours per bed total (\$30)

**Comparison to harvest labor** < 5 min/harvest bin max w/ avg 12 heads per bin... ~40

bins (<500 count per bed)... 3+hours to harvest a bed (\$60+)

**Post Harvest Labor** another 3 hours per bed (\$60+)

**Cost of seed** = Starfighter example 700 pelleted seeds = \$5.41

Raw – 5M at \$6.48 each vs. Pelleted – 5M at \$7.73 each

**Bottom Line at Brix** > Yes for a \$.88 cents investment per bed we can save \$3.50 in labor... especially key in high season

**? WHERE TO FOCUS YOUR TIME AND ENERGY?**

### Propagation Tips – Heads in 98's or 128's

Lettuce requires a “sweet spot” for good germination

Important to limit high soil temperatures

Shade is best in summer...

We've used shade (trees), shade cloth, tables, etc.

At brix birds are our typical #1 pest in summer germ season, occasionally rodents and of course woodchucks

Pop the seedlings and **move** to light

### July 15, 2017 – Panisse – triangulated pattern



TP 6/03/2018

1<sup>st</sup> Cultivation

6/23 – handweed

&

6/29 – quick handweed to allow melons to run after lettuce harvest... (see picture later in presentation)

June 29, 2016 – harvest period (7/06 > 7/16+)



TP 5/21 - Adriana TP 6/08 - NRF TP 5/28 - Ridgeline

## Lettuce Fertility in Focus

Moved away from sidedressing lettuce beds... instead we focus on “Super Charging” the Bed before planting

**Full Spectrum Minerals ... A to Z – at Brix > Ca + P + N + Min Mix**

Sufficient **Nitrogen** for fast growth  
**Copper, Iron, Magnesium & Phosphorous** for Energy and Maximum Photosynthesis  
**Calcium & Boron** may prevent tip burn  
**Potassium and Zinc** play a role in Water Use Efficiency  
**Sulfur** for protein development  
**Molybdenum** for Nitrate Utilization

Caution and careful with **Manganese** (fruiting energy) for greens

## Grow Roots Quickly

Fertility is the key to “signaling” plants to grow roots quickly... and having the necessary energy to do so...

In the springtime, pay attention to available Phosphorous.

August 9, 2016 – L mix 8 DAP



## Vegetative vs. Reproductive Growth

Carey Reams – “Male vs Female” Energy

3 Primary Growth Elements

**Calcium**  
 Nitrate Nitrogen  
 Potassium

In practice... at Brix Bounty we include a focus on Boron to help Calcium mobility (xylem), in 2017 we started using Calcium Nitrate in our fertility programs, especially in the springtime and for leaf crops... currently include ~100-150# Calcium Nitrate per acre (15.5% N) at planting = ~15.5 – 23.25# N per acre

## Growing Lettuce in a Drought

photo on August 9, 2016  
 cabbage tp 7.11, cauli 7.01



4 days later, 8.13:  
 Beets 8 DAP  
 (days after planting)





### Variety Selection

Summer Lettuce:  
**Magenta & Muir**  
also Panisse, Nevada  
and **Starfighter**

#### Photo 8.13

Approx. 2 WAP (7.29)  
(weeks after planting)

**Rain:** .3 (7/29), .3 (8/1),  
and .2 (8.10)



Photo 8.20



### Starfighter Heads

Full Spectrum Fertility

“Deep Tillage”

Dust Mulching

**No Irrigation = Less Weeds**

Photo: 8.20.2017



Photo 8.30:  
Additional rain ¼” on 8/22/17  
= ~1” total in 30 days  
Head harvest started 9.03,  
beets in late September



### Cultivation – June 3, 2016



Typical Cultivation  
Schedule at Brix  
**Transplant 4/28**

#### First Cultivation 5/09

1-2 Weeks after  
Planting (WAP)

#### 2<sup>nd</sup> cultivation 5/23 3 WAP

Includes hand weeding

**3<sup>rd</sup> Cultivation if necc.**  
Cobra & Wheel Tracks

### Time to Harvest... July 15 2017 (melons tp 6.20)



## Harvest & Post Harvest

### Harvesting Tips

**In Touch** with the field... 1 or 2 folks who are keyed into head harvest rhythm

**Aim: The Perfect Cut**  
**<2 minutes – 5 min/bin**

1.75 bu crates  
 8 – 10 – 12 – 14 – 16

Milk to Milk  
 and/or Stems > Edge

Burlap if necc...



## Washing Head Lettuce



Rubbermaid Bins

Single Wash

Scrub Stem End to  
 close milk...

2x after major  
 rainstorms and/or in  
 July & August  
 ?? Food Safety ??

Without coolers...  
 minimize field heat  
 > harvest early AM

## Marketing Head Lettuce (Display)

We use wet burlap to  
 create evaporative  
 cooling...

Yellow 1 1/8 bu. or  
 Green 1 3/4 bu.  
 (variety dependent)

Burlap (2x)  
 Layer of heads  
 Burlap  
 Layer of heads  
 Folder burlap bottom

We aim to sell what  
 we grow and harvest  
 at full price...



## 2018 Target Head Lettuce Prices

This summer we'll target \$4 per head for our largest and/or best quality heads and those in highest demand... ahem **PANISSE**

**Peak Production August...**

**demand may depend in part on lettuce mix availability, etc...**

A Saturday in August at the stand > ~100 heads – aim to have a nice selection still available at 6PM ... after the beach

Mon	Tue	Wed	Thur	Fri	Sat	Sun
FS	CSA	FS	Mkt	CSA	FS	FS

"Yesterday's" Lettuce at \$2/head

## Troubleshooting and Q & A



**Bolsachica**  
 a cut lettuce for mix

in the Fieldhouse  
 Nov 9, 2015

## Thank You

For more information on this presentation contact:

Derek Christianson  
**Brix Bounty Farm**  
 1 Seth Davis Way  
 Dartmouth, MA 02748  
 508-992-1868  
[derekchristianson@gmail.com](mailto:derekchristianson@gmail.com)

