

ONE-CUT LETTUCES

Insights & Techniques for Small Farms

Hensley's SEED CO. DENVER · COLORADO

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Original
Research Farm

the original research farm

Trial site in USDA zone 5b

- **200 acres managed**
- **25 miles of beds in production**
- **Emphasis on soil heath:**
  - **Wide production spacing to facilitate crop rotations**
  - **50+% of acreage in cover cropping annually**
  - **Extensive organic mulch inputs**



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TRIALING & SELECTION

- Approx. 3,000 varieties trialed in 2022, resulting in over 100 products added
- Year-round effort to select superior new products and substitutions
- Includes regional trials across the country with growers, universities, field day events, & more



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What IS One-Cut Lettuce?

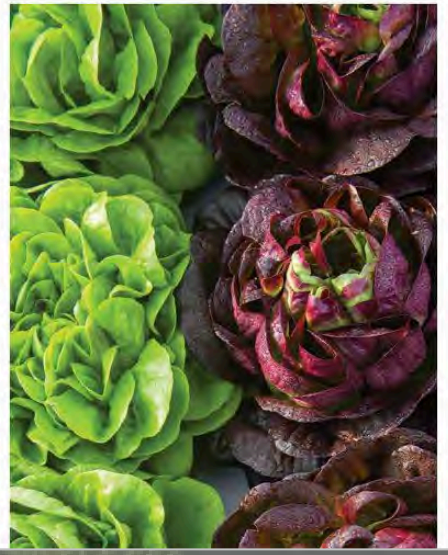
Distinct Lettuce Category:

- High leaf count
- Uniformly-sized leaves
- Grown to full size
- Suitable for salad mix



Uniform leaf size + high leaf count = yield potential

RESOURCES



Hensley's SEED CO.

Exclusive to the original source

Salanova®

The Ultimate Efficiency Lettuce

As compared to baby leaf, expect a higher quality salad mix with a lower production cost.

By transplanting and growing full-size heads, you can expect…

- **Improved cultivation efficiency.** Get a jump on weeds, use more aggressive tools, try plasticulture. Fewer weeds come harvest time means faster picking, washing, and packing.

How we select in our

One-Cut Variety Trials

Every year we run trials at our home research farm and with grower partners across all seasons to identify the best choices for our assortment. At the same time we seek out, evaluate, and act upon feedback from our customers. Reach out to our contact center to share your experiences!

We select for performance in the following areas:

- Extended harvest window without quality decline in leaf size, texture, flavor, and color, even through consecutive harvests.
- Upright, strong habit, for less exposure to soilborne disease and ease of harvesting.
- Consistency in leaf shape and size, from plant to plant as well as from center to outer leaves within a plant, for better uniformity of product and less sorting of oversized leaves during wash/pack.
- Attractive plants, both as whole heads and individual cut leaves.
- Strong disease tolerance, for higher pack-out and holding quality in the field and post harvest.



Lettuce Resistance Codes

HR = High Resistance IR = Intermediate Resistance

(DM)	Downy Mildew*
(LMV)	Lettuce Mosaic Virus
(Nr)	Lettuce Leaf Aphid



Key Advantages to Growing Salanova® Lettuce • Vegetable Product Manager Brenna Chase covers the key characteristics and benefits of this novel class of lettuce from the original source.



Advantages of One-Cuts Compared to Baby Leaf

Increased yield potential	Excellent quality	Adaptability	Stress Tolerance
• Full stands • High bulk • Heavier leaves • Potential for multiple cuts	• Better shelf life and handling • Greater loft • Superior flavor and color	• Extended harvest window • Efficient cultivation • Multi-use	• Bolting tolerance • Superior performance in challenging conditions

Cutting Types (Bulk)



Rhone (organic)

Heading Types (Specialty)



Salanova® Red Butter


Cutting Types
Heading Types

Cutting Types

- Salanova® Green Incised
- Salanova® Red Incised
- Salanova® Green Sweet Crisp
- Salanova® Red Sweet Crisp
- Salanova® Red Tango
- Intercut
- Ezpark (organic)
- Rhone (organic)
- Ezflor (organic)
- Brentwood (organic)
- Hampton (organic)
- Frisygo

Heading Types

- Salanova® Red Butter
- Salanova® Green Butter
- Salanova® Red Oakleaf
- Salanova® Green Oakleaf
- Salanova® Red Batavia
- Salanova® Green Batavia
- Brentwood (organic)
- Hampton (organic)
- Frisygo

View all of our one-cut lettuce varieties:
hensleyseeds.com



Common Leaf Types of One-Cut Lettuces



Lollo



Endive



Batavia



Oakleaf



Tango



Butter

Influences on Breeding & Availability

Global Markets

- Producibility
- Seed Quality
- Flavor

U.S. Commodity Ag.

- Shipper/packers – uniformity, shelf life
- Bremia – need for continuous updates
- Single Harvest

Hydroponics

- Speed/Yield
- Tipburn Resistance
- Shelf Life
- Color

Internal Lettuce Trials

- Keeping up with genetics (pre-commercial testing)
- 200-300 varieties annually (all types)
- Spring, Summer, Fall, Winter Tunnels
- Staggered successions – 6 to 8 trials/year
- Various plant spacings:
  - 6”x 9”, 4 rows/bed, plasticulture
  - 8”x 15”, 3 rows/bed, bare soil



















Color Retention





Salanova® Red Incised



Salanova® Red Tango

Key Traits in One-Cut Lettuces

- Attractive
- Easy to Grow
- Flavorful
- Yield Potential





Key Traits in One-Cut Lettuces

- Color Intensity, Gloss, Penetration, & Retention
- Early Plant Vigor – “determinate”
- Regrowth Vigor – “indeterminate”
- Frame Size
- Upright Habit
- Bolting & Tip Burn Tolerances
- Downy & Powdery Tolerances
- Leaflet Uniformity
- Leaf Quality at each harvest → thickness, texture, flavor & loft



Ezpark (organic)



Intercut



Ezpark (organic)



Intercut



EzFlor (organic)



Salanova® Red Incised



Hampton (organic)



Salanova® Green Incised



Split Cores

← Hampton (organic)



Leaflet Uniformity

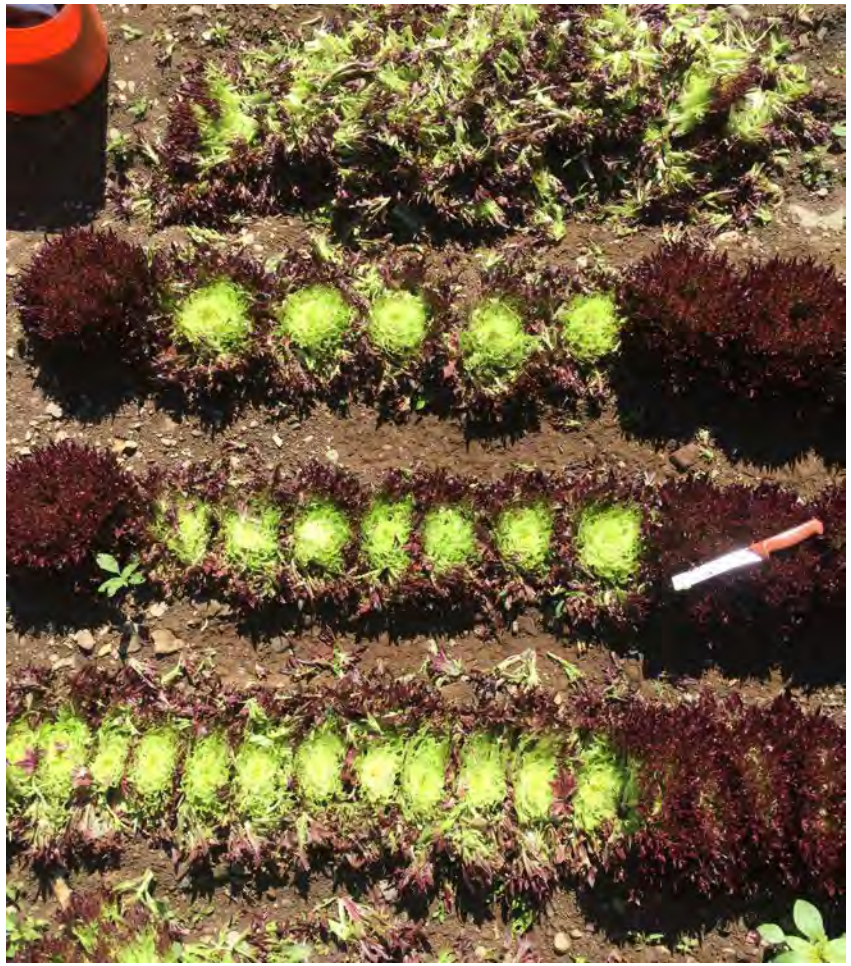


Salanova® Green Incised



Salanova® Green Butter

Plant Spacing & Harvest Timing





Salanova® Red Sweet Crisp — 3”, 6”, 9” in-row

- Which Transplanting & Cultivating Tools?
- What challenges?
- Single Cut or Multiple?
- Seasonality?
- Desired leaf size & habit?

Harvest Method



Harvest Knives

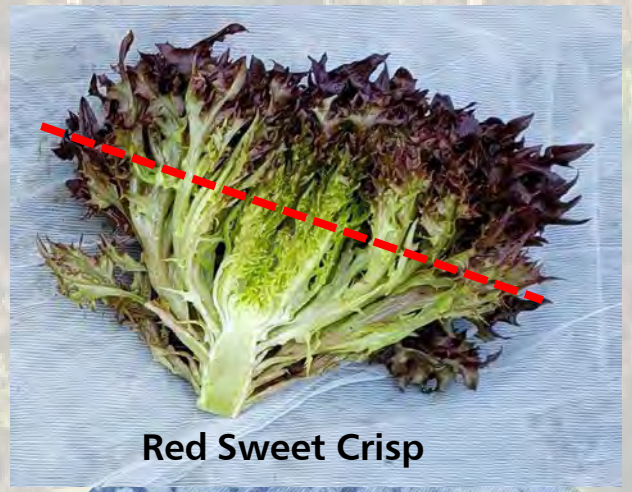


Baby Leaf Harvester

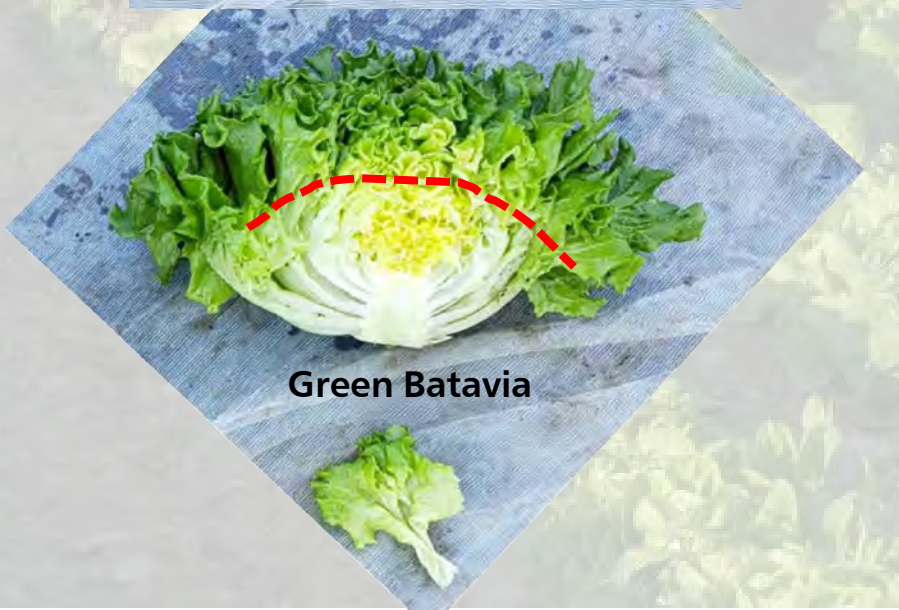
Cut Above the Core:
Flat Cut vs. Curved Cut



Green Sweet Crisp



Red Sweet Crisp



Green Batavia



Frisygo (curled grow point)























Why is Yield so Important?

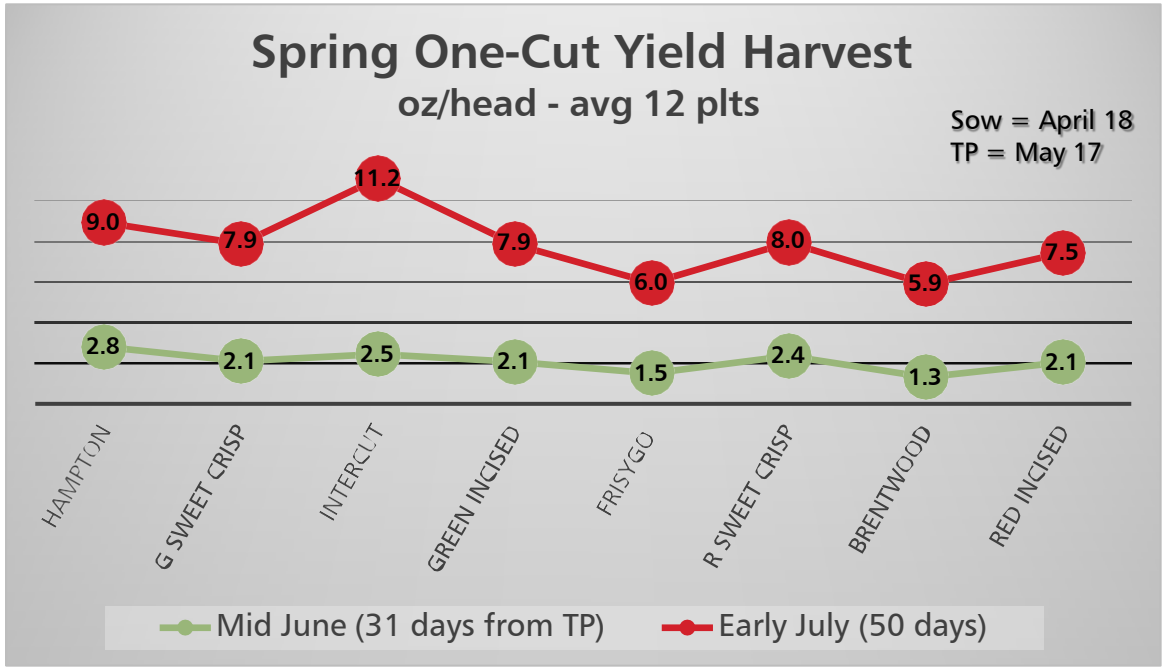
- Stronger advancement decisions
- Relative comparisons at variety level
- Further understand behaviors over time



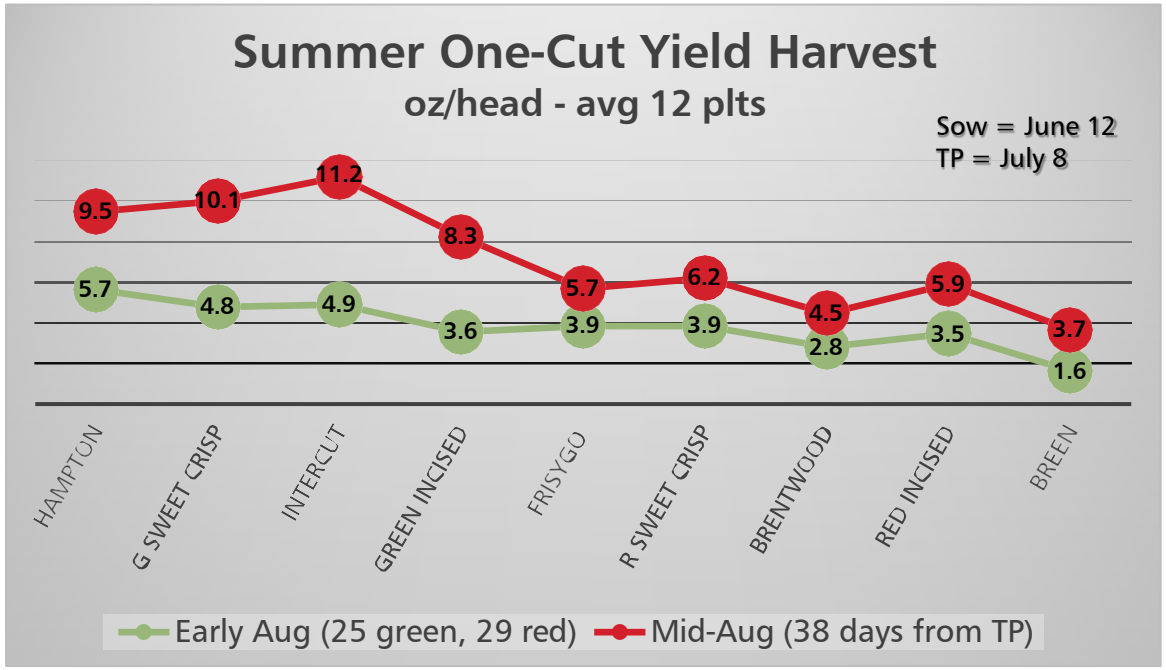
One-Cut Yield

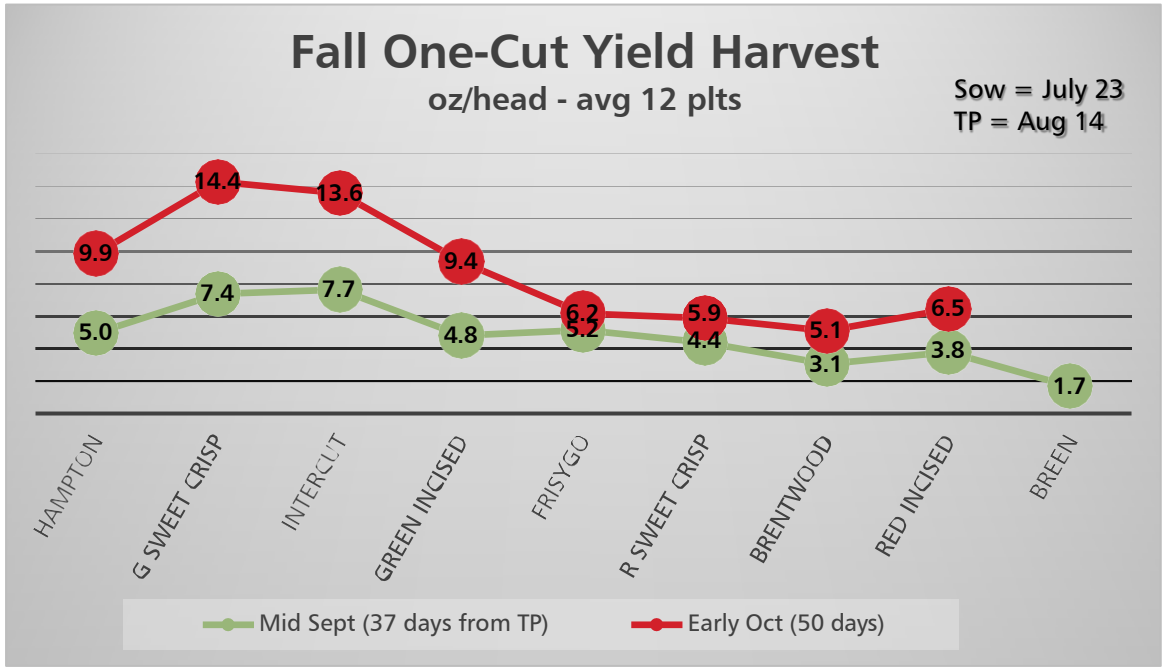
Trials at the original source

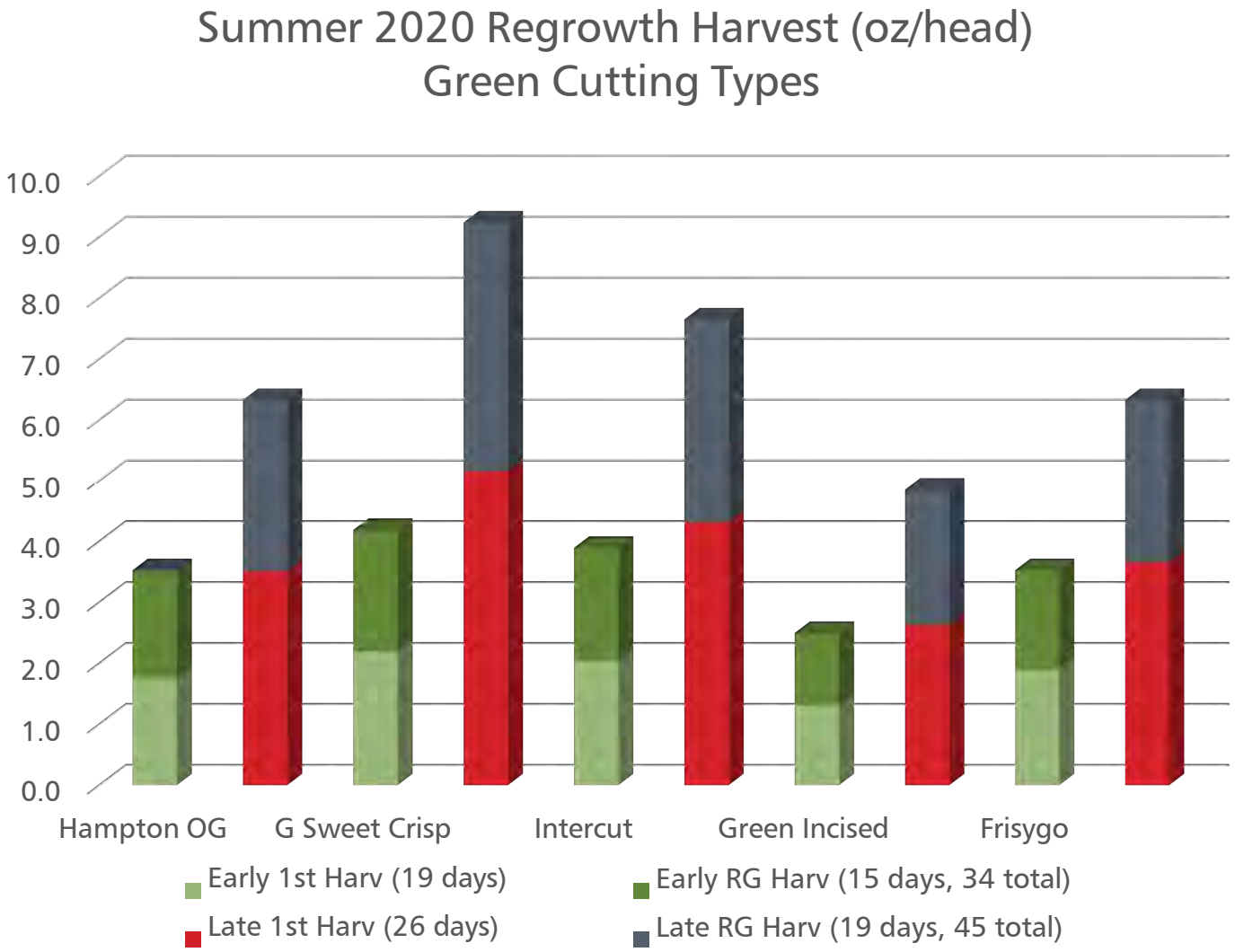
- Requires describing how it was done
- Current Yield Trial Setup:
  - Fertility pre-plant and in transplanter
  - 6” x 9” on plasticulture w/ drip
  - Leaf Height at each harvest
  - 12 avg heads/harvest – cut full block
  - Harvest same day instead of “when ready” for regrowth
  - 1” above core regardless of leaf size, same person
  - 2 harvests, 3 when possible, max single harvest
  - No wash, right time of day, work briskly
  - Replicated but not statistical



- Green > Red (top = GSC, Intercut)
- Sweet Crisp > Incised
- Seasonal Growth Rates
- Determinate vs Indeterminate
- Mini Romaines (Breen)









Green Sweet Crisp

Green Incised



One-Cut One-Offs

- Complementary Traits
- Growing Efficiency
  - Same Transplanter
  - Jump on Weeds
  - Plasticulture/Mulches
  - No-till
- Marketing Flexibility
- Unique Mix
- Save Seed





Red Tatsoi















Spinach






‘Red Snapper’ Red Spinach





Mâche







Red Mizuna









Claytonia & Wild Arugula



‘Charbell’ Swiss Chard





‘Red Veined Sorrel’







‘Sempre Bianca’ Endive





‘Benefine’ Endive

‘Curlesi’ Endive



One-Cut One-Offs Comparison Table

*Observed growth speed compared to One-Cut Lettuces 1st harvest

Crop	Variety Example	Growth Speed*	Color	Cut or Pick	Multi-plug?	Key Benefits
Friseé Endive	'Benefine'	V. Slow	Green/Gold	Cut	Single	Color, Shape, Flavor, Loft, Storage
Curly Endive	'Sempre Bianca'	Similar	Light Green	Cut	Both	Color, Shape, Vigor, Cold, Storage
Tatsoi	'Red Cloud'	Fast	Purple	Both	Multi	Flavor, Speed, Color, Shape, Loft
Spinach	'Sunangel'	Slow	Dark Green	Pick	Both	Flavor, Dark Color, Shape, Cold
Red Veined Sorrel	'Red Veined Sorrel'	V. Slow	Red/Green	Both	Multi	Tangy Flavor, Appearance
Swiss Chard	'Charbell'	Slow	Red/Green	Pick	Multi	Flavor, Color, Loft, Cold Tol.

More to Try:

- Claytonia (miner's lettuce)
- Red Russian Kale
- Mizuna & Mibuna
- Arugula & Wild Arugula
- Amara & Mustards
- Escarole
- Red Leaf Amaranth
- Mâche



RESOURCES

The following is a list of licks shared during our presentation

Our Full Selection of One-Cut Lettuce

Browse one-cut lettuce

Salanova® Variety & Collection Specifications

Growing resources

Original-source Grower's Library: Lettuce

Hydroponic growing resources

Research and seed information

Classical plant breeding

Non-GMO seed commitment

Our story

THANK YOU

WE HOPE YOU ENJOYED OUR PRESENTATION

Please join us again for upcoming free educational offerings.

Check out our previous webinars here:
Growing resources



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