

Celery Variety Field Trial 2018

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Celery

- Cool (60-70°F)
Long season (~150 days)
- Largest US producers
 - California (25k acres, \$256m)
 - Florida (8k acres, \$40m)
- One of Hawaii top imported crops





COOPERATIVE EXTENSION

UNIVERSITY OF HAWAII AT MĀNOA
COLLEGE OF TROPICAL AGRICULTURE AND HUMAN RESOURCES

NAME	RESISTANCES	SUPPLIER
Calypso	Fusarium wilt	High Mowing Seeds
Command (Organic)	Fusarium yellow	Osborne Seed Company
Conquistador	Bolting (tolerant)	Johnny's Seeds
Kelvin F1 (Organic)		Osborne Seed Company
Merengo F1	Fusarium yellows	High Mowing Seeds
Tall Utah	Rust	High Mowing Seeds
Tall Utah 52-70R Improved	West celery mosaic, Bolting, Fusarium	Harris Seeds
Tango (Organic)		Harris Seeds
TZ 6200 (Organic)	Fusarium	Osborne Seed Company

Planting, Harvesting

- 4 double-row plots (14" apart, 40" between centers)
- 12 plants per row (10" apart)
- 1' between plots inline
- **Seeded:** 1-11
Transplanted: 4-11 (90 days)
Harvested: 7-18 (188 days)



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Fertilizer, Irrigation, Weeds

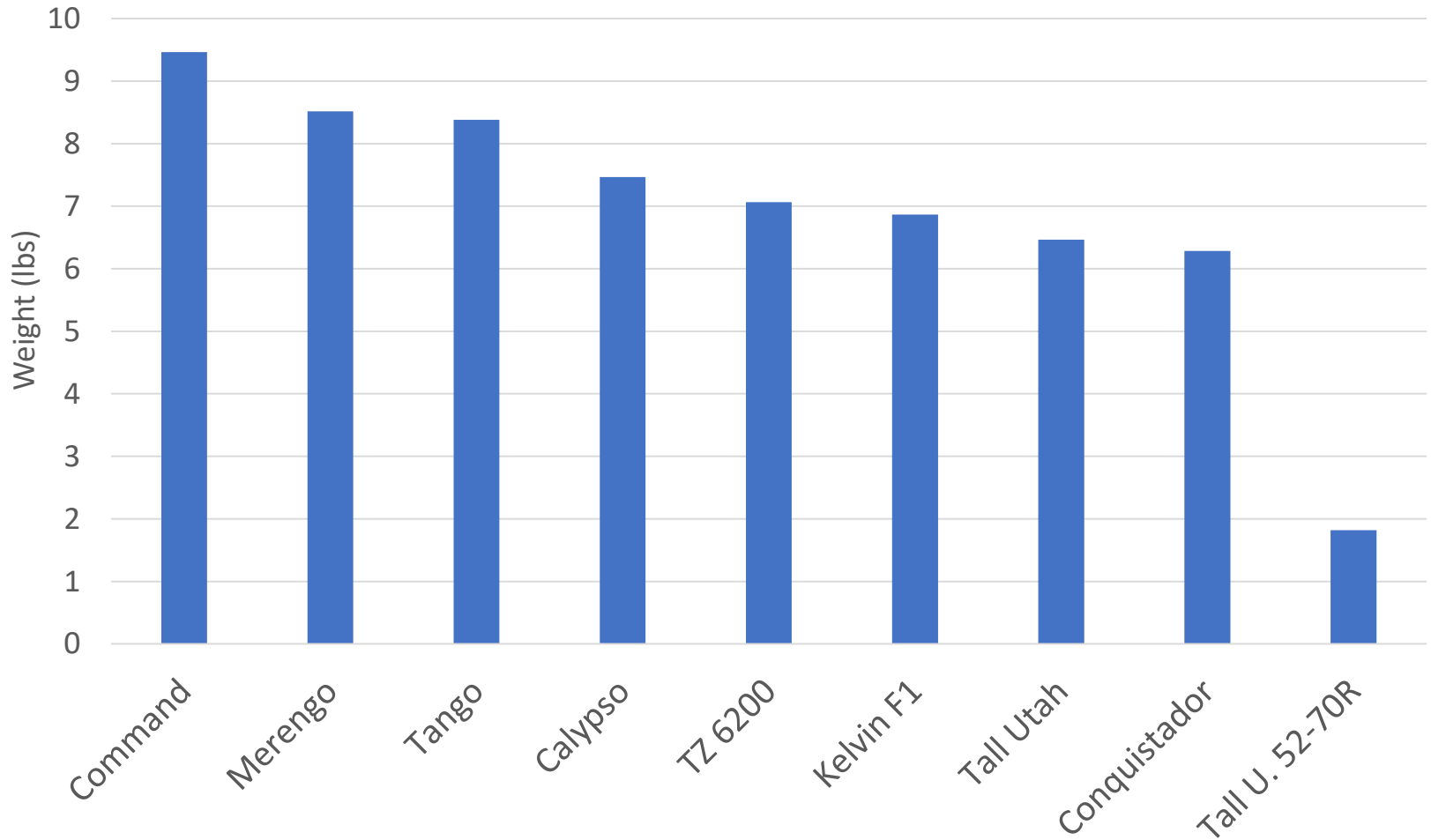
- Soil pH= 6.6
- Requires per acre per crop
N: 250 lbs
P: 50-100 lbs
K: 400 lbs
Ca: 5 lbs
B: 1 lb
- Requires total 2 acre-feet water (650,000 gallons), more towards harvest



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Average Marketable Weight

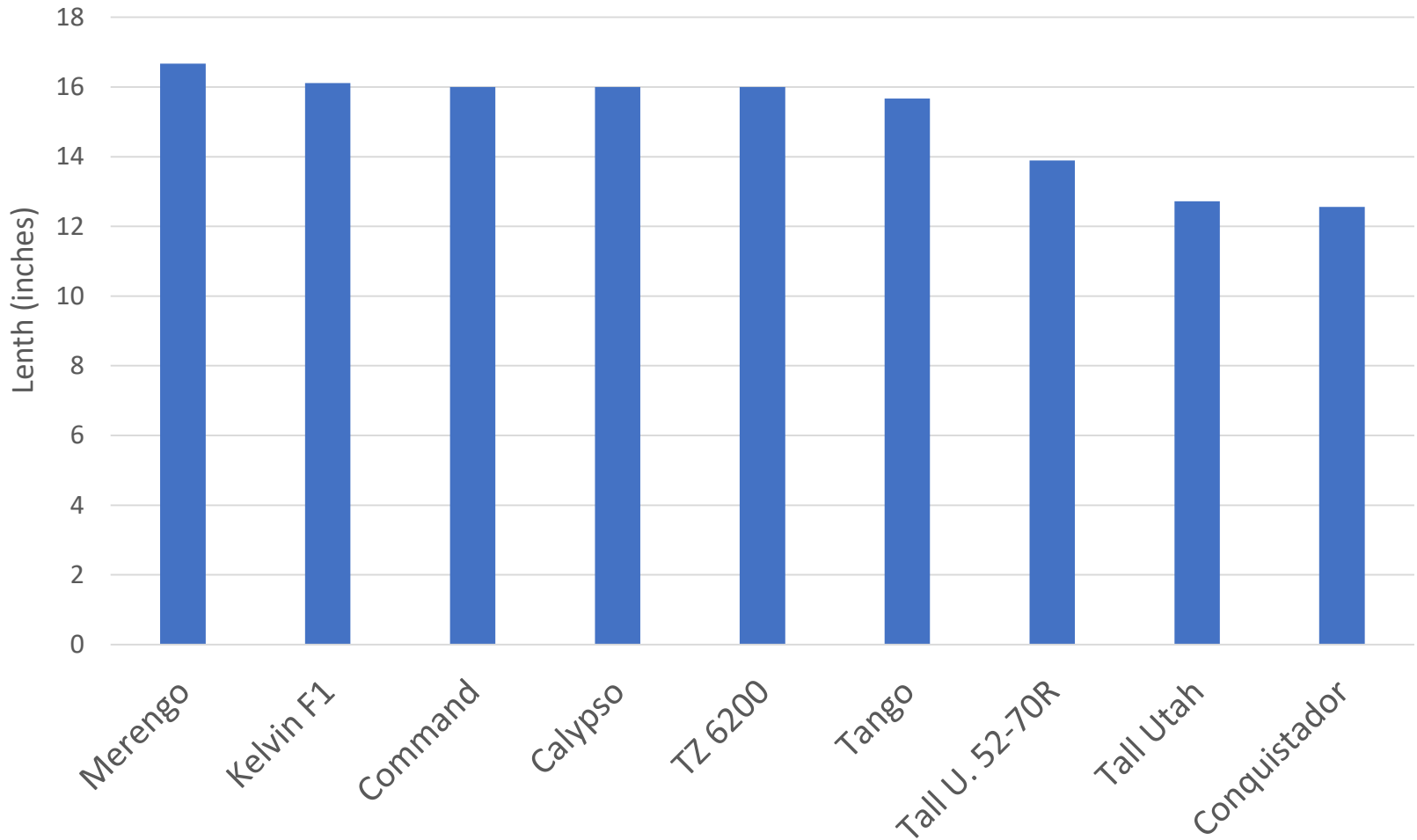




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Average Stalk Length

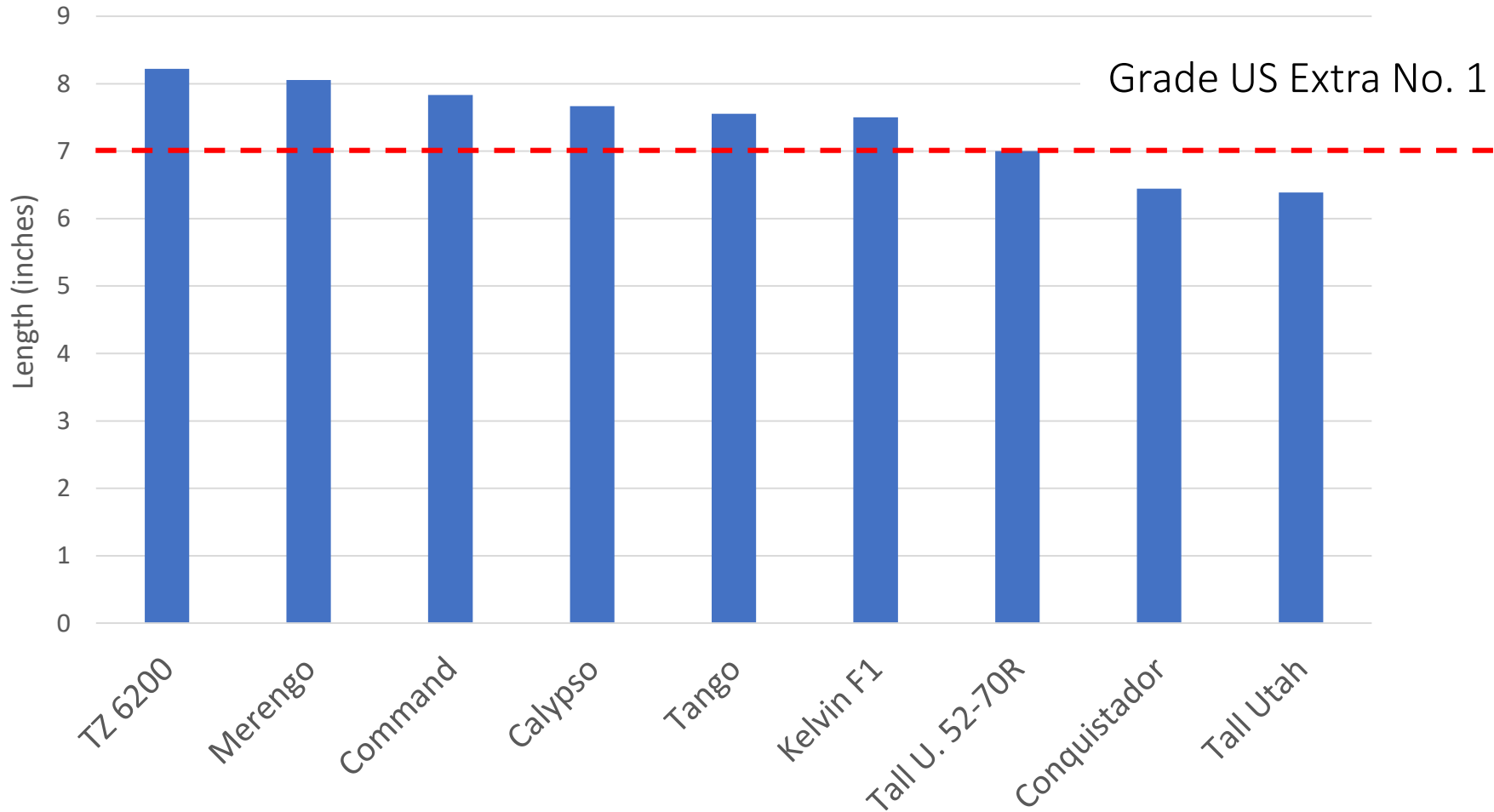




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Average Midrib Length



Merengo

Command

Tango

Calypso



Kelvin

TZ 6200

Tall Utah 52-70R

Conquistador

Tall Utah





Economic Feasibility (Preliminary)

Revenue= \$50,920 per acre

- Average 14lbs per 16 sqft. → 38,000 lbs per acre @ \$1.34 per pound → \$50,920 per acre

Costs= \$22, 432 per acre

- Seeds: 25k @ \$205 → 48 plants per 40 sq. ft. → 52,272 plants per acre → \$430 per acre
- Fertilizer: \$1853 per acre
(May be different with different fertilizer regime)
 - Urea: 0.5 lbs → 16 lbs per acre @ \$25 per 50# → \$8 per acre
 - TSP: 0.5 lbs → 16 lbs per acre @ \$33 per 50# → \$11 per acre
 - Potash: 1 lbs → 31 lbs per acre @ \$25 per 50# → \$16 per acre
 - CaNO₃: 2 lbs → 62 lbs per acre @ \$21 per 50# → \$26 per acre
 - Triple 19: 45 lbs → 1,400 lbs per acre @ \$51.20 per 40# → \$1792 per acre
- Water: \$1.89 per 1000 gallons → 778,000 gallons per acre → \$1470 per acre
- Weed (GoalTender): \$466.68 per 2.5 gal → 0.5 pints/acre → \$11.67 per acre
- Labor: 2 hours per week per 1400 sq.ft. @ \$20 per hour @ 15 weeks → \$18,668 per acre
(May be different with mechanization, scale)



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Highest Rated

Flavor= Kelvin, Calypso, Tango

Crunch=Calypso, TZ6200,
Merengo

Less Stringy=Calypso, TZ6200

Color= Tall Utah

Size=Merengo, Tango

Taste Test





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- Four varieties with size, quality potential (Merengo, Tango, Command, Calypso)
- Rich aroma more suited to restaurants/chefs

Questions?

