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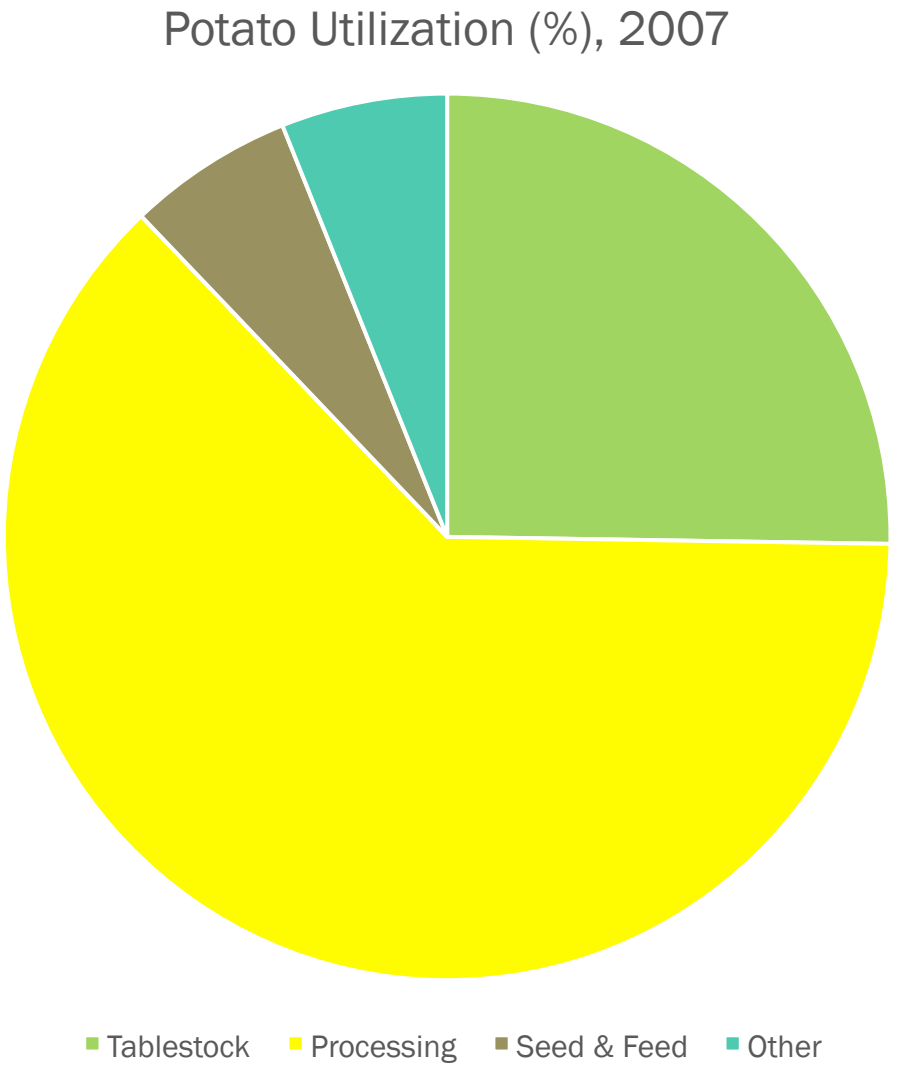
Potatoes

How are Potatoes Used?



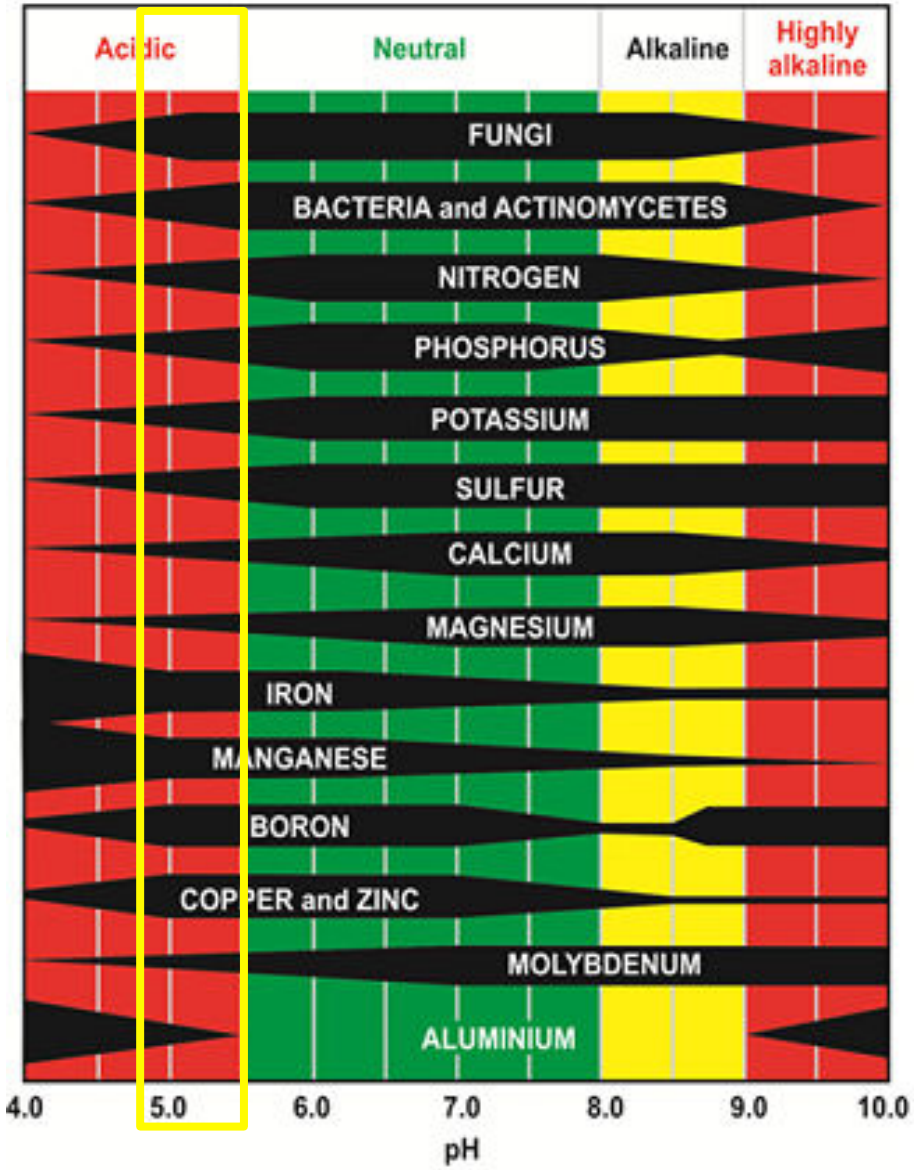
Preferred Growing Conditions for Potato

- Deep, well drained soil
- High water holding capacity (without becoming saturated)
  - Soils with high clay content require special management to maintain water drainage and soil structure
- Peat or muck soils are good if they are adequately drained
- Sandy soils require proper irrigation and fertilization
  - Produce high yields with good quality
- Potatoes are tolerant to low pH soils
  - Reduced incidence of common scab in soils with pH<5.4
  - Scab resistant varieties perform well in higher pH soils

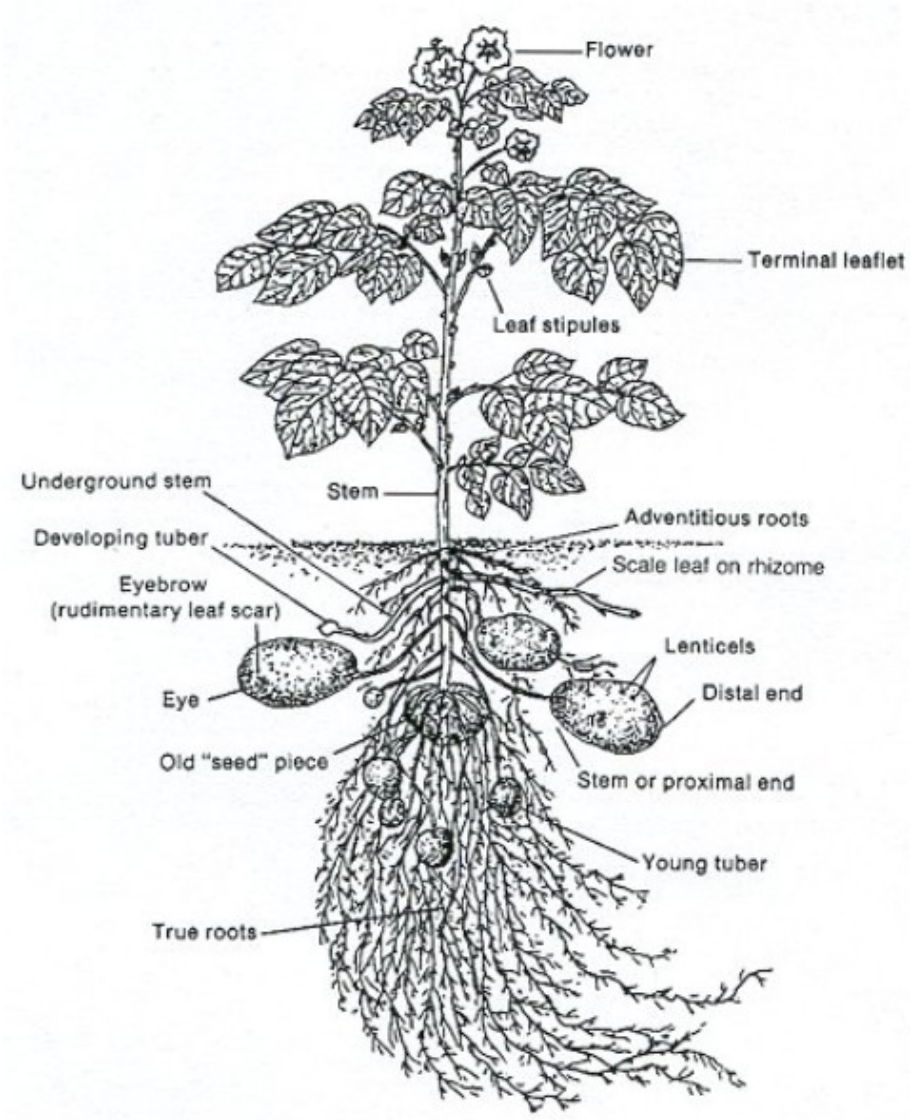
Low pH Soils can Limit Nutrient Uptake

Reduced availability of N, P, K, S, Ca and Mg

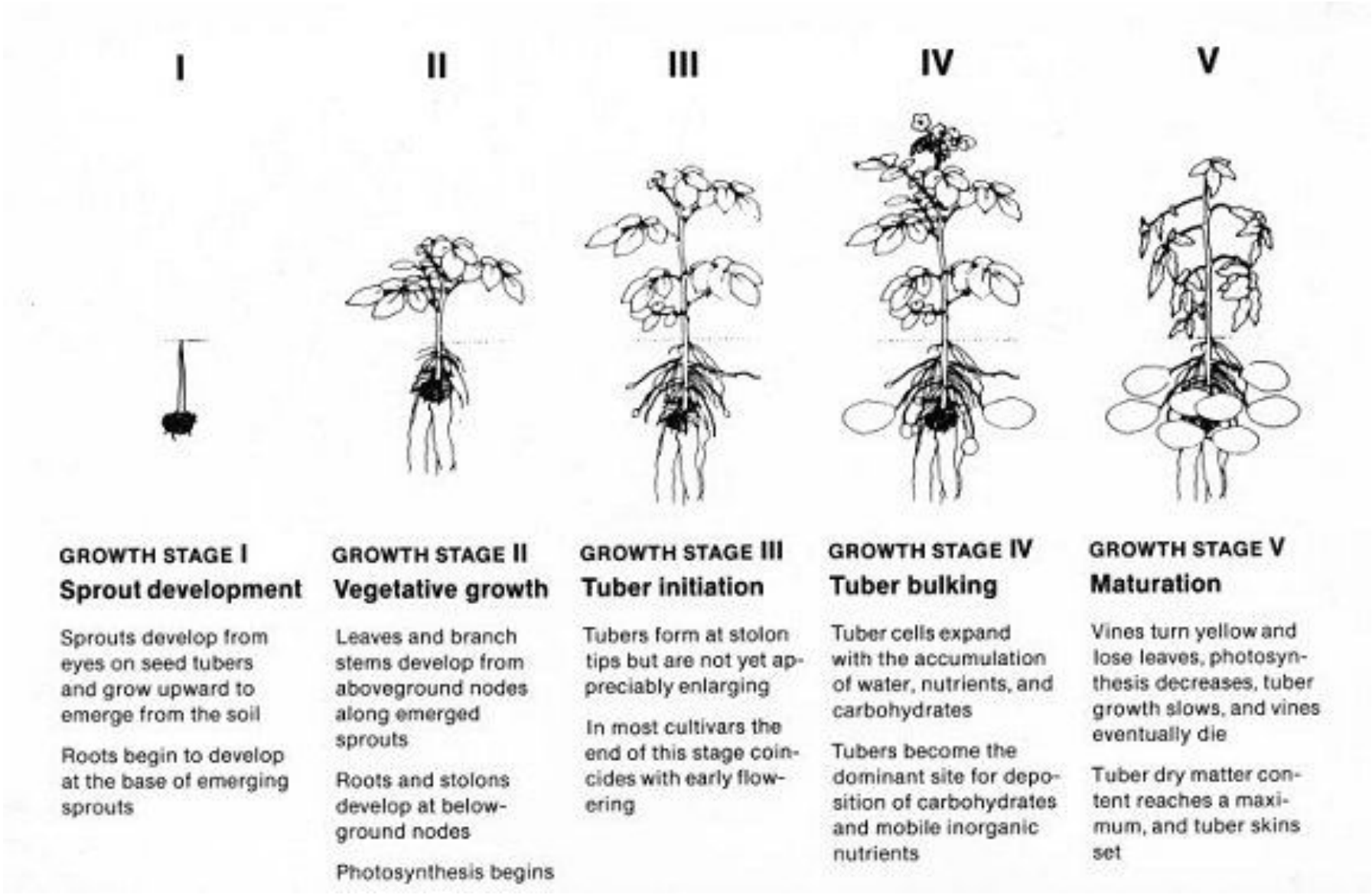
Increased availability of Al (can be toxic)



Potato Plant Part Description



Potato Growth Stages



Potato Nutrient Needs

Nutrient	Vines	Tuber yield, cwt/A 200	300	400	500	600
		Nutrient uptake lb/A				
Nitrogen (N)	90	86	128	171	214	252
Phosphorus (P)	11	12	17	23	28	35
Potassium (K)	75	96	144	192	240	288
Calcium (Ca)	43	3.0	4.4	5.9	7.4	8.9
Magnesium (Mg)	25	5.9	8.9	11.8	14.7	17.6
Sulfur (S)	—	8.8	13.2	17.6	22.0	26.4
Zinc (Zn)	0.11	0.70	0.11	0.14	0.18	0.22
Manganese (Mn)	0.17	0.03	0.04	0.06	0.07	0.08
Iron (Fe)	2.21	0.53	0.79	1.06	1.32	1.58
Copper (Cu)	0.03	0.04	0.06	0.08	0.10	0.12
Boron (B)	0.14	0.03	0.04	0.05	0.06	0.07

Source: Univ. Minnesota

Potato Nutrient Need

Nitrogen:

- Peak demand 20 – 60 days after planting
- Later applications can delay maturity, poor skin quality

Phosphorus:

- Major role in tuber set

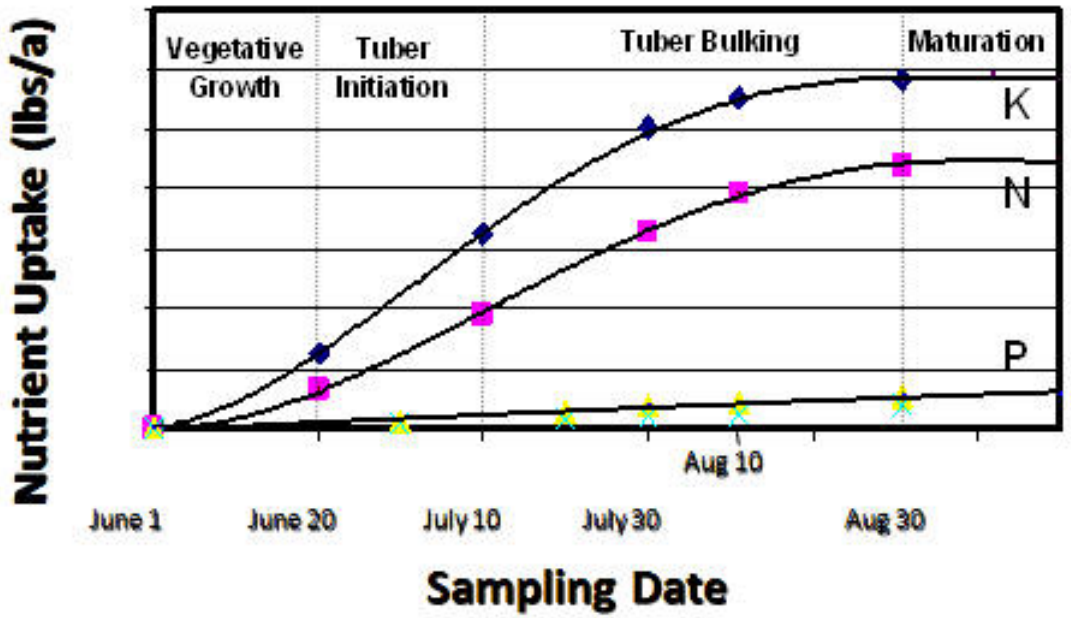
Potassium:

- Important in tuber yield, size, and quality
- Helps prevent bruising and improve storage quality

Calcium:

- Helps maintain storage quality
- Reduces hollow heart

Total potato plant N, P, and K uptake at Aberdeen, 1991-93.



Source: Univ. Idaho

Pro-Germinator Performance

Basin Fertilizer, 2015

Pro-Germinator 7.5 gal/A vs.
10-34-0 17 gal/A

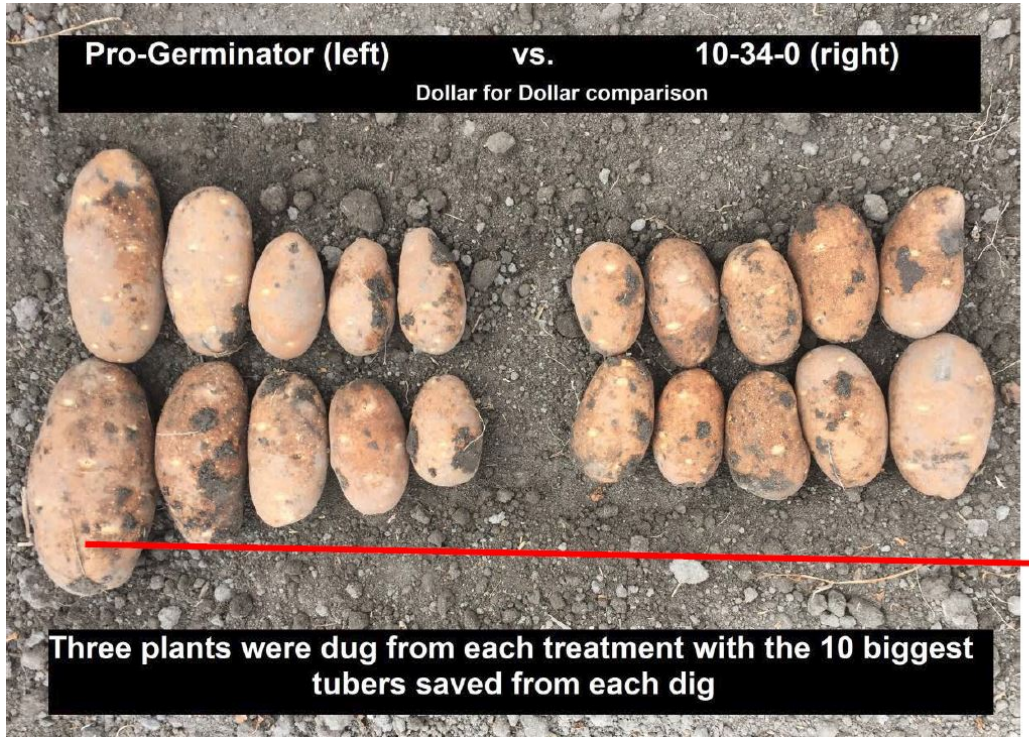
Applied through irrigation system

Yield (cwt/acre):

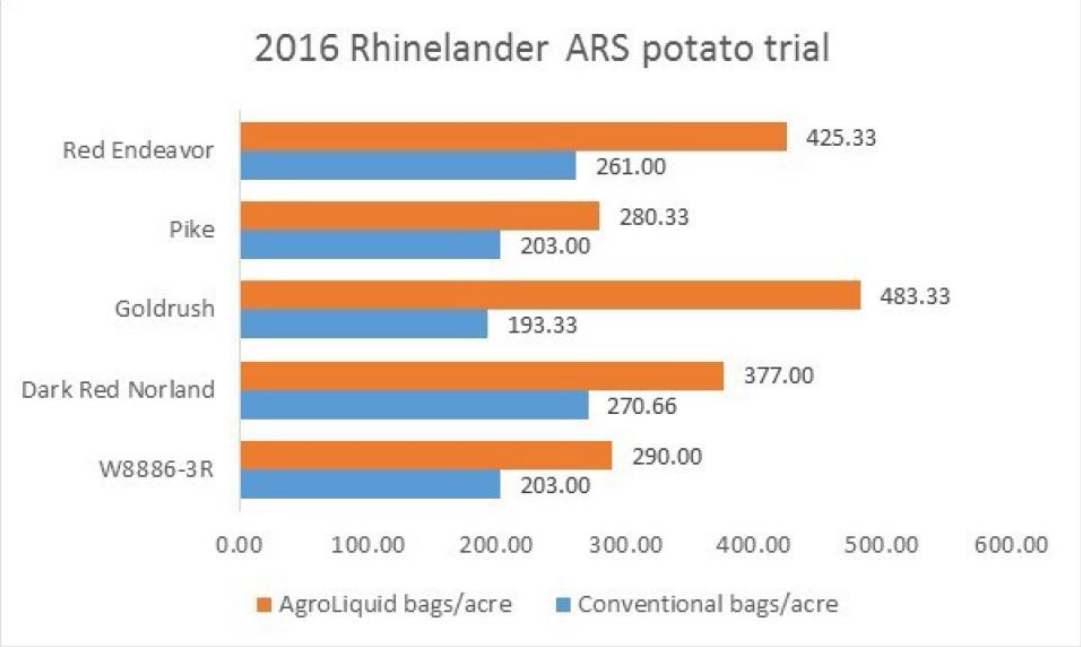
Pro-Germinator = 555

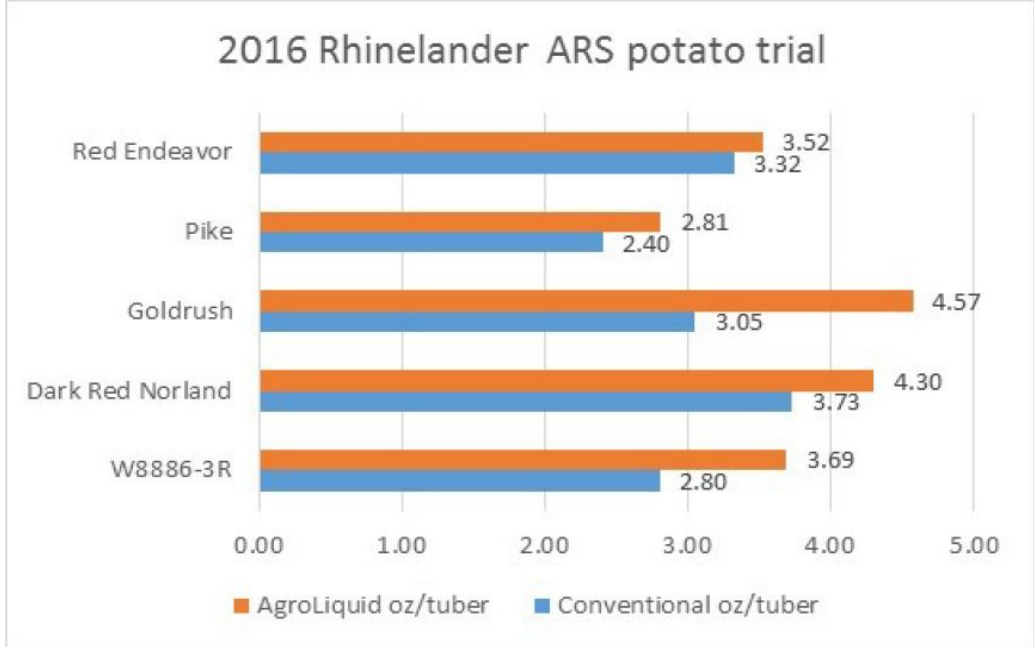
10-34-0 = 514

$281 net increase in return ($7/ cwt potato price)



AgroLiquid Performance





1 bag/acre = 100 lb/acre

AgroLiquid: Pro-Germinator 8 gal/A (at planting)
+ Sure K 2 gal/A
+ Micro 500 0.5 gal/A
32% UAN 10 gal/A (at hilling)

Conventional: 12-12-12 900 lb/A (broadcast and incorporated)

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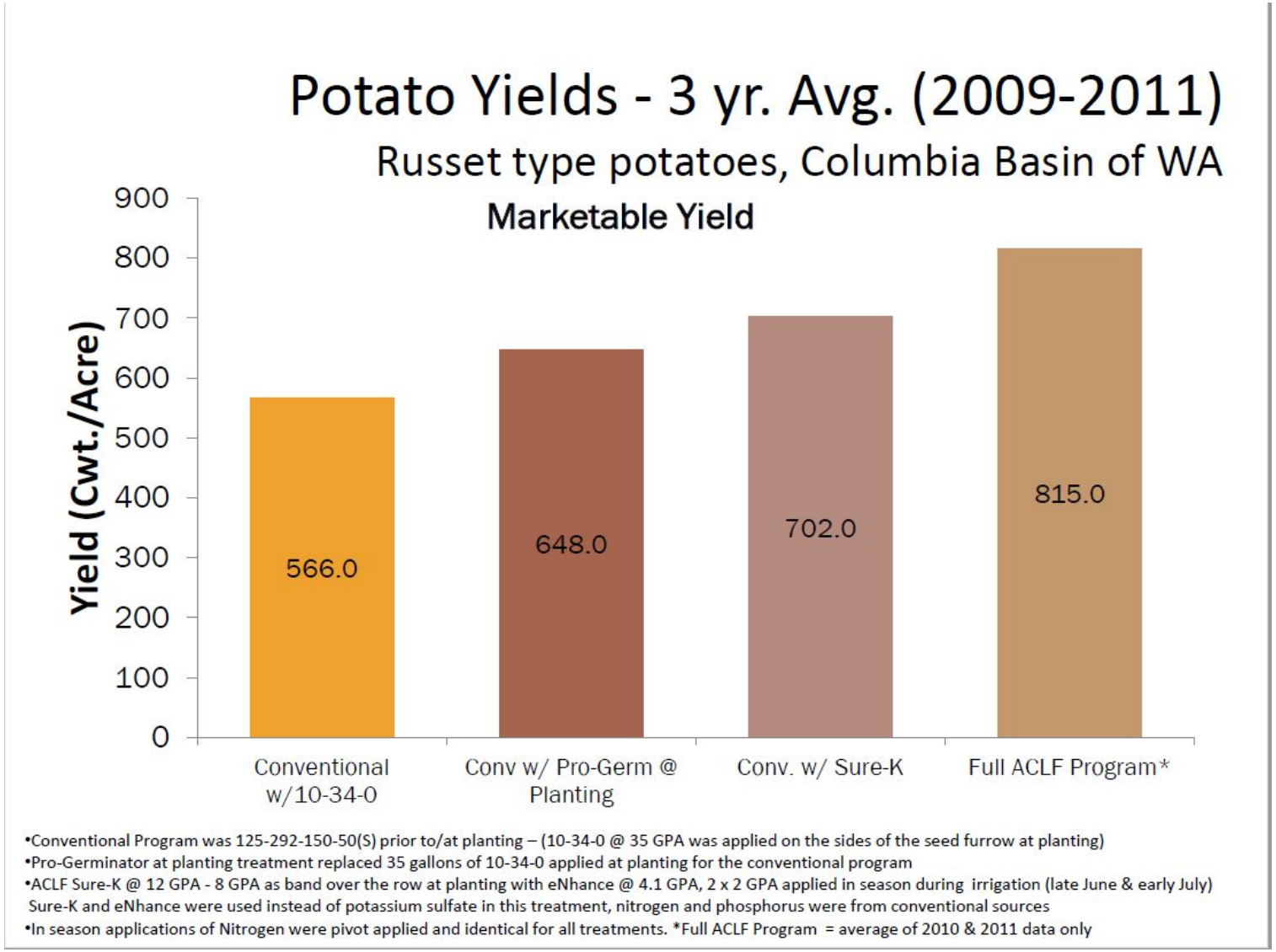
AgroLiquid Performance



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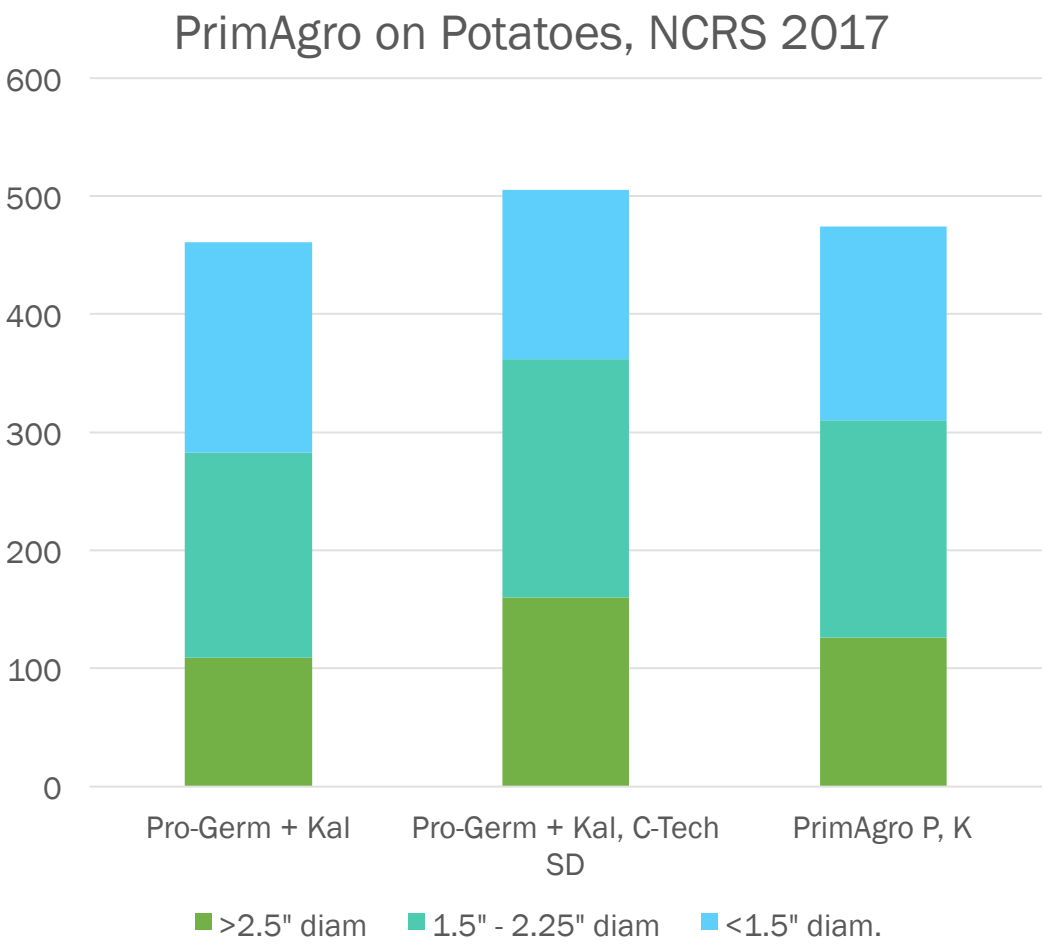
PrimAgro Products on Potatoes



Apply C-Tech at Side Dress (after tuber formation)

Pro-Germinator, Kalibrate, PrimAgro P, or PrimAgro K applied at 5 gal/acre at planting. C-Tech Applied at 0.5 gal/acre at side dress.

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