

2002

Production from Certified vs. Year Out Seed

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Introduction

- > Plant certified seed vs. "year out" seed
- > Cost comparison

Certified	Year out
\$8-10	\$4-5

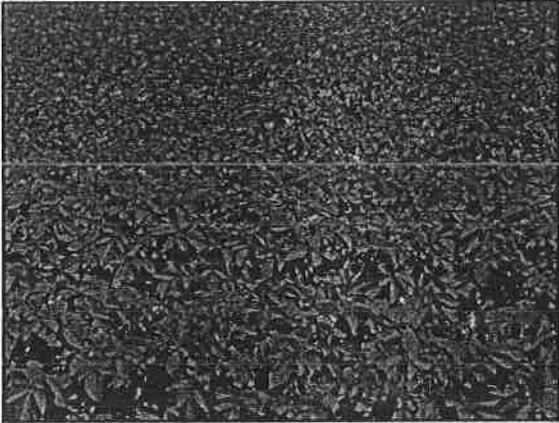
- > Considerations include early kill, storage, disease load, yield potential, timing, etc.

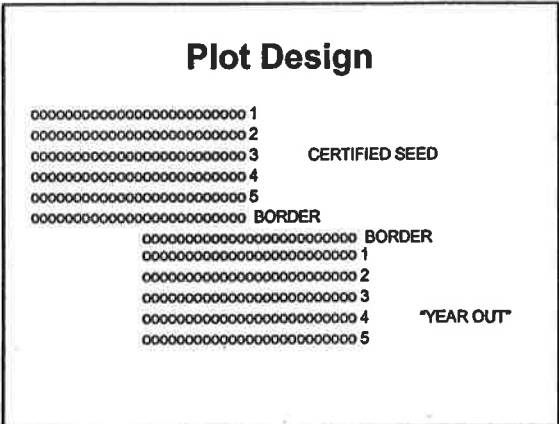
Structure of project

- > Certified seed potato grower donates 100 cwt of Generation 4 seed
- > Commercial grower participant plants this certified seed next to same cultivar of "year out" seed
- > Participant allows inspections during season, small plot development, and yield calculation prior to harvest

"The disease levels are not high enough in my own year out seed to justify purchase of new certified seed!"

"When I plant certified seed, the yield and grade the first year of growth do not compare to my own year out seed!"





Plot Design

- > Three grower participants
- > Same cultivar - side by side
- > 3 replications/seed source
- > 1000 plants/replication
- > Borders used between seed sources
- > Data taken on stand, vigor, disease content, yield and grade

A

	Certified	Year Out
Stand	88	88
Vigor	5	5
Disease - %LR	0.00	0.17
%MO	0.17	5.87
BRR	(--)	(--)

A

	Certified	Year Out
Ave Tuber #	161	174
Ave lb/25'	74	73
Ave cwt/a	456	451 (-5 cwt)

B		
	Certified	Year Out
Stand	95	88
Vigor	5	4
Disease – %LR	0.00	0.47
%MO	1.27	3.13
BRR	(--)	(+)

B		
	Certified	Year Out
Ave Tuber #	211	147
Ave lb/25'	76	67
Ave cwt/a	468	414 (-54cwt)

C		
	Certified	Year Out
Stand	92	93
Vigor	5	3
Disease – %LR	0.20	3.07
%MO	1.80	3.47
BRR	(--)	(+)



Comparison Harvest – Effect of PVY

- > Russet Norkotah 8, Generation 6
- > Plots – 0%, 12%, 20% PVY
 ooooooooooooooooooooooooooooo
- > 3 replications x 25' sections
- > Due to field variation, the 12 & 20% plot readings were combined

<u>Amount of PVY</u>	<u>0%</u>	<u>16%</u>
Tuber #	172	161
Total weight (lb)	88.3	77.5
cwt/acre	543	477
Difference	66 cwt/acre (4-10oz+)	
12% yield loss for 16% PVY infection		
66 cwt x \$5.00 = \$330/acre loss		

**"The disease levels are not high enough
in my own year out seed to justify
purchase of new certified seed!"**

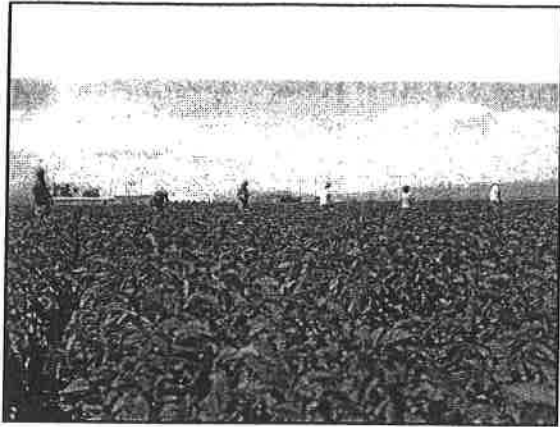
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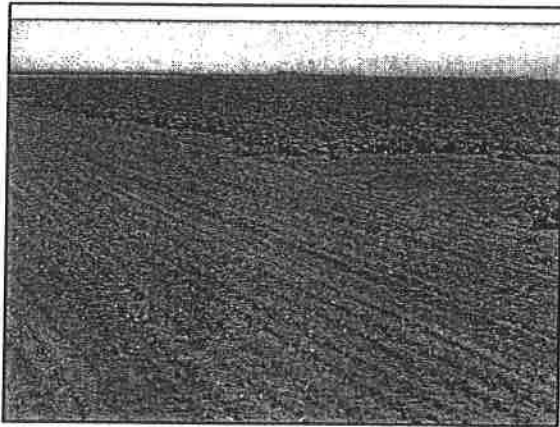
Summary

- > Certified seed stand and vigor comparable to "year out" seed
- > Disease levels in certified seed lower than "year out" seed minus BRR
- > Yield of certified seed of same selection was either comparable to or significantly better than "year out" seed
- > Yield loss was concentrated in 4-10oz+ range with higher numbers <4oz

Current State of Colorado Potato Certification Program

- > 35 growers
- > 13,000+ acres accepted in 2003 with an average of over 14,000 acres accepted in last six years
- > Over 100 cultivars/clones grown
- > 51% of seed accepted is Russet Norkotah and NK Selections
- > Disease levels in seed crop low
- > Post harvest testing complete with good to mixed results
- > ASK FOR INFORMATION!







**Colorado Certified Acreage Approved
(Percent Acres Approved)**

