

# **State of Colorado's Certified Seed Potato Program**

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**2007 So. Rocky Mt. Ag Conference**

# Objectives

- **General overview of Colorado's certified seed program**
- **Review post harvest test plots for 2006 crop**
- **Review cultivar differences (Russet Norkotah vs. others)**
- **Reasons for increase in mosaic levels in seed stocks**
- **Considerations for 2007 crop and beyond**

# Potato leafroll virus and PVY

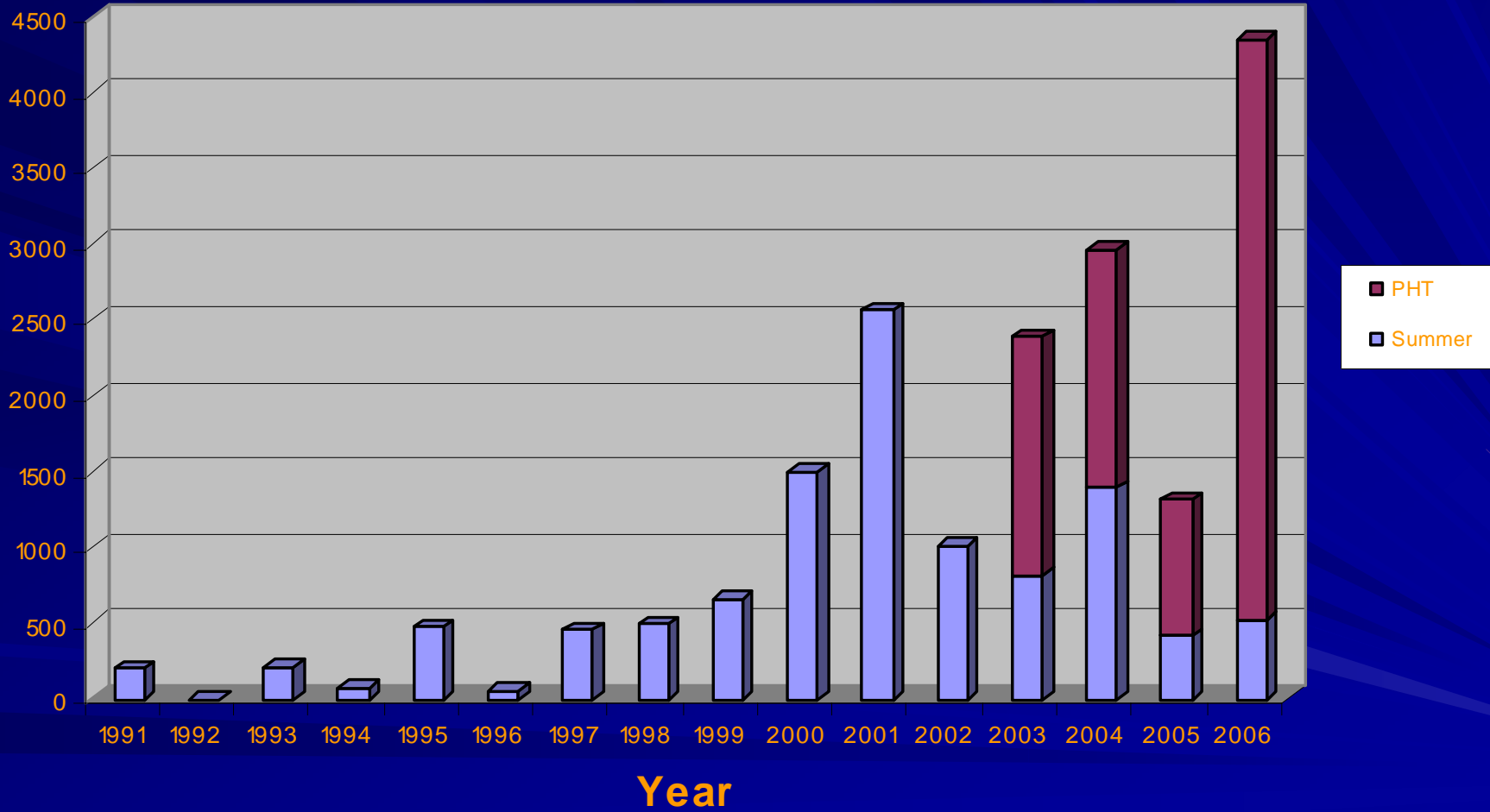


# Certified vs. 1 and 2 year out seed sources

Project conducted 2003, 2004

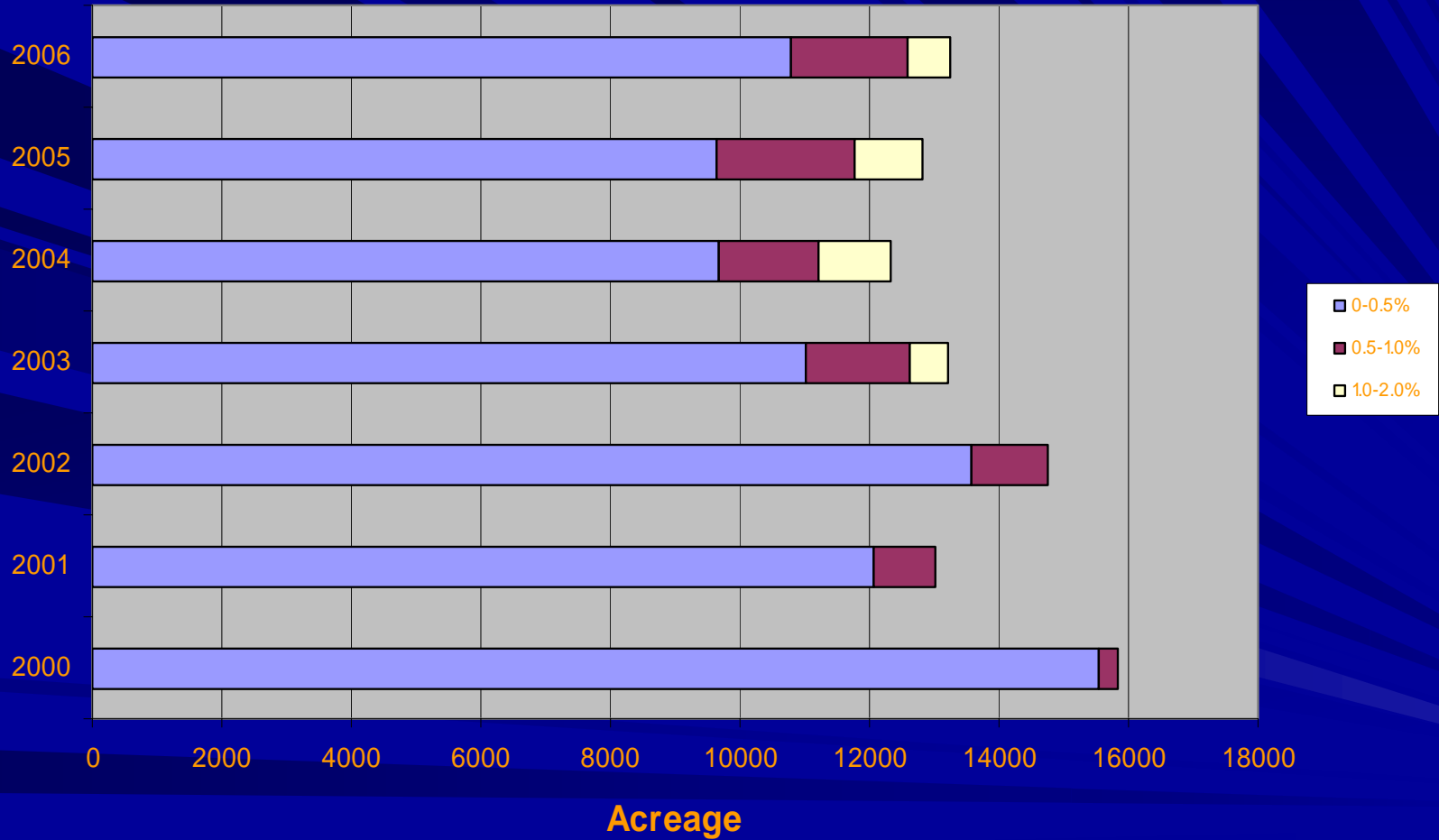
	Ave. % MO	Ave. Yield/Acre
Certified	2	483
1 Year out	4	432
2 Years out	40	324

# Acreage Rejected for MO



# Summer field inspection (MO) results

## Acres Accepted



## Overall lots for PHT by MO% level

**For NK –** 2004; 7 lots out of 194 were >10% MO  
2005; 7 lots out of 212 were >10% MO  
2006; 53 lots out of 170 were > 10% MO

**For non-NK-** 2004; 3 lots > 10% MO / 352a >3% MO  
2005; 0 lots > 10% MO / 0.3a >4% MO  
2006; 17 lots > 10% MO / 141 lots > 1% MO

# 2006 PHT by generation and MO%

## Acreage of Russet Norkotah and Selections

MO %	Generation			Total	%
	G2	G3	G4-6		
0-2	126	231	90	447	10.1
2-4	21	338	447	813	18.4
4-10	4	394	422	820	18.6
10-30	13	345	1448	1806	40.9
>30		19	508	527	11.9
<b>Total</b>	<b>164</b>	<b>1327</b>	<b>2915</b>	<b>4413</b>	

# Local sales (cwt) of certified seed

## Based upon BC/Tags

Year	R. Norkotah	Other	Total
2002	208,895	144,537	353,432
2003	238,823	130,819	369,642
2004	189,581	135,098	324,679
2005	238,327	168,776	407,103
2006 (proj)	298,610	170,000	468,610

Projected =  $0.4 \times 25\text{cwt/a} \times 29,861\text{a}$

# 2006 Certified acreage accepted by state Russet Norkotah and Selections

CO	ID	MT	NE	OR	WI	Total
5,347	3,401	1,584	1,240	614	949	14,559
N	Y	Y	N	Y	N/Y	Seed Law

AK, ME, MI, MN, ND, WA total = 1,421

N Y Y Y Y Y

# Potential Acreage for Sales of NK by Colorado Certified Seed Growers in 2006

21 farming operations represented as raising NK in 2006

Rej >10%

G4-6 <10%

G2-3 replant

1997

980

1221

The 980 acres represents only five operations with seed for sale. Many of the lots over 10% fall within the 10-20% range for MO. Eight operations have an average of 33a total for NK. Ave MO% for certification replant ranges between 1 to 14.3 with the median around 3-5%.

# **SLV Industry needs for Russet Norkotah**

- **SLV potato industry currently has 60% of the acreage devoted to Russet Norkotah and Selections (36,120a)**
- **Commercial industry needs 746,525 cwt to replant acres (29,861a [36,120 – 6,259] x 25cwt/a)**
- **Replant of CO certified seed equals 32% in most years**
- **Replant % in 2007 may be higher due to grower concerns over disease, markets, and recent push to utilize certified seed**
- **Suggest projected sales at 40% of total or 298,610 cwt**
- **If we assume 50% of the available seed (<10% MO) has been or will be shipped out of state, this leaves about 120,000 cwt creating a shortfall of 178,610 cwt to replant the commercial acres (representing 7,144a) (Currently 160,000 booked, but only 71,000 available without change)**

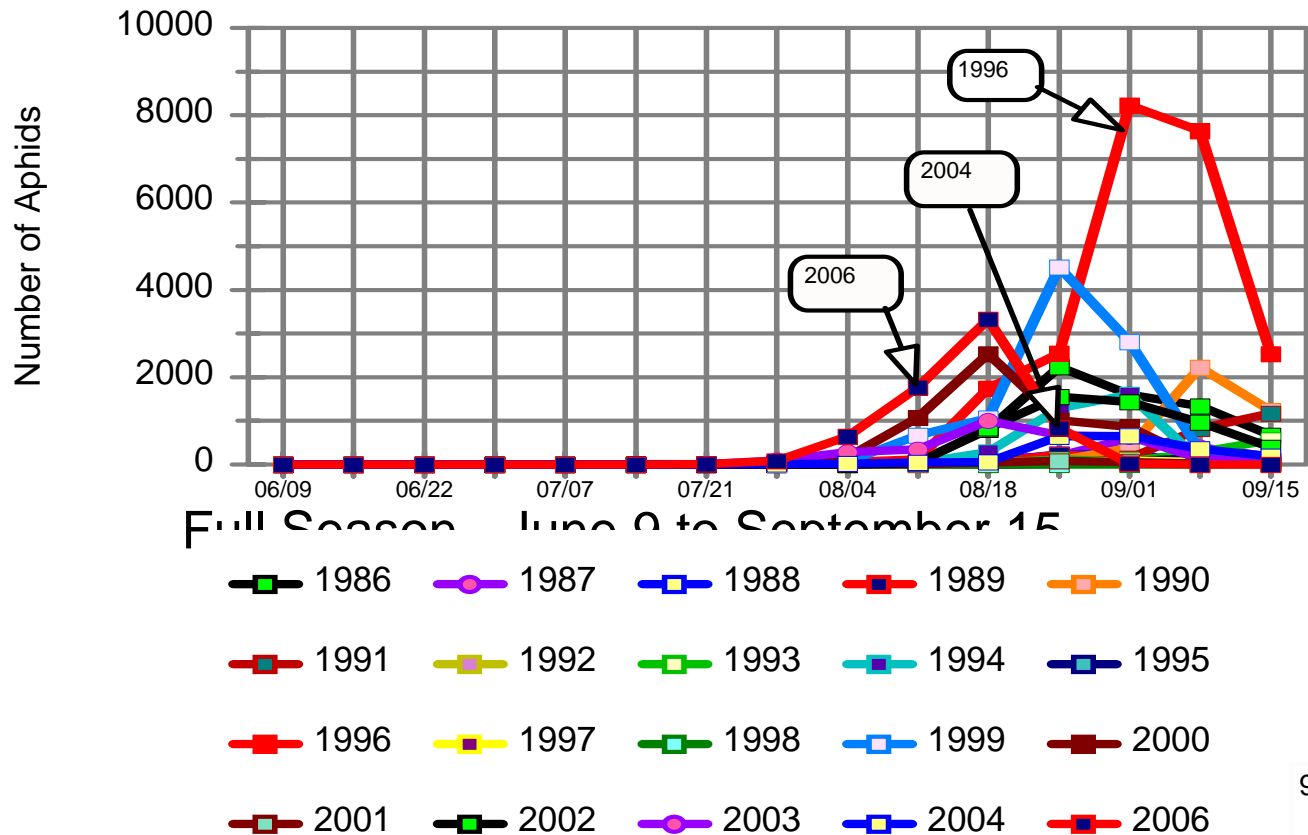
# **2006 Aphid Populations**

**Jeannine Willett**  
**Agro Engineering**

# Full season GPA Graph

## Green Peach Aphid Captures

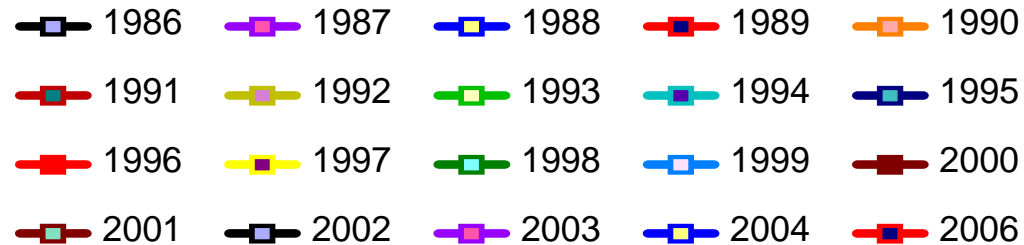
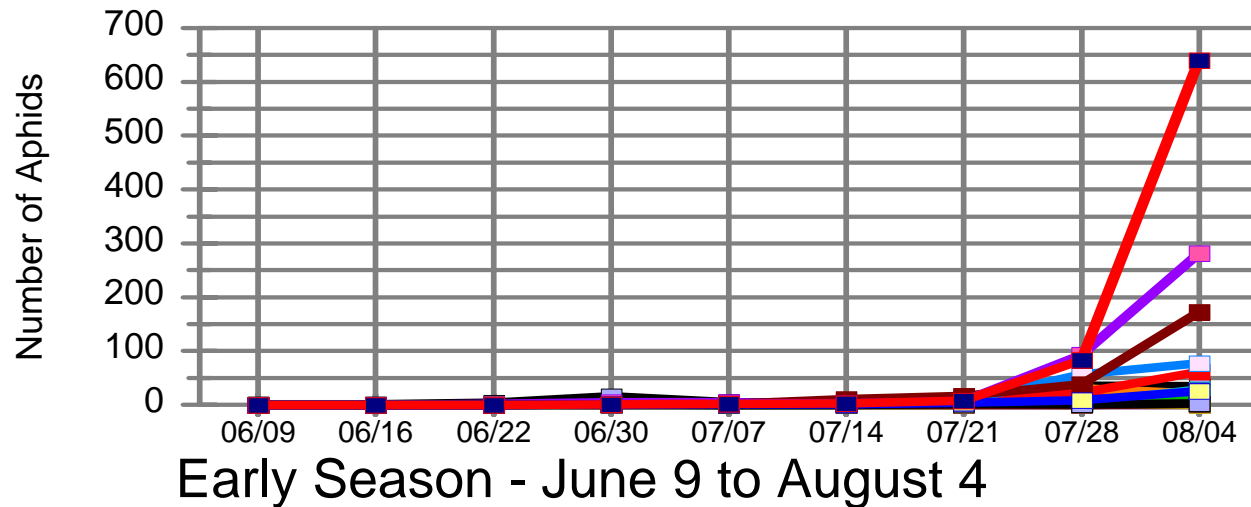
IPM Monitoring Program 1986 - 2006



# Early season GPA Graph

## Green Peach Aphid Captures

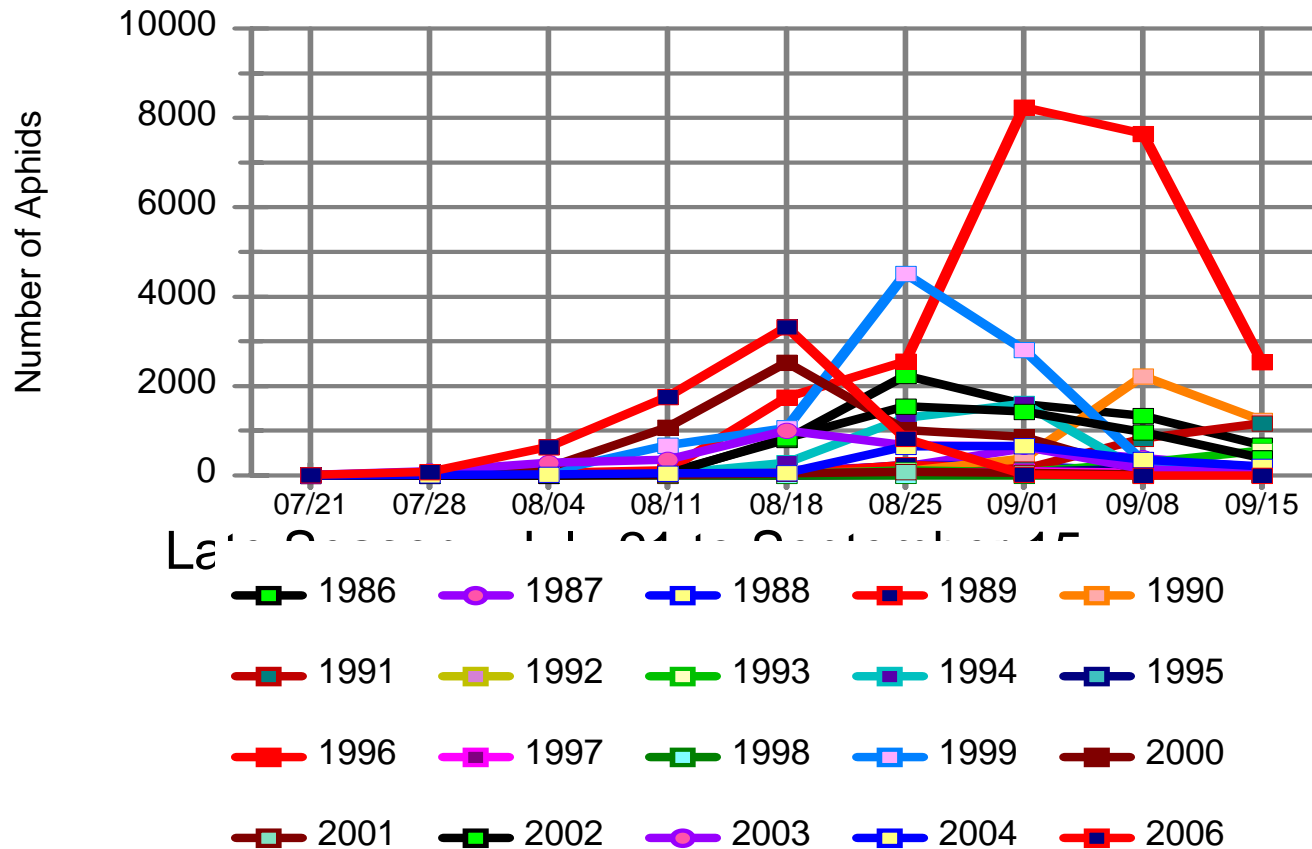
IPM Monitoring Program 1986 - 2006



# Late season GPA Graph

## Green Peach Aphid Captures

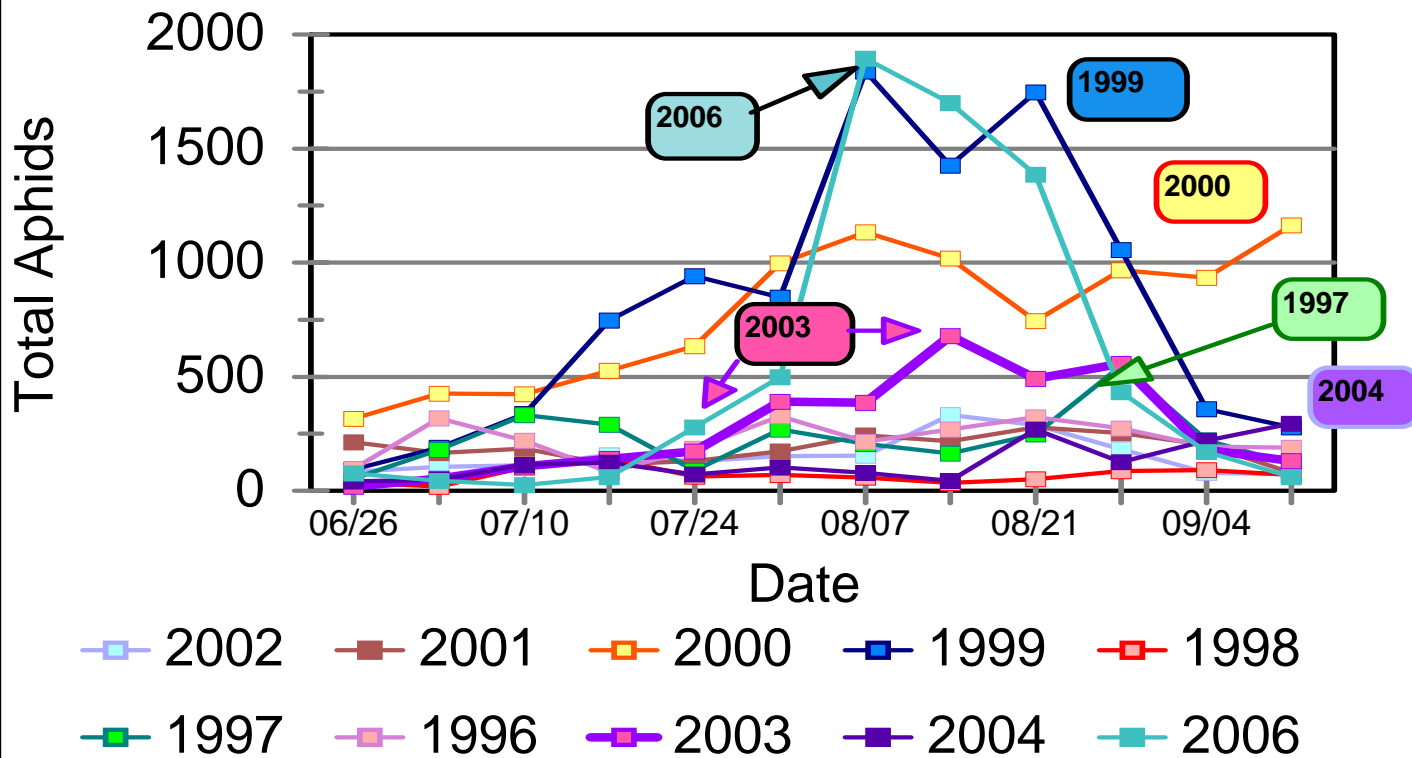
IPM Monitoring Program 1986 - 2006



# Miscellaneous Aphids

## Miscellaneous Aphid Counts

1996 - 2006



# Considerations for 2007 and beyond

**Joint CCPGA, CPAC and Industry task force met 1/22/07**

**CCPGA Board of Directors met 1/11/07**

**CCPGA membership met + Board action on 1/29/07**

## **Recommendations:**

- **Temporarily modify 10% tagging tolerance  
(to 25% with full disclosure by lot)**
- **Work toward reduction of overall inoculum pool in SLV**
- **Develop certified seed law within next 3 years**
- **Develop testing system to keep inoculum levels low**
- **Ramp up efforts in cultivar development and adoption**

## **Final Points**

**All segments of Colorado's potato industry must work together to solve critical issues!**

**Best management for PVY requires inoculum reduction**

**Commercial industry must work toward obtaining the best seed available, so use the information which is available to make practical, informed decisions**

**Recommendations will take time to implement and may or may not show immediate results**

QUESTIONS ?

# **Lines of Evidence that the PHT plots represented the readings given**

- **Early generation lots lower than late generation lots**
- **Consistent readings by growing operation**
- **Lots with high MO% next to lots with low MO%**
- **Major carryover of MO to non-NK cultivars with 34% of these cultivars having >1% MO**
- **Presence of increased PLRV levels within many lots clean during the summer inspections**

# **Lines of Evidence that the PHT plots represented the readings given**

- **Two inspectors read every NK lot with veto power**
- **PVY screening of ten lots consistent with readings**
- **Michaela's PHT project predicting current season spread**
- **B sample testing (to be determined)**
- **PVY<sup>N</sup> survey results (many more PVY samples to be submitted)**
- **Do plot readings represent the lots actual MO content – see Rick's analysis for the past three years (variance between summer field inspection readings x PHT results)**