



## Summary of the University of Vermont Apple Cultivar Evaluation of 1995 NE-183 Planting (1998-2000)

Principal Collaborators:  
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Arlet	GoldRush
Creston (BC-8M-15-10)	Honeycrisp
Braeburn (M.9)	NY429 (a.k.a. Fortune)
Braeburn (Mark)	NY75414-1
Carousel (a.k.a Cameo)	Orin
Enterprise	Pristine
Fuji	Sansa
Gala Supreme	Shizuka
Ginger Gold	SunCrisp
Golden Delicious/M.9	Sunrise
Golden Delicious/Mark	Yataka/M.9
Golden Supreme	Yataka/Mark

# Arlet/M.9 (Golden Delicious x Idared)



Number of reps: 5

Year	Average Harvest /Tree (kg)	Average Drops/Tree (kg)	Average TCSA (cm <sup>2</sup> )
1998 (3 <sup>rd</sup> leaf)	7.56	0.34	14.18
1999 (4 <sup>th</sup> leaf)	16.56	1.10	17.36
2000 (5 <sup>th</sup> leaf)	9.37	3.53	23.42

**Cumulative Yield Efficiency: 1.69 kg·cm<sup>-2</sup> (17<sup>th</sup> out of 23)**  
Average Annual Terminal Growth (cm): 29.1

<b>Three year summary of fruit evaluation (1998-2000)</b>					
Average Harvest Date	Average Days from FB to Harvest	Average Starch Index at Harvest	Average Soluble Solids at Harvest (% brix)	Average Red Color (%)	Average Overcolor/Blush (%)
12-Sep	125	6.0	14	63%	N/A

### **Overall Desirability (Look & Taste)**

Year	Scale of 1-5: 1=worst, 3= average, 5=best
1998 (3 <sup>rd</sup> leaf)	3.9
1999 (4 <sup>th</sup> leaf)	2.2
2000 (5 <sup>th</sup> leaf)	3.1
<b>Average Rating for all 3 years</b>	<b>3.1</b>

#### General Information:

Arlet is a sweet-tasting apple that was observed to be highly susceptible to russetting. Both the apple taster and consumers at the UVM HRC were willing to overlook the appearance for the taste of the apple. In general, the apple was sweet, juicy, crisp and well shaped. For small-scale situations, this apple has some promise. The tree was vigorous in growth and produced heavily. Could be a promising cider apple.

BC-8M 15-10 (a.k.a Creston)  
/M.9  
(Golden Delicious xNJ 8104)



*Number of reps: 2*

<i>Year</i>	<i>Average Harvest /Tree (kg)</i>	<i>Average Drops/Tree (kg)</i>	<i>Average TCSA (cm<sup>2</sup>)</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>5.40</i>	<i>0.17</i>	<i>18.20</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>7.81</i>	<i>1.13</i>	<i>9.80</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>9.33</i>	<i>0.06</i>	<i>12.25</i>

*Cumulative Yield Efficiency: 2.04 kg·cm<sup>-2</sup> (12<sup>th</sup> out of 23)*  
*Average Annual Terminal Growth (cm): 19.1*

<i>Three year summary of fruit evaluation (1998-2000)</i>					
<i>Average Harvest Date</i>	<i>Average Days from FB to Harvest</i>	<i>Average Starch Index at Harvest</i>	<i>Average Soluble Solids at Harvest (% brix)</i>	<i>Average Red Color (%)</i>	<i>Average Overcolor/Blush (%)</i>
<i>1-Oct</i>	<i>142</i>	<i>7.5</i>	<i>13.6</i>	<i>38</i>	<i>N/A</i>

*Overall Desirability (Look & Taste)*

<i>Year</i>	<i>Scale of 1-5: 1=worst, 3= average, 5=best</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>3.5</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>4.0</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>4.5</i>
<i>Average Rating for all 3 years</i>	<i>4.0</i>

General Information:

BC-8M (Creston) was a relatively desirable cultivar. Red blush was accentuated in final season. Little to no russeting was seen. The flavor was good: crisp, juicy and sweet. The fruit shape tended to be slightly lop-sided, and the color was dull. Moderately vigorous tree growth. TRIPLOID.

**Braeburn/M.9**  
(Lady Hamilton x ???)



*Number of reps: 3*

<i>Year</i>	<i>Average Harvest /Tree (kg)</i>	<i>Average Drops/Tree (kg)</i>	<i>Average TCSA (cm<sup>2</sup>)</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>4.24</i>	<i>0.22</i>	<i>4.33</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>4.59</i>	<i>1.08</i>	<i>5.97</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>5.41</i>	<i>0.59</i>	<i>6.80</i>

*Cumulative Yield Efficiency: 2.40 kg·cm<sup>-2</sup> (10<sup>th</sup> out of 23)*  
*Average Annual Terminal Growth (cm): 11.7*

<i>Three year summary of fruit evaluation (1998-2000)</i>					
<i>Average Harvest Date</i>	<i>Average Days from FB to Harvest</i>	<i>Average Starch Index at Harvest</i>	<i>Average Soluble Solids at Harvest (% brix)</i>	<i>Average Red Color (%)</i>	<i>Average Overcolor/Blush (%)</i>
<i>15-Oct</i>	<i>153</i>	<i>4.8</i>	<i>12.3</i>	<i>78%</i>	<i>N/A</i>

***Overall Desirability (Look & Taste)***

<i>Year</i>	<i>Scale of 1-5: 1=worst, 3= average, 5=best</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>3.7</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>3.3</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>Missing*</i>
<i>Average Rating for all 3 years</i>	<i>3.5</i>

**General Information:**

Braeburn/M9 is a late-ripening cultivar. In the final year, some taste data was not taken because of time limits. The apple was ‘riddled’ with bitter pit that detracted from appearance. Otherwise, it was a well-shaped, large, crisp, juicy apple. The tree was low in vigor and did not ‘spread’ well.

# Braeburn/Mark

(Lady Hamilton x ???)



Number of reps: 1

Year	Average Harvest /Tree (kg)	Average Drops/Tree (kg)	Average TCSA (cm <sup>2</sup> )
1998 (3 <sup>rd</sup> leaf)	7.95	0.33	7.30
1999 (4 <sup>th</sup> leaf)	3.12	0.00	10.10
2000 (5 <sup>th</sup> leaf)	10.32	0.30	14.90

**Cumulative Yield Efficiency: 1.47 kg·cm<sup>-2</sup> (20<sup>th</sup> out of 23)**  
 Average Annual Terminal Growth (cm): 23.4

<b>Three year summary of fruit evaluation (1998-2000)</b>					
Average Harvest Date	Average Days from FB to Harvest	Average Starch Index at Harvest	Average Soluble Solids at Harvest (% brix)	Average Red Color (%)	Average Overcolor/Blush (%)
15-Oct	155	3.7	13.1	83%	N/A

### Overall Desirability (Look & Taste)

Year	Scale of 1-5: 1=worst, 3= average, 5=best
1998 (3 <sup>rd</sup> leaf)	4.0
1999 (4 <sup>th</sup> leaf)	3.0
2000 (5 <sup>th</sup> leaf)	Missing
<b>Average Rating for all 3 years</b>	<b>3.5</b>

### General Information:

Braeburn/Mark is a late-ripening cultivar. In the final year, some taste data was not taken because of time limits. The apple was 'riddled' with bitter pit that detracted from appearance. Otherwise, it was a well-shaped, large, crisp, juicy apple. Only one replicate. Small, low vigor tree.

Carousel (a.k.a Cameo)/M.  
(Chance seedling)



Number of reps: 5

Year	Average Harvest /Tree (kg)	Average Drops/Tree (kg)	Average TCSA (cm <sup>2</sup> )
1998 (3 <sup>rd</sup> leaf)	10.26	0.11	9.97
1999 (4 <sup>th</sup> leaf)	14.33	1.43	12.20
2000 (5 <sup>th</sup> leaf)	19.11	0.06	15.26

**Cumulative Yield Efficiency: 3.12 kg·cm<sup>-2</sup> (4<sup>th</sup> out of 23)**  
Average Annual Terminal Growth (cm): 19.5

**Three year summary of fruit evaluation (1998-2000)**

Average Harvest Date	Average Days from FB to Harvest	Average Starch Index at Harvest	Average Soluble Solids at Harvest (% brix)	Average Red Color (%)	Average Overcolor/Blush (%)
2-Oct	142	5.0	12.8	72%	N/A

**Overall Desirability (Look & Taste)**

Year	Scale of 1-5: 1=worst, 3= average, 5=best
1998 (3 <sup>rd</sup> leaf)	3.5
1999 (4 <sup>th</sup> leaf)	3.9
2000 (5 <sup>th</sup> leaf)	3.0
<b>Average Rating for all 3 years</b>	<b>3.5</b>

General Information:

The apple looked good, and was sweet, juicy, and crisp. However, the apple lacked any real taste. Russetting seen at the calyx end. The tree was moderately vigorous and precocious.



## Enterprise/M.9

(PRI 1661-2 x PRI 1661-1 some Mc and Delicious)

*Number of reps: 2*

<i>Year</i>	<i>Average Harvest /Tree (kg)</i>	<i>Average Drops/Tree (kg)</i>	<i>Average TCSA (cm<sup>2</sup>)</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>2.84</i>	<i>0.11</i>	<i>9.80</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>6.64</i>	<i>0.18</i>	<i>13.20</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>11.93</i>	<i>0.64</i>	<i>13.90</i>

*Cumulative Yield Efficiency: 1.62 kg·cm<sup>-2</sup> (19<sup>th</sup> out of 23)*

*Average Annual Terminal Growth (cm): 24.0*

<i>Three year summary of fruit evaluation (1998-2000)</i>					
<i>Average Harvest Date</i>	<i>Average Days from FB to Harvest</i>	<i>Average Starch Index at Harvest</i>	<i>Average Soluble Solids at Harvest (% brix)</i>	<i>Average Red Color (%)</i>	<i>Average Overcolor/Blush (%)</i>
<i>8-Oct</i>	<i>146</i>	<i>3.2</i>	<i>14.1</i>	<i>92%</i>	<i>N/A</i>

### *Overall Desirability (Look & Taste)*

<i>Year</i>	<i>Scale of 1-5: 1=worst, 3= average, 5=best</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>3.3</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>Missing</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>Missing</i>
<i>Average Rating for all 3 years</i>	<i>N/A</i>

#### General Information:

Taste data available for only the first year. The cultivar was late ripening and did not sweeten in time for data collection. The trees were moderately vigorous.

Fuji (Nagafu #2)/M.9  
(Ralls Janet x Delicious)



Number of reps: 5

<i>Year</i>	<i>Average Harvest /Tree (kg)</i>	<i>Average Drops/Tree (kg)</i>	<i>Average TCSA (cm<sup>2</sup>)</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>0.15</i>	<i>0.00</i>	<i>9.30</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>14.83</i>	<i>0.86</i>	<i>11.66</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>9.88</i>	<i>0.06</i>	<i>14.82</i>

*Cumulative Yield Efficiency: 1.77 kg·cm<sup>-2</sup> (16<sup>th</sup> out of 23)*  
*Average Annual Terminal Growth (cm): 20.5*

<i>Three year summary of fruit evaluation (1998-2000)</i>					
<i>Average Harvest Date</i>	<i>Average Days from FB to Harvest</i>	<i>Average Starch Index at Harvest</i>	<i>Average Soluble Solids at Harvest (% brix)</i>	<i>Average Red Color (%)</i>	<i>Average Overcolor/Blush (%)</i>
<i>12-Oct</i>	<i>152</i>	<i>Difficult to Read</i>	<i>13.6</i>	<i>76%</i>	<i>N/A</i>

***Overall Desirability (Look & Taste)***

<i>Year</i>	<i>Scale of 1-5: 1=worst, 3= average, 5=best</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>3.5</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>2.9</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>Missing</i>
<i>Average Rating for all 3 years</i>	<i>3.2</i>

General Information:

Stripey attractive fruit. Difficult to read starch. Susceptible to watercore.  
Moderately vigorous tree. Tendency to see odd-shaped fruit---seed number?



# Gala Supreme/M.9

(Chance seedling)



Number of reps: 2

<i>Year</i>	<i>Average Harvest /Tree (kg)</i>	<i>Average Drops/Tree (kg)</i>	<i>Average TCSA (cm<sup>2</sup>)</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	5.88	0.13	8.20
<i>1999 (4<sup>th</sup> leaf)</i>	3.27	0.05	11.50
<i>2000 (5<sup>th</sup> leaf)</i>	4.62	0.00	14.40

*Cumulative Yield Efficiency: 0.90 kg·cm<sup>-2</sup> (23<sup>rd</sup> out of 23)*  
*Average Annual Terminal Growth (cm): 24.3*

<i>Three year summary of fruit evaluation (1998-2000)</i>					
<i>Average Harvest Date</i>	<i>Average Days from FB to Harvest</i>	<i>Average Starch Index at Harvest</i>	<i>Average Soluble Solids at Harvest (% brix)</i>	<i>Average Red Color (%)</i>	<i>Average Overcolor/Blush (%)</i>
<i>7-Oct</i>	<i>145</i>	<i>3.5</i>	<i>14.1</i>	<i>68%</i>	<i>N/A</i>

### *Overall Desirability (Look & Taste)*

<i>Year</i>	<i>Scale of 1-5: 1=worst, 3= average, 5=best</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>1.5</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>Missing</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>2.0</i>
<i>Average Rating for all 3 years</i>	<i>1.8</i>

General Information:

Low yield, large trees, poor flavor.

# Ginger Gold/M.9 (Chance seedling)



Number of reps: 5

Year	Average Harvest /Tree (kg)	Average Drops/Tree (kg)	Average TCSA (cm <sup>2</sup> )
1998 (3 <sup>rd</sup> leaf)	4.84	0.05	8.90
1999 (4 <sup>th</sup> leaf)	17.58	1.41	11.08
2000 (5 <sup>th</sup> leaf)	16.52	0.70	12.76

**Cumulative Yield Efficiency: 3.43 kg·cm<sup>-2</sup> (1<sup>st</sup> out of 23)**  
Average Annual Terminal Growth (cm): 26.9

<b>Three year summary of fruit evaluation (1998-2000)</b>					
Average Harvest Date	Average Days from FB to Harvest	Average Starch Index at Harvest	Average Soluble Solids at Harvest (% brix)	Average Red Color (%)	Average Overcolor/Blush (%)
8-Sep	112	3.5	12.3	N/A	7%

### **Overall Desirability (Look & Taste)**

Year	Scale of 1-5: 1=worst, 3= average, 5=best
1998 (3 <sup>rd</sup> leaf)	3.8
1999 (4 <sup>th</sup> leaf)	4.0
2000 (5 <sup>th</sup> leaf)	4.3
<b>Average Rating for all 3 years</b>	<b>4.0</b>

#### General Information:

Sweet, very crisp apple, short harvest season, variable blush on apples/ Trees were vigorous and precocious. This cultivar did not store well for us, however some growers in NY do very well with storage.

# Golden Delicious/M.9 (Chance seedling)



*Number of reps: 5*

<i>Year</i>	<i>Average Harvest /Tree (kg)</i>	<i>Average Drops/Tree (kg)</i>	<i>Average TCSA (cm<sup>2</sup>)</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>11.64</i>	<i>0.56</i>	<i>8.10</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>5.07</i>	<i>2.28</i>	<i>10.80</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>14.51</i>	<i>0.12</i>	<i>12.36</i>

*Cumulative Yield Efficiency: 2.82 kg·cm<sup>-2</sup> (5<sup>th</sup> out of 23)*  
*Average Annual Terminal Growth (cm): 17.8*

<i>Three year summary of fruit evaluation (1998-2000)</i>					
<i>Average Harvest Date</i>	<i>Average Days from FB to Harvest</i>	<i>Average Starch Index at Harvest</i>	<i>Average Soluble Solids at Harvest (% brix)</i>	<i>Average Red Color (%)</i>	<i>Average Overcolor/Blush (%)</i>
<i>5-Oct</i>	<i>143</i>	<i>6.3</i>	<i>14.8</i>	<i>N/A</i>	<i>7%</i>

### *Overall Desirability (Look & Taste)*

<i>Year</i>	<i>Scale of 1-5: 1=worst, 3= average, 5=best</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>2.7</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>3.2</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>4.2</i>
<i>Average Rating for all 3 years</i>	<i>3.4</i>

General Information:  
Standard cultivar.

# Golden Delicious/Mark (Chance seedling)



*Number of reps: 5*

<i>Year</i>	<i>Average Harvest /Tree (kg)</i>	<i>Average Drops/Tree (kg)</i>	<i>Average TCSA (cm<sup>2</sup>)</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>12.75</i>	<i>0.12</i>	<i>14.4</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>9.64</i>	<i>5.90</i>	<i>16.96</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>23.97</i>	<i>0.24</i>	<i>20.66</i>

*Cumulative Yield Efficiency: 2.45 kg·cm<sup>-2</sup> (9<sup>th</sup> out of 24)  
Average Annual Terminal Growth (cm): 19.8*

<i>Three year summary of fruit evaluation (1998-2000)</i>					
<i>Average Harvest Date</i>	<i>Average Days from FB to Harvest</i>	<i>Average Starch Index at Harvest</i>	<i>Average Soluble Solids at Harvest (% brix)</i>	<i>Average Red Color (%)</i>	<i>Average Overcolor/Blush (%)</i>
<i>5-Oct</i>	<i>143</i>	<i>6.6</i>	<i>14.4</i>	<i>N/A</i>	<i>8%</i>

### *Overall Desirability (Look & Taste)*

<i>Year</i>	<i>Scale of 1-5: 1=worst, 3= average, 5=best</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>2.8</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>3.7</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>3.4</i>
<i>Average Rating for all 3 years</i>	<i>3.3</i>

General Information:

Standard cultivar produced twice as much as Golden Delicious/M9.

# Golden Supreme/M.9 (Chance seedling)



*Number of reps: 4*

<i>Year</i>	<i>Average Harvest /Tree (kg)</i>	<i>Average Drops/Tree (kg)</i>	<i>Average TCSA (cm<sup>2</sup>)</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>6.05</i>	<i>1.83</i>	<i>12.30</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>15.00</i>	<i>2.92</i>	<i>15.25</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>4.88</i>	<i>7.02</i>	<i>19.50</i>

*Cumulative Yield Efficiency: 1.97 kg·cm<sup>-2</sup> (14<sup>th</sup> out of 23)*  
*Average Annual Terminal Growth (cm): 22.9*

<i>Three year summary of fruit evaluation (1998-2000)</i>					
<i>Average Harvest Date</i>	<i>Average Days from FB to Harvest</i>	<i>Average Starch Index at Harvest</i>	<i>Average Soluble Solids at Harvest (% brix)</i>	<i>Average Red Color (%)</i>	<i>Average Overcolor/Blush (%)</i>
<i>15-Sep</i>	<i>125</i>	<i>4.2</i>	<i>13.2</i>	<i>N/A</i>	<i>10%</i>

### *Overall Desirability (Look & Taste)*

<i>Year</i>	<i>Scale of 1-5: 1=worst, 3= average, 5=best</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>4.8</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>3.9</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>3.7</i>
<i>Average Rating for all 3 years</i>	<i>4.1</i>

#### General Information:

Harvested too late in 2000. We were waiting on color that did not develop. Apple tastes good: crisp and juicy. Moderately vigorous tree. May require multiple harvests for color development.

**GoldRush/M.9**  
(Golden Delicious x Co-op 17)



*Number of reps: 5*

<i>Year</i>	<i>Average Harvest /Tree (kg)</i>	<i>Average Drops/Tree (kg)</i>	<i>Average TCSA (cm<sup>2</sup>)</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>5.60</i>	<i>0.03</i>	<i>11.52</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>11.87</i>	<i>0.06</i>	<i>9.30</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>6.54</i>	<i>0.05</i>	<i>12.40</i>

*Cumulative Yield Efficiency: 1.86 kg·cm<sup>-2</sup> (15<sup>th</sup> out of 23)*  
*Average Annual Terminal Growth (cm): 16.6*

<i>Three year summary of fruit evaluation (1998-2000)</i>					
<i>Average Harvest Date</i>	<i>Average Days from FB to Harvest</i>	<i>Average Starch Index at Harvest</i>	<i>Average Soluble Solids at Harvest (% brix)</i>	<i>Average Red Color (%)</i>	<i>Average Overcolor/Blush (%)</i>
<i>12-Oct</i>	<i>154</i>	<i>2.2</i>	<i>14.1</i>	<i>N/A</i>	<i>15%</i>

***Overall Desirability (Look & Taste)***

<i>Year</i>	<i>Scale of 1-5: 1=worst, 3= average, 5=best</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>2.6</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>2.7</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>Missing</i>
<i>Average Rating for all 3 years</i>	<i>2.7</i>

**General Information:**

Cultivar does not reach maturity in Vermont. Small green baseballs. Tree was small and low in vigor.

# Honeycrisp/M.9 (Macoun x Honeygold)



*Number of reps: 5*

<i>Year</i>	<i>Average Harvest /Tree (kg)</i>	<i>Average Drops/Tree (kg)</i>	<i>Average TCSA (cm<sup>2</sup>)</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	8.03	0.07	7.26
<i>1999 (4<sup>th</sup> leaf)</i>	12.99	1.16	9.80
<i>2000 (5<sup>th</sup> leaf)</i>	9.79	1.16	10.30

*Cumulative Yield Efficiency: 3.24 kg·cm<sup>-2</sup> (3<sup>rd</sup> out of 23)*

*Average Annual Terminal Growth (cm): 13.9*

<i>Three year summary of fruit evaluation (1998-2000)</i>					
<i>Average Harvest Date</i>	<i>Average Days from FB to Harvest</i>	<i>Average Starch Index at Harvest</i>	<i>Average Soluble Solids at Harvest (% brix)</i>	<i>Average Red Color (%)</i>	<i>Average Overcolor/Blush (%)</i>
<i>9-Sep</i>	<i>117</i>	<i>5.9</i>	<i>12.4</i>	<i>57</i>	<i>N/A</i>

*Scale of 1-5: 1=worst, 3= average, 5=best*

<i>Year</i>	<i>Scale of 1-5: 1=worst, 3= average, 5=best</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>4.6</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>3.9</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>4.4</i>
<i>Average Rating for all 3 years</i>	<i>4.3</i>

## General Information:

Variable fruit and tree. Leaves showed yellowing and spotting, beginning in the middle of the growing season. Some trees produced stripey fruit, others produced nearly 100% red fruit. Trees were moderate-low in vigor, but relatively precocious.

NY429 (a.k.a. Fortune)/M.9  
(Red Spy x Empire)



Number of reps: 4

Year	Average Harvest /Tree (kg)	Average Drops/Tree (kg)	Average TCSA (cm <sup>2</sup> )
1998 (3 <sup>rd</sup> leaf)	1.71	0.24	11.70
1999 (4 <sup>th</sup> leaf)	7.51	7.95	12.58
2000 (5 <sup>th</sup> leaf)	21.96	0.51	17.75

**Cumulative Yield Efficiency: 2.27 kg·cm<sup>-2</sup> (11<sup>th</sup> out of 23)**

Average Annual Terminal Growth (cm): 19.9

<b>Three year summary of fruit evaluation (1998-2000)</b>					
Average Harvest Date	Average Days from FB to Harvest	Average Starch Index at Harvest	Average Soluble Solids at Harvest (% brix)	Average Red Color (%)	Average Overcolor/Blush (%)
11-Oct	150	5.1	14.6	91%	N/A

**Scale of 1-5: 1=worst, 3= average, 5=best**

Year	Scale of 1-5: 1=worst, 3= average, 5=best
1998 (3 <sup>rd</sup> leaf)	4.0
1999 (4 <sup>th</sup> leaf)	4.9
2000 (5 <sup>th</sup> leaf)	4.2
<b>Average Rating for all 3 years</b>	<b>4.4</b>

General Information:

Very large, very red, and sweet fruit. High acid content—may be an acquired taste. Tree was moderate-high in vigor.



NY75414-1/M.9  
(Liberty x Macspur)



Number of reps: 4

Year	Average Harvest /Tree (kg)	Average Drops/Tree (kg)	Average TCSA (cm <sup>2</sup> )
1998 (3 <sup>rd</sup> leaf)	6.79	3.49	12.70
1999 (4 <sup>th</sup> leaf)	6.27	1.85	7.85
2000 (5 <sup>th</sup> leaf)	8.69	3.78	9.25

**Cumulative Yield Efficiency: 3.35 kg·cm<sup>-2</sup> (2<sup>nd</sup> out of 23)**  
Average Annual Terminal Growth (cm): 19.2

<b>Three year summary of fruit evaluation (1998-2000)</b>					
Average Harvest Date	Average Days from FB to Harvest	Average Starch Index at Harvest	Average Soluble Solids at Harvest (% brix)	Average Red Color (%)	Average Overcolor/Blush (%)
21-Sep	134	3.9	13.4	94%	N/A

**Scale of 1-5: 1=worst, 3= average, 5=best**

Year	Scale of 1-5: 1=worst, 3= average, 5=best
1998 (3 <sup>rd</sup> leaf)	3.9
1999 (4 <sup>th</sup> leaf)	3.5
2000 (5 <sup>th</sup> leaf)	4.6
<b>Average Rating for all 3 years</b>	<b>4.0</b>

General Information:

Scab-resistant cultivar. Mid-September harvest may cause problems. Consumers at HRC enjoyed this apple! Good flavor, crisp, in a red-purple apple. A lot of people made value added items from this fruit-sauce, pies etc. Vigorous terminal growth, but in the 2000 the girth was stunted.

# Orin/M.9

(Golden Delicious x Indo)

Number of reps: 3

<i>Year</i>	<i>Average Harvest /Tree (kg)</i>	<i>Average Drops/Tree (kg)</i>	<i>Average TCSA (cm<sup>2</sup>)</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>10.07</i>	<i>0.38</i>	<i>16.40</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>8.54</i>	<i>0.40</i>	<i>13.27</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>19.04</i>	<i>0.44</i>	<i>15.10</i>

*Cumulative Yield Efficiency: 2.57 kg·cm<sup>-2</sup> (7<sup>th</sup> out of 23: tied with Sunrise/M.9)*

*Average Annual Terminal Growth (cm): 16.5*

<i>Three year summary of fruit evaluation (1998-2000)</i>					
<i>Average Harvest Date</i>	<i>Average Days from FB to Harvest</i>	<i>Average Starch Index at Harvest</i>	<i>Average Soluble Solids at Harvest (% brix)</i>	<i>Average Red Color (%)</i>	<i>Average Overcolor/Blush (%)</i>
<i>3-Oct</i>	<i>146</i>	<i>4.3</i>	<i>14.2</i>	<i>N/A</i>	<i>4%</i>

*Scale of 1-5: 1=worst, 3= average, 5=best*

<i>Year</i>	<i>Scale of 1-5: 1=worst, 3= average, 5=best</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>2.3</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>1.0</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>2.5</i>
<i>Average Rating for all 3 years</i>	<i>1.9</i>

General Information:

Good-size fruit, taste is acceptable---But it's an unattractive apple. Large lenticels on a dull green color. The tree was precocious and vigorous. TRIPLOID.

Pristine/M.9  
(Co-op 10 x Camuzat)



Number of reps: 3

<i>Year</i>	<i>Average Harvest /Tree (kg)</i>	<i>Average Drops/Tree (kg)</i>	<i>Average TCSA (cm<sup>2</sup>)</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	7.20	3.90	16.40
<i>1999 (4<sup>th</sup> leaf)</i>	0.00	2.22	11.40
<i>2000 (5<sup>th</sup> leaf)</i>	3.67	9.44	10.90

*Cumulative Yield Efficiency: 2.65g·cm<sup>-2</sup> (6<sup>h</sup> out of 23)*

*Average Annual Terminal Growth (cm): 20.2*

<i>Three year summary of fruit evaluation (1998-2000)</i>					
<i>Average Harvest Date</i>	<i>Average Days from FB to Harvest</i>	<i>Average Starch Index at Harvest</i>	<i>Average Soluble Solids at Harvest (% brix)</i>	<i>Average Red Color (%)</i>	<i>Average Overcolor/Blush (%)</i>
<i>13-Aug</i>	<i>95</i>	<i>**</i>	<i>**</i>	<i>6%</i>	<i>N/A</i>

*\*\* Could not test because of PHI*

*Scale of 1-5: 1=worst, 3= average, 5=best*

<i>Year</i>	<i>Scale of 1-5: 1=worst, 3= average, 5=best</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>2.1</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>Missing</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>3.7</i>
<i>Average Rating for all 3 years</i>	<i>2.9</i>

General Information:

Very early apple, taste tests were difficult because of pre-harvest intervals (hence the large amount of drop). Good-tasting, but did not appear to store well. Some trees tended to be biennial. The trees were vigorous and large.

Sansa/M.9  
(Gala x Akane)



Number of reps: 5

Year	Average Harvest /Tree (kg)	Average Drops/Tree (kg)	Average TCSA (cm <sup>2</sup> )
1998 (3 <sup>rd</sup> leaf)	1.43	0.00	5.40
1999 (4 <sup>th</sup> leaf)	4.92	0.11	6.48
2000 (5 <sup>th</sup> leaf)	5.02	0.23	7.50

**Cumulative Yield Efficiency: 1.68 kg·cm<sup>-2</sup> (18<sup>th</sup> out of 23)**

Average Annual Terminal Growth (cm): 19.7

<b>Three year summary of fruit evaluation (1998-2000)</b>					
Average Harvest Date	Average Days from FB to Harvest	Average Starch Index at Harvest	Average Soluble Solids at Harvest (% brix)	Average Red Color (%)	Average Overcolor/Blush (%)
29-Aug	104	5.5	13.5	68%	N/A

**Scale of 1-5: 1=worst, 3= average, 5=best**

Year	Scale of 1-5: 1=worst, 3= average, 5=best
1998 (3 <sup>rd</sup> leaf)	3.8
1999 (4 <sup>th</sup> leaf)	2.6
2000 (5 <sup>th</sup> leaf)	3.3
<b>Average Rating for all 3 years</b>	<b>3.2</b>

General Information:

The apple was acceptable: 75% red, sweet good flavored. Data for this cultivar in this planting may be misleading because the trees are virus-infected. The tree was low in vigor—small, stunted and spur bound.

Shizuka/M.9  
(Golden Delicious x Indo)



Number of reps: 2

<i>Year</i>	<i>Average Harvest /Tree (kg)</i>	<i>Average Drops/Tree (kg)</i>	<i>Average TCSA (cm<sup>2</sup>)</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>0.50</i>	<i>0.00</i>	<i>10.90</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>4.17</i>	<i>11.58</i>	<i>13.65</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>16.20</i>	<i>0.75</i>	<i>16.70</i>

*Cumulative Yield Efficiency: 1.99 kg·cm<sup>-2</sup> (13<sup>th</sup> out of 23)*

*Average Annual Terminal Growth (cm): 18.8*

<i>Three year summary of fruit evaluation (1998-2000)</i>					
<i>Average Harvest Date</i>	<i>Average Days from FB to Harvest</i>	<i>Average Starch Index at Harvest</i>	<i>Average Soluble Solids at Harvest (% brix)</i>	<i>Average Red Color (%)</i>	<i>Average Overcolor/Blush (%)</i>
<i>1-Oct</i>	<i>153</i>	<i>6.2</i>	<i>15.3</i>	<i>70%</i>	<i>5%</i>

*Scale of 1-5: 1=worst, 3= average, 5=best*

<i>Year</i>	<i>Scale of 1-5: 1=worst, 3= average, 5=best</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>3.2</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>Missing</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>3.9</i>
<i>Average Rating for all 3 years</i>	<i>3.5</i>

General Information:

Attractive apples, watery taste. Watercore was prevalent. Trees were moderately-high in vigor. TRIPLOID.



## Suncrisp (a.k.a NJ-55)/M.9

*Number of reps: 3*

<i>Year</i>	<i>Average Harvest /Tree (kg)</i>	<i>Average Drops/Tree (kg)</i>	<i>Average TCSA (cm<sup>2</sup>)</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>Missing</i>	<i>Missing</i>	<i>Missing</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>14.8</i>	<i>0.4</i>	<i>10.0</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>13.6</i>	<i>0.2</i>	<i>11.8</i>

*Cumulative Yield Efficiency: Due to missing data, not included in summary of Cumulative Yield Efficiency*

*Average Annual Terminal Growth (cm): 16.4*

<i>Three year summary of fruit evaluation (1998-2000)</i>					
<i>Average Harvest Date</i>	<i>Average Days from FB to Harvest</i>	<i>Average Starch Index at Harvest</i>	<i>Average Soluble Solids at Harvest (% brix)</i>	<i>Average Red Color (%)</i>	<i>Average Overcolor/Blush (%)</i>
<i>13-Oct</i>	<i>152</i>	<i>5.5</i>	<i>13.6</i>	<i>N/A</i>	<i>21%</i>

*Scale of 1-5: 1=worst, 3= average, 5=best*

<i>Year</i>	<i>Scale of 1-5: 1=worst, 3= average, 5=best</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>Missing</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>Missing</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>3.6</i>
<i>Average Rating for all 3 years</i>	<i>***</i>

### General Information:

Mildly surprising apple: good-tasting, crisp. Most apples developed red blush. Shape was good. Some tasters thought they were Honeycrisp. These apples did not develop as shiny a color as Honeycrisp. Low-moderate tree vigor.

# Sunrise/M.9

(McIntosh/G.Delicious x Chance Seedling)



Number of reps: 5

<i>Year</i>	<i>Average Harvest /Tree (kg)</i>	<i>Average Drops/Tree (kg)</i>	<i>Average TCSA (cm<sup>2</sup>)</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>11.25</i>	<i>0.25</i>	<i>11.88</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>8.18</i>	<i>0.02</i>	<i>10.24</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>12.52</i>	<i>0.00</i>	<i>12.44</i>

*Cumulative Yield Efficiency: 2.57 kg·cm<sup>-2</sup> (7<sup>th</sup> out of 23: tied with Orin/M.9)*  
*Average Annual Terminal Growth (cm): 18.9*

### **Three year summary of fruit evaluation (1998-2000)**

<i>Average Harvest Date</i>	<i>Average Days from FB to Harvest</i>	<i>Average Starch Index at Harvest</i>	<i>Average Soluble Solids at Harvest (% brix)</i>	<i>Average Red Color (%)</i>	<i>Average Overcolor/Blush (%)</i>
<i>22-Aug</i>	<i>104</i>	<i>3.7</i>	<i>12.2</i>	<i>53%</i>	<i>N/A</i>

**Scale of 1-5: 1=worst, 3= average, 5=best**

<i>Year</i>	<i>Scale of 1-5: 1=worst, 3= average, 5=best</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>3.9</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>3.4</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>3.8</i>
<i>Average Rating for all 3 years</i>	<i>3.7</i>

### General Information:

Early ripening, attractive apple (50% red). Acceptable flavor. Tree was large and vigorous.

# Yataka/M.9



*Number of reps: 5*

<i>Year</i>	<i>Average Harvest /Tree (kg)</i>	<i>Average Drops/Tree (kg)</i>	<i>Average TCSA (cm<sup>2</sup>)</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>1.43</i>	<i>0.03</i>	<i>8.3</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>11.44</i>	<i>0.49</i>	<i>9.70</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>3.63</i>	<i>0.02</i>	<i>12.56</i>

*Cumulative Yield Efficiency: 1.38 kg·cm<sup>-2</sup> (22<sup>nd</sup> out of 23)*  
*Average Annual Terminal Growth (cm): 15.8*

<i>Three year summary of fruit evaluation (1998-2000)</i>					
<i>Average Harvest Date</i>	<i>Average Days from FB to Harvest</i>	<i>Average Starch Index at Harvest</i>	<i>Average Soluble Solids at Harvest (% brix)</i>	<i>Average Red Color (%)</i>	<i>Average Overcolor/Blush (%)</i>
<i>12-Oct</i>	<i>154</i>	<i>Difficult to Read</i>	<i>13.5</i>	<i>63%</i>	<i>N/A</i>

*Scale of 1-5: 1=worst, 3= average, 5=best*

<i>Year</i>	<i>Scale of 1-5: 1=worst, 3= average, 5=best</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>2.5</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>3.8</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>Missing</i>
<i>Average Rating for all 3 years</i>	<i>3.2</i>

## General Information:

Starch was hard to read. Apples were observed to have a lot of watercore. The apples were attractive, but inedible (watery---did not ripen in time). Trees were vigorous in growth and may have been overcropped in 1999.



# Yataka/Mark



*Number of reps: 5*

<i>Year</i>	<i>Average Harvest /Tree (kg)</i>	<i>Average Drops/Tree (kg)</i>	<i>Average TCSA (cm<sup>2</sup>)</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>3.59</i>	<i>0.46</i>	<i>14.7</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>17.81</i>	<i>1.02</i>	<i>16.6</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>6.83</i>	<i>0.18</i>	<i>21.46</i>

*Cumulative Yield Efficiency: 1.39 kg·cm<sup>-2</sup> (21<sup>st</sup> out of 23)*  
*Average Annual Terminal Growth (cm): 19.4*

<i>Three year summary of fruit evaluation (1998-2000)</i>					
<i>Average Harvest Date</i>	<i>Average Days from FB to Harvest</i>	<i>Average Starch Index at Harvest</i>	<i>Average Soluble Solids at Harvest (% brix)</i>	<i>Average Red Color (%)</i>	<i>Average Overcolor/Blush (%)</i>
<i>11-Oct</i>	<i>154</i>	<i>Difficult to read</i>	<i>14.6</i>	<i>66%</i>	<i>N/A</i>

*Scale of 1-5: 1=worst, 3= average, 5=best*

<i>Year</i>	<i>Scale of 1-5: 1=worst, 3= average, 5=best</i>
<i>1998 (3<sup>rd</sup> leaf)</i>	<i>3.4</i>
<i>1999 (4<sup>th</sup> leaf)</i>	<i>4.2</i>
<i>2000 (5<sup>th</sup> leaf)</i>	<i>Missing</i>
<i>Average Rating for all 3 years</i>	<i>3.8</i>

## General Information:

Starch was hard to read. Apples were observed to have a lot of watercore. The apples were attractive, but inedible (watery---did not ripen in time). Trees were vigorous in growth and may have been overcropped in 1999.