

**APPLE & PEAR VARIETY  
PRODUCTION & PLANTING  
TRENDS  
IN WASHINGTON STATE**



**2008**

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# **APPLE & PEAR VARIETY PRODUCTION AND PLANTING TRENDS IN WASHINGTON STATE**

This report reviews production and planting trends for apples and pears in the State of Washington. Diversification in both industries is continuing as growers shift the varieties they are planting. These shifts are apparent in the planting trends observed in this year's Nursery Tree Survey.

It continues to be vitally important for growers to recognize and understand these trends when making decisions pertaining to their orchard operation and which varieties they may choose to plant.

## **APPLE PRODUCTION TRENDS**

The growth of fresh apple production in the State of Washington is depicted in *Illustration #1*. The 2008 crop established a new record volume for the industry with fresh apples at 110.4 million boxes. The production pattern over the past nine years as shown in *Illustration #2* is quite remarkable. The industry has experienced two, four year cycles of a record crop followed by three consecutive shorter crop years (2000-2003 & 2004-2007). Each cycle was affected by catastrophic occurrences.

Following the 2000 record crop, one would have expected the 2001 crop to have been lower. The expectation for the 2002 crop was for another large crop. However, a catastrophic fall freeze towards the end of harvest had a major impact on the crop, reducing it to levels below the prior year. The residual effect of the fall freeze resulted in the 2003 crop turning out to be the lowest fresh crop in since 1992 at 79.9 million boxes.

The 2004 crop followed with a new record production for the state. Given the alternate bearing pattern of production, the 2005 crop was expected to be lower. However, catastrophic hail storms ravaged the industry during 2006, which resulted in a shorter crop. The residual effect of these storms had an impact on the 2007 crop which was smaller than the prior year.

*Illustration #1*

# WASHINGTON APPLE PRODUCTION BY VARIETY

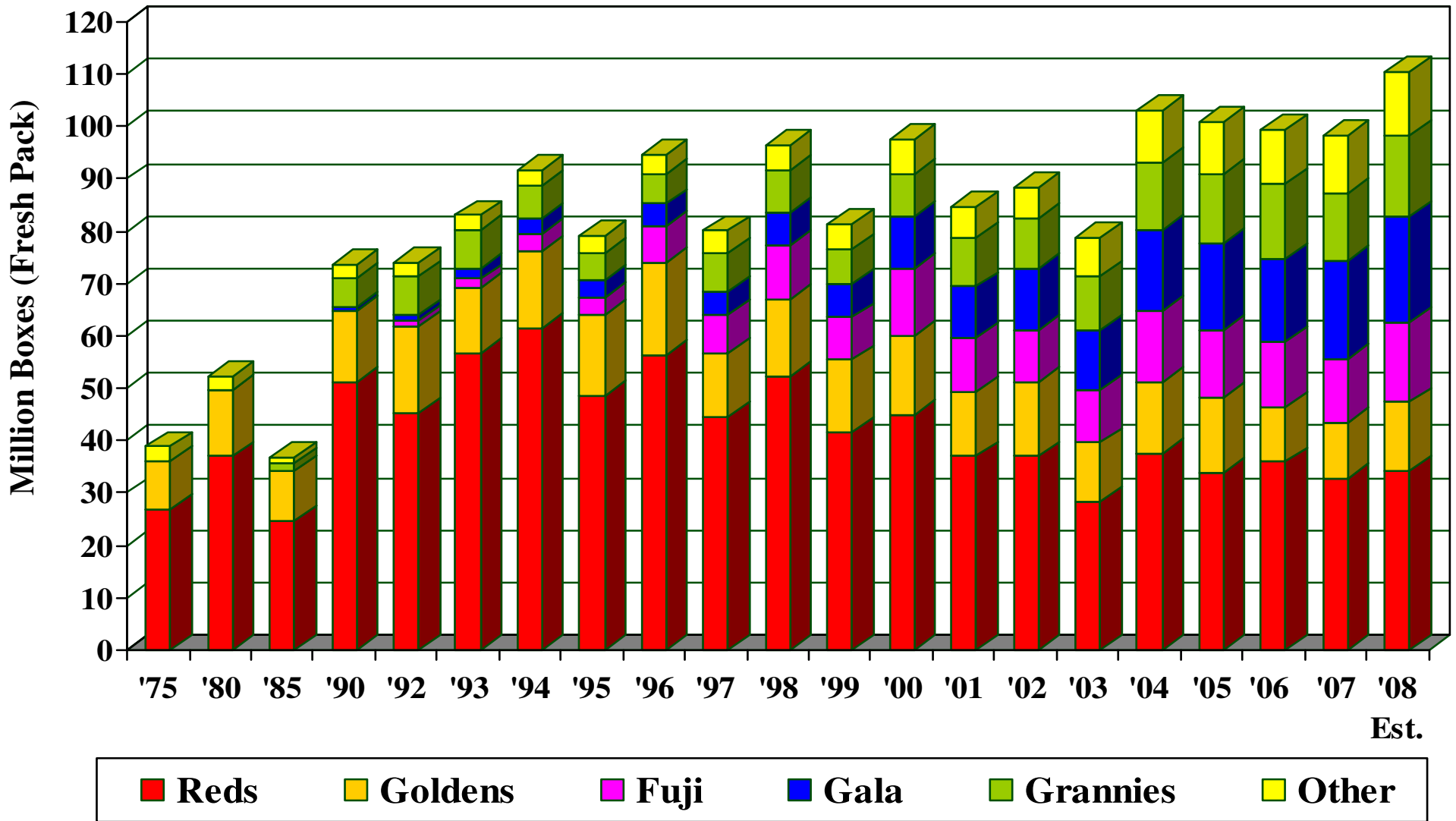
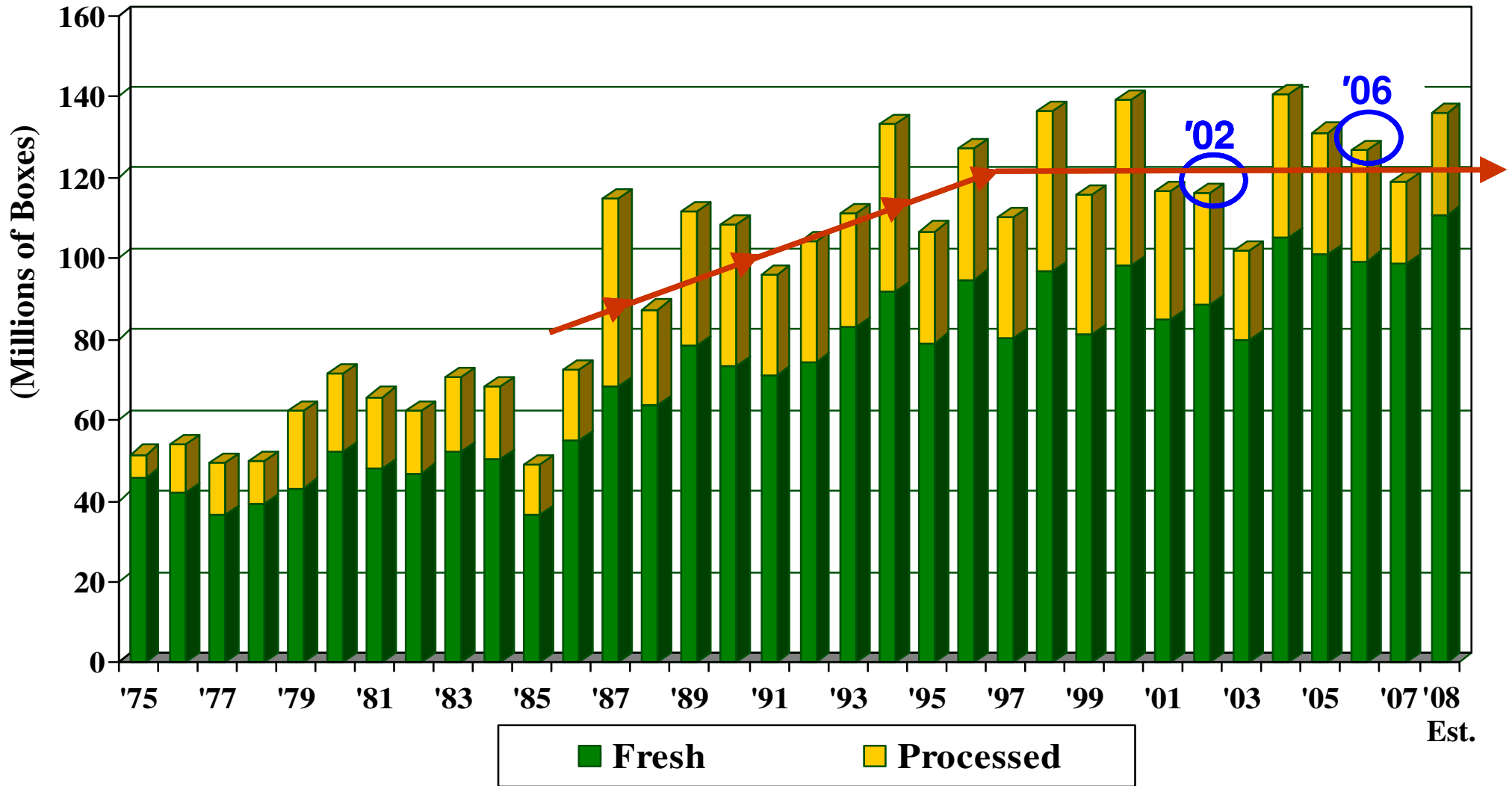


Illustration #2

# WASHINGTON APPLE CROP TREND



The 2008 crop, which initially was expected to produce a fresh crop near 100 million boxes, rebounded with an astounding record of well over 110 million boxes. It will be interesting to see if the prior eight year pattern repeats itself in the future.

The changing mix of apple varieties being produced in the State of Washington is clearly seen on the bar chart on page 4. The most notable change has been the steady decline of Red Delicious apples since 1994. The decline in Red Delicious, however, has been offset by the dramatic increase in “newer” varieties. The expansion of these “newer” varieties is expected to continue in the future based upon the varietal planting trends we see today.

The changing mix of apple varieties being produced in the State of Washington is quantified in *Illustration #3*. Red Delicious is still the dominant variety in the industry. Red Delicious production appears to be leveling off at the 33 to 35 million box levels. The use of new technologies applied at harvest has dramatically improved the storage quality for Red Delicious. As a result there has been improved demand for the variety in the fresh market.

Gala has clearly emerged as the second most popular variety produced in the State of Washington. In 2008, Gala production hit a record volume of 20.4 million boxes, representing 18.5% of the industry’s total production. Given the current planting trends for Gala, fresh production should remain well over 20 million boxes in the future.

Granny Smith production exceeds both Golden and Fuji production. Granny Smith production hit a new record volume in 2008 at 15.5 million boxes. Granny Smith production has grown steadily since 2002, but may be leveling off in the future. In 2008, Granny Smith represented 14% of total state production.

Fuji production peaked at 15.2 million boxes in 2008, a new record volume for the variety. Increase in “Early Fuji” production contributed to the record fresh production. The variety should see continued growth in fresh production in the future based upon current planting trends. In 2008, Fuji represented 13.9% of total state production.

Golden Delicious production ranks fifth in total production. In 2008, Golden Delicious volume reached 13.1 million boxes, or 11.9% of total state production.

*Illustration #3*

**WASHINGTON APPLE PRODUCTION  
BY VARIETY**

(000's Boxes) Fresh Pack

	<u>Red</u>	<u>Golden</u>			<u>Granny</u>		
	<u>Delicious</u>	<u>Delicious</u>	<u>Fuji</u>	<u>Gala</u>	<u>Smith</u>	<u>Other</u>	<u>TOTAL</u>
1975	26,844	9,283				2,731	38,858
1980	36,986	12,593			255	2,257	52,091
1985	24,797	9,535			1,296	1,084	36,712
1986	37,966	12,352			2,910	1,729	54,957
1987	49,742	12,936			3,790	1,596	68,064
1988	43,778	13,822			4,308	1,727	63,635
1989	55,336	15,892			4,852	2,366	78,446
1990	51,117	13,812	32	677	5,559	2,352	73,549
1991	49,400	14,628	146	688	4,005	2,334	71,201
1992	45,339	16,742	805	1,403	7,187	2,677	74,153
1993	56,845	12,446	1,654	2,184	7,323	2,636	83,088
1994	61,408	14,750	3,435	2,936	6,273	2,879	91,681
1995	48,505	15,627	3,419	3,017	5,431	3,057	79,056
1996	56,197	17,901	7,002	4,118	5,691	3,839	94,748
1997	44,430	12,195	7,331	4,388	7,398	4,330	80,072
1998	52,344	14,648	10,331	6,369	8,030	4,950	96,672
1999	41,563	13,841	8,091	6,324	6,718	4,656	81,193
2000	45,459	15,110	12,914	9,929	8,222	6,709	98,343
2001	37,133	12,212	10,458	9,821	9,459	5,732	84,815
2002	37,316	14,300	9,791	11,654	9,509	6,191	88,761
2003	29,590	11,140	10,187	11,322	10,055	7,638	79,932
2004	39,176	13,788	13,604	15,438	12,878	10,073	104,957
2005	33,770	14,274	12,879	16,735	13,105	10,266	101,029
2006	35,913	10,403	12,560	15,890	14,246	10,313	99,325
2007	32,804	10,607	12,110	18,874	12,858	11,224	98,477
*2008	34,195	13,108	15,246	20,406	15,538	11,921	110,414

\*Est. 4/1/09

Source: Yakima Valley Growers-Shippers Association

The “Other Varieties” category continues to show steady growth. The varieties established a new record volume in 2008 at 11.9 million boxes, which represents 10.8% of total state production. A breakdown of these varieties is outlined in *Illustration #4*. Braeburn and Cripps Pink remain the dominant varieties in this category.

To better understand what is driving these changes in apple production in the State of Washington and how they are likely to change in the future, growers need to be aware of the State’s apple planting trends, which are described in the following section.

*Illustration #4*

<b>WASHINGTON APPLE PRODUCTION OTHER VARIETIES</b>
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Million Boxes (Fresh Pack)

	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>
<b>Winesap</b>	.333	.361	.373	.240	.220	.154	.161	.095	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
<b>Rome</b>	.787	.888	.917	.976	1.281	1.135	1.058	.871	.867	.808	.766	.512	.471	.365	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*	N/A*
<b>Jonagold</b>			.150	.246	.323	.390	.434	.552	.781	.824	.816	.929	1.024	.985	.931	1.093	1.083	1.192	1.216	.977	1.096
<b>Braeburn</b>			.001	.019	.076	.401	.570	.982	1.494	1.780	1.972	1.833	2.782	2.280	2.464	2.514	3.455	3.253	3.525	3.373	3.538
<b>Cameo</b>											.245	.216	.536	.497	.803	.885	1.327	1.340	1.327	1.224	1.386
<b>Cripps Pink</b>											.110	.260	.651	.679	.405	1.250	2.074	2.107	1.907	2.411	2.376
<b>Misc.</b>	<u>.607</u>	<u>1.117</u>	<u>.911</u>	<u>.853</u>	<u>.777</u>	<u>.556</u>	<u>.656</u>	<u>.557</u>	<u>.697</u>	<u>.918</u>	<u>1.041</u>	<u>.906</u>	<u>1.245</u>	<u>.926</u>	<u>1.588</u>	<u>1.896</u>	<u>2.134</u>	<u>2.374</u>	<u>2.338</u>	<u>3.239</u>	<u>3.525</u>
<b>Total</b>	1.727	2.366	2.352	2.334	2.677	2.636	2.879	3.057	3.839	4.330	4.950	4.656	6.709	5.732	6.191	7.638	10.073	10.266	10.313	11.224	11.921

\*Estimates included in miscellaneous category

Source: Yakima Valley Growers-Shippers Association

## APPLE PLANTING TRENDS

This 2008 Nursery Tree Survey is the eleventh consecutive survey conducted by Tree Top, Inc. With the support of the nursery industry, we have been able to collect data on trees sold from 1986 to 2008, with estimates of trees budded for sale in the spring of 2009 and 2010.

The following highlights the results of this year's update as shown in *Illustration #5*.

**Red Delicious** plantings indicate an increasing trend in the most recent four years of our survey. Rebounding from a record low percentage of total trees sold of just 1.4% in 2006, Red Delicious steadily increased from 1.6% in 2007 to 4.7% in 2010. The increase is due in part to increased tree sales to Eastern growers. In Washington some increase can be attributed to growers replanting existing blocks with Red Delicious and the development of improved strains. Red Delicious is still the largest volume variety sold and fruit quality has improved with the use of MCP. Many warehouses continue to need Red Delicious in their mix of products. The planting trend is expected to stabilize in the future somewhere in the 3% to 5% range.

**Golden Delicious** appears to have leveled off at 2% to 3% of the trees being sold for 2007 to 2010. This is the lowest percentage for Golden Delicious during the 25 years of data for our survey. Goldens may be suffering from increased competition from Galas in the market place. Golden Delicious plantings will probably remain in the 2% - 3% range in the future.

**Red Romes** dropped to their lowest percentages of .2% to .1% of the trees sold. This variety is not being planted today in the State of Washington. Most nursery sales are to growers in the East. Returns for this variety remain marginal and existing orchards continue to be removed. Future sales are expected to remain at these current low levels.

**Granny Smith** showed a rebound in their percentages of trees sold in 2007 to 11.6%. Since 2007, the percentage has steadily declined to a record low of only 1.8% for 2010. However, the low percentage may be understated because of increases in independent planting not accounted for in our nursery sales. Granny Smith Fresh sales peaked in 2006 at 14.2 million boxes. Prices have been good in the Fresh Market as more warehouses have included Granny Smith in their product mix. However, current demand appears to be softening and returns have declined.

*Illustration #5*

**APPLE VARIETY TRENDS  
PERCENTAGE OF TOTAL**

<b>APPLES</b>	<b><u>1986</u></b>	<b><u>1987</u></b>	<b><u>1988</u></b>	<b><u>1989</u></b>	<b><u>1990</u></b>	<b><u>1991</u></b>	<b><u>1992</u></b>	<b><u>1993</u></b>	<b><u>1994</u></b>	<b><u>1995</u></b>	<b><u>1996</u></b>	<b><u>1997</u></b>	<b><u>1998</u></b>	<b><u>1999</u></b>	<b><u>2000</u></b>	<b><u>2001</u></b>	<b><u>2002</u></b>	<b><u>2003</u></b>	<b><u>2004</u></b>	<b><u>2005</u></b>	<b><u>2006</u></b>	<b><u>2007</u></b>	<b><u>2008</u></b>	<b>Est. <u>2009</u></b>	<b>Est. <u>2010</u></b>	
<b>Red Delicious</b>	35.0%	29.9%	29.4%	35.7%	22.6%	13.8%	9.7%	25.3%	26.1%	23.1%	22.1%	20.1%	18.9%	10.0%	6.5%	9.5%	7.2%	5.1%	3.7%	1.7%	1.4%	1.6%	2.1%	3.3%	4.7%	
<b>Goldens</b>	5.7%	8.3%	7.9%	5.3%	5.9%	4.7%	4.7%	8.1%	7.4%	7.3%	6.2%	5.1%	4.2%	4.5%	4.2%	6.4%	10.2%	9.9%	11.2%	4.1%	4.9%	2.3%	2.0%	2.8%	2.5%	
<b>Red Romes</b>	4.5%	4.6%	4.1%	3.5%	4.1%	5.0%	4.2%	3.4%	1.7%	0.6%	0.4%	0.5%	0.5%	0.6%	0.2%	1.1%	0.8%	0.5%	0.3%	0.3%	0.2%	0.2%	0.1%	0.2%	0.1%	
<b>Granny Smith</b>	23.3%	25.8%	13.6%	9.2%	4.9%	3.1%	3.1%	3.5%	3.7%	2.4%	6.4%	9.8%	15.7%	16.5%	13.2%	9.9%	10.9%	7.5%	6.2%	12.0%	6.4%	11.6%	6.7%	3.7%	1.8%	
<b>Jonagold</b>	2.3%	3.5%	7.9%	2.3%	2.1%	4.2%	4.7%	5.8%	4.4%	2.8%	3.3%	2.6%	1.5%	1.6%	0.5%	1.6%	1.6%	0.8%	1.3%	2.9%	2.8%	1.3%	1.1%	2.1%	3.5%	
<b>Gala</b>	6.3%	6.3%	3.8%	14.2%	25.1%	13.5%	10.2%	8.9%	12.3%	17.1%	23.2%	29.1%	33.5%	30.0%	27.1%	21.6%	24.7%	23.2%	27.5%	22.1%	17.6%	18.5%	14.7%	13.6%	14.7%	
<b>Red Fuji</b>	0.3%	0.1%	3.5%	8.2%	16.3%	34.8%	30.9%	23.5%	25.4%	25.4%	15.5%	10.7%	7.0%	5.6%	6.8%	9.5%	7.5%	5.1%	8.1%	7.3%	13.7%	20.2%	14.5%	25.0%	22.8%	
<b>Braeburn</b>				0.6%	1.7%	6.9%	16.6%	8.3%	4.7%	2.6%	2.3%	2.7%	1.6%	1.9%	3.9%	7.1%	5.0%	6.7%	7.7%	6.2%	2.6%	1.4%	0.8%	0.6%	0.4%	
<b>Cameo</b>									0.5%	4.4%	6.8%	1.8%	1.2%	1.9%	2.4%	4.1%	1.8%	1.8%	0.9%	0.5%	1.0%	3.6%	1.7%	1.3%	0.6%	
<b>Cripps Pink</b>										1.3%	2.6%	6.0%	6.2%	4.3%	5.0%	1.7%	4.7%	3.4%	3.5%	3.0%	2.6%	2.1%	5.7%	7.2%	3.6%	
<b>Honeycrisp</b>															2.7%	13.4%	4.9%	4.7%	7.4%	10.5%	10.9%	15.2%	14.3%	19.5%	12.8%	15.6%
<b>Early Fuji</b>																11.7%	7.2%	6.9%	4.0%	6.7%	6.8%	6.6%	4.3%	3.8%	2.4%	
<b>Others</b>	<u>22.6%</u>	<u>21.5%</u>	<u>29.8%</u>	<u>21.0%</u>	<u>17.3%</u>	<u>14.0%</u>	<u>15.9%</u>	<u>13.2%</u>	<u>13.8%</u>	<u>13.0%</u>	<u>11.2%</u>	<u>11.6%</u>	<u>9.7%</u>	<u>20.4%</u>	<u>16.8%</u>	<u>10.9%</u>	<u>13.7%</u>	<u>21.9%</u>	<u>15.1%</u>	<u>22.3%</u>	<u>24.9%</u>	<u>16.2%</u>	<u>26.7%</u>	<u>23.7%</u>	<u>27.4%</u>	
<b>Total</b>	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

Granny Smith may be impacted by increased competition from Pink Lady apples. Future sales of Granny Smith trees should remain at these lower percentages.

**Jonagold** experienced a slight resurgence for 2007 and 2010. Jonagold increased from 1.3% in 2007 to 3.5% in 2010. The renewed interest in Jonagold reflects the improved quality and marketability of the variety primarily resulting from the use of MCP. The increase may also be the result of higher density plantings in new blocks. The majority of tree sales are to growers in the East. Jonagold will probably range in the 2% to 3% of trees sold in the future.

**Gala** dropped to the third most popular variety being sold in our current nursery tree survey. Gala tree sales indicate a declining trend from 18.5% in 2007 to 14.7% in 2010. Growers may be backing off on Gala plantings today over concerns that the variety may be over planted, with sales of over 20 million boxes in 2008. Gala have continued to have strong demand in the Fresh market and generate good returns for growers. Tree sales are experiencing a shift to newer, higher coloring strains. A number of older Gala orchards are being replaced with these newer strains. Future sales of Gala trees should remain in the 14% to 15% range.

**Fuji** replaced Gala as the most popular variety planted in the State of Washington in this year's tree survey. Fuji's peaked at 25% in 2009, its highest percentage since 1995. Fuji demand in the Fresh market continues to increase. Many growers are continuing to replace older Fuji orchards with higher coloring Fuji strains. Given the current good Fresh market and pricing, future tree sales should remain over 20% of the trees sold.

**Braeburn** tree sales continue the steadily declining trend for 2007 to 2010. It ranges from 1.4% in 2007 to a record low percentage of .4% in 2010. The variety has not generated the Fresh market demand and returns that many growers had expected. It may have suffered increased competition from Pink Lady. Some orchard removal has occurred in the industry. Future tree sales are expected to be less than 1%.

**Cameo** tree sales experienced a rebound in 2007 at 3.6%. However, the trend declines from 2008 to 2010 resulted in a low percentage of .6%. The surge in 2007 sales reflected strong Fresh market demand for the variety. Costco has been affective in promoting the variety. However, future demand is uncertain and growers appear to be responding to this uncertainty by limiting plantings. As a result, future plantings will probably be in the 1% to 2% range.

**Cripps Pink** peaked at a record 7.2% of the trees sold in 2009. This is the highest percentage for the variety since it was included in the nursery survey back in 1995. The increase reflects more contract growing by more nurseries. Cripps Pink is an established variety today in the Fresh market. It is a variety that all growers can produce. It has a long growing season that puts it at risk of late-season freeze damage. Fire blight remains a concern with this variety. Future tree sales should remain in the 3% to 5% range.

**Honeycrisp** jumped to the second most popular variety being planted from 2007 to 2010. In 2008, it was the most popular variety being planted at 19.3%, superseding both Fuji and Gala. Honeycrisp has experienced rapid acceptance in the Fresh market due to its unique flavor. It continues to be difficult to grow and growers have struggled to get good packouts, but it commands high prices in the retail market. As trees mature, packouts should improve. With the patent ending in November 2008, a lot of Honeycrisp have been grafted in existing orchards. It is expected that Honeycrisp tree sales will remain in the 12% to 15% range for the next few years.

**Early Fuji** varieties peaked in 2001 at 11.7% of the trees sold and has gradually declined as a percentage ever since. From 2007 to 2010, the Early Fuji percentage decreased from 6.6% to 2.4%, the lowest level since we included them in the survey. There continues to be three major Early Fuji varieties being sold today. They continue to experience good consumer demand as a full-color Fuji with high brix and good flavor. However, they do not store as well as the regular Fuji. The varieties should continue in the 3% to 5% range of trees sold in the future.

The **Other** category indicates an increasing trend for 2007 to 2010, ranging from 16.2% to a high of 27.4%. Tree sales for this category exceeded those for any other “mainstream” variety for 2008 and 2010. The high percentage of trees sold for this category indicates that growers continue to be interested in finding new, more profitable apple varieties to add to their current mix. Many of these sales are to growers in states other than Washington State. Included in this category are three sub-categories of Early Golden varieties, pollinators, and miscellaneous varieties, which include Club varieties. Future sales for the Other category should continue to be over 20% of the trees sold. The percentage of trees sold for this category is shown in *Illustration #6*.

**Early Golden** variety is the first sub-category and consists primarily of Earligold and Ginger Gold. With a percentage ranging from .2% to .7% of the trees sold for

*Illustration #6*

<b>APPLE VARIETY TRENDS OTHER VARIETIES PERCENTAGE OF TOTAL</b>
---

	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>Est.</u> <u>2009</u>	<u>Est.</u> <u>2010</u>
<b>Early Golden Types</b>	2.4%	2.0%	5.8%	3.7%	2.3%	2.8%	2.3%	1.2%	1.0%	1.3%	0.8%	0.3%	0.3%	0.2%	0.2%	0.2%	0.7%	0.3%
<b>Pollinators</b>	4.8%	6.2%	3.9%	4.0%	3.9%	3.0%	3.1%	2.8%	3.1%	3.8%	3.7%	3.0%	2.3%	2.6%	2.5%	2.5%	3.1%	2.4%
<b>Misc.</b>	<u>6.0%</u>	<u>5.6%</u>	<u>3.3%</u>	<u>3.5%</u>	<u>5.4%</u>	<u>3.9%</u>	<u>15.0%</u>	<u>12.8%</u>	<u>6.8%</u>	<u>8.6%</u>	<u>17.4%</u>	<u>11.8%</u>	<u>19.7%</u>	<u>22.1%</u>	<u>13.5%</u>	<u>24.0%</u>	<u>19.9%</u>	<u>24.7%</u>
<b>Total Other Varieties</b>	13.2%	13.8%	13.0%	11.2%	11.6%	9.7%	20.4%	16.8%	10.9%	13.7%	21.9%	15.1%	22.3%	24.9%	16.2%	26.7%	23.7%	27.4%

2007 to 2010, the varieties are no longer considered commercially viable. Growers have continued to remove orchards of these varieties. Trees sold are for replacement trees in existing orchards. Future tree sales are expected to remain at the current low percentages.

**Pollinators** include Manchurian and Flowering Crab, which make up the majority of this sub-category. The percentage of pollinators has remained relatively stable in the 2% to 3% range for the last seven years of the tree survey.

The **Miscellaneous** sub-category consists primarily of newer varieties such as Jazz and Ambrosia. This category peaked at 24.7% of the tree sales for 2010. This reflects the highest percentage for this category since the beginning of our survey. This high percentage indicates growers' desire to find and develop new commercial varieties.

## **TREE DENSITY TRENDS**

In conjunction with variety trends, it is interesting to recognize tree density trends occurring in our industry.

Tree Density Trends are shown in *Illustration #7*.

The under 200 trees/acre (low-density) category includes seedlings, M111, and B118 rootstocks. Percentages of low-density have increased from 2007 to 2010, ranging from a record low of 3.8% in 2007 to a high of 6.1% in 2010 of trees budded for sale.

*Illustration #7*

**TREE DENSITY TRENDS - APPLES  
WASHINGTON STATE**

(Millions) Trees

	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	Est. <u>2009</u>	Est. <u>2010</u>
<b>Low</b>	42.0%	31.8%	28.9%	31.6%	24.2%	21.5%	17.6%	15.7%	15.6%	13.1%	11.6%	16.2%	12.1%	6.7%	4.9%	13.3%	8.4%	8.1%	6.9%	7.2%	7.5%	3.8%	5.6%	5.5%	6.1%
<b>Medium</b>	37.8%	41.3%	42.3%	40.8%	37.5%	33.9%	27.3%	37.6%	37.5%	34.9%	32.5%	30.4%	34.2%	26.4%	26.1%	30.7%	25.8%	20.4%	17.3%	11.8%	9.8%	8.3%	5.4%	5.1%	6.5%
<b>High</b>	<u>20.2%</u>	<u>26.9%</u>	<u>28.8%</u>	<u>27.6%</u>	<u>38.3%</u>	<u>44.6%</u>	<u>55.1%</u>	<u>46.7%</u>	<u>46.9%</u>	<u>52.0%</u>	<u>55.9%</u>	<u>53.4%</u>	<u>53.7%</u>	<u>66.9%</u>	<u>69.0%</u>	<u>56.0%</u>	<u>65.8%</u>	<u>71.5%</u>	<u>75.8%</u>	<u>81.0%</u>	<u>82.7%</u>	<u>87.9%</u>	<u>89.0%</u>	<u>89.4%</u>	<u>87.4%</u>
<b>Total</b>	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

The 200 – 500 trees/acre (medium-density) category includes M106, M107, M4, and C-30 rootstocks. This category shows a continued declining trend for 2007 to 2010. The low of 5.1% in 2009 is the lowest percentage in the history of our survey for this category. This decline has been offset by increases primarily in low-density plantings from 2007 to 2010.

The over 500 trees/acre (high-density) category includes M26, Mark, M9, B9, and C-16 rootstocks. This category remains relatively stable for 2007 to 2010 in the range of 88% to 90%. The high 89.4% of trees budded for sale in 2009 is the highest percentage for this category in the history of our survey.

## **PEAR PRODUCTION TRENDS**

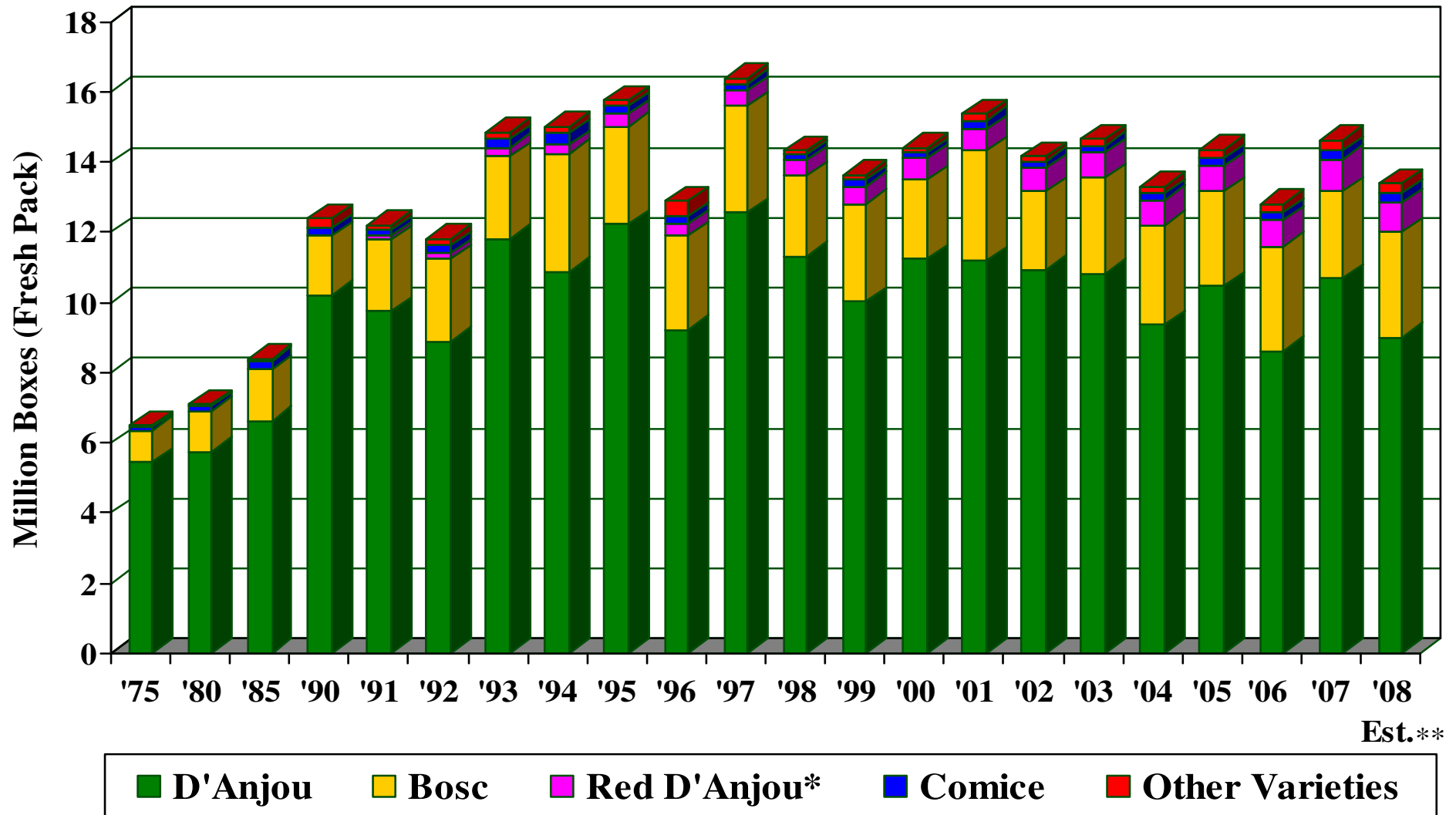
Production trends for Winter Pears are shown in *Illustration #8* and *Illustration #9*. Winter Pear production appears to have stabilized in the 13 to 14.5 million box range. D'Anjou pears continue to be the dominant variety in this category, averaging 9.4 million boxes or 69.4% of the total production in the past three years. Bosc remains the second most popular winter pear, averaging 2.8 million boxes or 20.7% of the total production in the past three years. Red D'Anjou is a distant third at an average of 826,000 boxes or 6.1% of the total category. Comice and the Other Varieties follow at 1.8% and 2.0% of the category.

The production trend for Washington and Oregon Bartlett's is shown in *Illustration #10*. Fresh Bartlett production peaked at 91,828 tons in 2007 and has averaged 86,312 tons for the past three years. Processed Bartlett production has steadily declined since the high of 152,514 tons in 2006. The 2008 volume of 121,056 tons was the lowest volume since 1997. The decline has resulted from the overall reduction in consumption for canned products, including pears. Increased imports have also reduced the demand for domestic production.

As with apples, growers need to understand production and planting trends for pear varieties when deciding which varieties to plant in the future.

Illustration #8

## WINTER PEAR PRODUCTION BY VARIETY



Est.\*\*

**D'Anjou**   **Bosc**   **Red D'Anjou\***   **Comice**   **Other Varieties**

\* Prior to 1991, Red D'Anjou's was included in the Other Variety category

\*\*Est. 4/17/09

Source: Winter Pear Control Committee

*Illustration #9*

**WINTER PEAR PRODUCTION  
BY VARIETY**

Million Boxes (Fresh Pack)

	<u>D'Anjou</u>	<u>Bosc</u>	<u>Red D'Anjou*</u>	<u>Comice</u>	<u>Other Varieties</u>	<u>TOTAL</u>
1975	5.436	.898		.104	.060	6.498
1980	5.764	1.152		.130	.060	7.106
1985	6.623	1.466		.259	.042	8.392
1986	7.423	1.514		.243	.104	9.284
1987	8.713	2.224		.365	.159	11.461
1988	9.618	1.729		.229	.166	11.742
1989	9.771	2.453		.329	.239	12.792
1990	10.209	1.677		.227	.282	12.395
1991	9.750	2.042	.092	.184	.245	12.313
1992	8.876	2.345	.160	.237	.325	11.943
1993	11.807	2.350	.251	.251	.418	15.077
1994	10.889	3.347	.252	.325	.443	15.256
1995	12.215	2.803	.351	.218	.515	16.102
1996	9.229	2.668	.337	.209	.482	12.925
1997	12.565	3.032	.429	.190	.614	16.830
1998	11.329	2.275	.450	.148	.110	14.312
1999	10.031	2.770	.509	.179	.143	13.632
2000	11.233	2.259	.597	.171	.135	14.395
2001	11.184	3.149	.604	.243	.175	15.357
2002	10.917	2.242	.678	.174	.138	14.149
2003	10.812	2.743	.708	.196	.182	14.641
2004	9.369	2.815	.733	.192	.191	13.300
2005	10.470	2.701	.720	.220	.223	14.334
2006	8.612	2.978	.749	.221	.251	12.811
2007	10.691	2.480	.913	.235	.304	14.623
2008 **	8.986	3.031	.816	.266	.275	13.374

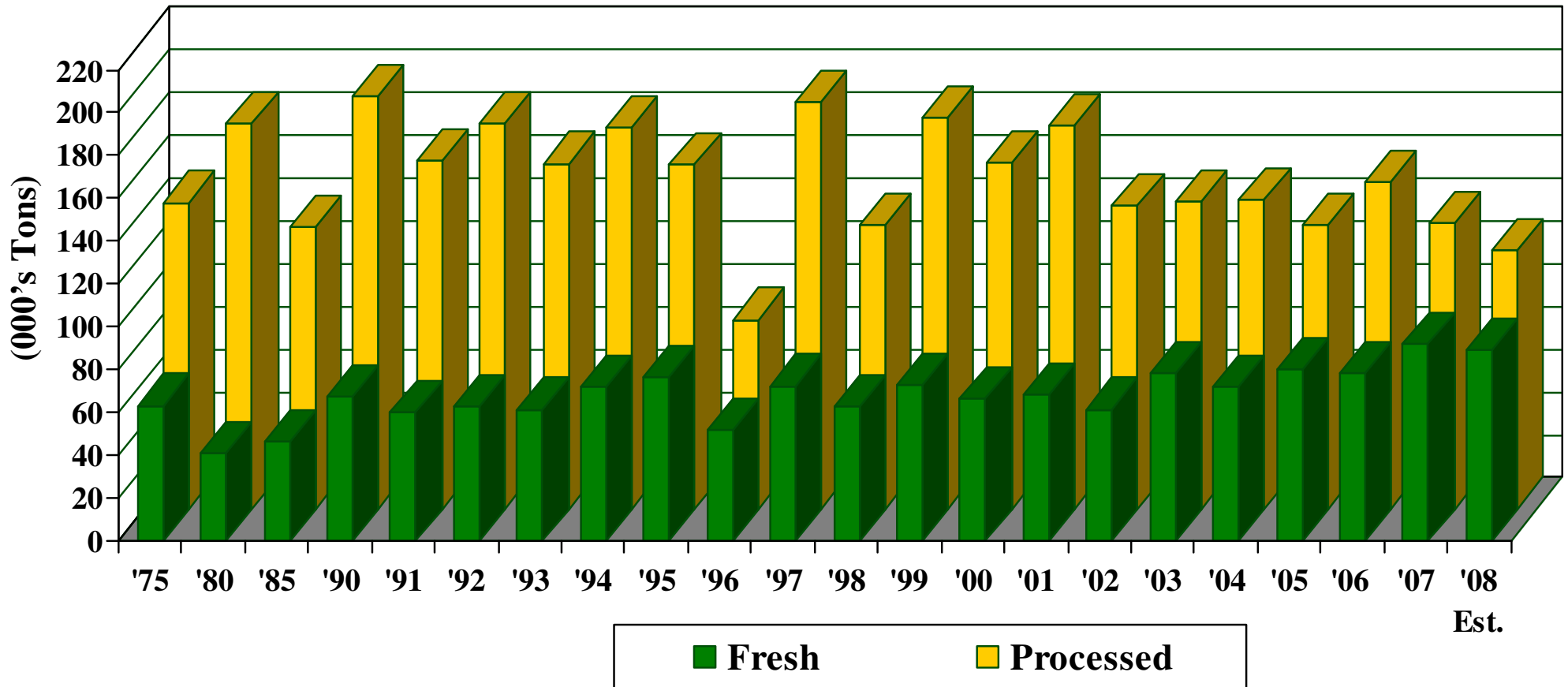
\* Prior to 1991, Red D'Anjou's was included in the Other Variety Category

\*\* Est. 4/17/09

Source: Winter Pear Control Committee

*Illustration #10*

## BARTLETT PEAR PRODUCTION WASHINGTON & OREGON



Source: Washington-Oregon Canning Pear Association

## **PEAR PLANTING TRENDS**

Planting trends for pears are shown in *Illustration #11*. As with apples, some interesting changes are occurring in the pear industry.

**D’Anjou** tree sales show a dramatic reversal from the prior declining trend from 2002 to 2005. In this year’s survey, the D’Anjou percentage of trees sold doubled from 2007 to 2010, increasing from 11.7% to 26.4%. The 26.4% of trees sold in 2010 is the highest percentage for D’Anjou reported in all the years of our survey. In 2010, D’Anjou replaced Bartlett’s as the most popular pear being planted in the industry. This dramatic increase has been driven by improved acceptance of the variety in the Fresh market. The continued success of the “preconditioning program” in the industry has provided an improved product to the market. The result has been greater Fresh demand, which has improved movement and return to growers. The majority of the trees sold are being used as interplants or as replacement stock for existing orchards. Future planting trends should remain at these higher percentages.

**Red D’Anjou** percentages also indicate an increasing trend for 2007 to 2010, ranging from a low of 3.2% to a high of 9.9% of tree sales. Red D’Anjou continues to be the preferred red pear in the market today. Fresh market demand has been good, resulting in good prices and returns to growers. Red D’Anjou have also benefitted from the industry’s “preconditioning program.” If grower returns continue to be good, future plantings should remain in the range of 5% to 10% of the trees sold.

**Bartlett** remains as the most popular pear being planted. The Bartlett percentage remained relatively stable in 2007 to 2009, ranging from 32.7% to 35.5%. However, the percentage of the trees budded for sale in 2010 dropped to 25.2%. The current trend is for higher density plantings, with many of the tree sales continuing to be for orchard replacements or interplants in existing blocks. Market demand has remained strong, resulting in good returns for growers. California production has continued to decline in the past few years which has been a plus for Northwest Bartlett growers.

**Red Bartlett** trend in this year’s survey indicated a dramatic decline in the percentage of trees sold or budded for sale. The percentage dropped from 2.4% in 2007 to a record low of .5% in 2010. The dramatic decline is indicative of a

*Illustration #11*

**PEAR PLANTING TRENDS  
PERCENTAGE OF TOTAL**

(000's) Trees

<b>PEARS</b>	<b><u>1986</u></b>	<b><u>1987</u></b>	<b><u>1988</u></b>	<b><u>1989</u></b>	<b><u>1990</u></b>	<b><u>1991</u></b>	<b><u>1992</u></b>	<b><u>1993</u></b>	<b><u>1994</u></b>	<b><u>1995</u></b>	<b><u>1996</u></b>	<b><u>1997</u></b>	<b><u>1998</u></b>	<b><u>1999</u></b>	<b><u>2000</u></b>	<b><u>2001</u></b>	<b><u>2002</u></b>	<b><u>2003</u></b>	<b><u>2004</u></b>	<b><u>2005</u></b>	<b><u>2006</u></b>	<b><u>2007</u></b>	<b><u>2008</u></b>	<b>Est. <u>2009</u></b>	<b>Est. <u>2010</u></b>
<b>D'Anjou</b>	19.9%	16.5%	13.4%	15.8%	14.4%	17.6%	14.4%	16.0%	17.7%	16.4%	21.0%	21.8%	18.8%	17.8%	15.4%	17.9%	9.6%	6.8%	6.2%	6.9%	8.1%	11.7%	12.2%	21.1%	26.4%
<b>Red D'Anjou</b>	16.9%	18.4%	15.9%	18.7%	10.9%	6.9%	10.4%	2.9%	7.3%	5.9%	4.9%	4.9%	5.2%	9.5%	7.3%	8.0%	7.2%	8.1%	4.4%	4.6%	4.7%	3.2%	3.7%	7.6%	9.9%
<b>Bartlett</b>	9.5%	10.0%	10.4%	13.0%	16.1%	21.7%	27.8%	40.5%	36.1%	41.2%	43.6%	39.6%	40.7%	27.5%	44.4%	35.9%	28.1%	33.5%	30.2%	34.8%	33.2%	32.7%	34.0%	35.5%	25.2%
<b>Red Bartlett</b>	20.2%	18.7%	16.1%	11.4%	8.7%	3.8%	4.5%	3.1%	2.6%	2.3%	1.8%	1.1%	1.4%	1.0%	0.9%	0.6%	1.2%	1.3%	1.2%	4.2%	4.0%	2.4%	1.7%	0.8%	0.5%
<b>Bosc</b>	23.9%	23.8%	25.6%	28.4%	31.6%	33.7%	27.8%	25.4%	23.9%	19.1%	13.5%	19.0%	16.9%	18.1%	13.0%	11.5%	14.5%	15.3%	27.4%	17.9%	20.3%	19.2%	23.9%	14.7%	24.3%
<b>Asian</b>	2.6%	3.0%	4.2%	2.1%	5.2%	3.3%	3.8%	4.3%	3.6%	4.8%	4.8%	3.4%	1.5%	2.4%	1.1%	7.5%	5.2%	5.5%	4.9%	6.1%	4.9%	3.1%	2.4%	1.9%	1.8%
<b>Concorde</b>												2.1%	3.2%	15.3%	10.7%	1.7%	5.5%	2.4%	2.4%	6.9%	5.3%	9.9%	6.0%	1.9%	2.1%
<b>Others</b>	<u>7.0%</u>	<u>9.6%</u>	<u>14.4%</u>	<u>10.6%</u>	<u>13.1%</u>	<u>13.0%</u>	<u>11.3%</u>	<u>7.8%</u>	<u>8.8%</u>	<u>10.3%</u>	<u>10.4%</u>	<u>8.1%</u>	<u>12.3%</u>	<u>8.4%</u>	<u>7.2%</u>	<u>16.9%</u>	<u>28.7%</u>	<u>27.1%</u>	<u>23.3%</u>	<u>18.6%</u>	<u>19.6%</u>	<u>17.8%</u>	<u>16.0%</u>	<u>16.6%</u>	<u>9.9%</u>
<b>Total</b>	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

variety that is no longer considered viable for the industry. The variety tends to be difficult to grow and the demand in the Fresh market has not been favorable. As a result, future tree sales are expected to remain at these lower percentages.

**Bosc** continues to be the second most popular pear being planted for 2007 at 19.2% of the trees sold and 2008 at 23.9%. Beginning in 2009, Bosc dropped to the third most popular pear at 14.7% of the trees for sale and will continue that position for 2010 at 24.3%. Bosc continues to generate good market demand and has generated good returns for growers over the years. The russeted varieties continue to be the favorite choice among growers. Future percentages will likely remain in the range of 20% of pear tree sales for the Northwest.

The **Asian** pear variety reflects a declining trend in this year's nursery survey. It declined from 3.1% of the trees for sale in 2007 to a low of 1.8% of the trees budded for sale in 2010. There are very few planted in the State of Washington with most sales to growers in California. Although it occupies a niche market, consumer demand appears to be declining for Asian pears. Future sales of Asian pear trees will probably be in the 1% to 2% range.

**The Concorde** shows a steady decline from 9.9% of tree sales in 2007 to 2.1% in 2010. The variety has not gained the level of acceptance in the Fresh market that growers had expected. The varieties susceptibility to fire blight has also been a concern with growers. Thus, growers appear to be shying away from this variety for future planting.

The **Other Varieties** category includes Comice, Red Clap, Seckle, Cascade, Conference, Forelle, Pachems, and Taylor Gold. This category indicates a declining trend from 2007 to 2010, from a high of 17.8% to a low of 9.9%. Fresh market prices have been relatively good for these varieties. The high percentages, even though declining, still indicate growers' interest in developing other pear varieties.

## **SUMMARY**

In closing, this Nursery Tree Survey update has revealed several interesting trends:

- 1) Both Apple and Pear growers are continuing to plant a broad mix of varieties in order to diversify their orchard operations.
- 2) Fuji has replaced Gala as the most popular apple variety being planted in the industry through 2010. If you include Early Fuji with Red Fuji, Fuji Varieties far surpass planting trends for any other individual variety.
- 3) The high-density planting trend continues to dominate in the apple industry. However, low-density plantings have seen a slight resurgence for 2007 to 2010, at approximately the same percentages as for medium-density plantings.
- 4) Bartletts remains the most popular pear variety being planted today, followed closely by Bosc. However, D'Anjou has experienced a remarkable resurgence in popularity and is the second most popular pear variety for 2009 and the most popular variety budded for sale in 2010.
- 5) As in the past, growers need to continue to work closely with their warehouse sales departments and their nurseries in selecting which varieties to plant in the future.

We at Tree Top hope you find this information helpful. This report would not be possible without the significant contribution of the nursery industry and their cooperation.