



2013 Annual End-of-August Maturity Report

Golden Delicious Maturity Report 1986-2013

Year	Background Color (1-4)*	Firmness (lbs)	Soluble Solids (°Brix)	Starch-iodine Index (1-8)**	Ethylene (ppm)	Bloom Date
1986	2.2	19.5	12.7			
1987		20.0	12.2			
1988		18.6	11.0	1.5		
1989		17.7	10.3	2.0		
1990		18.0	10.5	1.6		
1991	1.8	19.7	12.0	2.1		
1992	1.8	20.1	12.0	1.6		
1993	1.9	19.8	11.6	1.5		
1994	2.3	19.8	12.0	1.7		
1995	0.9	18.8	10.9	2.1		
1996	2.9	19.6	11.2	2.9		
1997	2.0	21.8	11.7	2.0		
1998	2.5	19.2	12.2	2.1		
1999	1.9	20.3	11.7	1.4		
2000	1.8	17.5	11.9	2.5		
2001	1.9	20.1	11.0	1.4		
2002	2.2	21.2	11.4	2.1		
2003	2.6	20.3	11.1	1.2		
2004	2.3	18.2	12.3	2.0		
2005	1.8	20.1	11.4	1.7		
2006	1.9	18.5	12.4	1.8		
2007	1.6	18.0	12.3	1.6		
2008	2.1	18.3	12.9	1.6		22-23 Apr
2009	1.8	17.2	12.4	1.7		22-Apr
2010	1.6	18.6	12.9	1.4		13-Apr
2011	2.1	20.1	12.9	1.2		20-Apr
2012	2.5	18.5	13.0	1.3	0.00	2-Apr
2013	2.2	18.3	11.9	2.2	0.17	25-Apr
Mean	2.0	19.2	11.9	1.8		17-Apr
Max	2.9	21.8	13.0	2.9		25-Apr
Min	0.9	17.2	10.3	1.2		2-Apr

* 1 = green, 2 = light green, 3 = yellowish green, 4 = yellow.

** 1 = 100% starch, 5 = 60% starch, 8 = 0% starch.

Red Delicious Maturity Report 1986-2013

Year	Red Color (%)	Firmness (lbs)	Soluble Solids (°Brix)	Starch-iodine Index (1-8)*	Ethylene (ppm)	Bloom Date
1986	72.0	18.8	11.2			
1987	68.0	19.8	10.8			
1988	54.0	18.4	10.0	1.6		
1989	69.0	18.6	8.7	1.6		
1990	73.0	18.1	8.9	1.5		
1991	69.0	18.8	10.4	1.6		
1992	76.0	20.8	10.2	1.3		
1993	68.0	21.7	9.5	1.7		
1994	68.0	19.7	9.5	1.9		
1995	68.0	19.2	9.1	1.6		
1996	62.5	19.3	8.9	2.0		25-Apr
1997	66.7	22.4	9.4	1.2		25-Apr
1998	81.9	19.3	9.9	2.5		15-Apr
1999	65.5	19.8	10.5	1.9		28-Apr
2000	87.4	16.2	9.6	2.3		11-Apr
2001	61.0	20.5	8.3	1.8		28-Apr
2002	60.2	21.4	9.4	2.1		22-Apr
2003	58.4	20.4	8.5	1.9		22-Apr
2004	88.2	16.7	10.0	2.3		20-Apr
2005	73.7	18.7	9.2	2.0		24-Apr
2006	63.8	18.7	10.7	2.0		16-Apr
2007	81.1	18.1	11.0	1.7		22-Apr
2008	86.6	18.1	9.4	2.0		22-Apr
2009	79.2	17.5	10.2	1.9		24-Apr
2010	65.9	18.2	11.5	1.7		8-Apr
2011	67.5	19.8	11.5	2.1		21-Apr
2012	92.1	18.2	11.9	1.8	0.03	29-30-Mar
2013	91.3	18.4	9.8	2.0	0.25	23-Apr
Mean	72.1	19.1	9.9	1.8	0.1	20-Apr
Max	92.1	22.4	11.9	2.5	0.3	28-Apr
Min	54.0	16.2	8.3	1.2	0.0	29-30-Mar

* 1 = 100% starch, 5 = 60% starch, 8 = 0% starch.

Gala Maturity Report 2008-2013

Year	Red Color (%)	Firmness (lbs)	Soluble Solids (°Brix)	Starch-iodine Index (1-8)*	Ethylene (ppm)	Bloom Date
2008	93.5	18.3	13.6	5.6		21-Apr
2009	86.8	17.5	13.4	4.5		22-Apr
2010	78.0	16.3	14.9	6.4		9-Apr
2011	77.5	19.4	13.7	4.9		19-Apr
2012	91.1	18.0	13.2	4.1	7.13	29-30-Mar
2013	91.1	18.0	12.4	5.4	1.71	23-Apr
Mean	86.3	17.9	13.5	5.2	4.4	15-Apr
Max	93.5	19.4	14.9	6.4	7.1	23-Apr
Min	77.5	16.3	12.4	4.1	1.7	29-30-Mar

* 1 = 100% starch, 5 = 60% starch, 8 = 0% starch.

Empire Maturity Report 2002-2013

Year	Red Color (%)	Firmness (lbs)	Soluble Solids (°Brix)	Starch-iodine Index (1-8)*	Ethylene (ppm)	Bloom Date
2002	42.0	25.3	10.4	2.1		
2003	60.4	21.9	9.6	1.7		
2004	78.1	17.2	10.9	2.2		
2005	55.3	20.3	10.1	1.9		
2006	46.0	19.7	10.7	2.1		
2007	64.0	17.9	10.6	2.1		
2008	66.3	18.2	11.0	2.1		21-Apr
2009	52.4	16.6	10.9	1.1		20-Apr
2010	44.3	18.1	10.7	1.8		
2011	49.8	19.7	11.2	2.0		
2012	85.9	19.2	12.5	1.7	0.01	29-Mar
2013	63.0	18.6	10.6	1.5	0.04	21-Apr
Mean	59.0	19.4	10.8	1.9	0.0	15-Apr
Max	85.9	25.3	12.5	2.2	0.0	21-Apr
Min	42.0	16.6	9.6	1.1	0.0	29-Mar

* 1 = 100% starch, 5 = 60% starch, 8 = 0% starch.

Maturity Report - Other Varieties 2011

Cultivar	Red Color (%)	Firmness (lbs)	Soluble Solids (°Brix)	Starch-iodine Index (1-8)*
HoneyCrisp	66.2	15.8	13.0	5.1
Idared	17.0	19.9	11.1	1.2

* 1 = 100% starch, 5 = 60% starch, 8 = 0% starch.

Maturity Report - Other Varieties 2012

Cultivar	Red Color (%)	Firmness (lbs)	Soluble Solids (°Brix)	Starch-iodine Index (1-8)*	Ethylene (ppm)	Bloom Date
Fuji Early Strain	65.5	16.7	14.7	4.1	0.03	5-Apr
Fuji Late Strain	26.0	20.9	12.1	2.1	0.03	5-Apr
Idared	36.7	17.0	12.3	1.3	0.00	2-Apr
Rome	39.8	22.5	12.3	1.5	.	12-Apr
York	41.8	22.4	10.7	1.0	0.00	3-Apr

* 1 = 100% starch, 5 = 60% starch, 8 = 0% starch.

Maturity Report - Other Varieties 2013

Cultivar (number of orchards tested)	Red Color (%)	Firmness (lbs)	Soluble Solids (°Brix)	Starch-iodine Index (1-8)*	Ethylene (ppm)	Bloom Date
Cameo (1)	33.5	18.1	10.2	1.7	0.53	N/A
Fuji Early Strain (2)	80.3	16.3	13.6	4.3	1.51	25-Apr
Ginger Gold (2)	3.9**	16.0	12.8	3.5	0.00	24-Apr
Idared (6)	41.1	17.5	10.1	1.2	0.12	23-Apr
Jonagold (1)	35.5	18.7	11.8	2.8	0.00	23-Apr
Rome (1)	21.2	24.6	9.2	2	0.00	1-May
York (1)	53.5	24.4	9.4	1	1.20	25-Apr

* 1 = 100% starch, 5 = 60% starch, 8 = 0% starch.

** 1 = green, 2 = light green, 3 = yellowish green, 4 = yellow.