



Cherry Rootstocks &
Scions for the M-F Area

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Production Trends

- The Dalles
 - Single commodity
 - 200 A – 1500 A
 - Most growing > 6 varieties
 - More rain = rain resistant varieties





Production Trends

- Mid-Columbia
 - 80% of dwarfing rootstocks sold into Oregon
 - Gisela 6 and 12
 - Krymsk 5 (K6)



Pedestrian Orchards

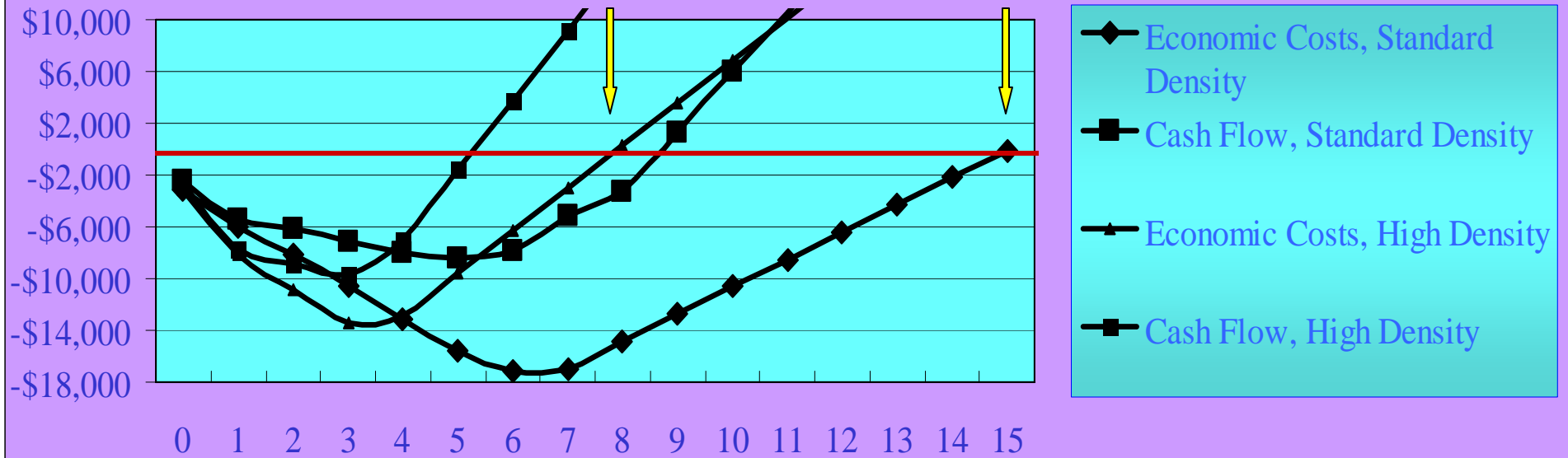
- Concerned about labor
- Pedestrian orchards
 - Easier maintenance
 - Harvest time is halved
 - Need fewer pickers



Standard density = 15'x18' Mazzard

High density = 10'x16' Gisela

Comparing the Economic and Cash Costs to Establish a Standard and High Density Sweet Cherry Orchard in Wasco County, Oregon.



Cash Flow = planting costs, labor, fertilizer, chemicals, harvest costs

Economic Costs = interest costs, depreciation, return on investments

C. Seavert

Chelan/Krymsk





Lapins/K5



Why Krymsk

- OCG growers ordered 50,000 trees on Krymsk since 2006
- Gisela premium of ~\$3.50
- Krymsk premium of ~\$1.00





Experience with productive rootstocks

- Mid-Columbia growers are learning
- 2006 - Lapins/Gisela, 12 t/a
- 2007 - Lapins/Gisela, mature, 6.8 t/a, 95% 9½ row +
- Regina/G6, 5th leaf, 8.2 t/a, 62% 9½ row +
- Lapins/Krymsk, mature, 8 t/a, peaking on 9½ row +

Four Simple Steps to Pruning Cherry Trees Gisela and Other Productive Rootstocks

L.E. Long

Pruning and training trees on productive rootstocks, such as Gisela® 6 or 12, requires techniques that are completely counter to pruning trees on Mazzard rootstock. When producing cherries on Mazzard rootstock, orchardists must constantly think about how to encourage precocity and productivity in the tree, whereas when producing cherries on productive rootstocks, they must focus on reducing crop load and increasing vigor.



Tree vigor is important because more leaves mean more carbohydrate production and larger cherries. The production of high-quality cherries requires a gross canopy leaf area-to-fruit (LA:F) ratio of at least 200 cm² of leaf area per fruit, which roughly translates to five leaves per fruit (Whiting and Lang, 2004). Trees with a lower LA:F ratio are unable to manufacture enough carbohydrates to produce premium cherries.

Pruning strategies for trees on productive rootstocks should focus on the following:

- Thinning cuts to remove pendant (downward-hanging) and weak wood and to improve light penetration into the tree
- Stub cuts to reduce crop load and renew spurs
- Heading cuts to encourage branching (leaf production) and reduce crop load

Thinning cuts

Each year, begin by removing any pendant or small-diameter wood at the point of its origin. Typically, these branches overset and produce small cherries. Removing these branches in the dormant season can eliminate a significant amount of small cherries before they develop.

Also reduce branches in the top on the perimeter to a single shoot.

These thinning cuts will allow light the inner and lower portions of the leaves in full sunlight can photosynthesize maximum capacity.

Stub cuts

The current season's crop can be heading with stub cuts. Stub cuts cut branches and renew old spurs.

The highest quality cherries grow last year's growth and on young spur no spur should be older than 5 years spurs within this age range, stub by 20 percent of all fruiting branches.

Adequate light must reach the area cut in order for a new branch to form. In reason, cut branches located near the longer stub than those near the tree range from 3 inches to 2 feet in length on the position of the branch in the

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A Pacific Northwest Extension publication
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Cuatro pasos sencillos para la poda de cerezos sobre Gisela y otros portainjertos productivos

L.E. Long

La poda y conducción de cerezos sobre patrones productivos, tales como Gisela® 6 ó 12, requiere técnicas totalmente contrarias a la poda de árboles sobre patrones Mazzard. Para producir cerezas sobre Mazzard, hay que promover la precocidad y productividad del árbol; en cambio, para producir cerezas sobre portainjertos productivos, hay que reducir la carga frutal y aumentar el vigor del árbol. El vigor del árbol es importante porque una mayor cantidad de hojas significa mayor producción de carbohidratos y cerezas más grandes. Se necesita una área de 200 cm² de hojas para cada cereza; esto equivale a cinco hojas por cereza.



Corinne Urban

La poda de árboles sobre portainjertos productivos debe enfocarse sobre lo siguiente:

- **Cortes de entesaque** para remover ramas pendientes o débiles y para mejorar la penetración de luz dentro del árbol
- **El troncón en ramas** para reducir la carga frutal y renovar los espolones
- **El desmoche de ramas** para estimular la ramificación (la producción de hojas) y reducir la carga frutal

La poda paso a paso para el manejo de la carga frutal sobre portainjertos productivos

Paso #1. Cortes de entesaque

¿Cuándo?—La temporada de reposo, cada año

¿Cómo?—Quite las ramas pendientes y las ramas débiles de grosor menor al de un lápiz.

¿Por qué?—Estos cortes remueven las ramas que tienden a producir demasiado fruto y fruto pequeño.



Paso #1. Quite todas las ramas pendientes o delgadas.

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Sweet Cherry Cultivars

*for the
Fresh Market*





Chelan

- General Impressions
 - Best early variety in PNW
 - Trusted by commercial buyers
 - Somewhat bland
- Color when ripe
 - Light mahogany to mahogany
- Suggested pollinizers
 - Bl. Rep., Index, Lapins, Sweetheart
- Suggested rootstocks
 - Mazzard
 - Gisela 6 or 12
 - Avoid Mahaleb



Timing	Size	Produc.*	Firmness	Cracking*
(-)10-12	25-28mm 10½-9½ r.	+++	306 g/mm +++	+++



Tieton



- General Impressions
 - Beautiful
 - Very large
 - Low productivity
 - Easily doubles
 - Very bland
- Color when ripe:
 - Light mahogany to mahogany
- Suggested pollinizers
 - Bing, Rainier, Van, Lapins
- Suggested rootstocks
 - Gisela 6 or 12, Maxma 14
 - Avoid Mahaleb

Timing	Size	Produc *	Firmness	Cracking *
-6 to -9	28-31mm	+ Maz	269 g/mm	++++
	9½ - 8½ r	+++ G6	+++	

* observation



Kiona (PC 8007-2)

- General Impressions
 - Good harvest timing
 - Excellent flavor
 - High sugar
 - May be frost sensitive
- Skin color when ripe
 - Red or mottled
- Suggested pollinizers
 - S₄S₉ allele, mid-season
- Suggested rootstocks
 - Mazzard or Gisela 6 or 12



Timing	Size	Prod *	Firmness	Cracking*
-6 to -9	28-31 mm 9½ - 8½ r	+++	310 g/mm +++	???

* Observation



SPC 136

- General Impressions
 - Not as early as Tieton
 - Excellent flavor
 - Good size
 - Good storage potential
- Potential rootstocks
 - Krymsk 5



Timing	Size	Prod *	Firmness	Cracking*
-4 to -7	28-31 mm 9½ - 8½ r	+++	301 g/mm +++	2006 – 8% Tieton-13%



Benton



- General Impressions
 - Very high quality
 - Excellent flavor
 - Very low doubling in 2006
 - Blooms late (+4-5 days)
 - Sensitive to frost?
- Color when ripe
 - Mahogany
- Suggested pollinizers
 - Self-fertile
- Suggested rootstocks
 - Mazzard or Gi 6

Timing	Size	Prod *	Firmness	Cracking*
-2 to -3	9½ to 9 r	+++	293 g/mm +++	+++



* Observation



Cowiche (PC 7903-2)

- General Impressions
 - High sugars
 - High acid
 - Highest ranked by flavor panel
 - Potential pitting
- Potential pollinizers
 - S₄S₉ allele, mid-season
- Potential rootstocks
 - Gisela 6, 12 or Mazzard



Timing	Size	Prod *	Firmness	Cracking*
+ 3-6	9 row	+++	280 g/mm +++	???

* Observation



Attika

- General Impressions
 - Excellent flavor
 - Ships well
 - Rain tolerant
 - Frost sensitive
- Color when ripe
 - Mahogany
- Suggested pollinizers
 - Skeena, Benton, Sandra
Rose, Regina
- Suggested rootstocks
 - Mazz, Gisela 6 or 12



Timing	Size	Prod*	Firmness	Cracking
+7 to 10	9½ - 9 r	+++	292 g/mm +++	5% 2005 +



Storage and Shipping

	OVF arrival in UK 25-35 days	OSU storage tests
Least defects	Regina	Regina
	Bing	Bing
	Attika	Not tested
Moderate defects	Lapins	Lapins
Most defects	Sweetheart	Sweetheart



Selah

- General Impressions
 - Moderately productive
 - Loose clusters
 - Commercial quality ???
 - Significant plantings
- Color when ripe
 - Light Mahogany to Mahogany
- Suggested pollinizers
 - Self-fertile
- Suggested rootstocks
 - Mazzard, Gi 6 or 12



Timing	Size	Prod *	Firmness	Cracking*
+ 10 to 12	9½ - 8½ r	+++	+++	++++

* Observation



Lapins



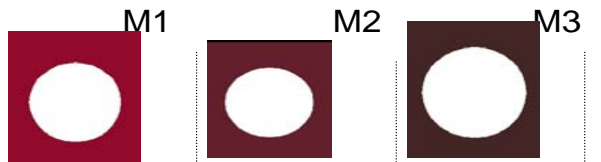
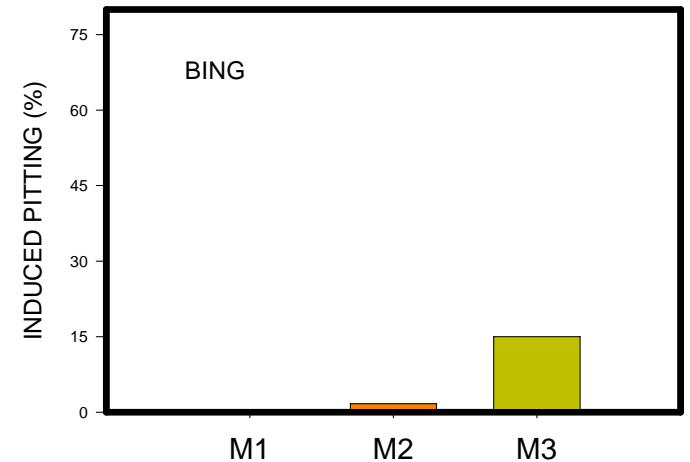
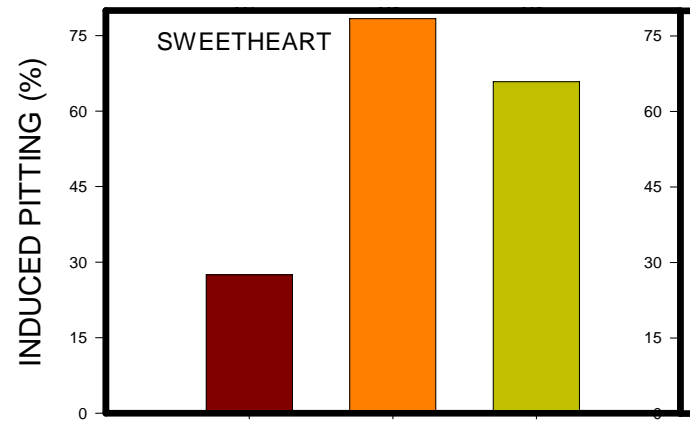
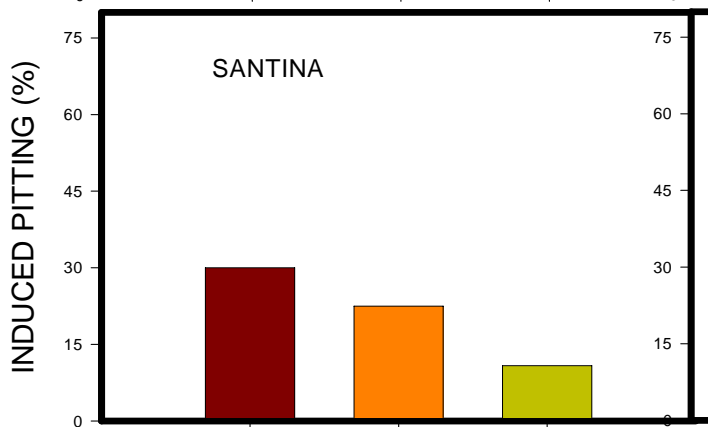
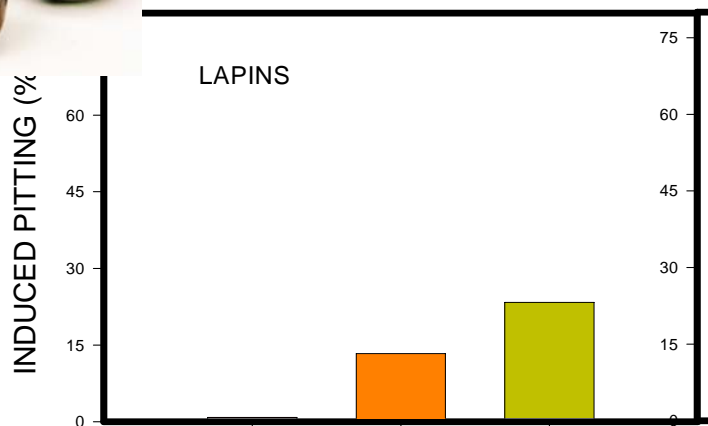
- General Impressions
 - 2nd most popular – 17%
 - Low pack outs
 - Pitting
 - Buyers and growers giving up on it
- Color when ripe
 - Light mahogany
- Suggested pollinizers
 - Self-fertile
- Suggested rootstocks
 - Mazzard

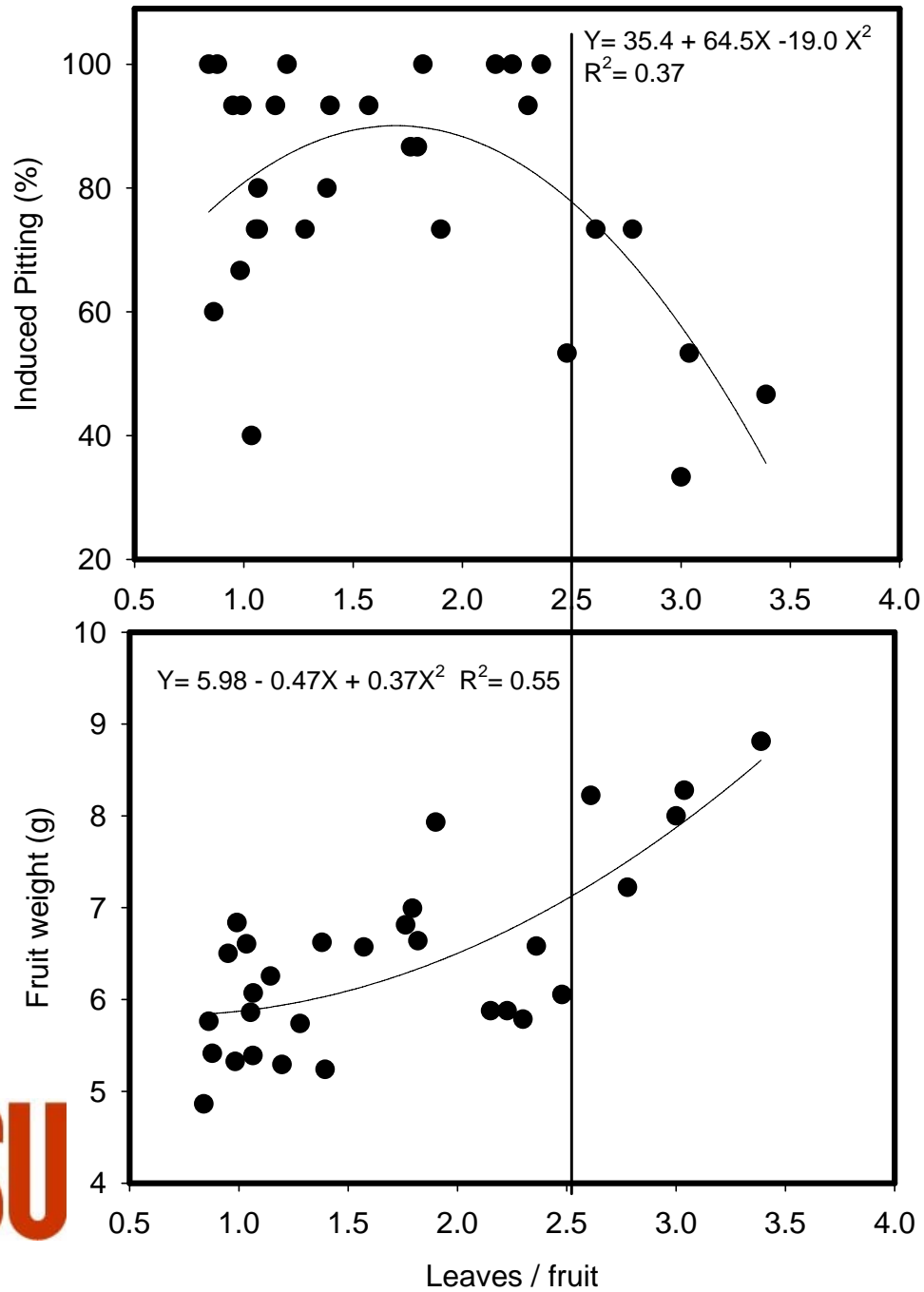


Timing	Size	Prod *	Firmness	Cracking*
+10 to 15	9½ - 9 r	++++	277 g/mm +++	10% 2005 ++



Pitting incidence (%) induced by 10g steel ball at different maturity levels







Skeena

- General Impressions
 - High quality fruit
 - Fewer problems than Lapins
 - Replacing Lapins
 - Susceptible to rain
 - Young trees susceptible to heat
 - Stem retention may be problem
 - Self-fertile
- Color when ripe
 - Light mahogany to mahogany
- Suggested Pollinizers
 - Self-fertile
- Suggested rootstocks
 - Mazzard or Gi 6



Timing	Size	Prod *	Firmness	Cracking*
+ 12 to 15	9½ - 8½ r	+++	322 g/mm	40% 2005
			++++	++++

* Observation



Regina

- General Impressions
 - Highest returns
 - “Never any adjustments”
 - Good resistance to rain
 - Mazzard: Low productivity
 - Gi 6: 5th leaf – 8.2 t/ac
 - Multiple pollinizers
- Color when ripe
 - Mahogany to dark Mahogany
- Suggested Pollinizers
 - Sam, Schneiders, Starks Gold, Hedelfingen, Attika
- Suggested Rootstocks
 - Gisela 6 or 12



Timing	Size	Prod *	Firm.	Crack *
+ 14-17	9½ - 9 r	Maz + Gi +++	314 g/mm ++++	5% 2005 +

* Observation



Sweetheart



- General Impressions
 - Best of the very late varieties
 - Problem with pitting
 - So far not affecting sales
 - Manage crop load
 - Head all new growth
 - Reduce number of laterals
- Color when ripe
 - Light mahogany
- Suggested Rootstocks
 - Mazzard

Timing	Size	Prod *	Firmness	Cracking *
+20 to 22	10 – 9 r	++++	348 g/mm ++++	+++