

CHALLENGES WITH NEW VARIETIES... AN INDEPENDENT VIEW

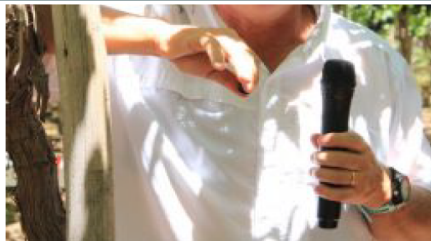
Martín Silva Armanet
I.Agrónomo PUC
Asesorías Paso Pehuenche Ltda
msilva@asesoriaspehuenche.com



CATHARSIS!!!

Not necessarily this definitions should be those that were used in traditional varieties...

▶ “Dehidrated rachis...”



Por Martín Silva, Ingeniero Agrónomo PUC, Asesorías Paso Pehuenche.

PRODUCTIVE EQUATION (Ecuación Productiva or EPU)

Productive Equation

FARM DATA																red light (Alert)			II. CROP ADJUSTMENT AND BUNCH THINNING										III. BERRY SIZE			IV. CROP PRODUCTION				
Farm	Variety	Rootstock	Block	Planting year	Ha	Dist in between (m)	Dist between rows (m)	Plants/ha	I. PRUNING							BUD FERTILITY ANALYSIS			II. CROP ADJUSTMENT AND BUNCH THINNING						III. BERRY SIZE			IV. CROP PRODUCTION			Total Export Cartons					
									Vine Status (Vigor 1-5)	Canes/vine	buds/cane	spurs/vine	buds/spur	buds/vine	Canes/Há	Buds/ha	Bud Fertility (%)	Bunches x fertility	bunches x fert x vine	Bunches/vine (count pre adjustment)	bunches/cane	bunches/spur	bunches/vine	bunches/Ha	berries/bunch	berries/Ha	Average berry size (mm)	Berry weight (gr)	Bunch weight (gr)	Kilos/Ha		Export average (%)	Cartons/ha 4,5 Kg			
Delirio 3	Thompson	Franco	1	2005	7,60	3,50	1,75	1.633	2,5	16,0	8,0			128	26.122	208.980	25%	52.245	32				2,0			32	52.245	100	5.224.490	20,0	6,5	650	33.959	80%	6.037	45.883
Compostela	Thompson	Franco	2	2005	18,00	3,50	2,00	1.429	3,0	18,0	9,0			162	25.714	231.429	20%	46.286	32				2,0			36	51.429	100	5.142.857	20,0	6,6	660	33.943	80%	6.034	108.617
Delirio 2	Crimson	Franco	1	1998	7,00	3,50	1,75	1.633	3,0	15,0	8,0			120	24.490	195.918	40%	78.367	48				2,8	1,0		42	68.571	115	7.885.714	19,0	6,0	690	47.314	75%	7.886	55.200
Apalta	Crimson	Franco	2	1998	3,06	3,50	3,50	816	3,0	30,0	8,0	4,0	2,0	248	24.490	202.449	40%	80.980	99				2,8	1,0		88	71.837	115	8.261.224	19,0	6,0	690	49.567	75%	8.261	25.279
Rosario A	Crimson	Franco	3	1999	9,50	3,50	3,00	952	3,5	25,0	7,0	4,0	2,0	183	23.810	174.286	40%	69.714	73				2,8	1,0		74	70.476	115	8.104.762	19,0	6,0	690	48.629	75%	8.105	76.995
Rosario D	Crimson	Franco	4	1999	9,50	3,50	3,00	952	3,0	23,0	6,5	4,0	2,0	158	21.905	150.000	43%	64.500	68				2,8	1,0		68	65.143	115	7.491.429	19,0	6,0	690	44.949	75%	7.491	71.169
Compostela	Crimson	Franco	5	2005	36,00	3,50	2,00	1.429	4,0	17,0	7,5	4,0	2,0	136	24.286	193.571	40%	77.429	54				2,8	1,0		52	73.714	115	8.477.143	19,0	6,0	690	50.863	75%	8.477	305.177
Rosario A	Red Globe	Franco	1	1999	4,74	3,00	3,00	1.111	3,0	20,0	4,0	7,0	2,0	94	22.222	104.444	60%	62.667	56				2,0	1,0		47	52.222	65	3.394.444	28,0	14,0	910	47.522	80%	8.448	40.045
Delirio 1	Red Globe	Thompson	2	1995	2,50	4,50	2,00	1.111	2,0	24,0	4,0	4,0	2,0	104	26.667	115.556	60%	69.333	62				2,0	1,0		52	57.778	65	3.755.556	28,0	14,0	910	52.578	80%	9.347	23.368
Delirio 2	Red Globe	Franco	3	1995	3,89	3,50	1,75	1.633	2,5	15,0	4,0	4,0	2,0	68	24.490	111.020	60%	66.612	41				2,0	1,0		34	55.510	65	3.608.163	28,0	14,0	910	50.514	80%	8.980	34.933
Delirio 3	Red Globe	Franco	4	1995	4,50	3,50	1,75	1.633	2,5	15,0	4,0	4,0	2,0	68	24.490	111.020	60%	66.612	41				2,0	1,0		34	55.510	65	3.608.163	28,0	14,0	910	50.514	80%	8.980	40.411
Apalta	Red Globe	Franco	5	1995	3,00	4,00	2,50	1.000	2,5	26,0	4,0	4,0	2,0	112	26.000	112.000	60%	67.200	67				2,0	1,0		56	56.000	65	3.640.000	28,0	14,0	910	50.960	80%	9.060	27.179
Rosario D	Timco	101-14 Mgt	1	2012	5,61	3,50	1,88	1.520	3,5			24,0	2,0	48	0	72.948	74%	53.982	36						1,6	38	58.359	80	4.668.693	24,0	10,0	800	46.687	80%	8.300	46.562
Apalta	Timco	101-14 Mgt	2	2013	11,50	3,50	1,75	1.633	3,5			24,0	2,0	48	0	78.367	75%	58.776	36						1,5	36	58.776	80	4.702.041	24,0	10,0	800	47.020	80%	8.359	96.131
Delirio 1	Krissy	1103 P	1	2013	4,00	3,50	1,75	1.633	4,0			28,0	2,0	56	0	91.429	75%	68.571	42						1,4	39	64.000	80	5.120.000	23,0	8,2	656	41.984	75%	6.997	27.989
Delirio 1	Krissy	Harmony	2	2013	4,00	3,50	1,75	1.633	3,5			28,0	2,0	56	0	91.429	75%	68.571	42						1,4	39	64.000	80	5.120.000	23,0	8,2	656	41.984	75%	6.997	27.989
Delirio 1	Krissy	1103 P	3	2016	10,00	3,50	1,75	1.633	3,5			28,0	2,0	56	0	91.429	75%	68.571	42						1,4	39	64.000	80	5.120.000	23,0	8,2	656	41.984	75%	6.997	69.973
Rosario A	Krissy	Freedo-Mag	4	2017	5,00	3,00	1,80	1.852	3,0			24,0	2,0	48	0	88.889	75%	66.667	36						1,4	34	62.222	80	4.977.778	23,0	8,2	656	40.818	75%	6.803	34.015
Rosario D	Allison	1103 P	1	2018	9,50	3,30	1,75	1.732	3,0	4,0	8,0			32	6.926	55.411	75%	41.558	24				4,0			16	27.706	85	2.354.978	23,0	9,0	765	21.195	80%	3.768	35.796
Apalta	Timpson	Freedom	1	2018	13,00	3,30	1,75	1.732	3,0	4,0	8,0			32	6.926	55.411	75%	41.558	24				4,0			16	27.706	100	2.770.563	22,0	8,0	800	22.165	75%	3.694	48.023
Rosario A	Autumn Crisp	Harmony	1	2018	9,00	3,30	1,75	1.732	3,0	3,0	5,0			15	5.195	25.974	75%	19.481	11				2,0			6	10.390	90	935.065	24,0	11,0	990	10.286	75%	1.714	15.429
180.90																																				1.256.164

180,90

1.256.164

Farm Data				Analysis			
Farm	Variety	Area (ha)	Plants/ha	Yield (kg/ha)	Yield (t/ha)	Yield (kg/ha)	Yield (t/ha)
Delirio 3	Thompson	1.633	1.633	3,000	3,000	3,000	3,000
Compostela	Thompson		1.429				
Delirio 2	Crimson		1.633				
Apalta	Crimson		816				
Rosario A	Crimson		952				
Rosario D	Crimson		952				
Compostela	Crimson		1.429				
Rosario A	Red Globe		1.111				
Delirio 1	Red Globe		1.111				
Delirio 2	Red Globe		1.633				
Delirio 3	Red Globe		1.633				
Apalta	Red Globe		1.000				
Rosario D	Timco		1.520				
Apalta	Timco		1.633				
Delirio 1	Krissy		1.633				
Delirio 1	Krissy		1.633				
Delirio 1	Krissy		1.633				
Rosario A	Krissy		1.852				
Rosario D	Allison		1.732				
Apalta	Timpson		1.732	3,000			
Rosario A	Autumn Crisp		1.732	3,000			



Buds Fertility

Buds Fertility

Carmen Gloria Olea
ANALISIS DE YEMAS
Cel: 97454505
carmengloriaolea@gmail.com

PRODUCTOR
PREDIO
VARIEDAD
FECHA

Inia Grape-One
20-04-2019

Corte=	5A																				
PI/Há=	1666	YEMAS EN EL CARGADOR																			
	CARG.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
N° CARGADORES POR PLANTA (SIN FS)	1	V	F	F	F	F	F	F													
	2	V	F	V	M	F	F	F													
	3	M	M	F	V	F	F	F													
	4	F	F	F	V	F	F	F													
	5	F	F	V	F	V	F	F													
	6	M	V	F	F	F	F	M													
	7	V	M	F	M	F	F	V													
	8	V	F	F	F	F	F	F													
	9	V	F	F	F	F	F	M													
	10	V	F	V	V	F	F	F													
	11	A	F	F	A	M	F	F													
	12	V	V	F	F	V	F	F													
	13	F	V	V	M	V	F	F													
	14	F	V	V	V	F	F	F													
	15	M	F	F	F	F	V	F													
	16																				
		15	15	15	15	15	15	15	0	0	0	0	0	0	0	0	0	0	0	0	0

THE SAMPLE IS INSUFFICIENT:
In this case the sample consists in 105 buds on a block of 3 hectares, were are 420.000 buds in total, so the sample covered only 0,025%

A decorative graphic consisting of a series of concentric circles. The circles are centered on the left side of the page and extend towards the right. The circles are drawn with thin, light blue lines. The background of the entire page is a solid, deep blue color.

Buds Fertility

Variety Fertility	FERTILITY RANGE			Buds per HA (for 50.000 bunches)		
	Low	Medium	Average	Low	Medium	Average
Low (IE Thompson)	10%	30%	20%	500.000	166.667	250.000
Medium (IE Crimson)	30%	50%	40%	166.667	100.000	125.000
High (IE Prime)	40%	80%	60%	125.000	62.500	83.333

Varieties of Low Fertility: **Thompson**, Superior (occasional), Ralli (occasional)
Varieties of Medium Fertility: Superior, Ralli, Crimson, Arra 29??
Varieties of High Fertility: Flame, Red Globe, Timco, Allison, Timpson, Tawny, etc...

When you decide the number of bunches per hectare, please keep in mind the bunch weight

Buds Fertility

Varieties of Low Fertility: **Thompson**, Superior (occasional), Ralli (occasional)

Varieties of Medium Fertility: Superior, Ralli, Crimson, Arra 29??

Varieties of High Fertility: Flame, Red Globe, Timco, Allison, Timpson, Tawny, etc...

GENERAL RULE

Variety Fertility	FERTILITY RANGE		
	Low	Medium	Average
Low (IE Thompson)	150.000	300.000	220.000
Medium (IE Crimson)	180.000	130.000	150.000
High (IE Prime)	120.000	80.000	100.000

When you decide the number of bunches per hectare, please keep in mind the bunch weight

					I. PRUNING							BUD FERTILITY ANALYSIS		
Farm	Variety	Detailed Observations and Notes	Plants/ha	Vine Status (Vigor 1-5)	Canes/vine	buds/cane	spurs/vine	buds/spur	buds/vine	Canes/Há	Buds/ha	Bud Fertility (%)	Bunches x fertility	bunches x fert x vine
Delirio 3	Thompson		1.633	2,5	16,0	8,0			128	26.122	208.980	25%	52.245	32
Compostela	Thompson		1.429	3,0	18,0	9,0			162	25.714	231.429	20%	46.286	32
Delirio 2	Crimson		1.633	3,0	15,0	8,0			120	24.490	195.918	40%	78.367	48
Apalta	Crimson		816	3,0	30,0	8,0	4,0	2,0	248	24.490	202.449	40%	80.980	99
Rosario A	Crimson		952	3,5	25,0	7,0	4,0	2,0	183	23.810	174.286	40%	69.714	73
Rosario D	Crimson		952	3,0	23,0	6,5	4,0	2,0	158	21.905	150.000	43%	64.500	68
Compostela	Crimson		1.429	4,0	17,0	7,5	4,0	2,0	136	24.286	193.571	40%	77.429	54
Rosario A	Red Globe		1.111	3,0	20,0	4,0	7,0	2,0	94	22.222	104.444	60%	62.667	56
Delirio 1	Red Globe		1.111	2,0	24,0	4,0	4,0	2,0	104	26.667	115.556	60%	69.333	62
Delirio 2	Red Globe		1.633	2,5	15,0	4,0	4,0	2,0	68	24.490	111.020	60%	66.612	41
Delirio 3	Red Globe		1.633	2,5	15,0	4,0	4,0	2,0	68	24.490	111.020	60%	66.612	41
Apalta	Red Globe		1.000	2,5	26,0	4,0	4,0	2,0	112	26.000	112.000	60%	67.200	67
Rosario D	Timco		1.520	3,5			24,0	2,0	48	0	72.948	74%	53.982	36
Apalta	Timco		1.633	3,5			24,0	2,0	48	0	78.367	75%	58.776	36
Delirio 1	Krissy		1.633	4,0			28,0	2,0	56	0	91.429	75%	68.571	42
Delirio 1	Krissy		1.633	3,5			28,0	2,0	56	0	91.429	75%	68.571	42
Delirio 1	Krissy		1.633	3,5			28,0	2,0	56	0	91.429	75%	68.571	42
Rosario A	Krissy		1.852	3,0			24,0	2,0	48	0	88.889	75%	66.667	36
Rosario D	Allison		1.732	3,0	4,0	8,0			32	6.926	55.411	75%	41.558	24
Apalta	Timpson		1.732	3,0	4,0	8,0			32	6.926	55.411	75%	41.558	24
Rosario A	Autumn Crisp		1.732	3,0	3,0	5,0			15	5.195	25.974	75%	19.481	11

FARM DATA				II. CROP ADJUSTMENT AND BUNCH THINNING						III	IV
Farm	Variety	Plants/ha	bunches x fert x vine	Bunches/vine (count pre adjustment)	bunches/cane	bunches/spur	bunches/vine	bunches/Ha	berries/bunch	berries/Ha	
Delirio 3	Thompson	1.633	32		2,0		32	52.245	100	5.224.490	
Compostela	Thompson	1.429	32		2,0		36	51.429	100	5.142.857	
Delirio 2	Crimson	1.633	48		2,8	1,0	42	68.571	115	7.885.714	
Apalta	Crimson	816	99		2,8	1,0	88	71.837	115	8.261.224	
Rosario A	Crimson	952	73		2,8	1,0	74	70.476	115	8.104.762	
Rosario D	Crimson	952	68		2,8	1,0	68	65.143	115	7.491.429	
Compostela	Crimson	1.429	54		2,8	1,0	52	73.714	115	8.477.143	
Rosario A	Red Globe	1.111	56		2,0	1,0	47	52.222	65	3.394.444	
Delirio 1	Red Globe	1.111	62		2,0	1,0	52	57.778	65	3.755.556	
Delirio 2	Red Globe	1.633	41		2,0	1,0	34	55.510	65	3.608.163	
Delirio 3	Red Globe	1.633	41		2,0	1,0	34	55.510	65	3.608.163	
Apalta	Red Globe	1.000	67		2,0	1,0	56	56.000	65	3.640.000	
Rosario D	Timco	1.520	36			1,6	38	58.359	80	4.668.693	
Apalta	Timco	1.633	36			1,5	36	58.776	80	4.702.041	
Delirio 1	Krissy	1.633	42			1,4	39	64.000	80	5.120.000	
Delirio 1	Krissy	1.633	42			1,4	39	64.000	80	5.120.000	
Delirio 1	Krissy	1.633	42			1,4	39	64.000	80	5.120.000	
Rosario A	Krissy	1.852	36			1,4	34	62.222	80	4.977.778	
Rosario D	Allison	1.732	24		4,0		16	27.706	85	2.354.978	
Apalta	Timpson	1.732	24		4,0		16	27.706	100	2.770.563	
Rosario A	Autumn Crisp	1.732	11		2,0		6	10.390	90	935.065	

HOW MUCH WEIGHTS ONE BERRY?



72 BERRIES OF 10 GR EACH (Sugar Crisp, Piura-Perú, January 2019)

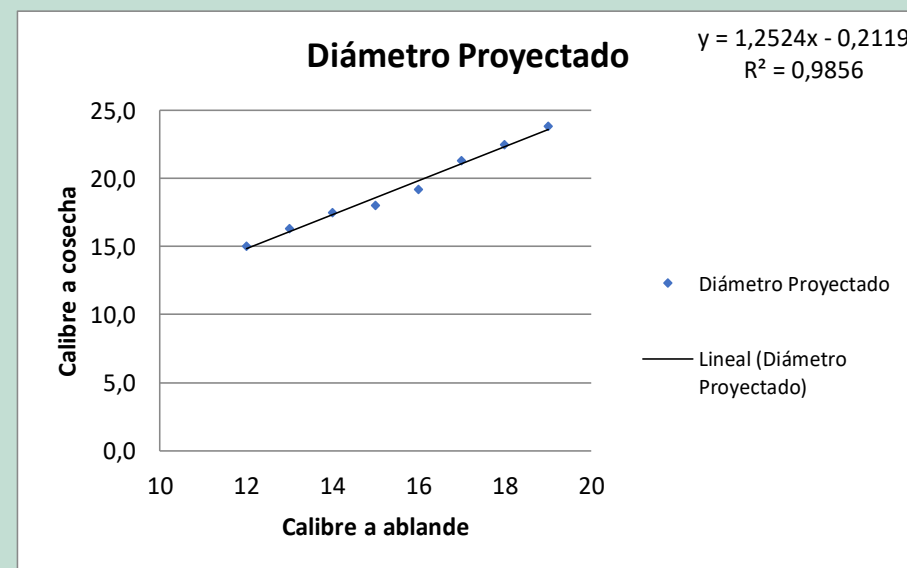
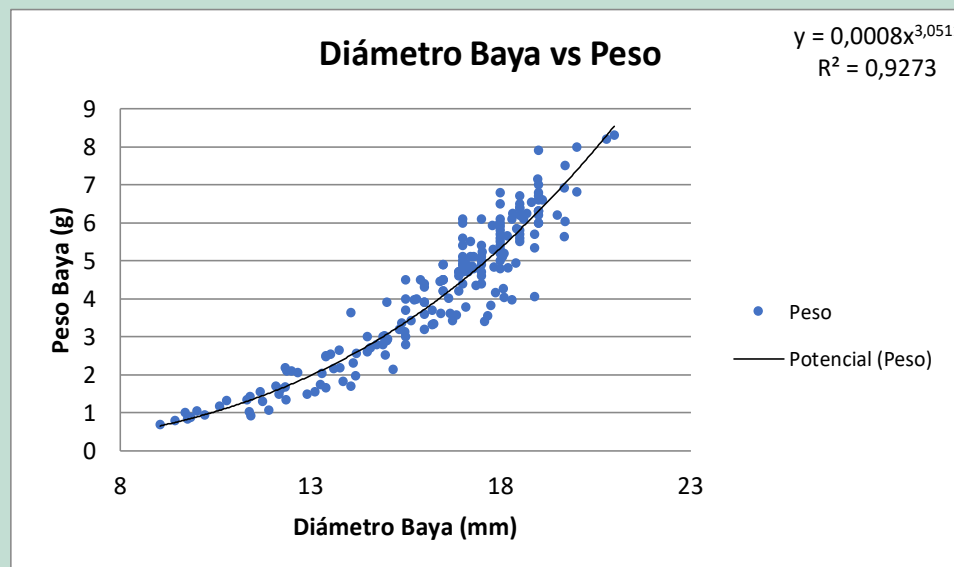
HOW MUCH WEIGHTS ONE BERRY?

This information was prepared with data provided by Gawie van der Merwe, and validated with data obtained in Chile

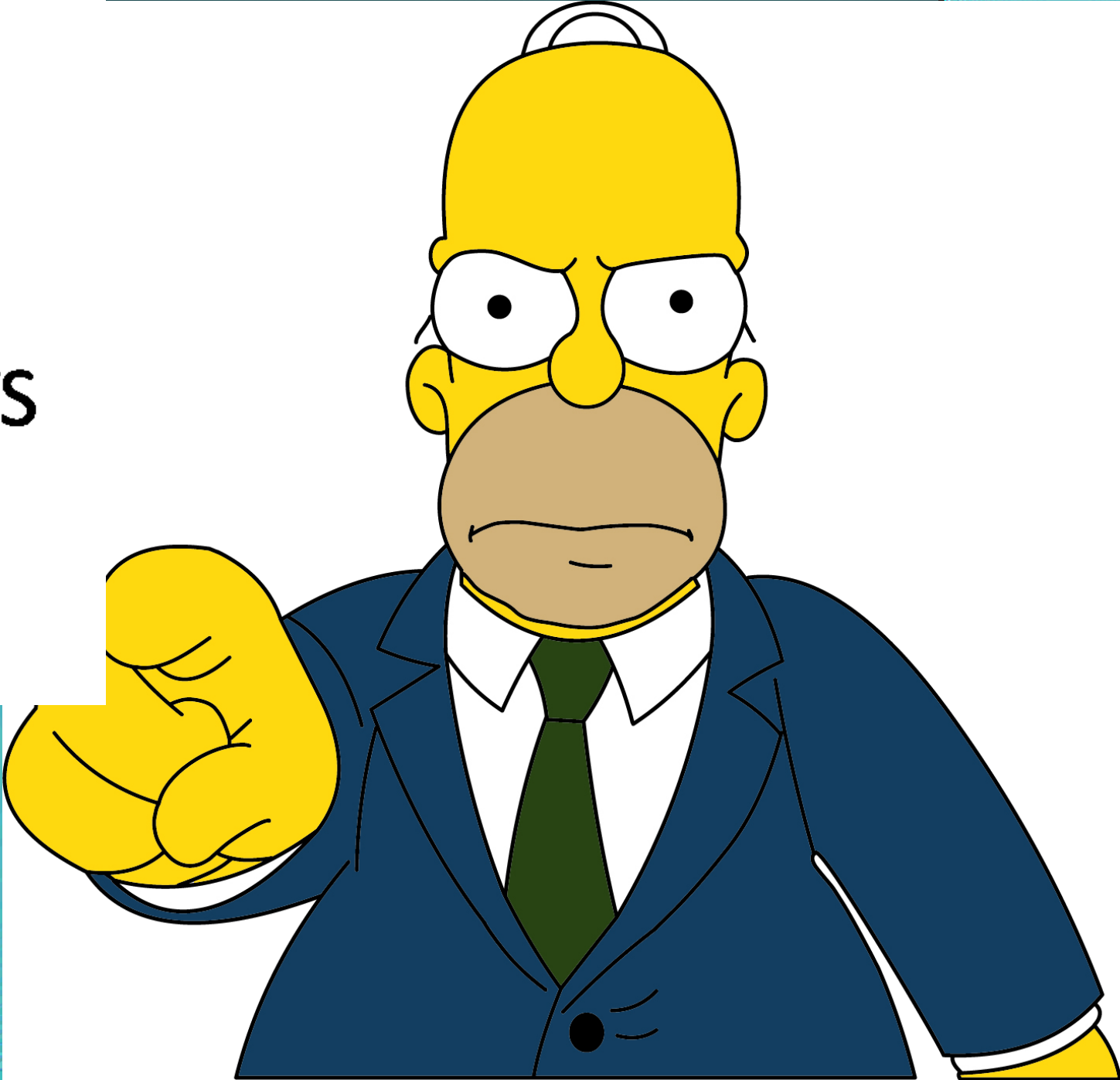
THOMPSON SEEDLESS

	$y = 1,2524x$ factor: 1,22		$y = 0,0008x^{3,0511}$
Diámetro ablande	Diámetro Projectado (1)	Diferencia (1)	Peso Projectado
12	14,64	2,64	2,88
13	15,86	2,86	3,68
14	17,08	3,08	4,61
15	18,30	3,30	5,69
16	19,52	3,52	6,93
17	20,74	3,74	8,33
18	21,96	3,96	9,92
19	23,18	4,18	11,70

Datos SA Flame		
Diámetro ablande	Diferencia (SA)	Diámetro Projectado
12	3,0	15,0
13	3,3	16,3
14	3,5	17,5
15	3,0	18,0
16	3,2	19,2
17	4,3	21,3
18	4,5	22,5
19	4,8	23,8



HOW MUCH WEIGHTS ONE BERRY?

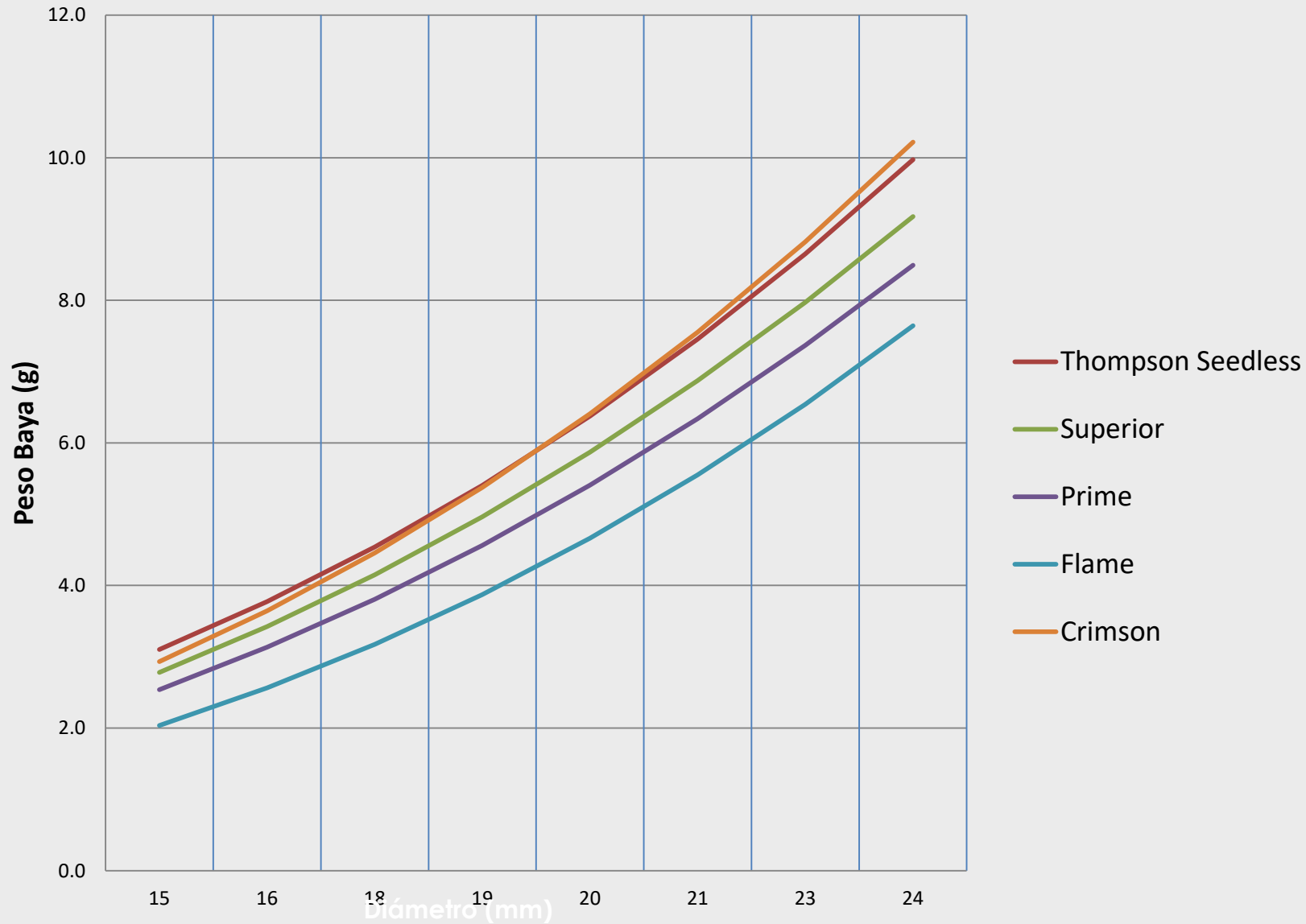


WE NEED TO
DO THIS JOB
NOW, FOR
EVERY NEW
VARIETY!!!

	6,0	4,9
	6,8	5,7
	7,8	6,5
	8,9	7,4
	10,0	8,2
	11,2	9,0
	12,5	9,8
	14,0	10,6
	15,5	11,4
	17,1	12,3
		13,1
		13,9
		14,7
		15,5
		16,3
		17,1
		18,0
782	$y = 0,002x^{2,7165}$	$y = 0,8154X-10,574$

This information
was prepared
with data
provided by
Gawie van der
Merwe, and
validated with
data obtained in
Chile

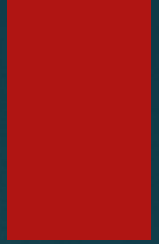
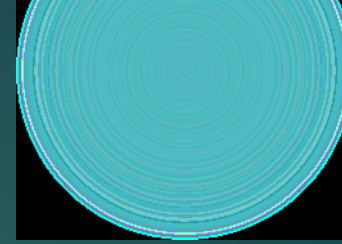
Diámetro a cosecha vs Peso de Baya



HOW MUCH WEIGHTS ONE BERRY?

This information was prepared with data provided by Gawie van der Merwe, and validated with data obtained in Chile





BUNCH THINNING

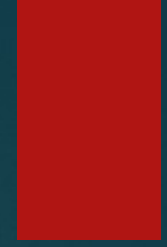
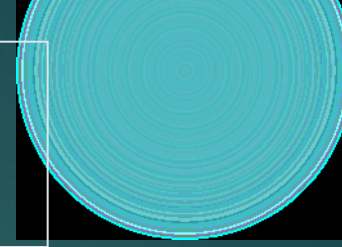
It must give the number
of berries per hectare

Every season needs a
compromise.

What worked last season,
must be questioned



Bunch Thinning (Art or Engineering?)



Goals:

- 1.- Bunch must be finish loose (sanity, color)
- 2.- Number of berries per bunch in agreement with the plan (n° of berries per hectare)
- 3.- Work must be simple, fast, easy to do, and to
- 4.- Low Cost

“I choose the one with less cuts per bunch”

→ Open mind to new ideas...

Berries/cm
of rachis

Goal:
2 floors



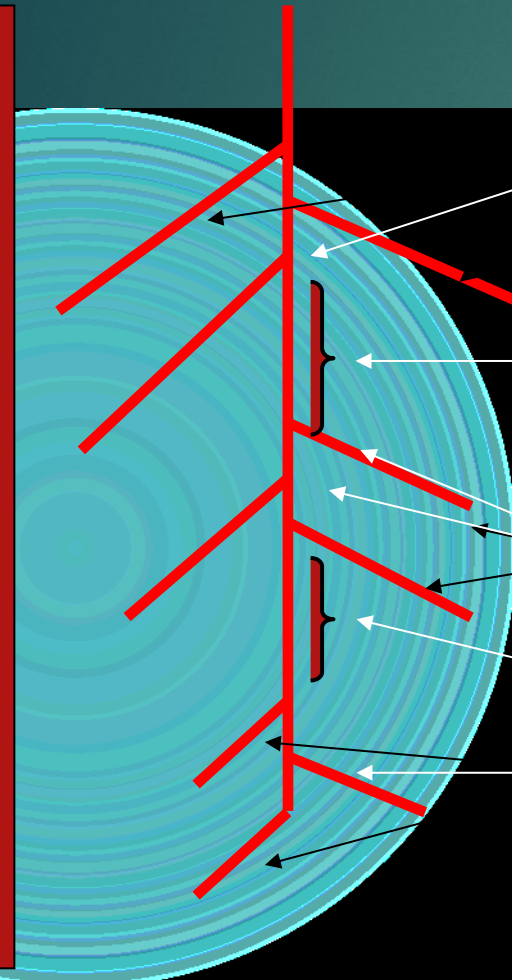
Bunch Thinning (Art or Engineering?)

► Thompson Seedless: Se requieren dos bayas por cada cm de raquis

ARREGLO TIPO 3 – 3 - 3

Si sumamos el total de raquis presentado en el cuadro de la derecha, obtendremos 60cm. Si consideramos la regla de 2 bayas por cm de raquis, tenemos $60 \times 2 = 120$ bayas en el racimo.

M. Silva, 2003-2009.-



Racimo:

3 hombros de 10 a 12 cm.
(33 cm de raquis)

Espacio de 3 dedos

3 hombros de 6 cm
(18 cm de raquis)

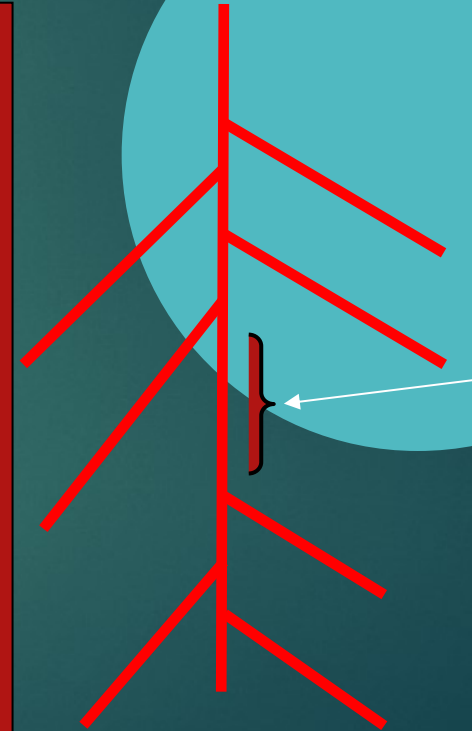
Espacio de 2 dedos

3 hombros de 3 cm
(9 cm de raquis)

ARREGLO TIPO 4 – 4

Si sumamos el total de raquis presentado en el dibujo de la derecha, obtendremos 60cm. Si consideramos la regla de 2 bayas por cm de raquis, tenemos $60 \times 2 = 120$ bayas en el racimo.

M. Silva, 2003-2009-2019



Racimo:

4 hombros de 10 a 12 cm.
(44 cm de raquis)

Espacio de 3 dedos

3 a 4 hombros de 6 cm
(18 cm de raquis)

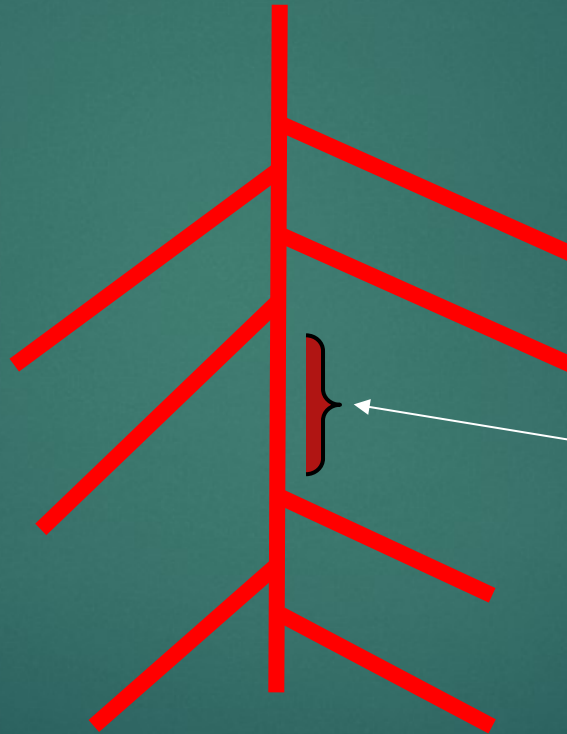
Bunch Thinning (Art or Engineering?)

NEW VARIETIES

ARREGLO TIPO 4 (3) – 3 (4)

Si sumamos el total de raquis presentado en el dibujo de la derecha, obtendremos 51 cm. Si consideramos la regla de 1,5 bayas por cm de raquis, tenemos $51 \times 1,5 = 77$ (80) bayas en el racimo.

M. Silva, 2003-2009 - 2019.-



Racimo:

3 a 4 hombros de 10 a 12 cm.
(33 cm de raquis)

Espacio de 3 a 4 hombros

3 a 4 hombros de 6 cm
(18 cm de raquis)

TIMCO, ALLISON, AUTUMN CRISP, ETC. ALL THEM REQUIRE 1,5 BERRIES/ CM OF RACHIS

FARM DATA				II. CROP ADJUSTMENT AND PRUNING				III. BEERY SIZE				IV. CROP PRODUCTION			
Farm			s x fert x vine	s/vine (count pruned)	s/can							Bunch weight (g)	Kilos/Ha	Export average (%)	Cartons/ha 4,5 Kg
Delirio 3												650	33.959	80%	6.037
Compos												660	33.943	80%	6.034
Delirio 2												690	47.314	75%	7.886
Apalta												690	49.567	75%	8.261
Rosario												690	48.629	75%	8.105
Rosario												690	44.949	75%	7.491
Compos												690	50.863	75%	8.477
Rosario												910	47.522	80%	8.448
Delirio 1												910	52.578	80%	9.347
Delirio 2												910	50.514	80%	8.980
Delirio 3												910	50.514	80%	8.980
Apalta												910	50.960	80%	9.060
Rosario												800	46.687	80%	8.300
Apalta												800	47.020	80%	8.359
Delirio 1												656	41.984	75%	6.997
Delirio 1												656	41.984	75%	6.997
Delirio 1												656	41.984	75%	6.997
Rosario												656	40.818	75%	6.803
Rosario												765	21.195	80%	3.768
Apalta	Timpson	1.732	24	4,0	16	27.706	100	2.770.563	22,0	8,0	800	22.165	75%	3.694	
Rosario A	Autumn Crisp	1.732	11	2,0	6	10.390	90	935.065	24,0	11,0	990	10.286	75%	1.714	

The information quality is vital. It's preferred no information, tan bad information

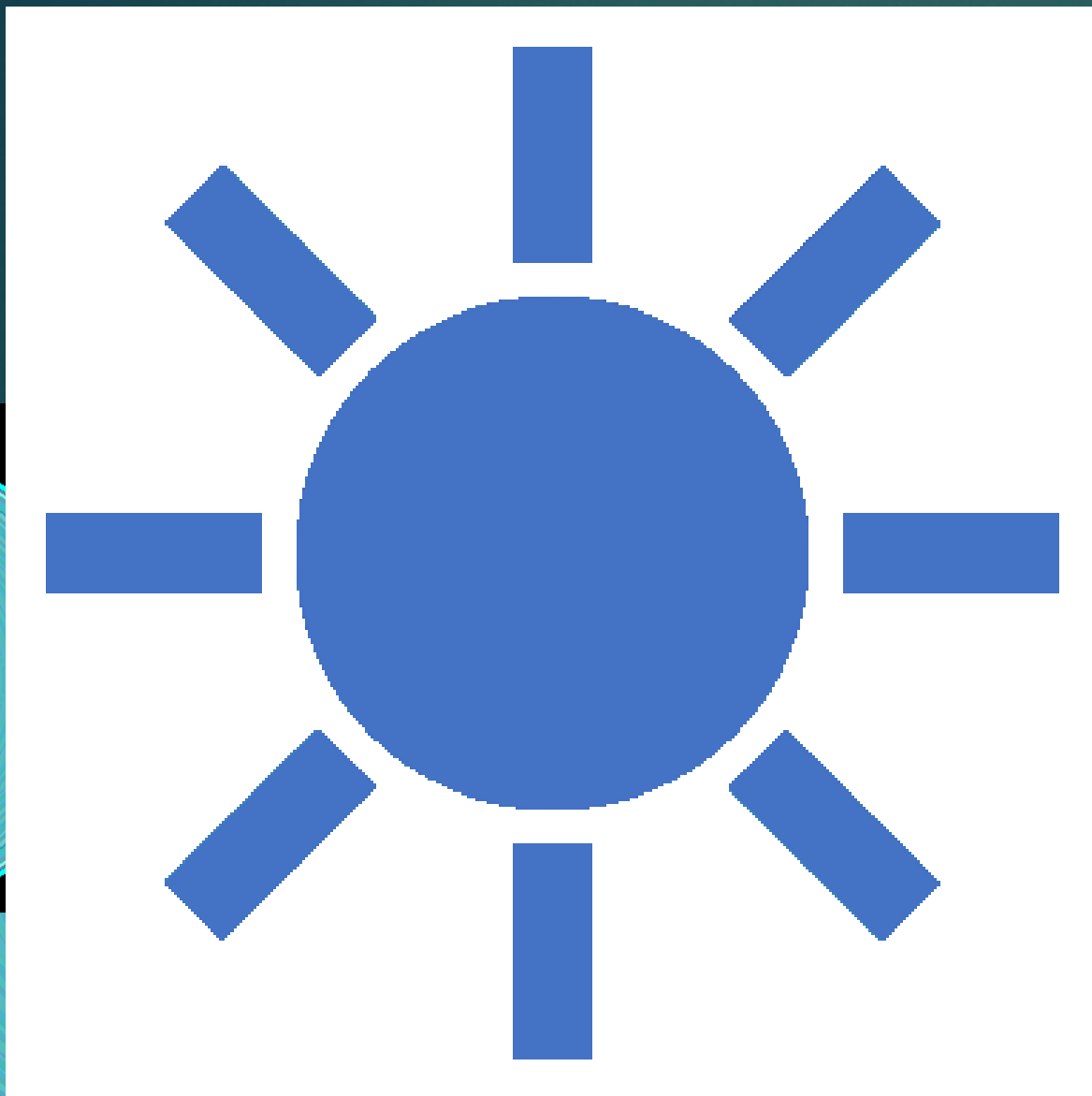
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CROP LOAD ADJUST

The information quality is vital. It's preferred no information, tan bad information



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**THE CROP
POTENTIAL**

CROP LOAD (Productive Potential)

The crop one vine is able to ripe properly, with the highest quality, is related with the ***foliar surface effectively iluminated***, what can be expressed as cm² or number of leaves per gram of fruit, per berry or per cluster.

Gonzalo F. Gil y Philipo Pszczółkowski, Viticultura, Fundamentos para Optimizar Producción y Calidad. Ed. Universidad Católica, 2007

CROP LOAD (Productive Potential)

Ratio between cm² of leaves to produce and ripe one grape gram

Variedad	Fuente	cm ² / gr
Tokay	Kliewer y Weaver, 1971	10 a 14
Moscatel de Alejandría	Buttrose, 1966	12 a 17
Concord	Shaulis et al., 1966	15
Thompson Seedless	May et al., 1969	7 a 8 - 10
Thompson Seedless	Kliewer y Weaver, 1971	8 a 10
Thompson Seedless	Kliewer y Antcliff, 1970	8 a 10
Italia	Smart, 1987	8
Red Globe	Dokoozlian, 1994	6 a 9

Gonzalo F. Gil y Philippo Pszczółkowski, Viticultura, Fundamentos para Optimizar Producción y Calidad. Ed. Universidad Católica, 2007

CROP LOAD (Productive Potential)

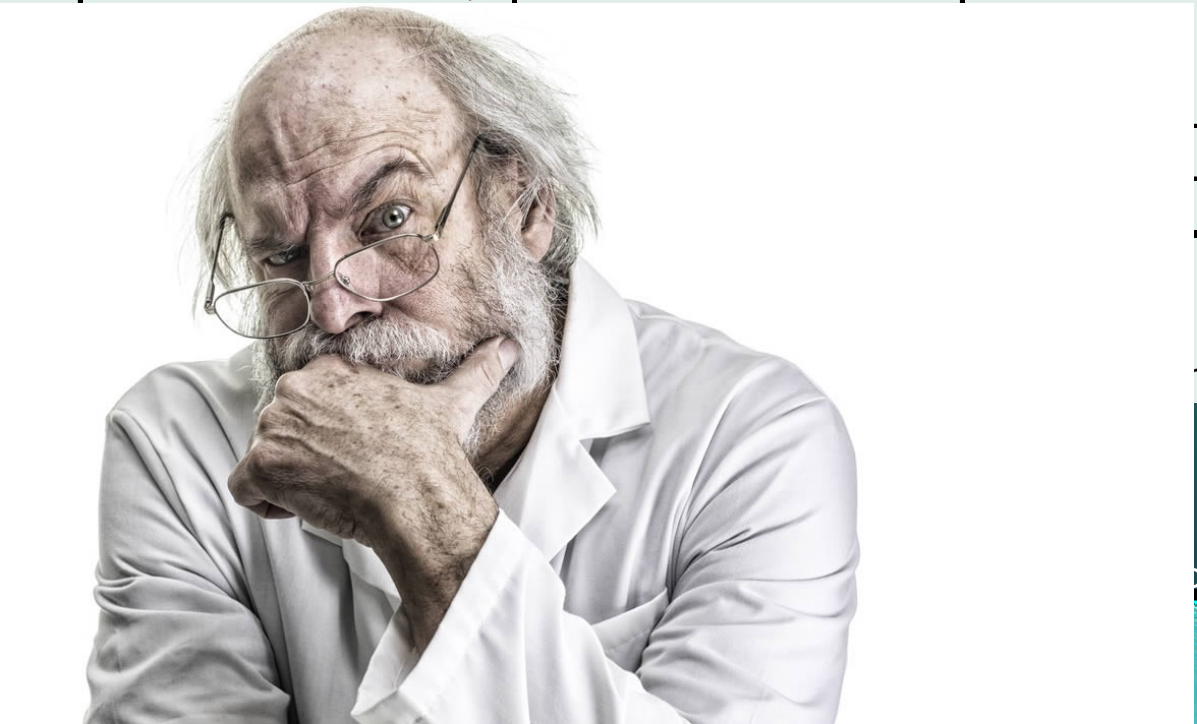
Optimum canopy size to achieve desired product (1.000 boxes per acre) for Flame Seedless, Thompson Seedless and Redglobe under current cultural practices¹.

Do we have numbers for the new varieties?

Variedad	IAF óptimo promedio
Flame S. y Thompson	2.36
Redglobe	1.47

AF = Área Foliar
* Tamaño de canopy

¹Modern cultural practices include a canopy size and a girdle at the base of the vine.
Adaptado de: "Interpreting the Table Grape Cultivation Manual"





Upper level of leaves.
Interception rate of radiation
is 70%

→ 100% Photosynthesis

Second level of leaves.
Interception rate of radiation
is 14%

→ 25%
Photosynthesis

Lower level of leaves,
there is no interception of
light.

→ No Photosynthesis



What is an ideal canopy?

- An ideal canopy is one that produces high quality fruit in sufficient volume according to the site, variety, and growing conditions
- Components of the “Perfect” Canopy
 - Balanced Vigor
 - Good shoot density
 - Good shoot positioning
 - Good air and sun exposure



Luz y Canopia

UNIVERSITY OF
MARYLAND
EXTENSION
Solutions in your community

Canopy Management: No Mercy

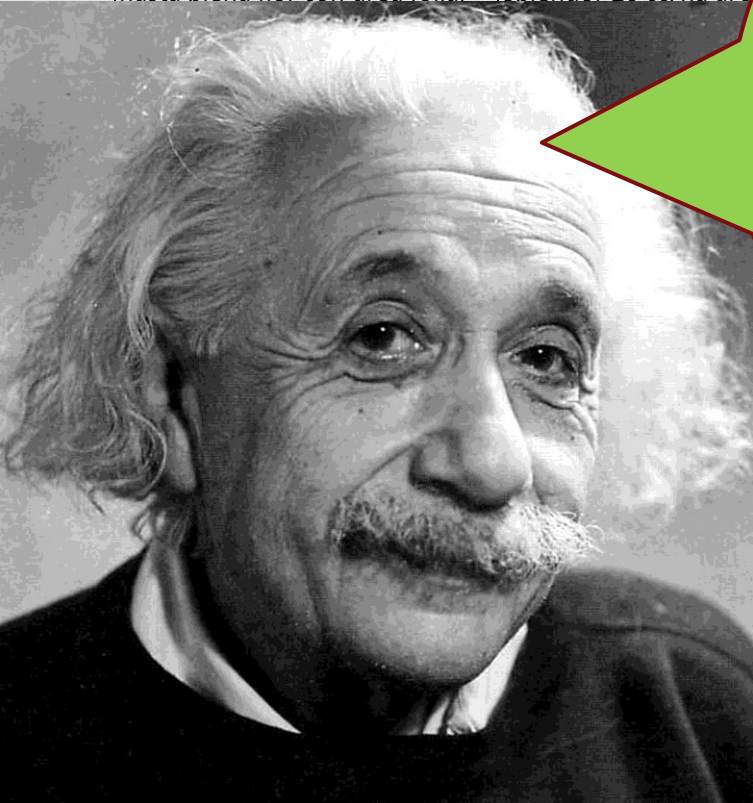


PLANT GROWHT REGULATORS

“USE THE MINIMUM QUANTITY OF PGR
THAT LEADS TO OBTAIN THE DESIRED
OBJECTIVE”
(CATON, 143 B.C.)

Ruby Seedless' by growth regulators, but no hairline occurred on Redglobe' table grapes. **Therefore, berry quality during cold storage is greatly influenced by growth regulator management in the vineyard.**

		DRAGO LJUBETIC		Luis Cariola L	
VARIEDAD / N° BAYAS					
RACIMO	RALEO	CRECIMIENTO			
TIMCO	Partir desde brote de 30 cm hasta plena flor con urea foliar	Splendor 20 cc/ha al s			
80-90 Bayas, peso c/u					
ALLISON					
80-90 Bayas, peso c/u					



- Compartir Información
- Estudiar
- Viajar
- Aprendizaje en Permanente Evolución
- **ESTAMOS MUY LEJOS DE SABERLO TODO**

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REGULADORES DE CRECIMIENTO





Thankyou – Baie Dankie – Muchas Gracias

se agradece especialmente la contribución con información relevante de mis amigos Oscar Salgado y Fernando Irarrázabal, sin la cual no se habría podido hacer este trabajo

**ASESORIA EN
UVA DE MESA**

MARTIN SILVA ARMANET

Ing. Agrónomo PUC
Asesorías Paso Pehuenche

Cerro Colorado 6160 Depto 122 - Las Condes
Santiago, CHILE
móvil: +56 9 93201538
msilva@asesoriaspehuenche.com
ms101257@gmail.com