



Testing of sweet cherry varieties in Belgium

J. Vercammen, A. Gomand and N. Claes

Proeftuin pit- en steenfruit (Belgium)

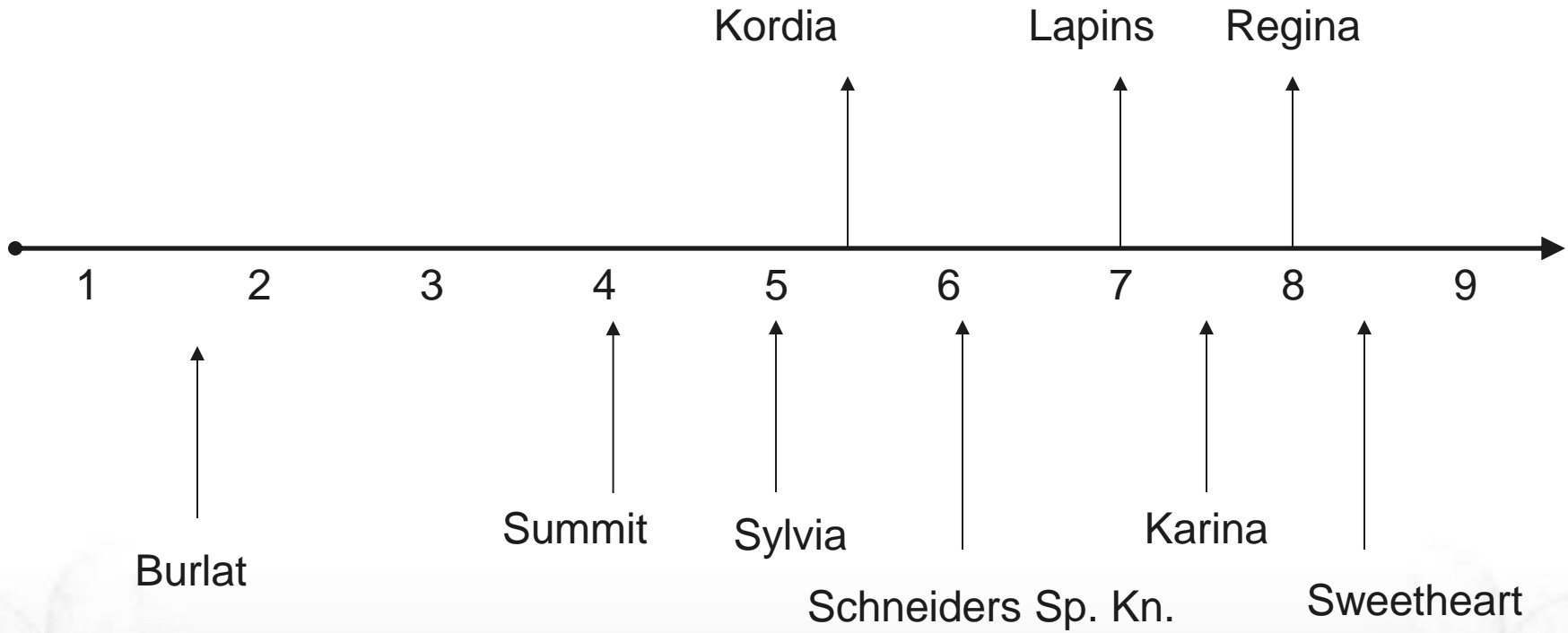


Sweet cherry varieties in Belgium

- Main varieties
 - Kordia
 - Lapins
 - Regina
 - Sweetheart
- Secondary varieties
 - Burlat
 - Schneiders Sp. Kn. and Summit
 - Sylvia and Karina : Pollenizers for Regina



Picking moment





Disadvantages of the main varieties

- Kordia \Rightarrow susceptible to spring night frost
- Regina \Rightarrow difficult fruit set
- Lapins \Rightarrow susceptible to cracking and rot
- Sweetheart \Rightarrow susceptible to cracking and rot



Disadvantages of the secondary varieties

- Burlat \Rightarrow small, low firmness
- Summit \Rightarrow difficult fruit set, low firmness
- Sylvia \Rightarrow difficult tree shape
- Schneiders Sp. Kn. \Rightarrow difficult fruit set
- Karina \Rightarrow strong vigour



Demands for a new variety ?





The ideal variety

- Early or late picking moment
- Weak vigour
- Good fruit quality
 - Firm
 - Large
 - Good taste
- Productive
- Little susceptible to cracking and rot
- Little susceptible to spring night frost
- Self-fertile



How variety trials are done ?





Sweet cherries : Level 1

- 3 trees per variety
- If possible on Gisela 5
- Compared to Kordia
- Since 1999 in our station
- Cherry Descriptor List (IBPGR)
- Protection against birds (with nets)
- Annual report to the breeders



Sweet cherries: Level 1

- Yield: kg/tree
- Fruit weight (50 cherries)
- Fruit size
- Firmness (g/mm)
- Sugar content (°brix)
- Taste (1-9)
- Cracking (% on the tree)
- Cracking index (1-100)



New varieties

- 2015: 73 new varieties in level 1
- 2015: 13 varieties grubbed
- 2016: 21 new varieties planted
- 3 trees/variety on Gisela 5 (Ref.: Kordia)
- Interesting varieties planted on larger scale (level 2)



Sweet cherries : Level 2

- 20-25 trees are planted to test the best varieties at orchard level
- Finding solutions for the negative qualities of the new variety



Technical report



Promising new varieties

- Varieties in level 2
 - Grace Star
 - Skeena
 - Korvik
 - Rubin
 - Hertford
 - Samba
 - Poisdal
- Other promising varieties
 - Penny



Poisdel

- France (Delbard Nurseries)
- Middle bloom (S1S3)
- 2nd to 3rd week
- Good fruit size
- Very firm and good taste
- Good storability
- Susceptible to cracking
- Not without plastic covering
- More experience needed
- Pollenizer: Lapins



Planting year: 2006



Samba/Sumste (13S-36-18)

- Canada (Summerland)
- 2S-43-48 x Stella 16A-7
- 3rd week
- Upright growth habit
- Moderate productive
- Good fruit size, firm
- Little susceptible to cracking
- Moderate taste
- **NOT** self-fertile (S₁S₃)
- Susceptible to Pseudomonas
- Pollenizers: Lapins, Sweetheart, (Bellise)

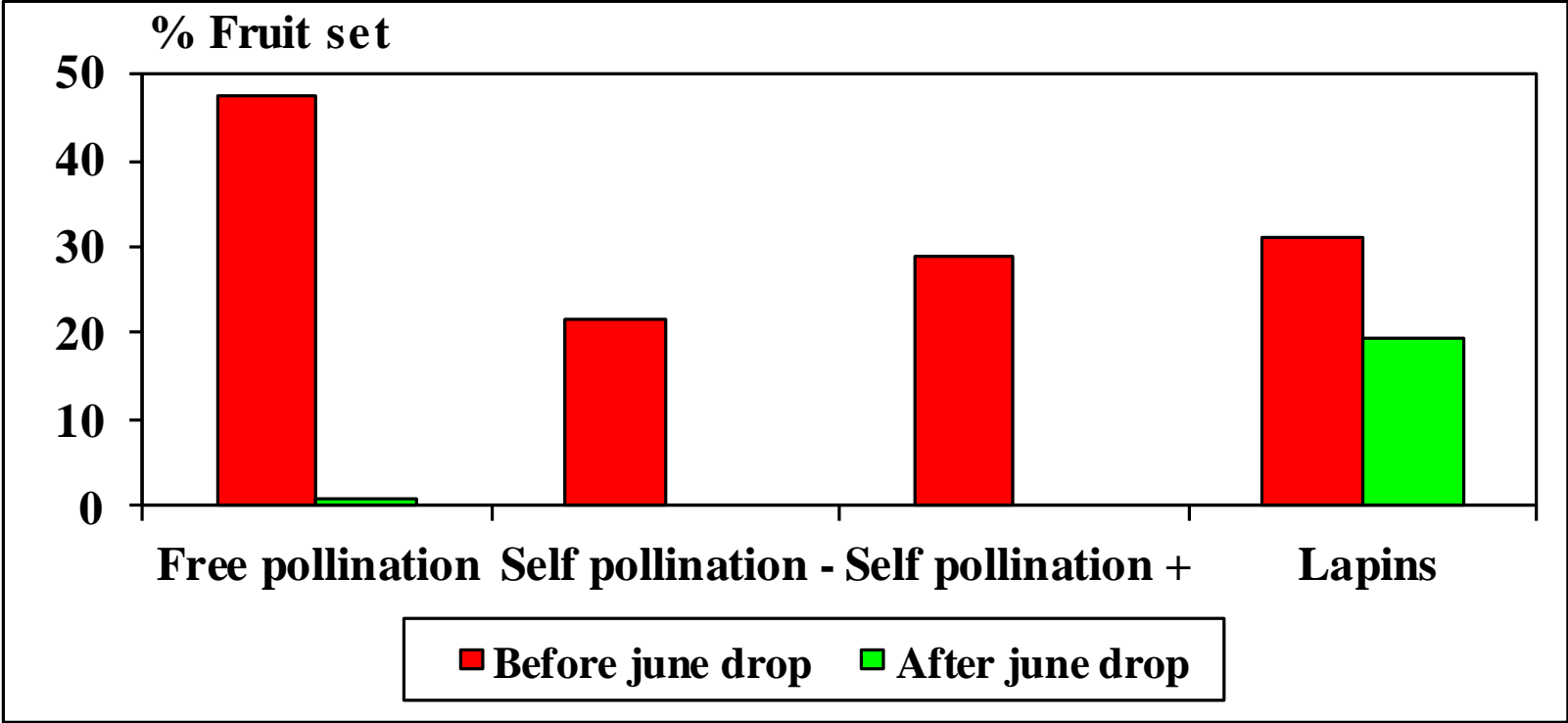


Planting year: 2003



Samba 2008

Fruit set (%)



Self pollination - = without pollen of Samba

Self pollination + = hand pollination with pollen of Samba



Vanda

- Czech Republic
- Van x Kordia
- Productive
- 3rd - 4th week
- Good fruit size (9-10 g)
- Moderate firmness
- Good fruit quality (taste)
- Little susceptible to cracking
- Early to middle bloom (S1S6)
- Susceptible to spring night frost
- Pollenizers: Grace Star en Korvik

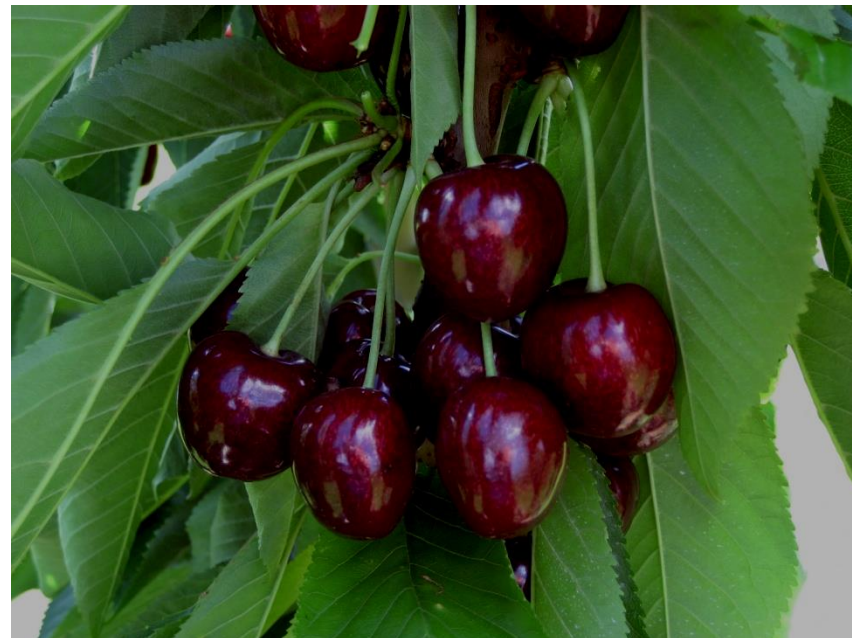


Planting year: 1999



Korvik

- Czech Republic
- Kordia x Vic
- Easy tree shape
- Very productive, good size
- 4th week
- Similar to Kordia
- Moderate firmness
- Good fruit quality/taste
- Little susceptible to cracking
- Early to middle bloom
- Pollenizers: Grace Star (Hertford and Sweetheart)



Planting year: 2004



Grace Star (DCA BO 84.703.003)

- Bologna (Italy)
- Free pollination of Burlat
- Early to middle bloom
- Very productive
- Self-fertile (S₄'S₉)
- 4th week
- Good taste, good fruit size
- Attractive cherry
- Good pollenizer for Korvik
- Moderate susceptible to cracking



Planting year: 1997 (2003)



Hertford (JI 13014)

- England (John Innes)
- Early bloom (S1S6)
- 4th - 5th week
- "Productive"
- Pollination is very important
- Good fruit size
- Firm, good taste
- Moderately susceptible to cracking



Planting year: 1999

- Pollenizers: Samba, Lapins and Sweetheart



Rubin

- Roemenia
- 6th-7th week
- Easy tree shape
- Late bloom (S₃S₁₂)
- Very productive
- Good fruit size
- Good taste
- Moderately susceptible to cracking
- Good pollenizer for Regina
- Pollenizer: Regina and Kordia (Penny)



Planting year: 2007



Penny

- Engeland (East Malling)
- 7th week
- Good fruit size
- Firm and good taste
- Easy tree shape
- Late bloom (S6S9)
- Pollenizer for Regina
- Susceptible to cracking \Rightarrow Plastic covering
- Moderate productive
- More experience needed
- Pollenizers: Regina and Rubin



Planting year: 2006



Total yield data

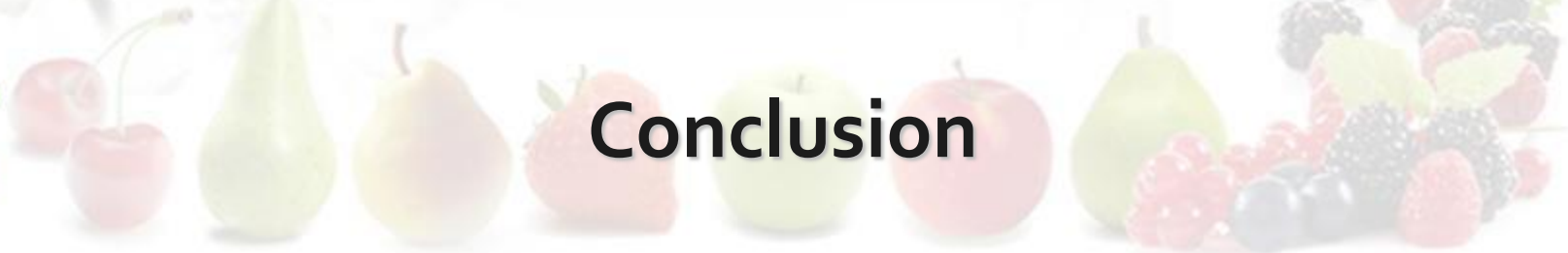
Variety	Year	Week	Kg/tree	Fruit weight (g)	Cracking %	Taste (1-9)
Poisdel	2006	2	46.8	10.7	47	6
Samba	2003	3	107.7	10.8	27	6
Vanda	1999	4	247.1	10.0	23	7
Korvik	2004	4	144.0	10.6	21	6
Grace Star	1997*	4	130.3	11.1	37	7
Hertford	1999	4	198.6	10.8	31	7
Rubin	2007	6	67.4	10.6	34	6
Penny	2006	7	54.6	10.8	54	6

* Yield data until 2012 (replanted in 2003)



New assortment

Variety	June					July							
	12	16	20	24	28	2	6	10	14	18	22	24	28
Week	1	2	3	4	5	6	7	8					
Poisdel													
Samba													
Korvik													
Grace Star													
Herfford													
Kordia													
Lapins													
Karina													
Rubin													
Regina													
Penny													
Sweetheart													



Conclusion

- Some promising new varieties
- 3rd - 6th week
- Addition of the assortment
- No replacement of the main varieties
- Looking further for early and late varieties





Some novelties

- Folfer
- Christiana
- Benton/Columbia
- Giorgia
- Areko (92/31-22)
- ...





Folfer

- France (INRA)
- Middle bloom(S6S9)
- 3rd to 4th week
- Good fruit size
- Good firmness
- Moderate taste
- Very susceptible to cracking
- Only under plastic covering



Planting year: 2007

Pollenizers: Hertford, Lapins and Poisdal



Christiana

- Czech Republic
- Van x Kordia
- 4th to 5th week
- Early bloom(S3S6)
- Very productive
- Small fruit size
- High firmness
- Good taste
- Susceptible to cracking
- More experience needed



Planting year: 2010



Benton / Columbia

- USA - Prosser
- Stella x Beaulieu
- 4th week
- Middle bloom (S₄'S₉)
- Productive (?)
- Moderate firmness
- Moderate susceptible to cracking
- Moderate taste
- More experience needed



Planting year: 2008



Giorgia

- Italy
- Caccianese x ISF123
- 4th to 5th week
- Late bloom (S1S13)
- Productive (?)
- High firmness
- Susceptible to cracking
- Good taste
- More experience needed



Planting year: 2009



Areko (92/31-22)

- Germany (Pillnitz)
- Kordia x Regina
- 5th to 6th week
- Middle bloom (S1S3)
- Moderate productive
- Large, darkred cherry
- Good firmness (= Kordia)
- Moderate susceptible to cracking
- Tree shape = Regina
- More experience needed



Planting year: 2012



Total yield data

Variety	Year	Week	Kg/tree	Fruit weight (g)	Cracking %	Taste (1-9)
Folfer	2007	3	72.0	11.0	47	5
Christiana	2010	3	30.9	8.8	37	6
Benton	2008	5	60.6	10.8	29	6
Giorgia	2009	5	31.0	9.6	41	6
Areko	2012	5	4.9	14.0	29	7



Grubbed varieties (1)

- Bigalise: very low production
- Coralise: too soft, small fruit size
- Selah: moderate taste, very susceptible to cracking
- Symphony: very susceptible to cracking, bad taste
- Summit: too soft, very short shelf life
- Canada Giant: too soft, susceptible to cracking
- Noire de Meched: short harvest window



Grubbed varieties (2)

- Satin: low production
- Bellise: small fruit size, very susceptible to cracking
- Merchant: susceptible to cracking, too soft
- Ferdiva: low production
- Fermina: small fruit size
- Sumbola: low production
- Vera: very susceptible to cracking
- Simoné: low production, small fruit size

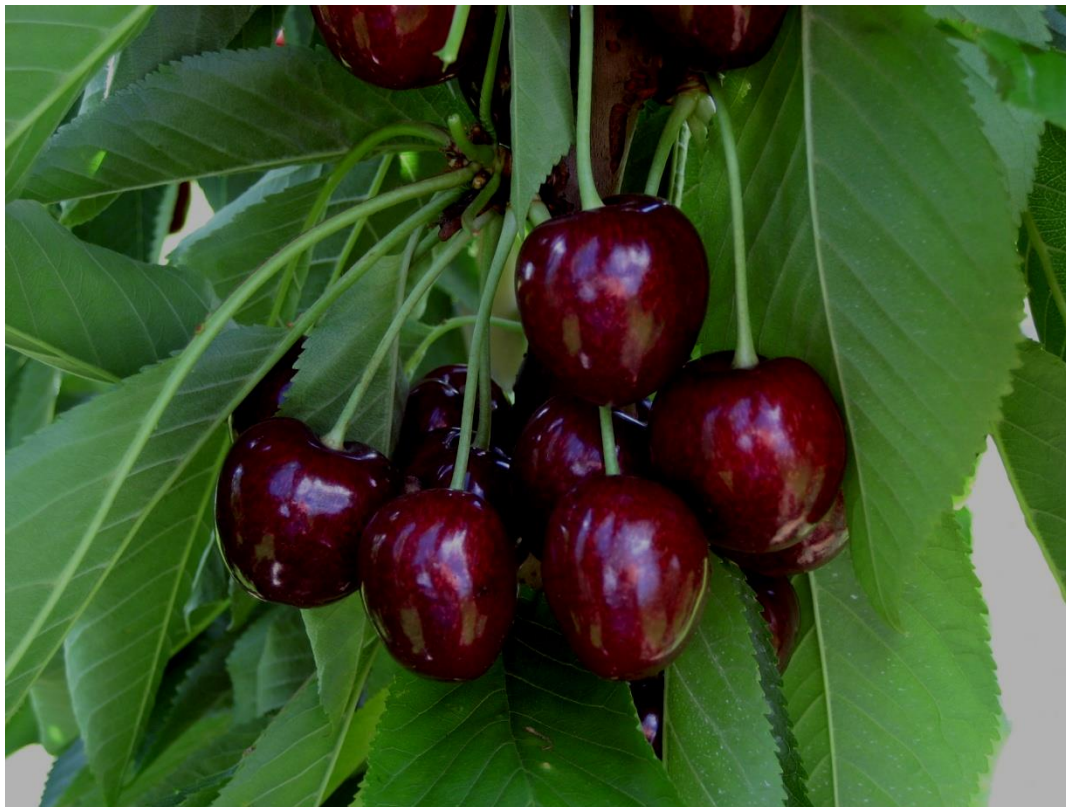


Grubbed varieties (3)

- Sweet Early: low production, too soft
- Vanda: small fruit size, too soft
- Sumbigo: bad taste, very susceptible to cracking
- SPC 207: blushed cherry, low production, bad taste
- SPC 232: blushed cherry, very susceptible to cracking
- Early Red: low production, susceptible to frost
- Firm Red: low production, small fruit size



Thank you for your attention !



(Research done with financial support of CMO)