

Weigi[®]



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- ▶ **Weigi® dwarfing and semi-dwarfing rootstocks for cherry trees**
- ▶ Weigi rootstocks are crossings between GiSelA- and Weiroot-clones.
- ▶ Owner/ Licensee for Weigi-clones 1,2,3 and 4 is Peter Stoppel, Kressbronn (D).
Trademark: Weigi ®; see also www.weigi.com
- ▶ In 1965, 18 selections of Weiroot rootstocks were presented in Weihenstephan (D) by Prof. Hermann Schimmelpfeng. These clones were then crossed in 1989 with some selections from the Gisela series obtained by Prof. Werner Gruppe in Giessen (D).
- ▶ This cross produced more than 400 seedlings that were planted in Weihenstephan in 1990 and evaluated and selected for 10 years together with Herman Schimmelpfeng. Five of these complex Prunus hybrids were selected and put into trials at Peter Stoppel farm in Kressbronn am Bodensee (D). Peter Stoppel is besides fruit grower a well-known breeder in sweet cherries and strawberries (Malwina). Peter Stoppel has selected and propagated early cherry varieties in the Prim® line and late cherry varieties called Final®, both marketed under the brand name Cerasina®. These varieties are nowadays tested and grown worldwide.

- ▶ Further trials started in 2004 on 4 different locations, 4 in Germany (1x Baden, 2x Franken and 1x Thüringen) and 1 location in south of France (La Tapy). The chosen varieties were Regina and Skeena.
- ▶ After few years testing and some positive results, decision is taken to propagate them invitro in Italy and start making trees. This is done in German and Dutch nurseries which make it possible to start more trials in 2013 in more in Germany, Italy, France, Spain and Ukraine. For 7 years testing is also started in Chile with Weigi® 1, Weigi® 2 and Weigi® 3.
- ▶ The last 4-5 years also testing the Weigi® 2, Weigi® 3 and Weigi® 4 in Canada and USA

Regina after 9 years

Weigi®1



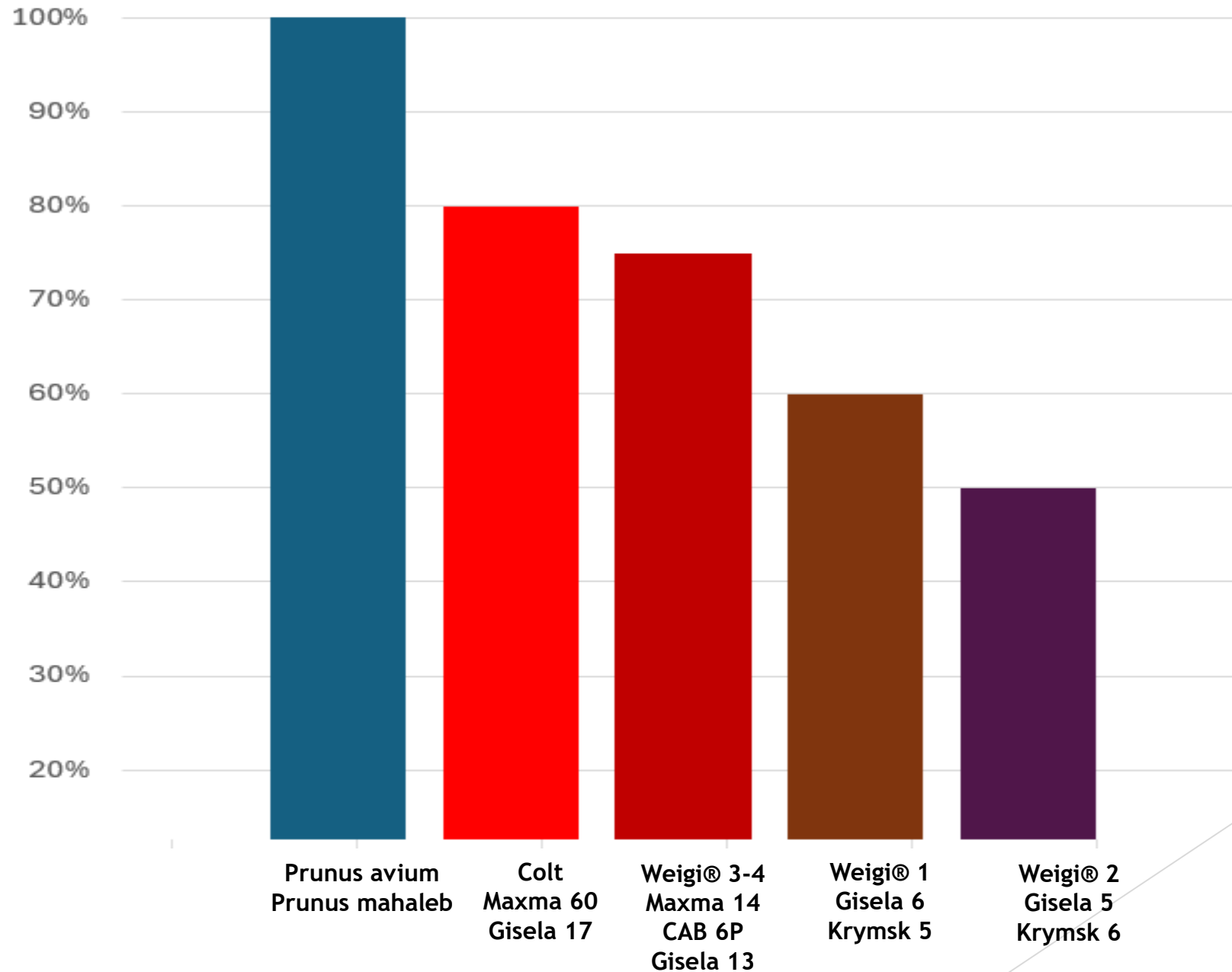
Weigi®2



Weigi®3



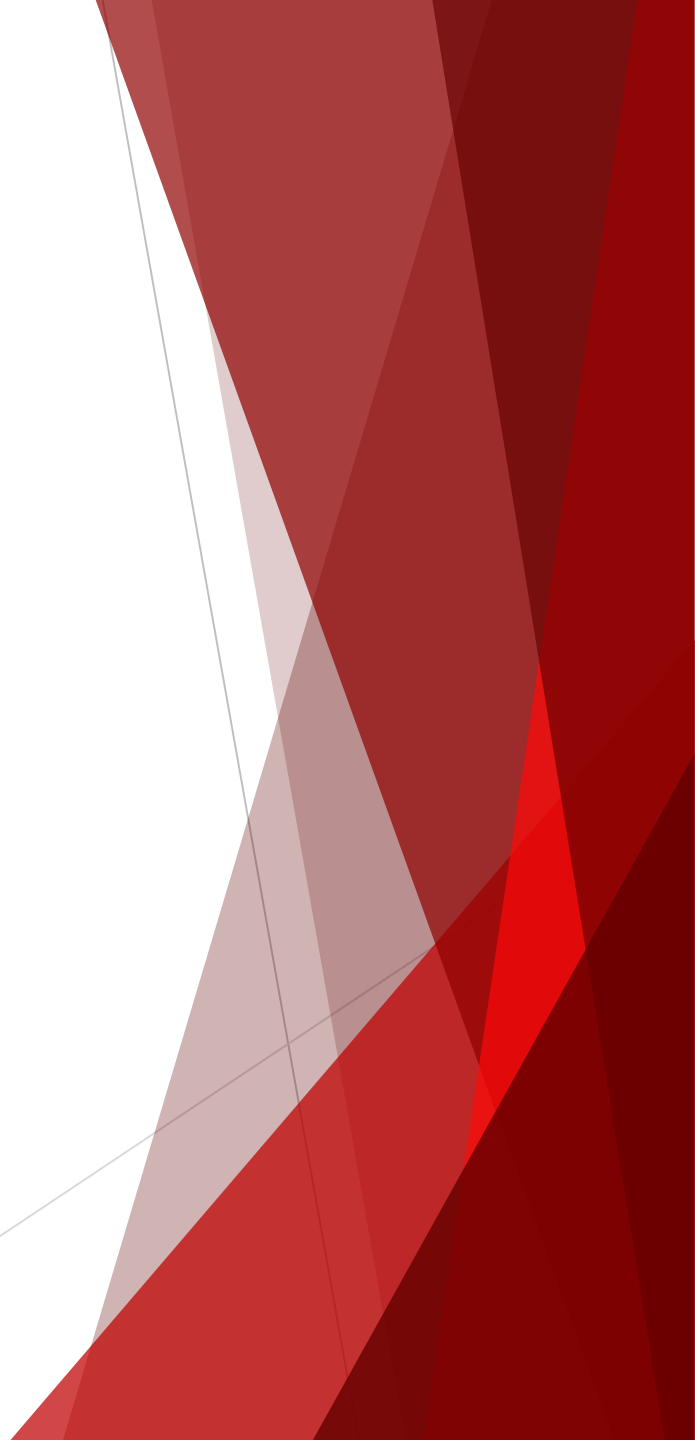
Vigor different rootstocks



Weigi[®] 1

- ▶ **Weigi[®]1** is recommended for central European climates, especially on fresh soils and with self-fertile varieties. It has about 10% more growth as Gisela[®] 5 and approximately the same growth rate as Gisela[®] 6 but is much less sensitive than Gisela[®] 6 to high summer temperatures and water stress, probably because of deep rooting. Because of these characteristics, it has proven to be well adapted even in southern growing areas in Italy. In addition, the root system of Weigi[®]1 withstands heavy rainfall and waterlogging quite well. For rainy regions and replanting areas this rootstock is not recommended.

Weigi[®] 1



Skeena after 9 years

Weigi®1



Weigi®2



Weigi® 2

- ▶ **Weigi®2** in the central European climate and on light soils shows slightly higher growth than Gisela® 5. The production yield is like that of Gisela® 5, but the fruit size is slightly larger. In very hot weather, the fruit of trees grafted on Weigi® 2 shows a tightness of maturity compared to those grafted on Gisela® 5. It has very good compatibility with current cherry varieties.
- ▶ In addition, Weigi®2 tolerates fluctuations in water supply better because of its deeper root system. Weigi®2 sometimes grows poorly in the first two years, while after the second year, vegetative development is superior to Gisela® 5. Weigi®2, in warm climate areas such as southern European or northern Chilean areas, has shown similar growth to temperate areas.
- ▶ In central Chile, Weigi®2 is already cultivated on a large scale, as well as in southern France, northern Italy and Spain, where there have been good results in intensive plantations up to the eighth year after planting".

Weigi[®] 2



Vignola, Italy after 5 years



Weigi®2 Weigi®1 Maxma 60

Skeena on Weigi® 2

6 years



9 years



Regina after 9 years

Weigi®1



Weigi®2



Weigi[®] 3 and Weigi[®] 4

- ▶ Weigi[®]3 and Weigi[®]4 are the more vigorous rootstocks which vigor are between Gisela 6 and Colt. Like Gisela and Weigi[®]1, Weigi[®]2 bud formations are very good. Both are recommended for less fertile soils or soils with limited irrigation availability, even for replanting soils it can be a good alternative. Both rootstocks are interesting for planting systems like Spanish Bush, UFO or double leaders. If we look at variety choice, it seems that self-fertile varieties do very well on these rootstocks. Both rootstocks have excellent compatibility with all current cherry varieties. Grafting union is smooth and generally no root suckers. No negative effect seen on flower period or harvest date. Excellent anchorage and stability of the trees.
- ▶ Weigi[®]3 and Weigi[®]4 are recommend in central-north Europe for replanting with limited access to water and in hot and dry climates these rootstocks are worth to plant on commercial base.

Weigi[®] 3



Skeena after 9 years

Weigi®3



Weigi®4



Regina after 9 years

Weigi®3



Weigi®4



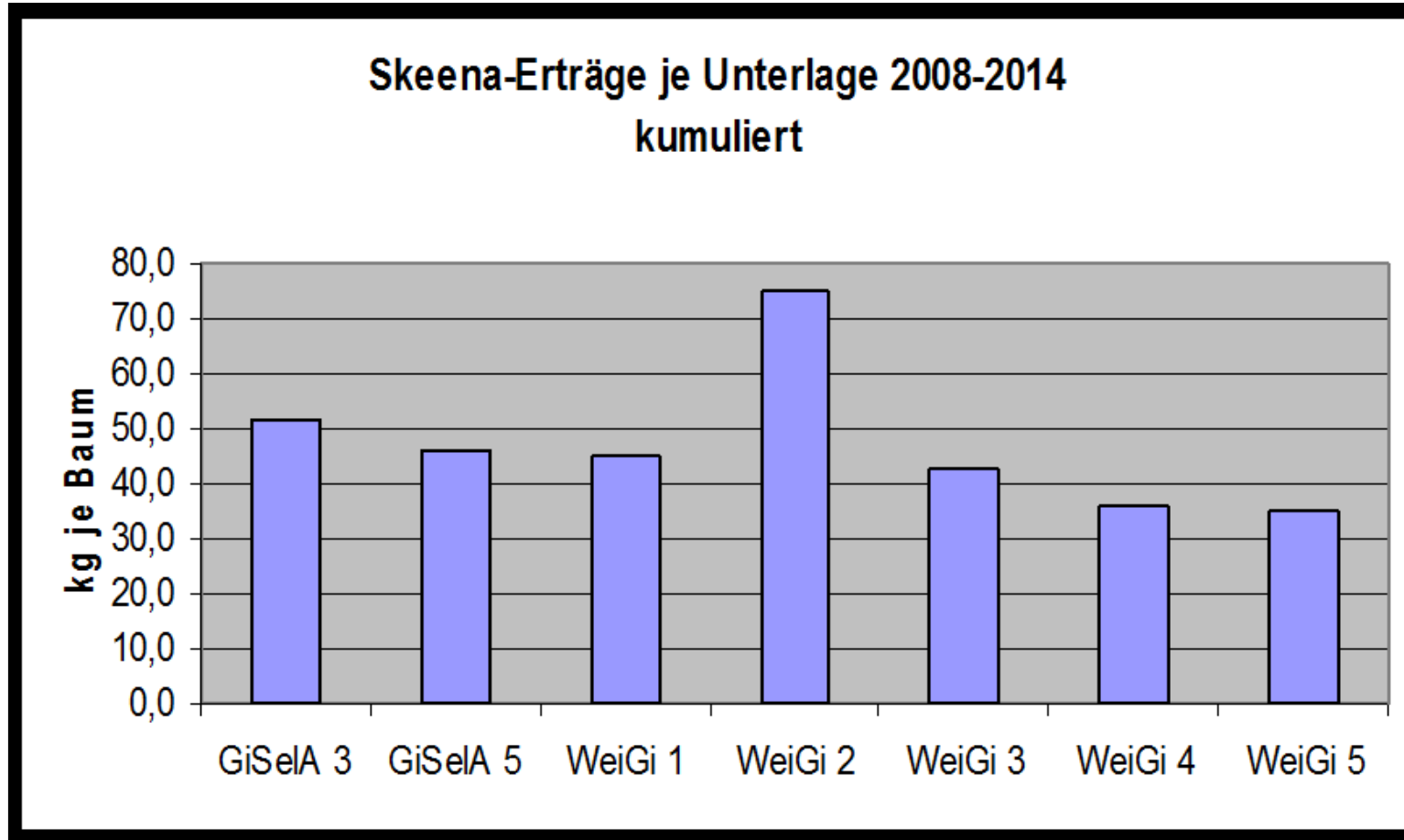
Prim® 2.3

Weigi®2

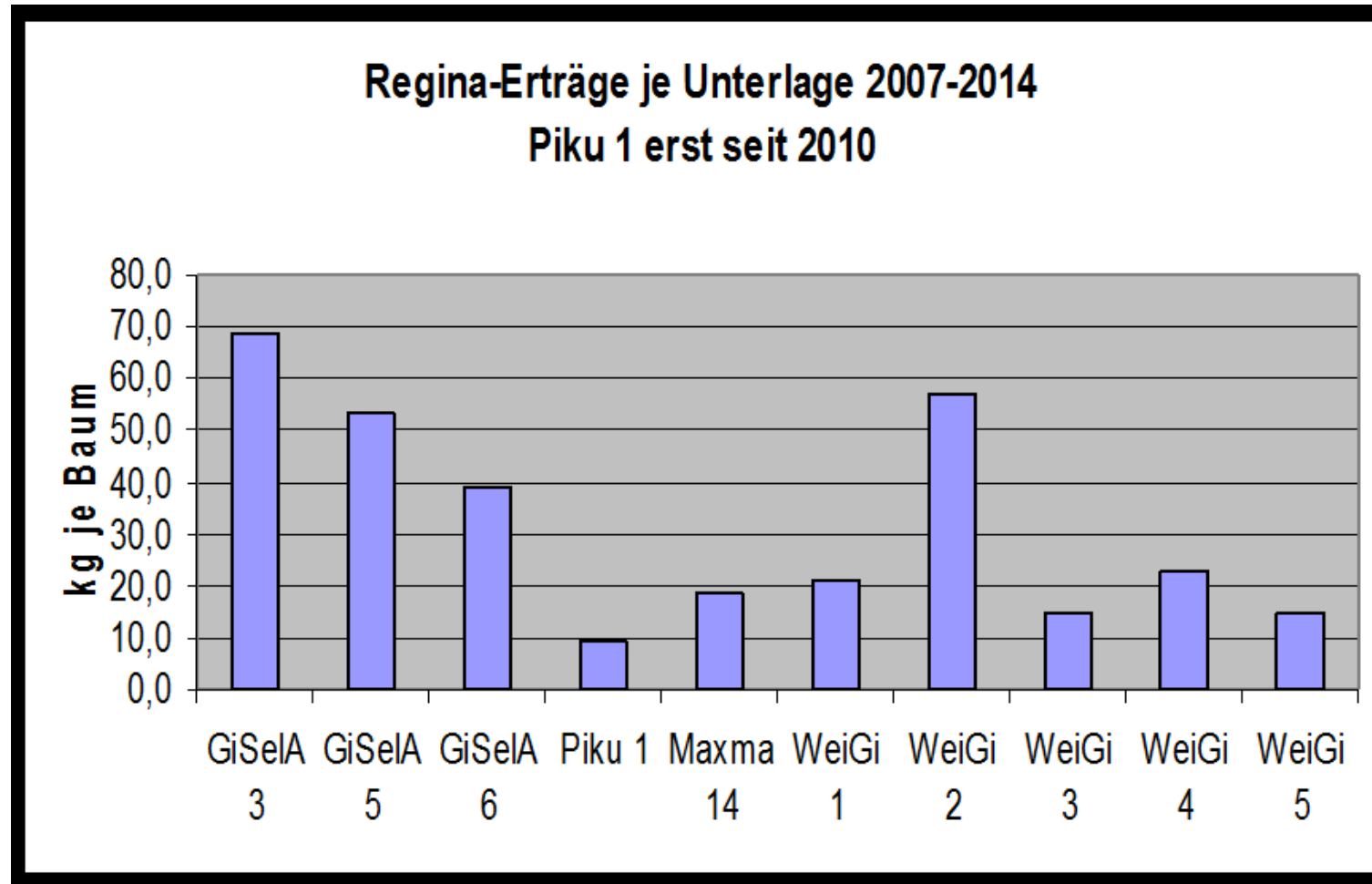
Colt



Experiences OGS Südbaden, Germany

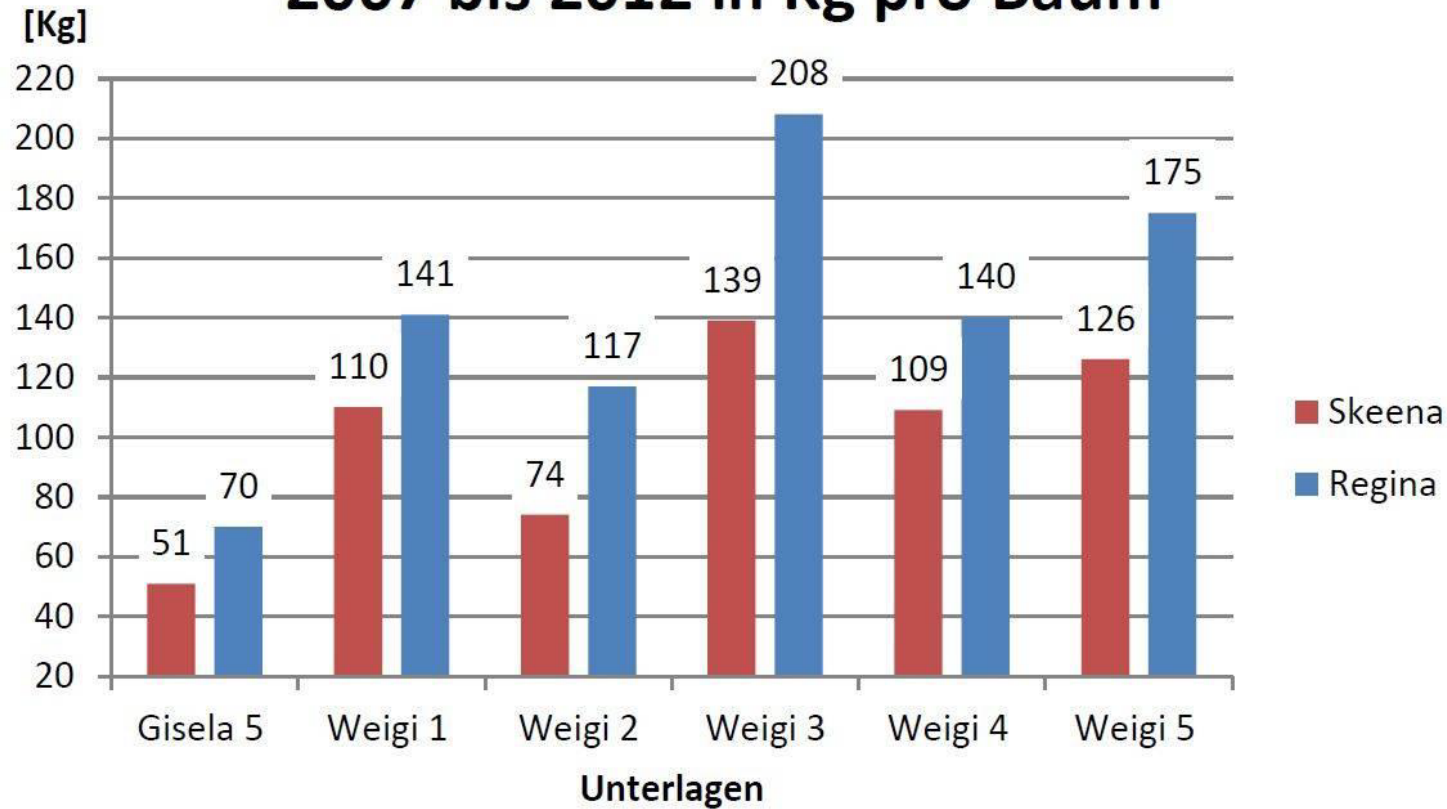


Experiences OGS Südbaden, Germany



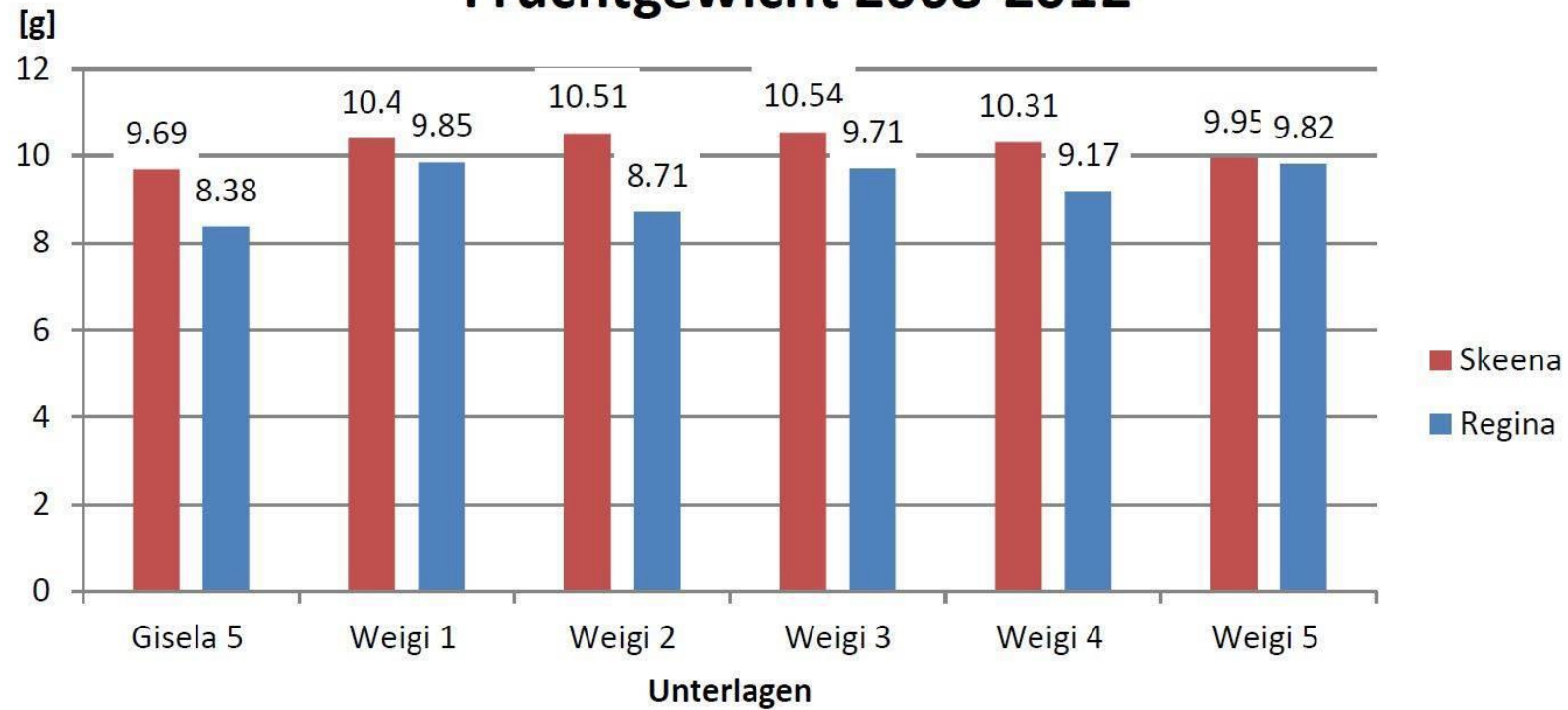
Test results, France, La Tapy

Standort La Tapy: Summierter Ertrag 2007 bis 2012 in Kg pro Baum

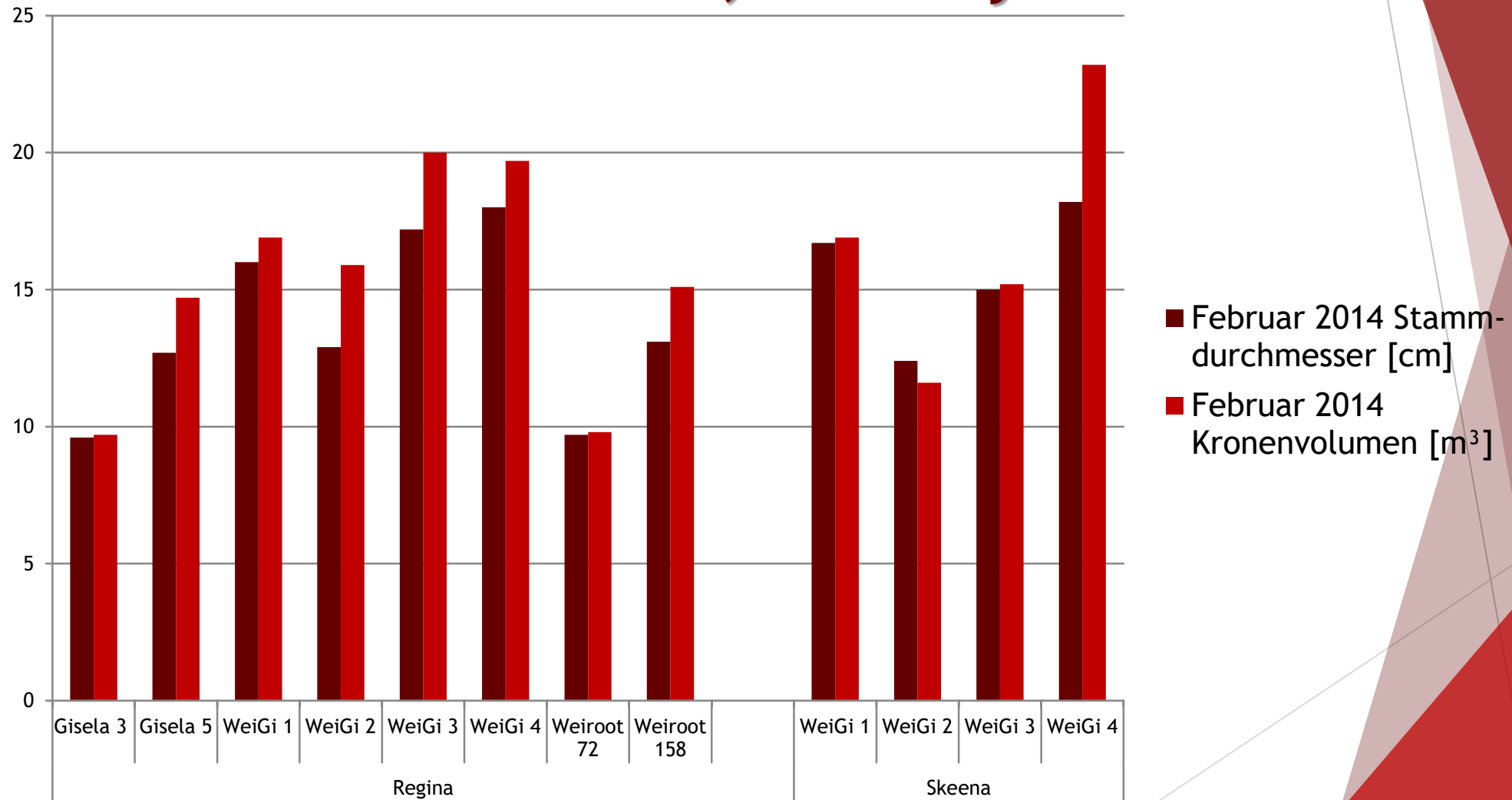


Test results, France, La Tapy

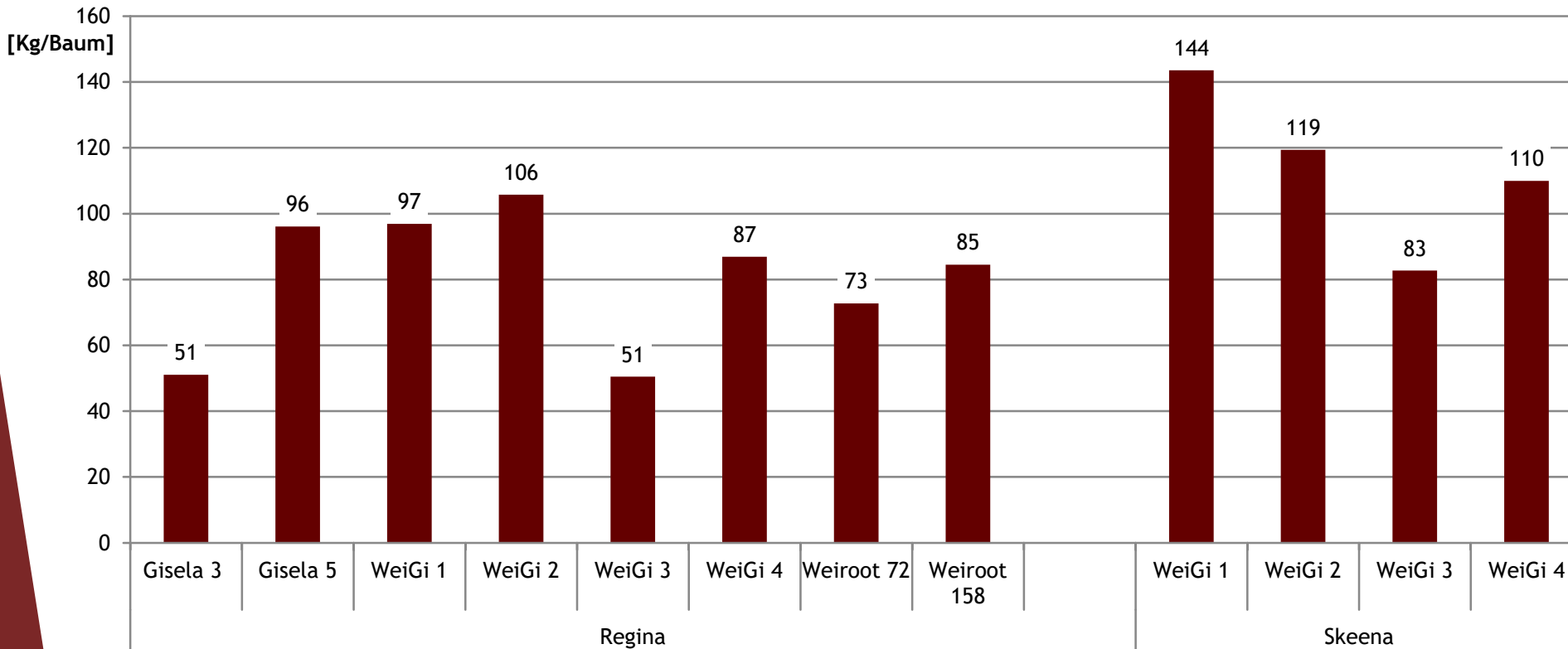
Standort La Tapy: Durchschnittliches Fruchtgewicht 2008-2012



Trunk diameter/crown volume 2006-2014, Veitshöchheim, Germany



Productions 2006-2014, Veitshöchheim, Germany



Production Regina (2017) and Kordia (2018)

Production kg/tree

	Regina				Kordia			
	Gi 5	Gi 13	Weigi 1	Weigi 2	Gi 5	Gi 13	Weigi 1	Weigi 2
	24.161+261	24.162+262	24.163+263	24.164+264	24.171+271	24.172+272	24.173+273	24.174+274
2018	1,0	0,1	0,5	0,5				
2019	5,2	0,6	1,4	2,6	1,0	0,3	0,6	
2020	13,7	14,4	9,2	13,4	2,3	2,4	3,0	0,6
2021	11,6	8,1	7,6	11,3	11,4	7,4	6,8	9,8
2022	18,2	12,5	12,6	14,2	10,5	9,7	9,0	8,2
2023	7,0	7,3	3,5	5,0	5,2	4,3	5,1	4,2
Summe	56,73	42,98	34,81	46,95	30,36	24,09	24,54	22,84
Mittelwert	9,45	7,16	5,80	7,83	6,07	4,82	4,91	5,71

Fruit weight Regina and Kordia

Fruit weight

	Regina				Kordia			
	Gi 5	Gi 13	Weigi 1	Weigi 2	Gi 5	Gi 13	Weigi 1	Weigi 2
	24.161+261	24.162+262	24.163+263	24.164+264	24.171+271	24.172+272	24.173+273	24.174+274
2018	10,8	1,3	10,8	11,3				
2020	9,4	12,4	9,5	11,2	11,4	11,6	10,9	12,4
2021	10,2	10,7	10,8	10,6	10,2	11,4	11,6	11,2
2022	10,3	11,2	9,9	8,4	8,9	8,3	9,4	9,0
2023	11,9	11,9	12,6	13,5	13,6	13,7	13,8	14,0
gew. Mittelw.	9,32	11,45	9,88	9,83	10,08	10,44	10,88	10,96

Fruit size in mm Regina and Kordia

Fruit size in mm

	Regina				Kordia			
	Gi 5	Gi 13	Weigi 1	Weigi 2	Gi 5	Gi 13	Weigi 1	Weigi 2
	24.161+261	24.162+262	24.163+263	24.164+264	24.171+271	24.172+272	24.173+273	24.174+274
2019								
2020	28,20	30,38	28,27	29,04	29,00	29,50	29,38	29,87
2021	26,59	27,21	27,17	27,05	26,62	27,70	27,54	27,50
2022	27,85	29,16	27,88	26,84	26,98	26,91	27,56	27,24
2023	29,48	29,53	30,78	30,74	30,74	30,92	30,95	31,22
Frg. Mittlw.	28,0	29,1	28,5	28,4	28,3	28,8	28,9	29,0

Firmness Regina and Kordia

Firmness in g/mm

	Regina				Kordia			
	Gi 5	Gi 13	Weigi 1	Weigi 2	Gi 5	Gi 13	Weigi 1	Weigi 2
	24.161+261	24.162+262	24.163+263	24.164+264	24.171+271	24.172+272	24.173+273	24.174+274
2019								
2020								
2021								
2022								
2023	258,7	232,3	251,3	238,9	225,4	239,2	239,9	237,6
Frg. Mittlw.	258,7	232,3	251,3	238,9	225,4	239,2	239,9	237,6

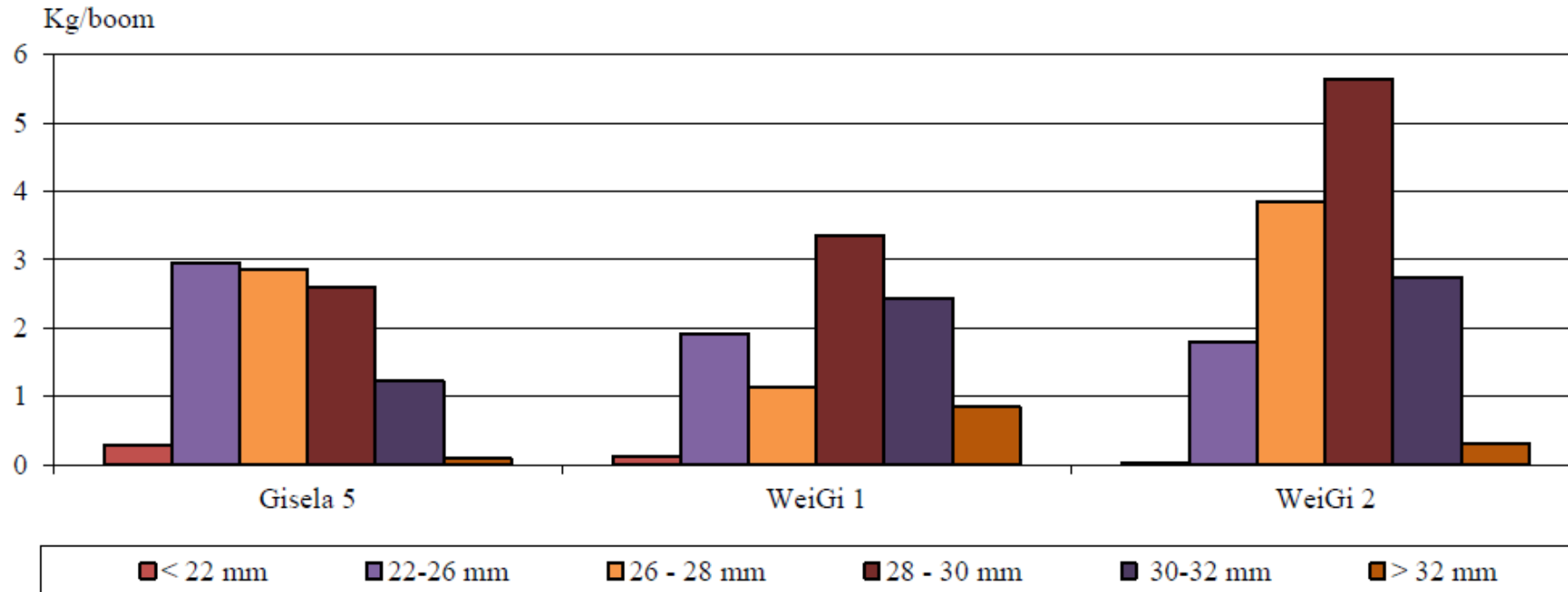
Rootstock trial Belgium Regina (2014 planted)

Rootstock	Increase trunk(cm) 2021	Total trunk increase (cm)	% t.o.v. Gi5	Diameter trunk (cm) 28-11-2021
Gisela 5	1.1	22.7	100	28.7
Weigi 1	1.9	31.2	137	36.9
Weigi 2	1.0	26.0	114	32.0

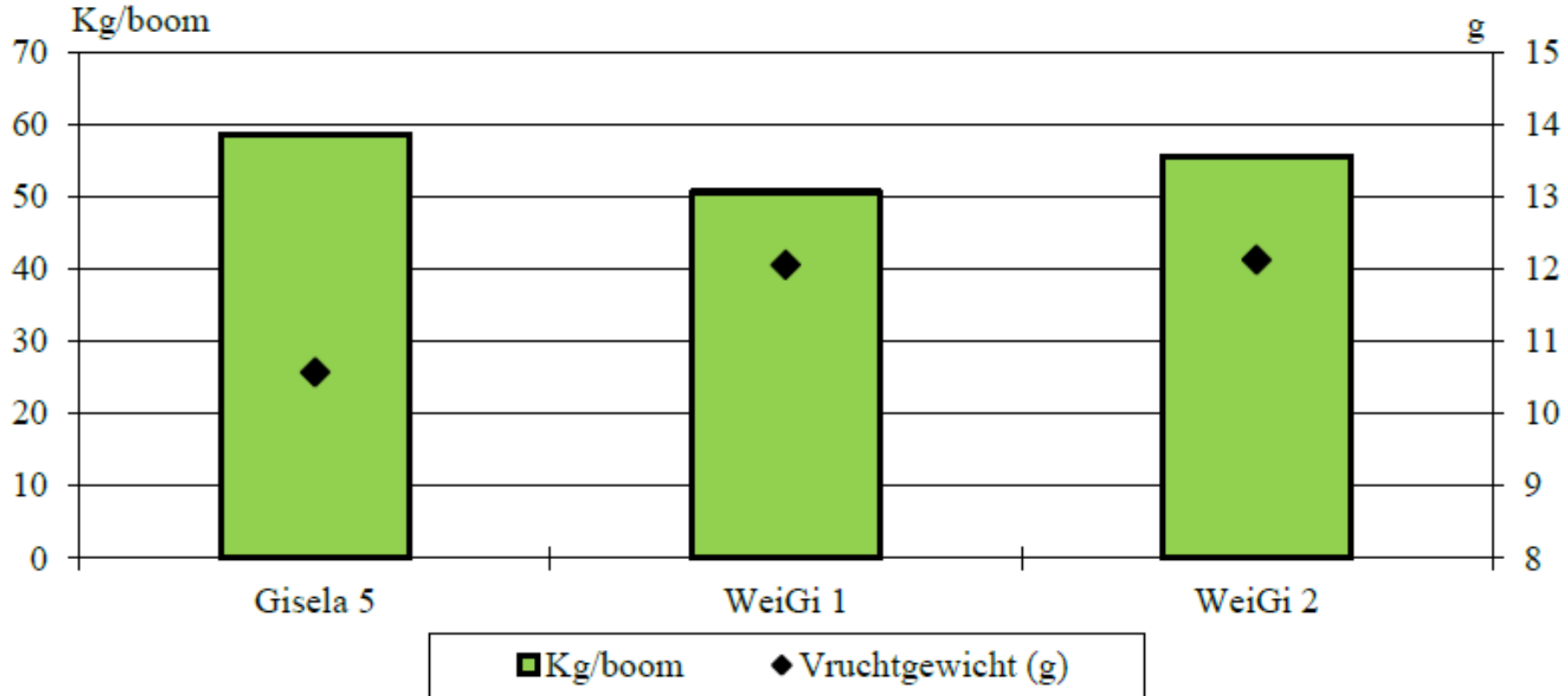
Rootstock trial, Belgium Regina (2014 planted)

rootstock	Kg/tree 2021	Fruit weight (g)	Ton/Ha	% > 28 mm
Gisela 5	11.2	11.4	12.6	34.9
Weigi 1	12.5	14.3	14.1	53.2
Weigi 2	16.1	12.5	18.1	54.0

Size sorting Regina 2021 in mm



Kg/Tree and Fruit Size Regina (2017-2021)



**THANK YOU FOR
YOUR ATTENTION**

www.weigi.com