



Summary of two-year demo trial on blueberries at BBG. (2021 & 2022)



Conclusions

- ▶ ChitosanHC can be presented with certainty as a remedy against fungi and bacteria (*Pseudomonas* and *Septoria*). The higher calcium values and lower ratio N/Ca are a sign of better resistance to disease and better health in general.
- ▶ It therefore appears not necessary to apply the addition of ChitosanHC throughout the season, and 4 sprayings from March to the end of May have been found to be sufficient. (4x 100gr/Ha/year, 160 eur/Ha/year)
- ▶ The other findings are not clearly supported enough by the figures to be used as arguments.
- ▶ European legislation and CTGB authorises the use of ChitosanHC as an antifungal and antibacterial agent in large fruits, soft fruit and berries.

Comments on the tables

- ✓ **Crop status and crop development**
- ✓ ChitosanHC has a plant resilience enhancing effect: the present Pseudomonas and Septoria are slowed down or stopped,
- ✓ In addition, ChitosanHC ensures a higher iron, calcium and silicon content in the leaf. Iron is important for the formation of chlorophyll and the fixation of nitrogen.
- ✓ ChitosanHC complexes the cations and allows their transport in the plant.
- ✓ ChitosanHC stimulates and accelerates growth and crop development. Due to the acceleration of crop development, the crop is 'ready' earlier at the end of the growing season, just as the fruits ripen earlier. The leaves fall earlier in November and the crop is closed faster.
- ✓ In terms of winter hardiness and frost resistance, we have not been able to determine it due to mild weather.
- ✓ No negative observations have been identified.

Comments on the tables

- ✓ **Fruit quality and yield**
- ✓ Initially, during the season, the fruiting of the ChitosanHC treatment was rated slightly better: fuller clusters throughout the plant, on both affected wood and healthy wood. (Pot size of 5 or 7.5 liters for the plants before transplantation can also have an influence on the observations).
- ✓ When looking at the fruit analyses, the ChitosanHC provides more calcium, magnesium and zinc in the fruits. The calcium contributes to the fruit quality and firmness of the fruits after picking. The ratio N/Ca is lower in treated fruits which is positive for the fruit quality.
- ✓ BRIX values are slightly higher for the treated fruits. '(more sugars and phenols).
- ✓ The yield has not been determined due to local circumstances.
- ✓ The shelf life test did not show a clear difference. (When picking, no account was taken of the fact that the treated fruits were ready earlier than the untreated fruits).
- ✓ No negative observations have been identified.

Observations

WAARNEMINGEN	BEHANDELD		ONBEHANDELD		EFFECT/COMMENTAAR	
	2021	2022	2021	2022		
Groeikract in Mei	4,00	4,40	3,35	4,65	Verschillende potten, 5 en 7,5 liter voor plantenmateriaal!	
Groeikracht in Juni	4,50	4,70	4,35	4,40		
Gewasstand in Aug.	4,60	-	4,40	-		
Gemmidelde vitaliteit	4,44		4,23		B > O	
Effect > Pseudomonas	X					
Effect > Septoria		X			+/- 50% minder vlekken	
Bladmonsters						
g/kg ds	N	16,50	17,80	15,50	18,97	
	P	1,00	1,30	1,00	1,40	
	K	6,00	6,30	6,00	6,60	
	Ca	4,20	4,30	3,60	4,50	B > O
	Mg	1,50	1,60	1,40	1,50	
	S	1,45	1,40	1,45	1,40	
mg/kg ds	Si	380,00	241,00	250,00	254,30	
	Al	30,00	20,00	20,00	17,50	
	Fe	45,00	53,90	45,00	44,20	B > O
	NH4	120,00	275,80	95,00	284,40	
	Cl	500,00	350,00	400,00	392,70	
RATIO						
	K/Ca	1,43	1,47	1,67	1,47	B < O
	N/Ca	3,93	4,14	4,31	4,22	B < O

Observations

WAARNEMINGEN	BEHANDELD		ONBEHANDELD		EFFECT/COMMENTAAR	
	2021	2022	2021	2022		
Vruchtmonsters						
mg/100g ds	N	800,00	850,00	710,00	1000,00	B < O
	P	100,00	100,00	100,00	100,00	
	K	610,00	660,00	620,00	650,00	
	Ca	68,00	69,00	56,00	64,00	B > O
	Mg	41,00	39,00	34,00	36,00	
	S	62,00	70,50	62,00	78,00	
mg/kg ds	Si	95,00	90,00	80,00	96,00	
	Al	18,00	8,00	9,00	8,00	
	Na	4,95	4,40	3,90	6,00	
	B	4,90	6,30	6,05	7,40	
	Cu	2,95		3,15		
	Mn	5,95	7,65	6,00	8,85	
	Zn	7,20	4,00	6,50	3,90	
RATIO						
	K/Ca	8,97	9,57	11,07	10,16	B < O
	N/Ca	11,76	12,32	12,68	15,63	B < O
BRIX		11,4	12,5	11,2	10,4	B > O
Houdbaarheid			42%		35%	aangetast na 1 maand
Opbrengst						niet bepaald (externe fakt.)
Eind seizoen		sneller klaar				soms beter