

STATUS OF TABLE GRAPE PLANTMATERIAL

AND WHAT WE CAN LEARN FROM THE SUCCESSES OF THE
WINE INDUSTRY

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SASEV/SATI Information days – 19, 21, 23 August 2019



WINE GRAPES VS TABLE GRAPES

WINE GRAPES	TABLE GRAPES
Use same cultivars over years	High demand for new cultivars to fit into market
Vine improvement scheme	Deciduous fruit improvement scheme

2018 – Vine improvement scheme



WINE GRAPES VS TABLE GRAPES

WINE GRAPES	TABLE GRAPES
22 397 128 vines grafted	21 042 686 vines grafted
71 varieties	83 varieties
245 clones	149 clones
93.8% certified in the scheme	53% certified in the scheme
<i>Statistics from 2018 VIA Annual Report</i>	<i>Statistics from 2018 VIA Annual Report</i>





wvvivia

*Ingevolge die Plantverbeteringwet (Wet nr. 53 van 1976),
is die Wingerdverbeteringsvereniging (WVV) die
aangewese organisasie wat wingerdverbetering in Suid-
Afrika koördineer en die "SA Plantsertifisering-skema vir
Wingerd" administreer*

Who is the VIA?

- Plant improvement organisations (7 PIO's)



- Nurseries (42)



- Producers organisations (3) Raisins-, Table and Wine grapes



What is certification?

It is the action or process to issue an **official document** which confirms the status of plant material

Certified plantmaterial

Plant material from a known source of which the phytosanitary status is known and it was handled according to prescribed processes

Certified plantmaterial must be evaluated:

- True to type
- Viticultural management
- Phytosanitary status

VIRUSES THAT OCCUR IN GRAPEVINE

- 85 viruses that can occur in grapevine
 - Viruses with a damaging effect on vines
 - Economic importance
- VIRUS FREE = Scion and rootstock material is free of the viruses prescribed in the plant improvement scheme

Economically important viruses (Plant improvement Scheme)

Name	Abbrev	Spread	Detection	Factor	Effect
Grapevine leafroll virus	GLRaV1-9	Mealy bug (vector)	ELISA, HWI, PCR	Prod; vig, qual	10-70%
Grapevine fanleaf virus	GVFLV	Xiphinema index (vector)	ELISA, HWI, PCR	Prod; vig, qual	10-80%
Grapevine stemgrooving virus	GVSGV	Graft; mechanical	ELISA, HWI, PCR	Prod; vig, qual	10%+
Corky bark	CB	Graft	ELISA, HWI, PCR	Prod; vig, qual	15%
Fleck	GFvK	Graft	ELISA, HWI, PCR	Prod; vig, qual	2-10%
Shiraz disease	SD	Graft	ELISA, HWI	Prod; vig, qual	2-10%
Vein necrosis	VN	Graft	HWI	Prod; vig, qual	2%
Vein mosaic	VM	Graft	HWI	Prod; vig, qual	2%



Grapevine bacteria

Name	Disease	Spread	Detection	Factor	Effect
<i>Agrobacterium vitis</i>	Crown gall	Vector; mechanical, graft	ELISA, PCR	Production; vigour	Little - Total
<i>Xilophilus ampelinus</i>	Bacterial blight	Vector; mechanical, graft	ELISA, PCR	Production; vigour	Little - Total



Grapevine fungi

Name	Other
<i>Phytophthora</i>	Root Rot
<i>Pythium</i>	Root Rot



Grapevine insects

Scientific Name	Common Name
<i>Margarodes</i>	Margarodes
<i>Meloidogyne</i>	Root knot nematode
<i>Pseudococcus; Planococcus</i>	Mealy bug
<i>Xiphinema index</i>	Dagger nematode
<i>Vitis vitifoliae</i>	Phylloxera



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WINGERDVERBETERINGSVERENIGING
VINE IMPROVEMENT ASSOCIATION

WVV C-2-4

**VOORGESKREWE SKEMA TOETSINTERVALLE VIR SERTIFISERING
VAN WINGERD EENHEDE (WVV C-1-3)**

	GFLV (Netelblaar)	GLRaV 1 - 3 (Rolblaar)	GVA (Gleufstam & Shirazsiekte)	GVB (Skurfbas)		
KERNEENHEID						
ALLE WINGERD	Elke 5 jaar (Nov/Des)	Elke 5 jaar (April/Mei)	Elke 5 jaar	Elke 5 jaar		
GRONDVESEENHEID						
ALLE WINGERD	Voor plant - Eenmalig (X. index)	Jaarliks visueel vry (*)	NOTAS: 1. <u>Slegs die volgende onderstamme kan (W2/**) wees:</u> <ul style="list-style-type: none"> • 143-B • US 8-7 • Jacquez Alle ander ondersokke (W1/*)			
	Na een jaar - Eenmalig stok vir stok (ELISA)	Jaarliks stok vir stok (**)				
MOEDEREENHEID						
ALLE WINGERD	Voor plant - Eenmalig (X. index)	Jaarliks visueel vry (*)			2. <u>Alle toetse moet negatief toets met ELISA</u>	
	Na een jaar - Eenmalig stok vir stok (ELISA)	Jaarliks stok vir stok (**)				



VOORGESKREWE FITOSANITÊRE TOETSE VIR WINGERDKLONE IN TERME VAN DIE SKEMA

SIEKTE	Netelblaar	Vlek	Rolblaar	Skurfbas	Gleufstam (Kober 5BB)	Stam-verpitting (Rupestris)	Shirazsiekte	Nerf Nekrose	Nerf Mosaïek
BOSTOKKE									
KANDIDAAT KLOON	ELISA	ELISA – GfKv	ELISA -GLRaV 1 to 3	ELISA – GVB	ELISA – GVA	GEEN	ELISA – GVA ELISA -GLRaV3	GEEN	GEEN
REGISTER KLOON	PKR	PKR	PKR	PKR	PKR	PKR	PKR	GEEN	GEEN
ONDERSTOKKE									
KANDIDAAT KLOON	ELISA	ELISA – GfKv	ELISA -GLRaV 1 to 3*	ELISA – GVB*	ELISA – GVA*	NONE	ELISA – GVA* ELISA -GLRaV3*	GEEN	GEEN
REGISTER KLOON	PKR	PKR	PKR	PKR	PKR	PKR	PKR	HI	HI

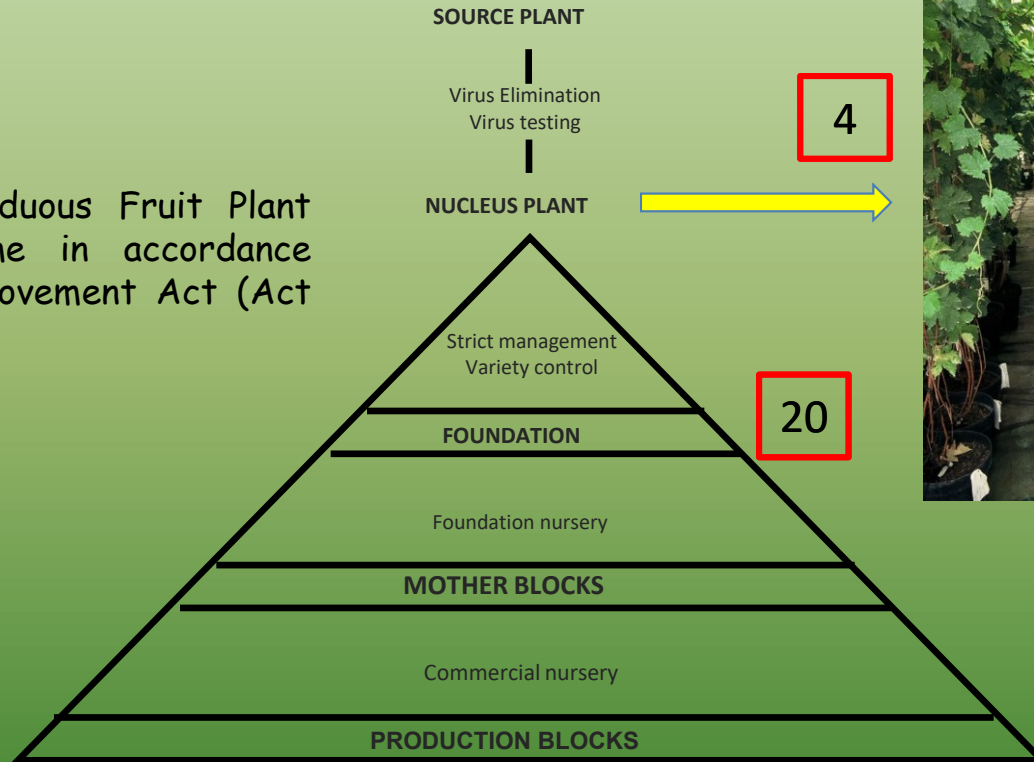
*Slegs *Vitis vinifera* kruisings

ELISA toets vir Vlek – nie gevalideer

PKR – toetse moet uitgevoer word deur AWRI (voorheen Waite Diagnostics)

ROAD TO CERTIFICATION

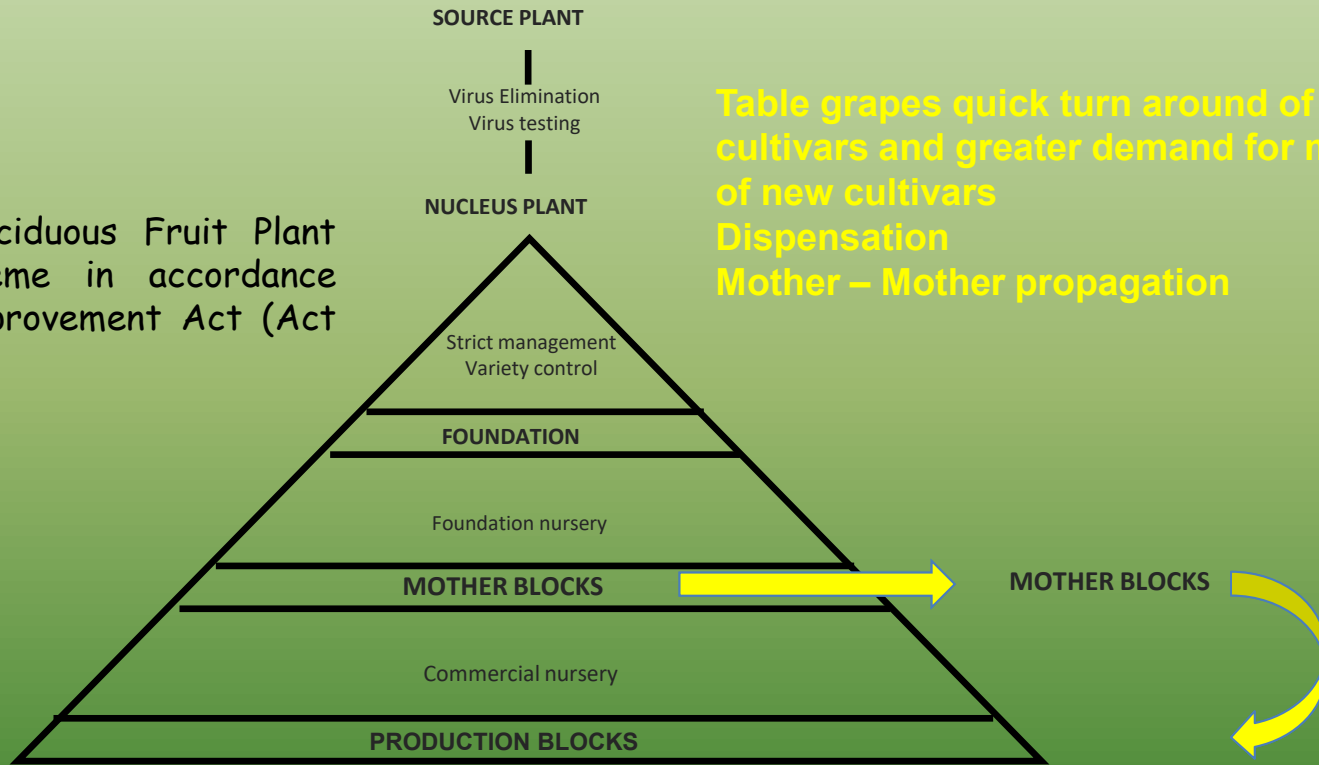
South African Deciduous Fruit Plant Certification Scheme in accordance with the Plant Improvement Act (Act 53 of 1976)



The "classical" route of plant certification

ROAD TO CERTIFICATION

South African Deciduous Fruit Plant Certification Scheme in accordance with the Plant Improvement Act (Act 53 of 1976)



The “classical” ~~road~~ of plant certification



PLANT IMPROVEMENT INITIATIVES TO ADDRESS THE MOTHER TO MOTHER NON CLASSICAL ROUTE

- RaisinsSA, SATI & SAPO – quality of material
- Especially material that did not go the classical route
- Mother blocks older than 10 years not used
- Younger than 10 years – bigger foundation blocks
- In order to establish new mother blocks faster
- To be able to address the demand for material, especially new cultivars
- Cannot happen over night – dispensation to phase it in over 3 years



WHAT CAN WE LEARN OUT OF THE SUCCESSES OF THE WINE INDUSTRY

- Must try to get a higher % of material certified, more control over the whole process and phytosanitary status
- Mother blocks in isolated areas



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WINGERDVERBETERINGSVERENIGING
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20-09-2018

- Vine by vine testing of mother blocks for leafroll – higher cost for vines to be paid by producer
- Research to determine which cultivars can be evaluated visually and which ones need to be tested with ELISA

THANK YOU !!!

