



wvv|via

WINGERDVERBETERINGSVERENIGING
VINE IMPROVEMENT ASSOCIATION

ANNUAL REPORT **2022**



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VINE IMPROVEMENT ASSOCIATION

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SUID-AFRIKAANSE PLANTSERTIFISERINGSKEMA VIR VITIS
SOUTH AFRICAN PLANT CERTIFICATION SCHEME FOR VITIS

1. MEMBERS OF THE VIA

1.1 Producer organisations

The following producer organisations were registered members of the VIA during 2022:

Vinpro (wine grape producers)
SATI (table grape producers)
Raisins SA (drying grape producers)

1.2 Plant Improvement Organisations

The following Plant Improvement Organisations were members of the VIA in 2022:

Bosman Adama
Hexberg Kwekery
SAPO Trust
Stargrow
TopFruit
Vititec
Voor-Groenberg

1.3 Nurseries

There were 58 nurseries registered to produce vines in 2022, 24 of these were registered by five of the seven Plant Improvement Organisations as foundation nurseries. Four of the registered foundation nurseries and one commercial nursery did not submit a return. The SA Vine Growers Association (SAVGA) represented the nurserymen on the VIA Board and Technical Committee.

The list of registered nurseries (in alphabetical order) is as follows:

CERT VIA REGISTERED NURSERIES 2022-2023

10296	Babilons Kwekery
10230	Bacchus Kwekery
10229	Bosman Adama Kwekery
12091	Bosman Fisantevlug Kwekery
12012	Bosman Herculesfontein Kwekery
12089	Bosman Moutonshoek Kwekery
12090	Bosman Nuhoop Kwekery
10218	Constantia Kwekery
10224	Cordiersrus Kwekery
10566	Cornerstone Nursery
12094	Cornerstone Vines
10779	Duikerfontein Kwekery
10203	Elnie Kwekery
10611	Fleury Kwekery
10356	Groenendal Kwekery
10226	Hexberg Kwekery
12099	Hexberg-Gifberg Kwekery
10391	Koplande Boerdery
10204	Leeuwrivier Kwekery
10232	Mischa Premier Vines
10277	NR Ennis Boerdery
10396	Olifantskop Kwekery
11703	Oranjerivier Wingerd Kwekery
10205	Patatskloof Familietrust
10615	Rooiheuvel Kwekery
10780	Solitaire Boerdery
10801	Stargrow Marthinusrust
10440	Vergesig Kwekery
11752	Vitigraft BK
11579	Vititec Bokloof
12004	Vititec Kleinfontein
11746	Vititec Picardi
10394	Wamakersvallei Kwekery
10223	Welvanpas Kwekery

PIO registered foundation nurseries

Bosman GV Kwekerye
SAPO GV Kwekerye
Stargrow GV Kwekerye
Vititec GV Kwekerye
Voor-Groenberg GV Kwekerye

2. COMPOSITION OF THE BOARD, THE EXECUTIVE COMMITTEE AND THE TECHNICAL COMMITTEE

2.1 VIA BOARD MEMBERS

Mr Theo Heydenrych served as chairman of the VIA Board. The following members represent their respective organisations:

Producers

Mr.	S Jordaan	Raisins SA
Mr.	D Moelich	SATI
Mr.	H Botha	Vinpro NPC
Mr.	JF Viljoen	Vinpro NPC

PIO's

Mr.	JC Bosman	Bosman Adama
Mr.	M Roux	Hexberg (From 01.03.2022)
Ms.	R Carstens	SAPO Trust
Mr.	MH Prins	Stargrow
Mr.	S Amos	TopFruit
Mr.	A Van Wyk	Vititec
Mr.	J Wiese	Voor-Groenberg

Nurseries

Mr.	W Laubscher	SAVGA
Mr.	HJT Heydenrych	SAVGA

Co-opted members

Mr.	NL Africander	Department of Agriculture, Land Reform and Rural Development (DALRRD)
Mr.	H Mootane	DALRRD (Acting Registrar)
Mr.	JH Booyesen	Chairman – Technical Committee
Prof.	F Halleen	Agricultural Research Council - Nietvoorbij

Secretary

Ms.	RM Kriel	Plant SA
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2.2 EXECUTIVE COMMITTEE

Mr.	HJT Heydenrych (Chairman)
Mr.	W Laubscher
Mr.	MH Prins

2.3 TECHNICAL COMMITTEE

Mr.	JH Booyesen	Independent (Chairman)
Mr.	AJ Jansen Van Vuuren	TopFruit
Ms.	MC Louw	Bosman Adama (Until 28.02.2022)
Mr.	G Botma	Bosman Adama (From 01.03.2022)
Mr.	T Oosthuizen	Vititec (Until 23.10.2022)
Mr.	H Slabber	Vititec (From 24.10.2022)
Mr.	MH Prins	Stargrow
Mr.	J Laubscher	Voor-Groenberg
Mr.	D Venter	Hexberg (From 01.03.2022)
Ms.	S Malan	SAPO Trust
Mr.	T Heydenrych (Jr)	SAWKV
Mr.	JH Malan	SAWKV
Mr.	D Moelich	SATI
Mr.	S Jordaan	Raisins SA
Mr.	C Schutte	Vinpro
Mr.	HP Gerber	BG Plantinspeksie Konsultante

Co-opted

Ms.	I du Toit	Inspection Services - DALRRD
Ms.	L Frazenburg	Plant Health - DALRRD
Ms.	P Burger	Agricultural Research Council
Dr.	G Pietersen	Patho Solutions
Ms.	RM Kriel	Secretary

3. DIRECTORS OF PLANT SA

The following VIA members served as Directors of Plant SA in 2022:

Mr. HJT Heydenrych (Vice Chairman), Mr. JC Bosman, Mr. JF Viljoen and Mr. A Van Wyk served as alternate director.

4. FINANCIAL STATEMENT AS AT 31 DECEMBER 2022

According to the preliminary audited Income and Expenditure Statement for the financial year 1 January 2021 to 31 December 2022, as compiled by BGR de Villiers, the financial year ended with a surplus of R 43 748.

As a result of this surplus, the accumulated funds of the VIA increased from R 637 937 on 1 January 2022 to R 681 685 on 31 December 2022.

5. SUMMARY OF THE ACTIVITIES OF 2022

- Hexberg registered as PIO with the VIA in January 2022.
- Local PCR tests are approved for registered clone applications.
- The routine annual soil analysis for *X. index* is decreased to rotating tests on a five-year basis in established nursery units that are utilised on an alternate basis.

- The last of the uneconomical old type of Tyvek certification labels were issued in 2022. All the nurseries have switched over to the new labels and the old “sprocket” labels are no longer in use.
- The PIO and Producer members took part in a nationwide survey to confirm that *Xylella fastidiosa* is not present in South-Africa.

6. GRAFTED VINES AVAILABLE FROM NURSERIES

The figures for vines available from registered nurseries for 2022 are compared in **Table 1** with the corresponding figures for 2021.

Table 1 Corresponding figures for vines lifted in 2022 compared to 2021

	2021	2022
WINE GRAPES		
Number of nurseries	37	38
Vines lifted	9 533 603	9 563 554
Grafting efficacy (%)	45%	44%
% Certified & Candidate	97%	96%
TABLE GRAPES		
Number of nurseries	34	37
Vines lifted	5 457 185	4 494 499
Grafting efficacy (%)	39%	40%
% Certified & Candidate	46%	53%
DRYING GRAPES		
Number of nurseries	28	34
Vines lifted	2 834 637	2 704 041
Grafting efficacy (%)	38%	40%
% Certified & Candidate	96%	87%
TOTAL		
Number of nurseries	42	49
Vines lifted	17 825 425	16 893 282
Grafting efficacy (%)	42%	42%
% Certified & Candidate	81,2%	81,4%

7. STATE OF CLONES

There were 16 clones that upgraded to registered status while 16 candidate clones were added to the clone register.

Requests for the scrapping of clones included one registered clone and three candidate clones.

Clones listed in the clone register on 31 December 2022 is summarised in **Table 2**.

TABLE 2 Number of varieties and clones listed by status

		CANDIDATE	REGISTERED	TOTAL	OFFICIAL VARIETIES
WINE GRAPES	VARIETIES	137	89	168	152
	CLONES	406	486	892	
TABLE GRAPES	VARIETIES	110	52	141	212
	CLONES	161	76	237	
DRYING GRAPES	VARIETIES	9	8	13	13
	CLONES	28	20	48	
ROOTSTOCKS	VARIETIES	38	16	44	48
	CLONES	70	75	145	

- There are 29 wine grape varieties, 102 table grape varieties and one drying grape variety on the official variety list that is not currently on the official clone register. These varieties have become redundant or belong to owners that do not participate in the VIA scheme. Only 11 of these varieties were propagated in 2022.
- There are candidate clones of 45 wine grape varieties, 32 table grape varieties and 1 drying grape variety that are not on the official variety list.
- In the past year, an average of 31% of the scion clones on the register were utilised, while an average of 45% of the varieties on the register were utilised. (This utilisation refers to plant material issued to growers.)

- There are currently 172 grapevine varieties with Plant Breeders' Rights, of which two are rootstock varieties.

➤ *For the purposes of this report, all varieties that can be used as drying grapes according to the official variety list have been fully included in the drying grape component.*

8. STATE OF THE BLOCK UNITS

8.1 Rootstocks

The changes to the rootstock block register for 2022 includes the addition of 30 rootstock units while 55 units have been scrapped.

The state of the rootstock block units as recorded on 31 December 2022, are summarised in **Table 3**. The rootstock block units without status includes experimental varieties as well as units where the fan leaf test results are still outstanding.

TABLE 3 Number of rootstock varieties and clones by certification category and unit type

	STATUS		VARIETIES	CLONES	PREMISES	UNITS	VINES
FOUNDATION	CERTIFIED	W1	13	26	20	119	529 849
		W2	2	2	4	8	21 258
	CANDIDATE	K1	16	17	5	27	17 464
		K2	3	3	2	3	9 040
	NONE		7	8	7	12	30 768
	TOTAL		24	41	23	169	608 379
MOTHER	CERTIFIED	W1	9	21	42	226	921 471
	CANDIDATE	K1	2	2	2	3	6 406
		K2	1	1	1	1	5 040
	NONE		7	9	10	17	85 037
	TOTAL		9	22	48	247	1 017 954
GRAND TOTAL			24	42	64	416	1 626 333

8.2 Scions

The changes to the scion block register for 2022 include the addition of 288 scion units while 318 units have been scrapped.

There is a drop in the number of wine grape foundation block units which can largely be attributed to a large decrease in the number of units that have not been tested for leafroll (from 1 041 090 vines in 2021 to only 345 013 vines).

The total number of foundation vines for table grapes increased with 159% while the number of drying grape vines almost doubled.

The number of mother blocks for all types of vines decreased with the biggest decline for drying grapes where the number of vines in mother blocks almost halved.

In **Table 4** the number of scion vines (wine, table, and drying grapes) planted in foundation- and mother block units, as at 31 December 2022, are summarised according to certification status.

TABLE 4 Number of scion varieties and clones according to unit type and status

		STATUS		VARIETIES	CLONES	PREMISES	UNITS	VINES	
WINE GRAPES	FOUNDATION	CERTIFIED	W1	13	51	29	128	344 181	
			W2	86	420	34	1 861	330 744	
		CANDIDATE	K1	5	5	3	7	832	
			K2	92	159	10	308	6 936	
		NONE		44	92	21	116	128 200	
		TOTAL		148	596	57	2 420	810 893	
	MOTHER	CERTIFIED	W1	56	181	104	626	2 468 079	
			W2	4	4	3	4	39 812	
		CANDIDATE	K1	8	8	12	4	11 815	
			K2						
		NONE		18	59	31	90	231 200	
		TOTAL		61	218	121	732	2 750 906	
	GRAND TOTAL			149	614	143	3 152	3 561 799	
	TABLE GRAPES	FOUDATION	CERTIFIED	W1	1	1	1	1	1 474
				W2	43	55	13	105	27 322
CANDIDATE			K1	13	13	5	17	5 607	
			K2	89	105	12	216	19 196	
NONE				29	32	9	45	32 481	
TOTAL				116	149	25	384	86 080	
MOTHER		CERTIFIED	W1	4	4	5	6	23 915	
			W2	2	3	3	3	7 928	
		CANDIDATE	K1	3	3	3	3	6 930	
			K2	5	5	6	9	16 452	
		NONE		8	8	9	11	64 223	
		TOTAL		13	16	22	32	119 448	
SOURCE		CANDIDATE	K1	6	6	3	7	19 705	
			K2	3	3	3	3	16 911	
		NONE		4	4	6	10	33 182	
		TOTAL		11	11	10	20	69 798	
GRAND TOTAL			118	151	51	461	275 316		
DRYING GRAPES		FOUNDATION	CERTIFIED	W1	2	2	2	2	8 544
	W2			7	17	13	57	54 392	
	CANDIDATE		K1	2	3	4	4	8 575	
			K2	8	15	8	38	31 256	
	NONE			4	5	9	16	54 343	
	TOTAL			10	27	20	117	161 094	
	MOTHER	CERTIFIED	W1	2	4	9	14	33 305	
			W2	3	3	3	4	19 889	
		CANDIDATE	K1	1	1	1	1	1 894	
			K2	1	1	1	1	559	
		NONE		2	4	5	7	46 250	
		TOTAL		4	8	15	27	101 897	
GRAND TOTAL			11	28	32	146	263 086		

9. PLANT MATERIAL ISSUED TO NURSERIES

9.1 Rootstocks

There were 42.5 M, rootstocks issued in 2022 (40.4 M in 2021), of which 99.3% were certified. There were 39.5 M rootstocks grafted of which 97.6% were certified (39.2 M in 2021).

A total of 949 899 uncertified rootstocks were utilised, of which 128 900 were grafted with certified scion material. Thus 0,4% of grafted vines do not have status due to the use of uncertified rootstocks.

The grafted rootstocks (**Table 5**) came from 18 different varieties (in 2021 there were 13) and 34 different clones (31 in 2021).

TABLE 5 Rootstocks grafted in 2022

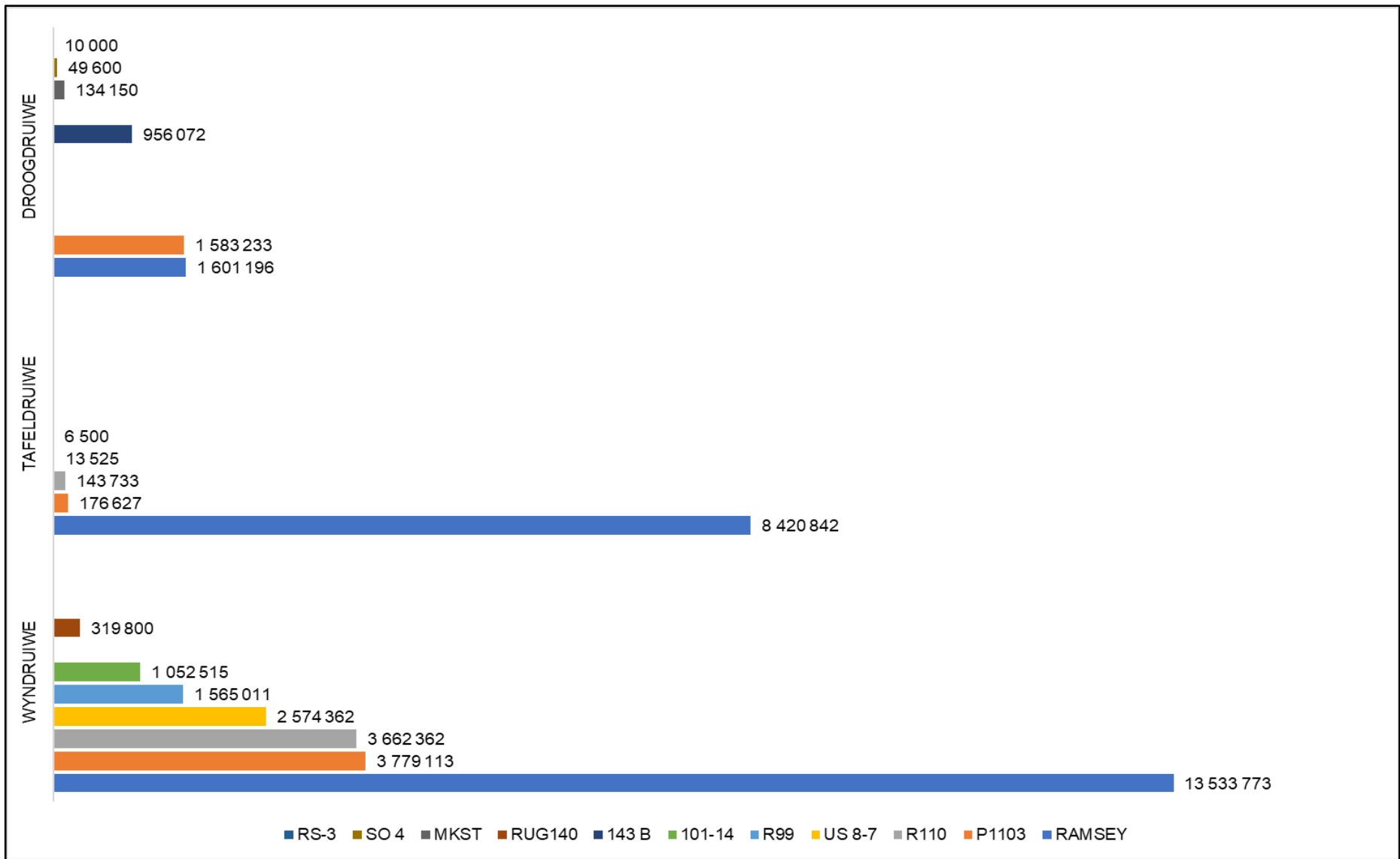
VARIETY	NUMBER OF CLONES	NUMBER OF SHOOTS
RAMSEY	4	23 555 810
PAULSEN 1103	3	5 538 973
RICHTER 110	3	3 806 095
US 8-7	3	2 587 887
RICHTER 99	3	1 571 511
101-14 MGT	2	1 052 639
143 B MGT	3	956 161
RUGGERI 140	3	319 800
SO 4	1	50 500
OTHER (9 VAR)	9	12 992

Of the 31 rootstock clones utilised, 10 clones made up 86% of the total utilisation. The utilisation of the top 10 clones is indicated in **Table 6**.

TABLE 6 Top 10 rootstock clones grafted in 2022 compared to 2021

VARIETY	CLONE	2021	2022
RAMSEY	SC 18 AB	8 582 207	9 044 039
RAMSEY	SC 18 AE	8 996 928	8 996 150
RAMSEY	SC 18 AH	1 904 097	3 878 080
P1103	PS 28 I	3 574 615	3 439 071
R 110	RQ 28 C	2 351 656	2 544 283
P1103	PS 28 G	1 899 418	1 900 527
US 8-7	UC 274 A	2 383 450	1 802 206
RAMSEY	SC 19 E	1 345 343	1 230 906
R 110	RQ 244 D	1 242 170	1 191 299
R 99	RY 13 C	1 050 985	961 445

Graph 1 shows the utilisation of the different rootstock varieties for wine grapes, table grapes and drying grapes, respectively. Where less than 5 000 vines have been grafted per rootstock variety - the rootstock is not included in the graph.



GRAPH 1 Rootstocks grafted in 2022

9.2 Wine grapes grafted in 2022

- 26 488 378 vines grafted vs. 21 304 814 in 2021
- 47 white varieties (14 557 813 vines)
- 45 red varieties (11 930 565 vines)
- 267 different clones
- 97.8% of grafted vines are certified/candidate
- 20.7% of grafted vines are from units tested for leafroll (18.5% in 2021)

Table 7 lists the 20 wine grape clones of which the most material was grafted in 2022 compared to the same clones grafted in 2021.

TABLE 7 The top 20 wine grape clones, grafted in 2022 compared to 2021

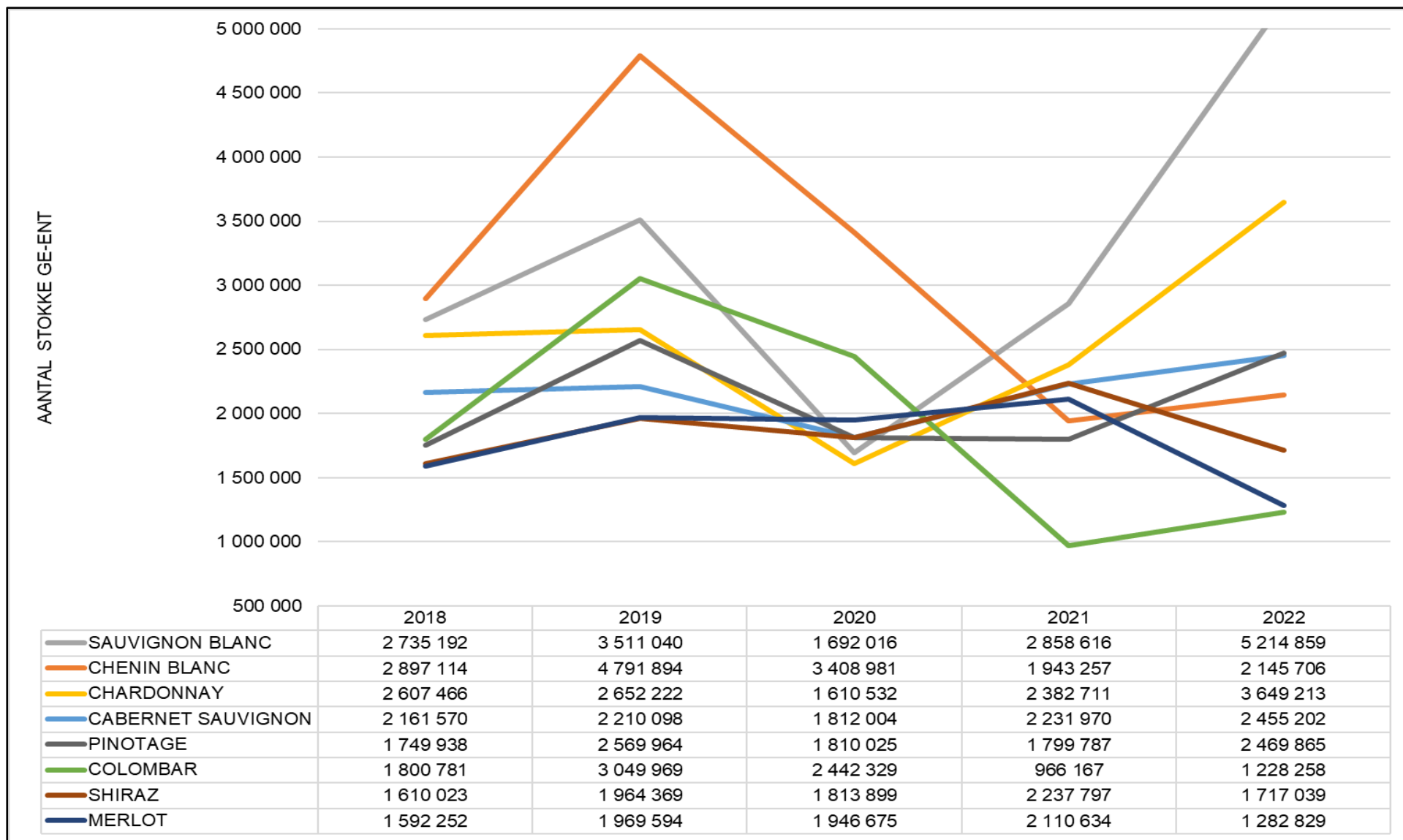
VARIETY	CLONE	2021	2022
SAUVIGNON BLANC	SB 316 G	813 225	1 716 542
CHARDONNAY	CY 55 R	1 113 789	1 698 278
SAUVIGNON BLANC	SB 242 B	534 863	1 222 170
PINOTAGE	PI 48 A	695 488	1 031 324
MERLOT	MO 348 A	1 701 297	965 395
COLOMBAR	CO 1098 Q	848 407	899 473
SHIRAZ	SH 9 C	809 825	888 222
CHARDONNAY	CY 95 B	493 427	738 587
PINOTAGE	PI 48 C	302 545	673 393
CHENIN BLANC	SN 220 C	518 891	660 587
DURIF	DF 1 A	481 530	649 556
SAUVIGNON BLANC	SB 7 A	291 222	574 682
CABERNET SAUVIGNON	CS 15 M	672 571	564 931
PINOT GRIS	PG 40 B	135 097	559 205
RUBY CABERNET	RC 1 A	665 052	548 616
SAUVIGNON BLANC	SB 11 O	127 300	536 337
CABERNET SAUVIGNON	CS 46 C	221 875	530 645
SAUVIGNON BLANC	SB 11 R	415 468	510 828
CHENIN BLANC	SN 220 B	549 247	493 200
CABERNET FRANC	CF 214 B	113 579	477 251

The ten largest wine grape varieties grafted in 2022 are as follows:

- 1) Sauvignon blanc (20 clones) – 5 214 859 vines
- 2) Chardonnay (20 clones) – 3 649 213 vines
- 3) Pinotage (14 clones) – 2 469 865 vines
- 4) Cabernet sauvignon (18 clones) – 2 455 202 vines
- 5) Chenin blanc (14 clones) – 2 145 706 vines
- 6) Shiraz (20 clones) – 1 717 039 vines
- 7) Merlot (11 clones) – 1 282 829 vines
- 8) Colombar (7 clones) – 1 228 258 vines
- 9) Pinot noir (9 clones) – 745 857 vines
- 10) Durif (1 clone) – 649 556 vines

The top 3 white wine grape varieties make up 80% of the total, while the top 6 red wine grape varieties make up 80% of the total.

Graph 2 shows the number of wine grape vines grafted over the last five years of the eight most used varieties in 2022. The order in which the varieties appear refers to the total number of vines made over the five-year period.



GRAPH 2 Top 8 wine grape varieties grafted in 2022

9.2 Table grape vines grafted in 2022

- 8 762 340 grafted compared to 11 002 751 in 2021
- 193 varieties (55 clones)
- 50 official varieties (21 with registered clones / 25 with candidate clones)
- 143 experimental varieties (10 with candidate clones)
- 50.3% of grafted vines are certified/candidate compared to 45.6% in 2021
- 46.8% of grafted vines are from units tested for leafroll (55.7% in 2021)

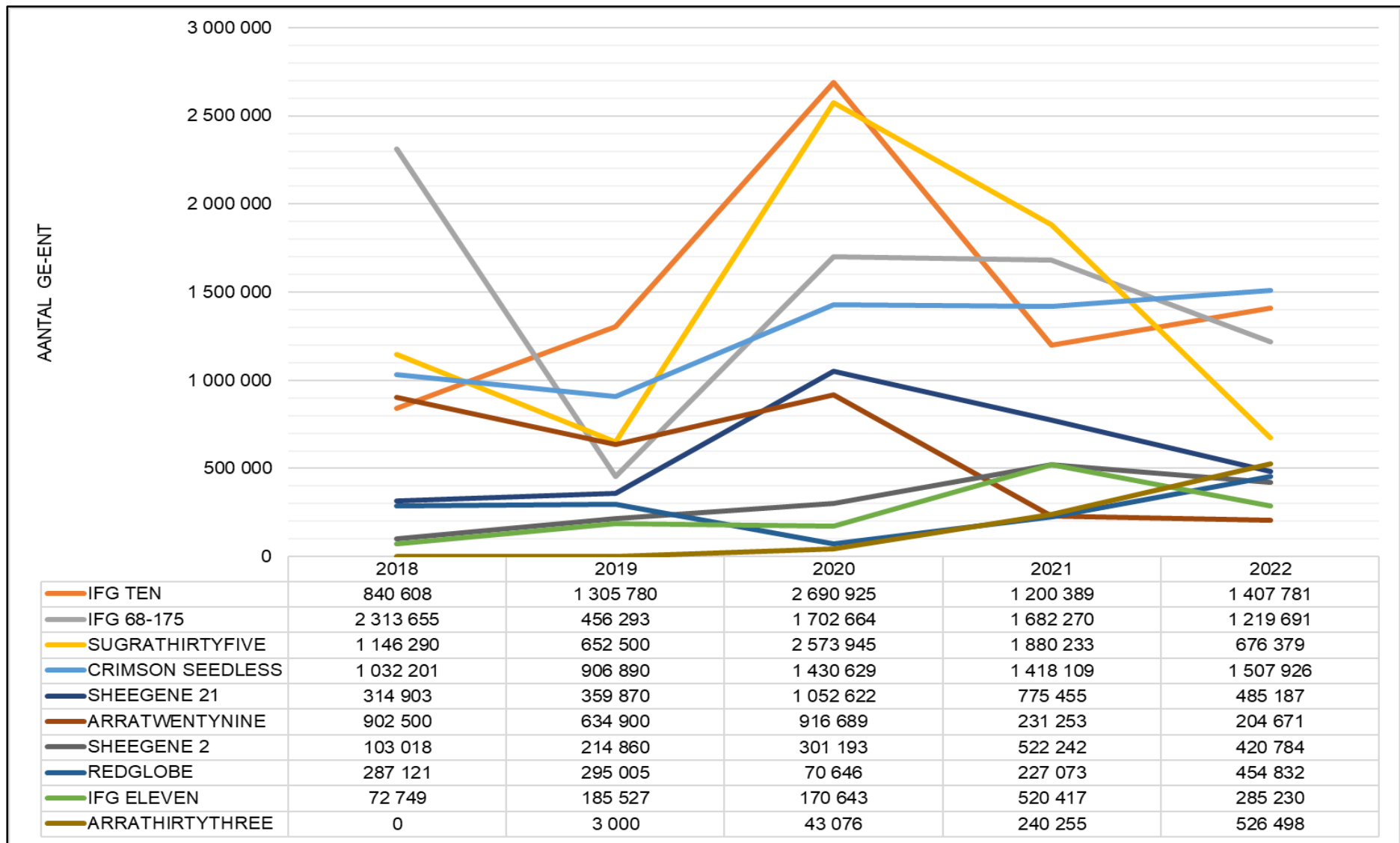
Table 8 lists the 20 largest table grape varieties grafted as well as the % certified material issued thereof.

TABLE 8 Top 20 table grape varieties grafted in 2022 compared to 2021

VARIETY	2021	% CERTIFIED	2022	% CERTIFIED
CRIMSON SEEDLESS	1 418 109	77%	1 507 926	81%
IFG TEN	1 200 389	52%	1 407 781	43%
IFG 68-175	1 682 270	33%	1 219 691	47%
SUGRATHIRTYFIVE	1 880 233	95%	676 379	77%
ARRATHIRTYTHREE	240 255	1%	526 498	1%
SHEEGENE 21	775 455	17%	485 187	69%
REDGLOBE	227 073	85%	454 832	81%
SHEEGENE 2	522 242	2%	420 784	61%
IFG ELEVEN	520 417	39%	285 230	65%
ARRATWENTYNINE	231 253	4%	204 671	45%
<i>ITUM FIFTEEN</i>	13 830	44%	137 750	2%
SHEEGENE 20	78 325	14%	114 767	30%
ARRAFIFTEEN	180 750	0%	106 800	0%
EVANS DELIGHT	104 858	0%	100 050	0%
<i>ARRATHIRTYFIVE</i>			90 900	0%
PRIME	405 824	0%	89 446	0%
<i>SUGRAFIFTYTHREE</i>	700	100%	80 534	3%
IFG SEVEN	21 668	1%	74 445	21%
<i>ARRATHIRTYSEVEN</i>			60 500	0%
<i>VOL 1-3-2-4</i>			57 322	0%

The varieties indicated in italics in Table 8 are not yet on the official variety list and are considered experimental. Propagation of more than 10 000 vines is permitted with dispensation from the Registrar of Plant Improvement.

Graph 3 shows the number of table grape vines grafted over the last five years, of the ten most used varieties in 2022. The order in which the varieties appear refers to the total number of vines made over the five-year period.



GRAPH 3 Top 10 table grape varieties grafted in 2022

9.3 Drying grape vines grafted in 2022

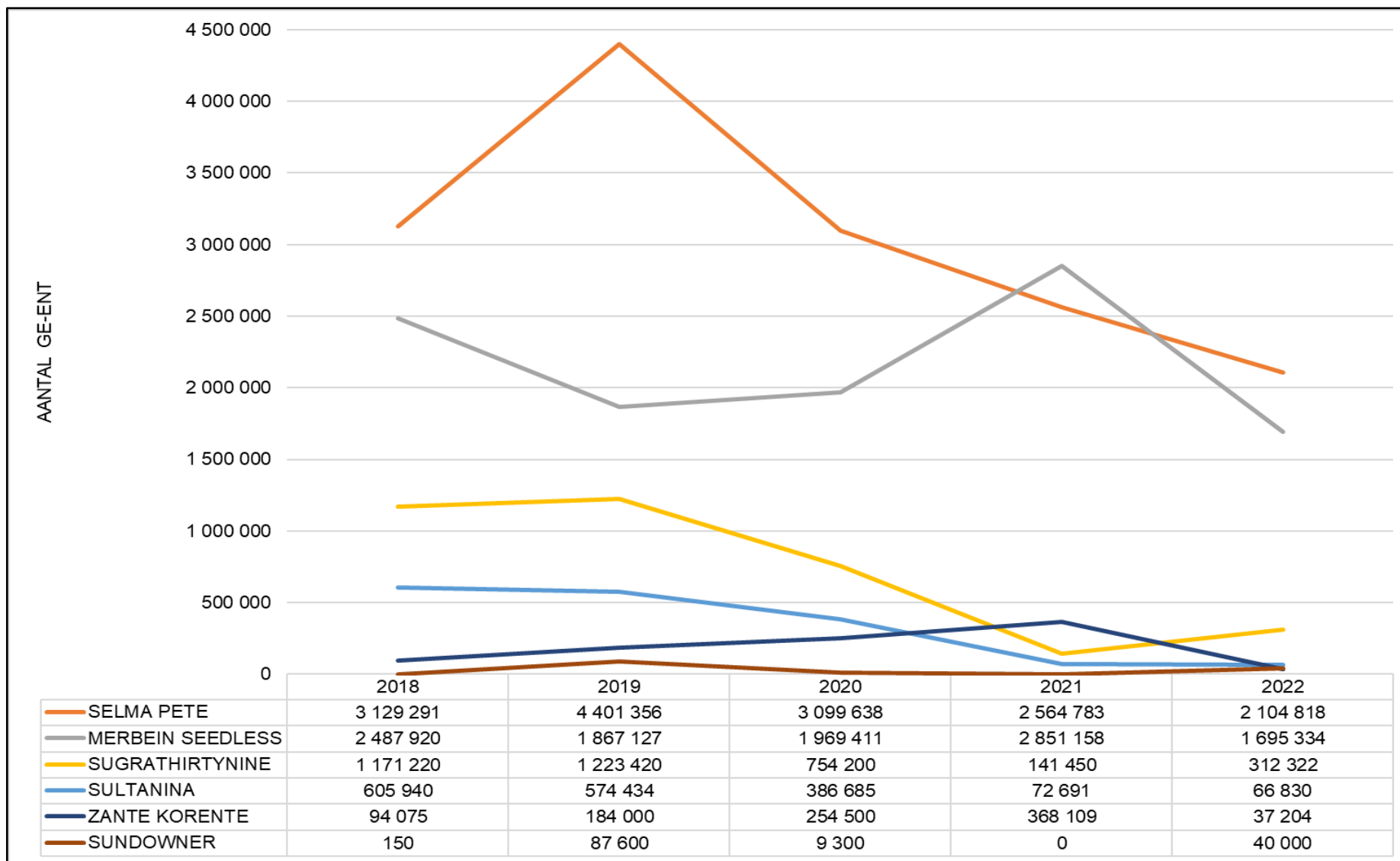
- 4 335 801 vines grafted compared to 6 297 643 in 2021
- 10 varieties (16 clones)
- 12 registered clones and 4 candidate clones
- 98.7% of grafted vines certified compared to 88.8% in 2021
- 91.4% of grafted vines are from units tested for leafroll (57.8% in 2021)

Table 9 lists the drying grape varieties grafted as well as the % certified material issued thereof.

TABLE 9 Drying grape varieties grafted in 2022 compared to 2021

VARIETY	2021	% CERTIFIED	2022	% CERTIFIED
SELMA PETE	2 564 783	87%	2 104 818	100%
MERBEIN SEEDLESS	2 851 158	96%	1 695 334	100%
SUGRATHIRTYNINE	141 450	100%	312 322	100%
SULTANINA	72 691	63%	66 830	82%
SUNDOWNER			40 000	100%
ZANTE KORENTE	368 109	94%	37 204	100%
DOVINE	54 900	100%	28 000	100%
DATAL	25 037	0%	24 200	0%
IFG 104-253			22 293	0%

Graph 4 shows the number of drying grape vines grafted over the last five years of the six most used varieties in 2022. The order in which the varieties appear refers to the total number of vines made over the five-year period.



GRAPH 4 Top 6 drying grapes grafted in 2022

10. STRATEGIC GOALS

10.1 Block units

Mother from Mother blocks

- The VIA Board confirmed in November 2019 that all Mother from Mother block units must be phased out within three years.
- In the past year, 43 Mother from Mother block units were scrapped.
- One block was left on the register because plant material from the unit was used in the last season.

Leafroll tested versus visual inspection

- It was approved in November 2020 that all foundation units must be tested vine by vine for Leafroll at least once in a three-year cycle.
- The percentage of tested foundation units increased from 70.5% in 2019 to 94.7% in 2022.

Age of the units

- Although there is no limit on the age of block units, the assumption is that older blocks pose a greater phytosanitary risk.
- For rootstock foundation and mother blocks, 75% of the blocks are currently younger than 10 years, while only 1 foundation and 9 mother block units are older than 16 years.
- The profile of the scion block units differs with 25% of units older than 20 years, while 56% of units are younger than 10 years.
- Only 10 of the blocks older than 20 years are not wine grapes.

Monitoring of units

- The total number of units that have been monitored in the past year only makes up a fraction of the total number of block units.
- This very important aspect of the certification process will need to improve significantly.

10.2 Nurseries

% certified / candidate material utilised

- The number of certified rootstocks as well as wine grape planting material that is used annually is approximately 98%.
- For table grapes, the percentage of certified vines grafted in 2022 improved from 45.6% (2021) to 50.3%, while the certification of drying grapes increased from 88.8% to 98.7%.

11. ACKNOWLEDGEMENTS

The VIA wishes to thank every PIO and nurseryman who contributed in 2022 to the success of the South African Plant Certification Scheme for *Vitis*. Thank you also to all the individuals who served on the VIA Board, Technical Committee and Phytosanitary Working group in 2022.

Theo Heydenrych
VIA Chairman

Rachel Kriel
VIA Secretary