



ROOIBOS[®]
LIMITED

Preferred Supplier
SINCE 1954



Overview of the Rooibos Sector



Contents

- Rooibos production
- Markets
- Empowerment and development
- Demand, supply and producer price
- Pests and diseases
- Certification
- Sector challenges and possible solutions

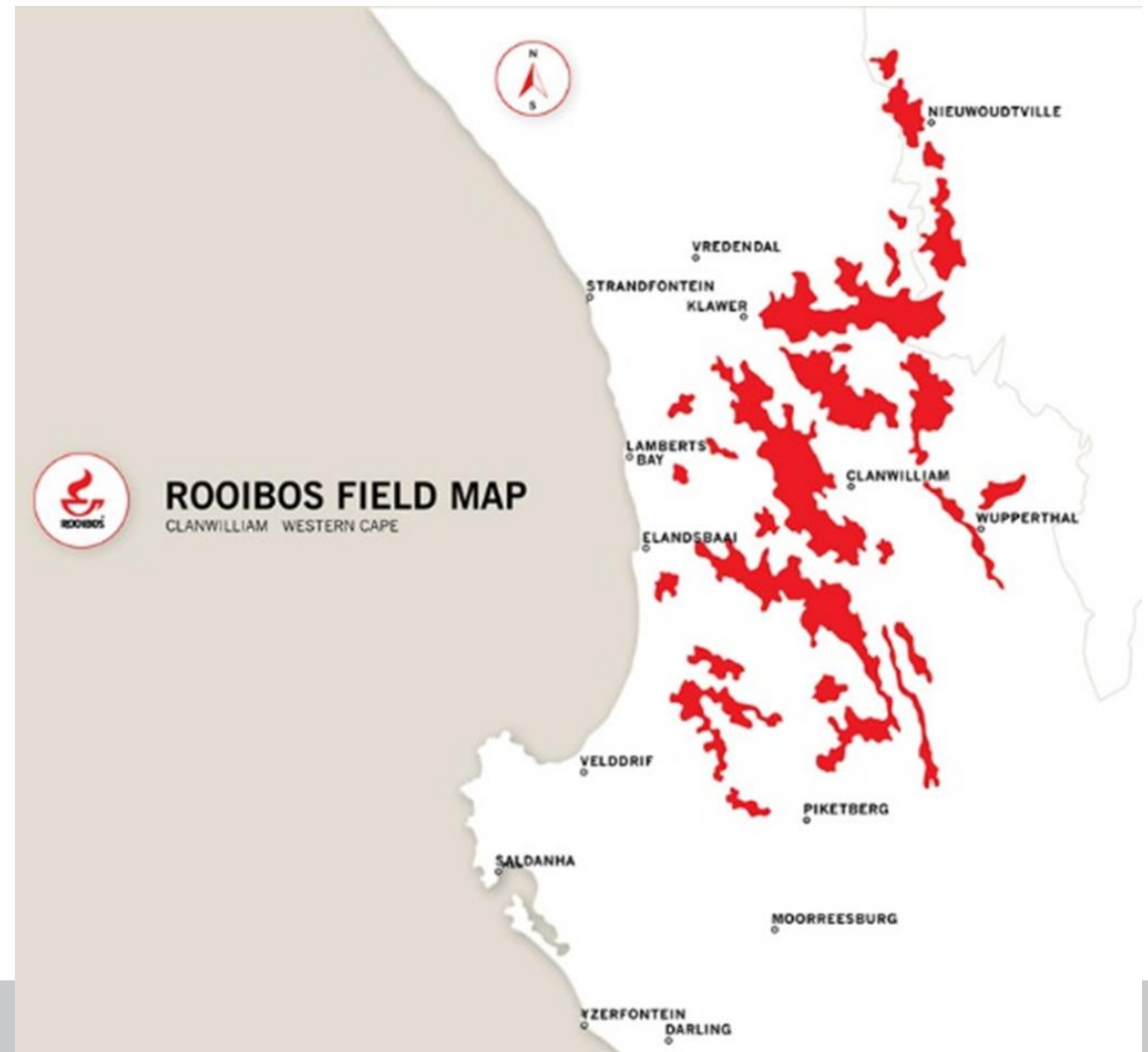


Rooibos production



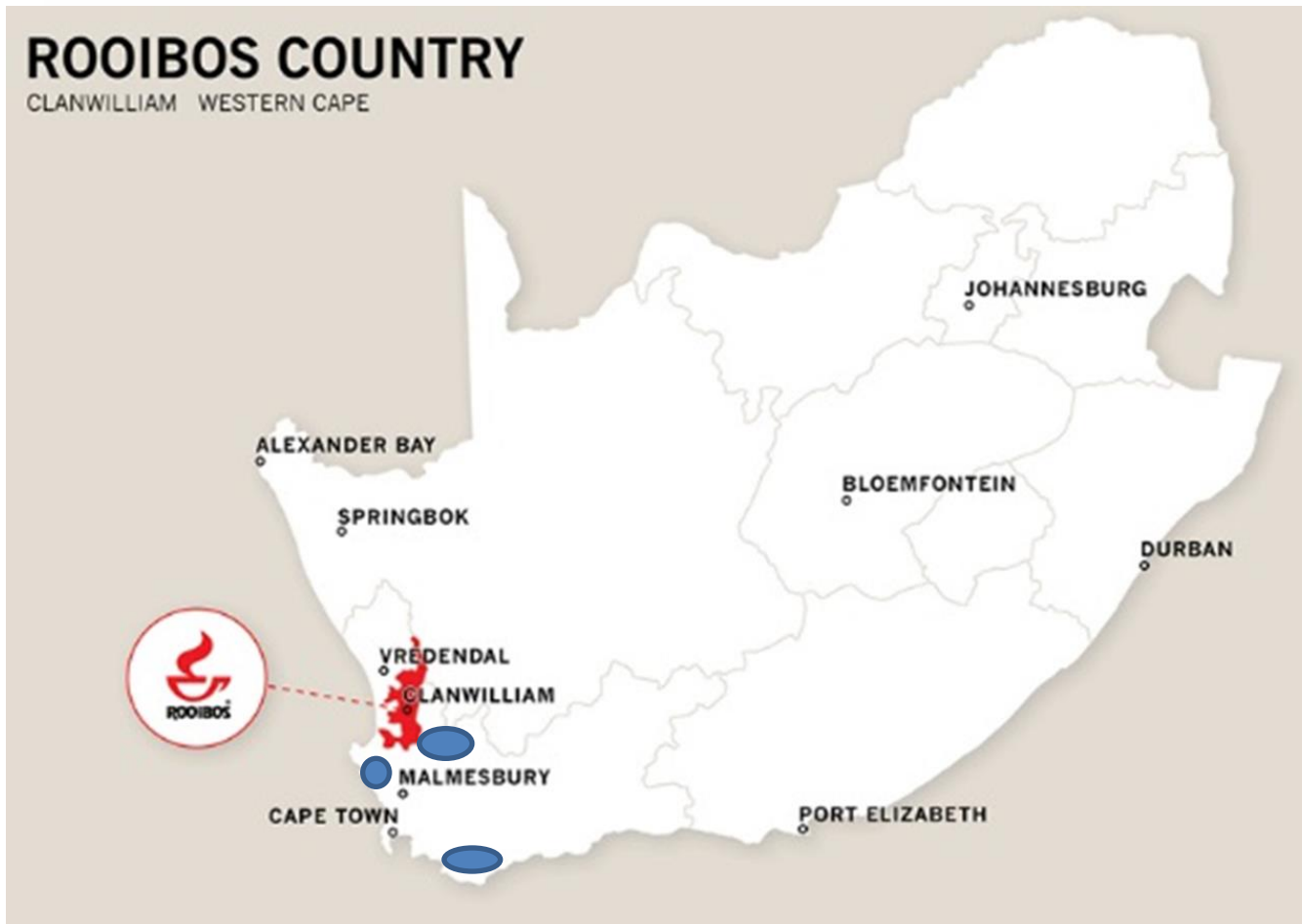
Rooibos Traditional Production Area

- Winter rainfall area
- 200 - 600 mm
- Fynbos biome
- Well drained sandy soils
- pH 4.5 - 5.5
- 90 000 ha





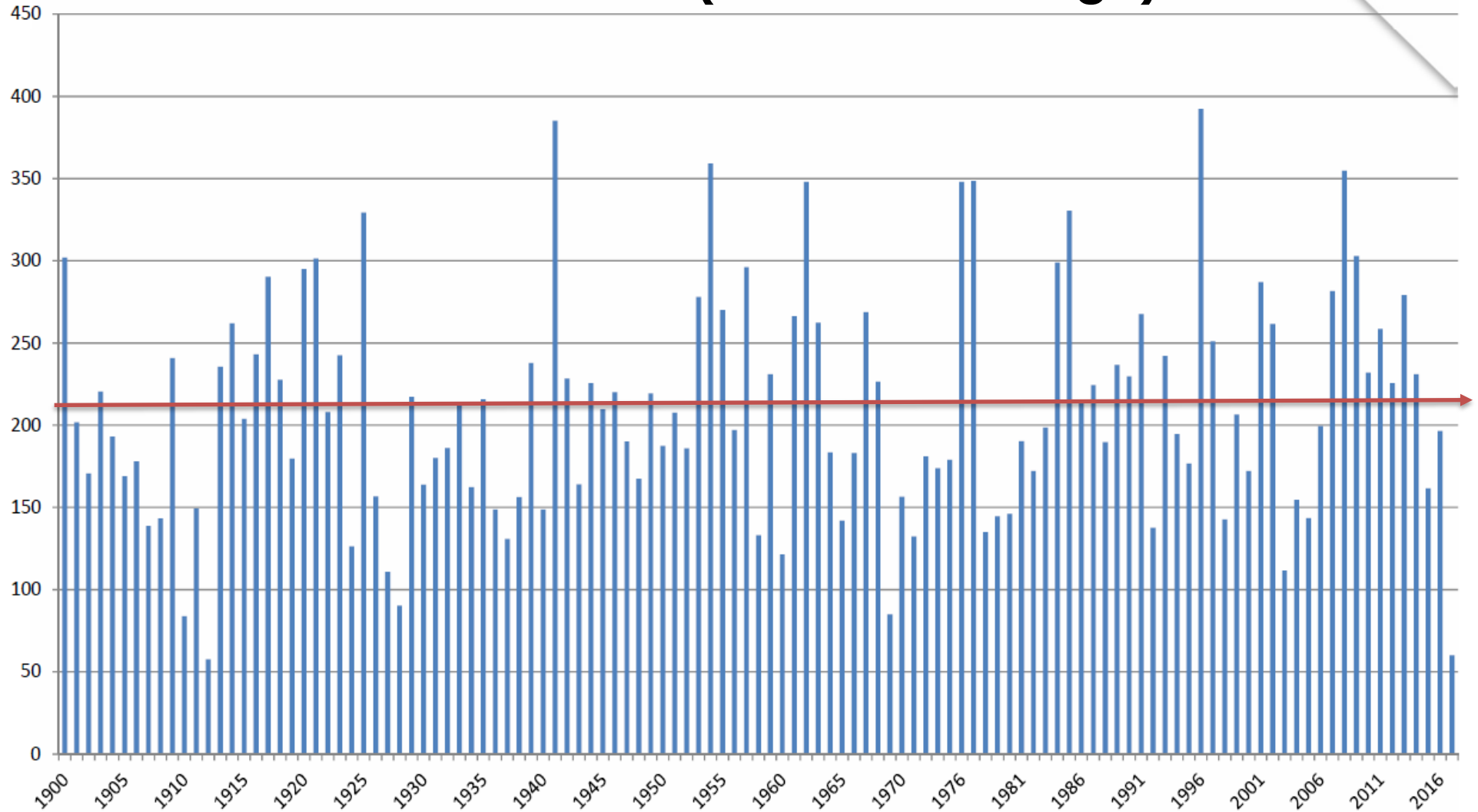
Rooibos Field Map



- 120 000 ha
- 270 commercial producers
- 12 PDI
- 400 small farmers
- 5 500 people employed in the industry



RAINFALL 1906 -2017 (- 30% on average)











Year 1 (Planting Year)

- ▶ 12,000 ha planted in 2017
- ▶ 30 000 ha estimated for 2018
- ▶ 8,000 ha needed





Year 2 – 6 (Harvest Years)

- ▶ 52,000 ha harvested in 2018
- ▶ 12,500 tons



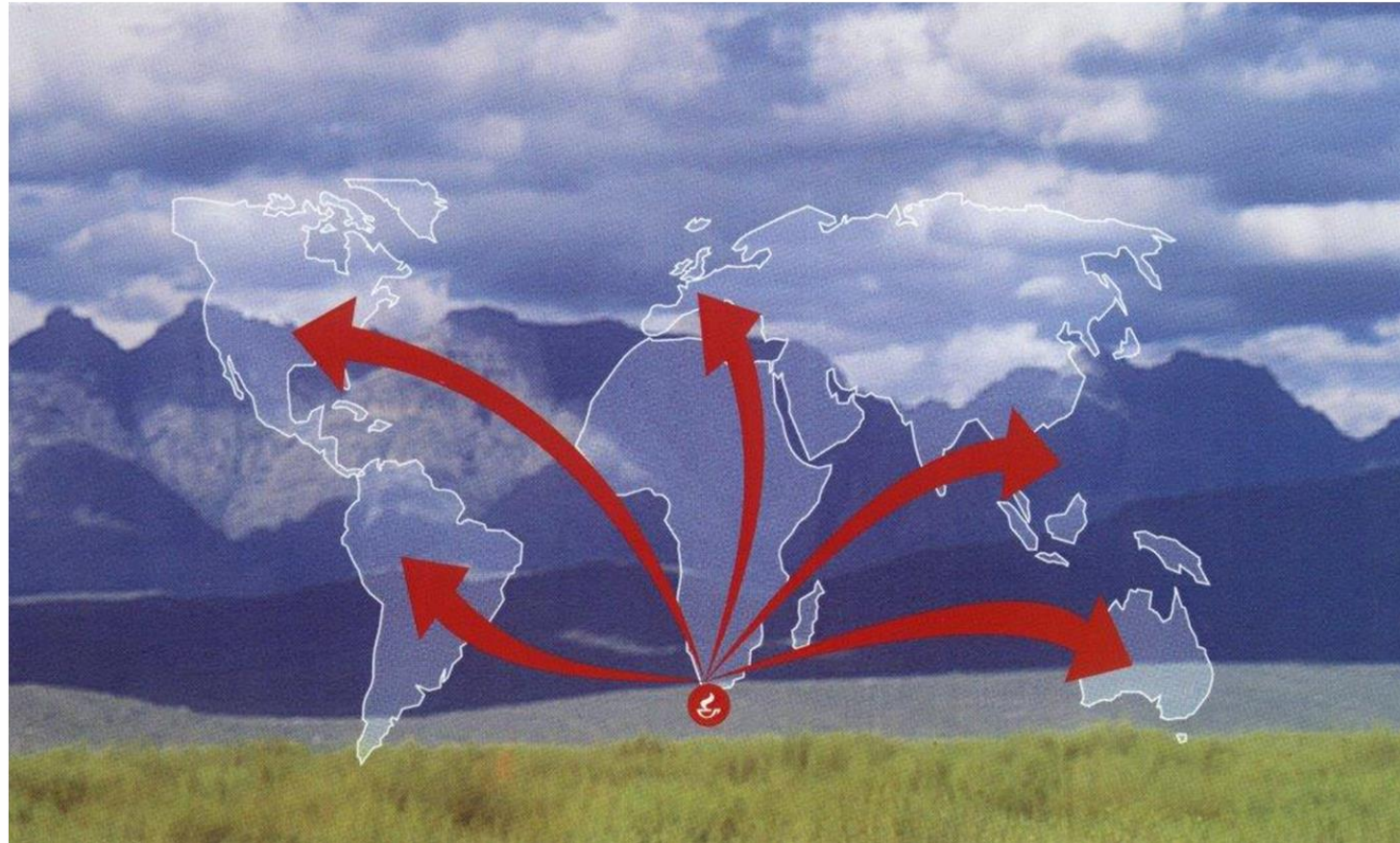


Markets



Rooibos Markets

- Global demand 16,000 tons
- 40% local
- 60% export



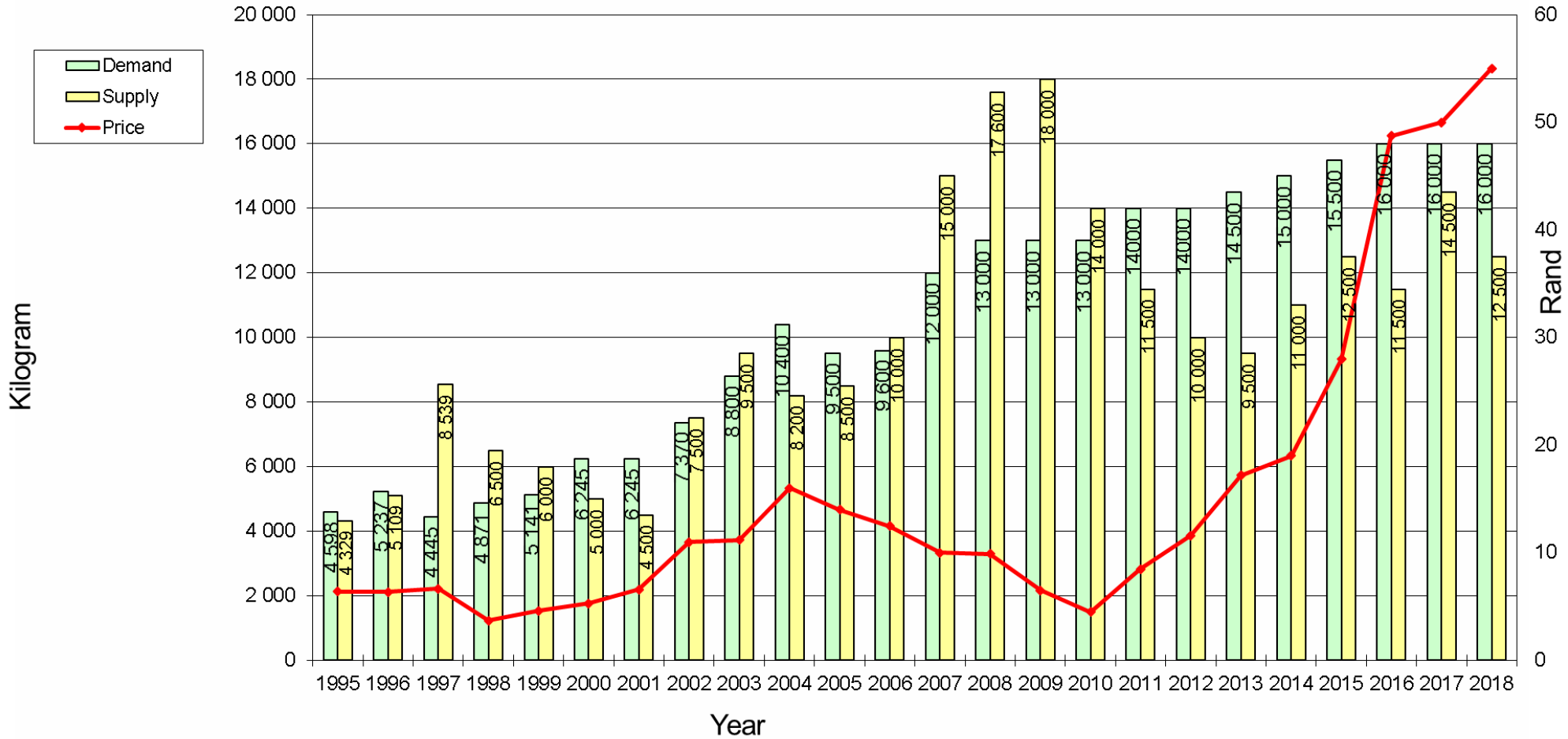


Empowerment and Development





Demand, supply and producer price





Pests and diseases

Insects on Rooibos

Chewing Insects



Looper



Bollworm



Clear Wing Moth



Snout Beetle



Wool worm



Longhorn beetle

Sucking Insects



Leafhopper



Myrid

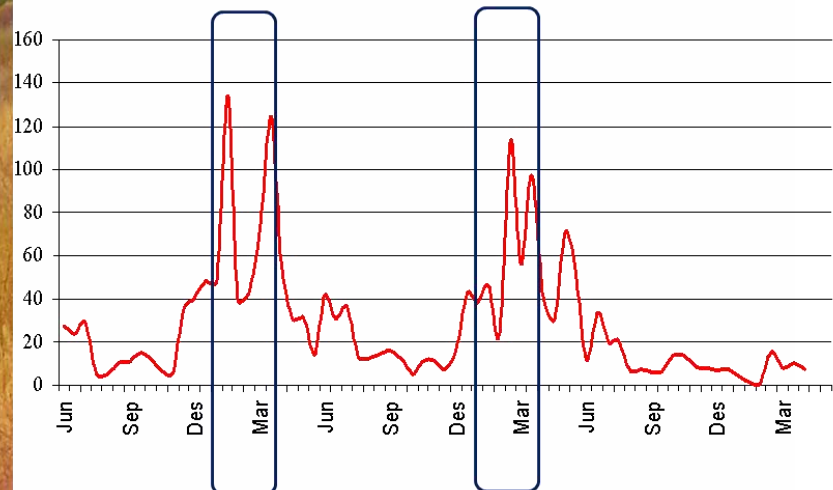


Bragada beetle



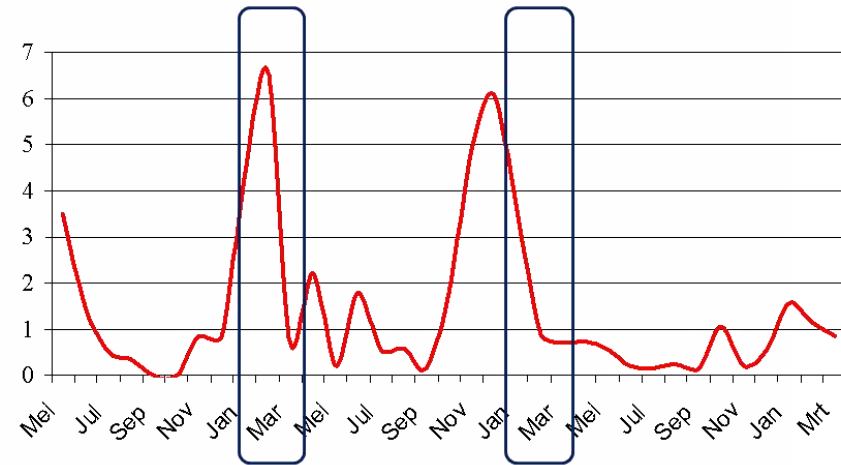
Leafhopper Damage

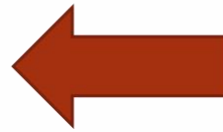
Rooibos Ltd





Looper Damage







Soilborne and Foliage Diseases

Rooibos Ltd

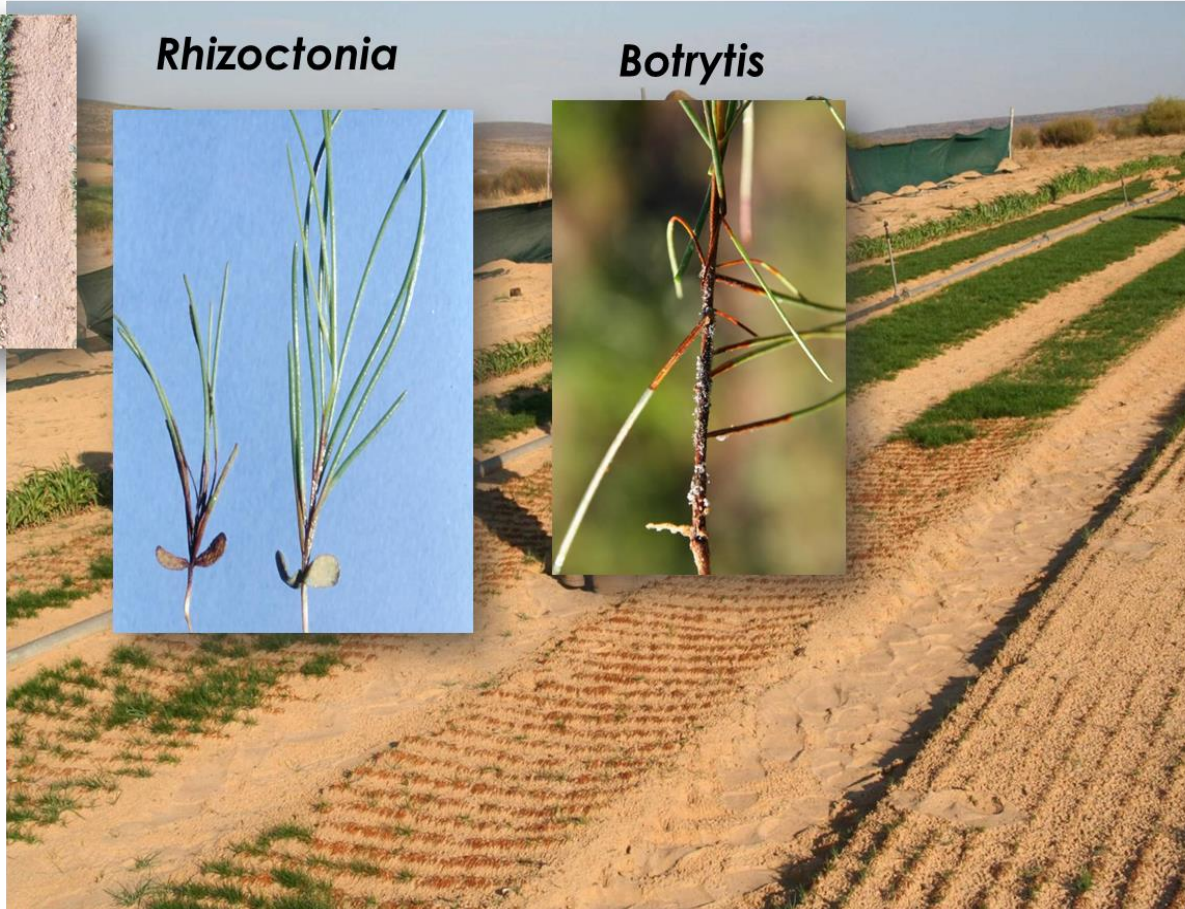
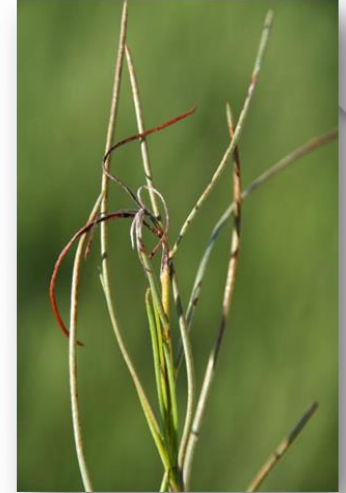


**Fusarium,
Phytophthora,
Pythium &
Rhizoctonia**

Rhizoctonia



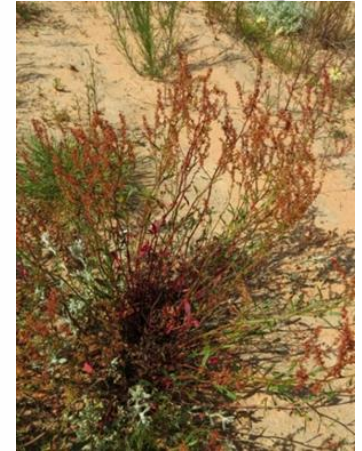
Botrytis





Five major weeds species

- Steenboksuring (*Rumex acetosella*)
- Rooisaadgras (*Ehrharta calycina*)
- Bitterbos (*Senecio angustifolia*)
- Ramnas (*Raphanus raphanistrum*)
- Perdekweek (*Paspalum paspaloides*)





Pesticides

Proposed Withholding Period	Pest	Active Ingredient	Banned Products	"Watchlist"	Registered	IRAC - Class
3 months	Leafhopper	Demethon -S-methyl	X		✓	1B
3 months	Bragada Beetle False wireworm	Chlorpyrifos		X	✓	1B
3 months	Leafhopper	Profenofos			X	1B
3 months	Leafhopper / Looper	Cypermethrin			✓	3A
3 months	Leafhopper / Looper	Beta-cyfluthrin	X		✓	3A
3 months	Leafhopper / Looper	Lamba-cyhalothrin		X	✓	3A
3 months	Bollworm / Looper	Alpha-cypermethrin			✓	3A
3 months	Clear Wing Moth	Esfemvalerate			✓	3A
4 months	Leafhopper	Acetamiprid		X	✓	4A
4 months	Leafhopper	Flonicamid			X	29
1 month	Bollworm / Looper	Spinetoram			✓	5
1 month	Looper	Bacilcus Thuringiensis Kurstaki			✓	11A
3 months	Leafhopper	Diafenthiuron			X	12A
1 month	Bollworm	Nucleopolyhedrovirus			✓	



Fungicides

Proposed Withholding Period	Fungi	Active Ingredient		Banned Products	Watch list	Registered
Used for Seed treatment	Soilborne diseases	<i>Thiram</i>		X		✓
Used in nurseries – 1 year before pruning	<i>Fusarium & Pythium</i>	<i>Captan</i>				✓
	<i>Colletotrichum acutatum</i>	<i>Chlorothalonil</i>		X		✓
	<i>Botrytis cinerea</i>	<i>Iprodione</i>				✓
	<i>Rhizoctonia solani</i>	<i>Pyrimethanil</i>				X



Herbicides

Proposed Withholding Period	Weed	Active Ingredient		Registered
6 months	Pre-emergence weeds	Cyanazine		✓
6 months	Post-emergence control of annual grasses	Propaquizafop		✗
6 months	Broadleaf weeds	Rimsulfuron		✗
6 months	Grasses	Clethodim		✗
6 months	Pre-emergence weeds	S-metolachloor		✗



Certification



Certification



- All producers wanting to export need to be SAGAP certified
- Some producers are choosing organic or other sustainable certifications to meet various market's demands





Sector challenges and possible solutions



Sector Challenges

- To maintain a continuous supply of quality Rooibos
- Lack of registered chemicals
- Chemical resistance
- Food safety issues (MRL)
- Export markets no longer accepting Rooibos



Solutions?

- Production research to increase yield
- Work with DAFF and Chemical companies to register chemicals specifically for Rooibos
- Field trials to test chemicals (MRL, Terminal Residues)
- Investment needed (more testing facilities) in stringent MRL testing according to EU food safety standards
- Communication with producers in terms of allowable chemicals
- Work with DAFF & PPECB to ensure sustainability of the export market