

Game meat production on private land in South Africa: current scale and potential for the future

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Talk outline

- Background to the study
- Basic wildlife ranching statistics....
-and the difficulties of getting these statistics
- Historical commercial game meat production
- Limitations of game meat production
- Current production
- Potential future production



Background to the study

Wildlife ranching clearly contributes to the economy, job creation and biodiversity conservation.

But how much?



Background to the study

We set out to gather data on the SA private wildlife sector

- Potential contribution to biodiversity conservation
- Potential contribution to the economy
- Potential contribution to social issues

We defined wildlife ranching as the management of wildlife on private land for commercial purposes



The difficulties of getting information

- There is no central database of landowners
- Protection of Personal Information Act (POPI)
- Definitions – there are a wide variety of land uses



Wildlife ranch numbers and area

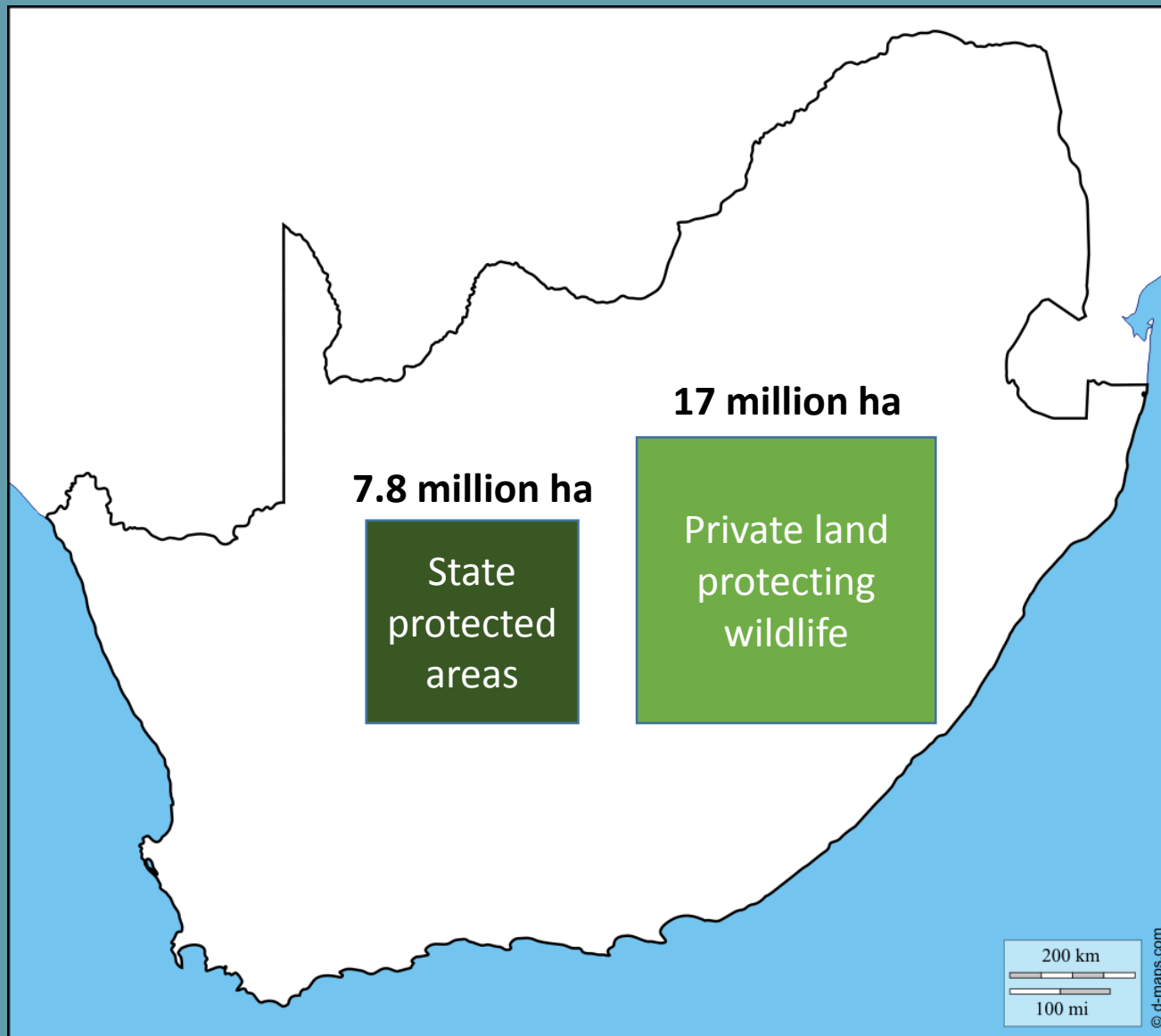
- Estimates of the number of wildlife ranches fluctuate depending on who you speak to
- The most commonly cited estimate for the area under wildlife ranching is 20 million hectares
- This estimate is at least 10 years old (see NAMC 2006)
- Bottom line: we do not know the true extent of wildlife ranching



Wildlife ranch numbers and area

EWT 2015 study – Provincial and extrapolated results	
Total number of exempt properties (2015)	6 734
Total area under exempt properties (2015)	12.8 million ha
Extrapolated number of wildlife properties	8 979
Extrapolated area under private wildlife	17.0 million ha





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Historical commercial game meat production

- Started in Kruger National Park during 1960s
- Few domestic options available before 1980s
- 1984: 36% of game farmers produced game meat (Behr & Groenewald 1990)
- Early 2000s: 1,350 tonnes of game meat produced annually (NAMC 2006) (unknown accuracy)
- There is a dearth of information on quantities (Hoffman et al. 2004)



Historical commercial game meat production

Indirect evidence from SAMIC (South African Meat Industry Company) suggests that uncontrolled game meat contributes ~20% of the total fresh red meat (beef) consumption in South Africa during the hunting season.

Annual beef consumption (SAMIC)	850 000 tonnes
Annual estimated game meat consumption	42 500 - 70 800 tonnes



Limitations on game meat production

1. It is not easy to make a profit selling game meat
 - Animals are free roaming (not farmed)
 - Animals occur at low densities
 - Carcasses have to be processed in the field
 - Live sale values of game species are relatively high
2. Disease outbreaks (e.g. foot and mouth disease)
 - Mainly affect exports
 - May have major long-term impacts



Limitations on game meat production

3. Lack of a regulatory framework for game meat within the Meat Safety Act
 - Until now there has been no game meat scheme
 - Few quality standards
4. Under-developed consumer market



Domestic sources of game meat

- Biltong hunting: mostly consumed by the hunters;
- Trophy hunting: meat is a low quality by-product;
- Culling: most efficient form of commercial game meat production

All forms contribute to consumption, whether sold commercially or not



Questionnaire surveys

We interviewed 251 wildlife ranchers using structured questionnaire surveys.

Criteria for inclusion were:

1. Must be privately owned;
2. Must generate revenue from wildlife.

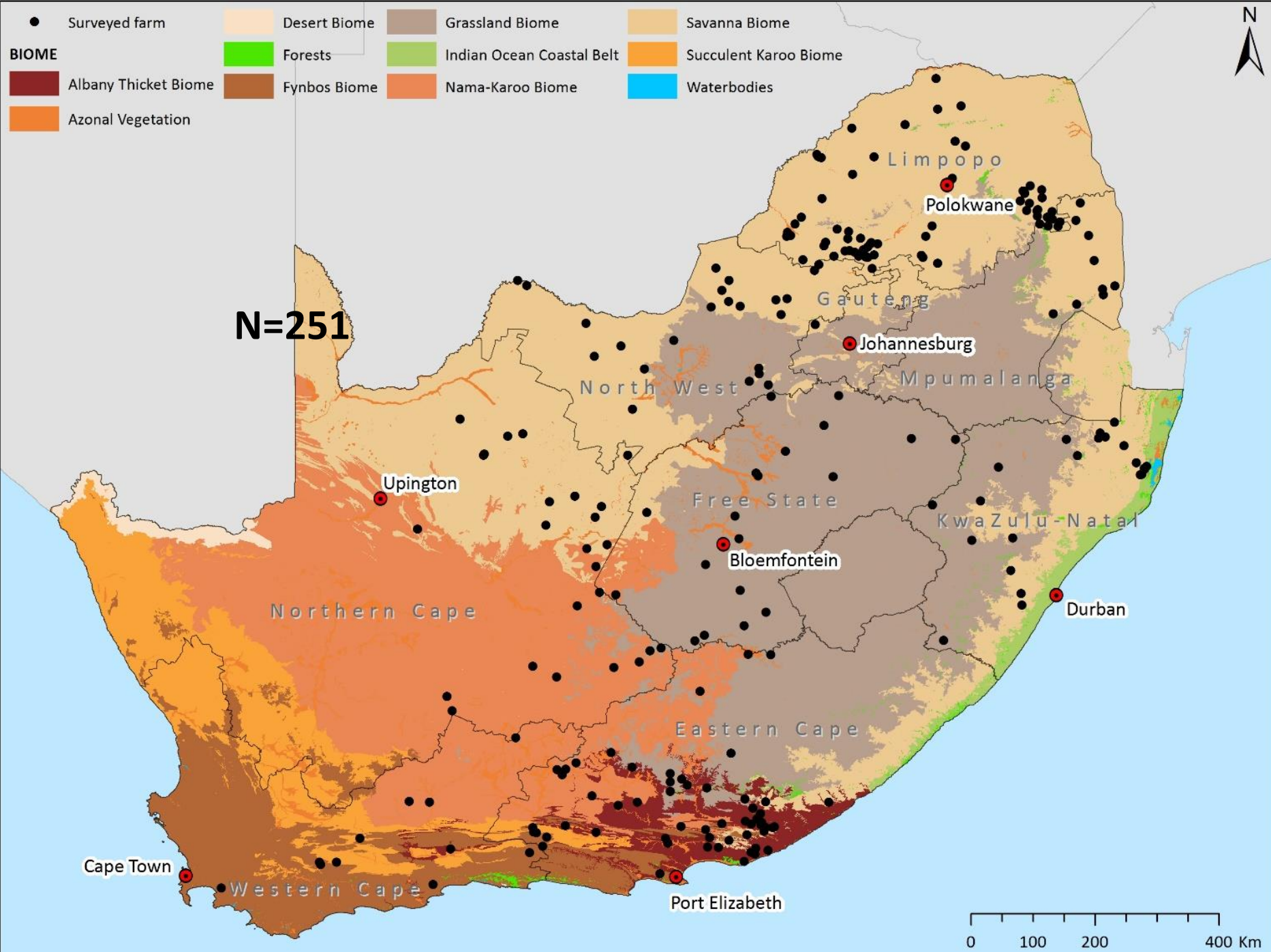


Questionnaire surveys

Questions included:

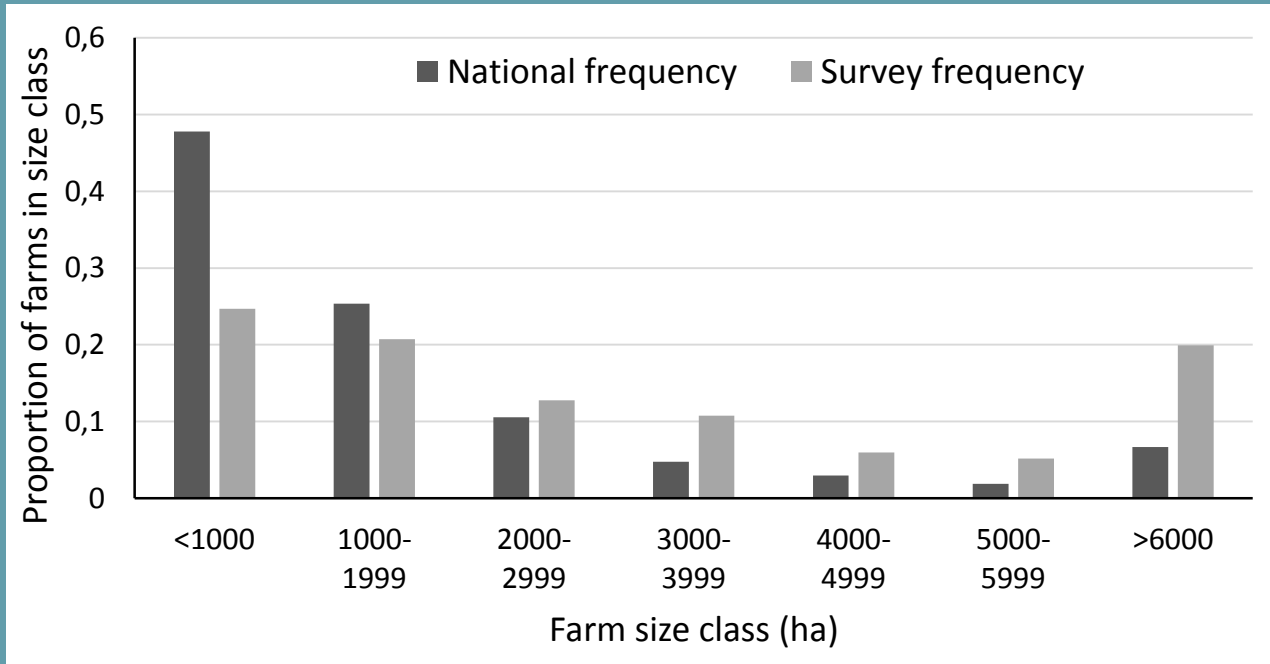
1. What is the size of your property?
2. What land uses do you practice?
3. What ungulate species do you have, and how many?
4. What were the offtakes for each species?
5. What do you do with the game meat?
6. What prices do you get for meat?



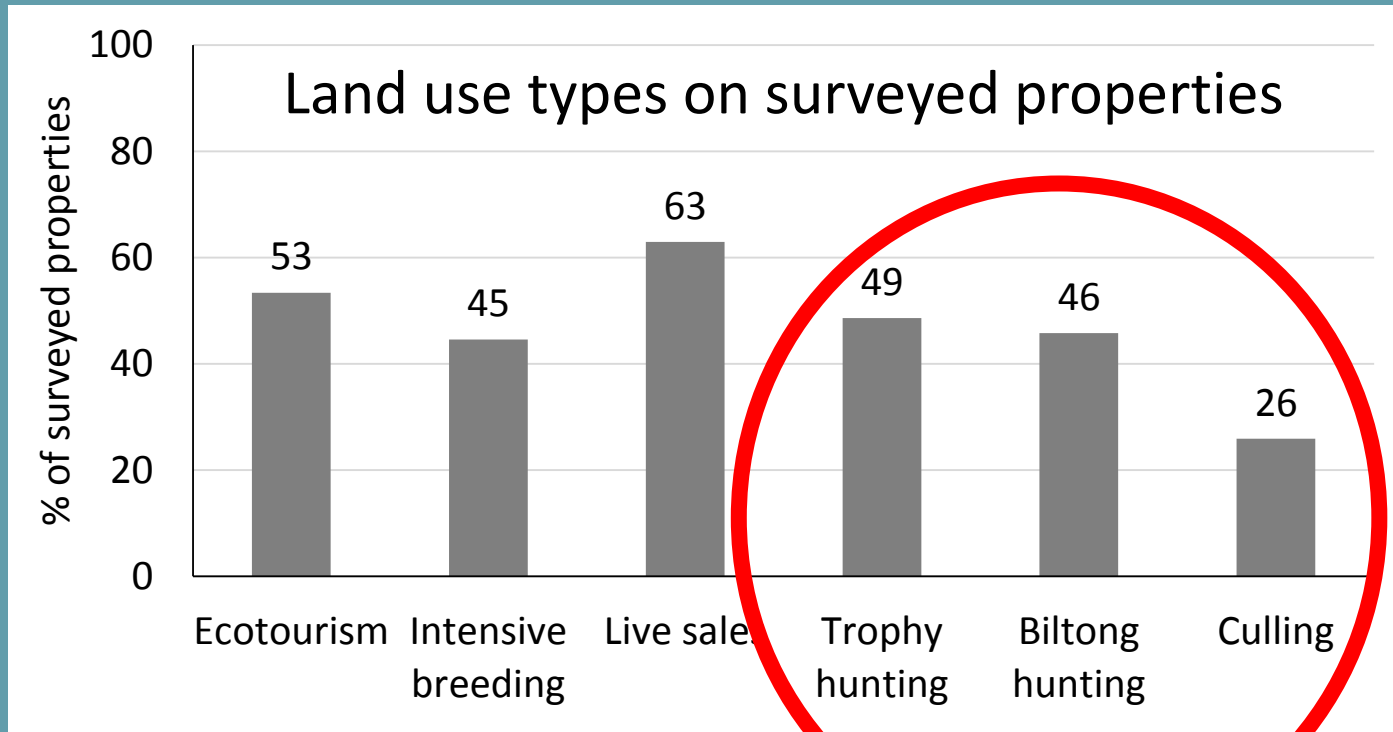


Survey results

Total area of surveyed properties = 1.38 million ha
(8% of private wildlife area)



Survey results



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Survey results

Trophy hunting offtakes (n=74)	
Total number of species trophy hunted	37
Median number species per property	6.5
Median offtake density per hectare (animals)	0.017
Median offtake biomass per hectare (kg)	3.0 (2.3–3.8)



Survey results

Biltong hunting offtakes (n=74)	
Total number of species hunted for biltong	24
Median number species per property	5
Median offtake density per hectare	0.032
Median offtake biomass per hectare (kg)	4.5 (2.0–5.6)



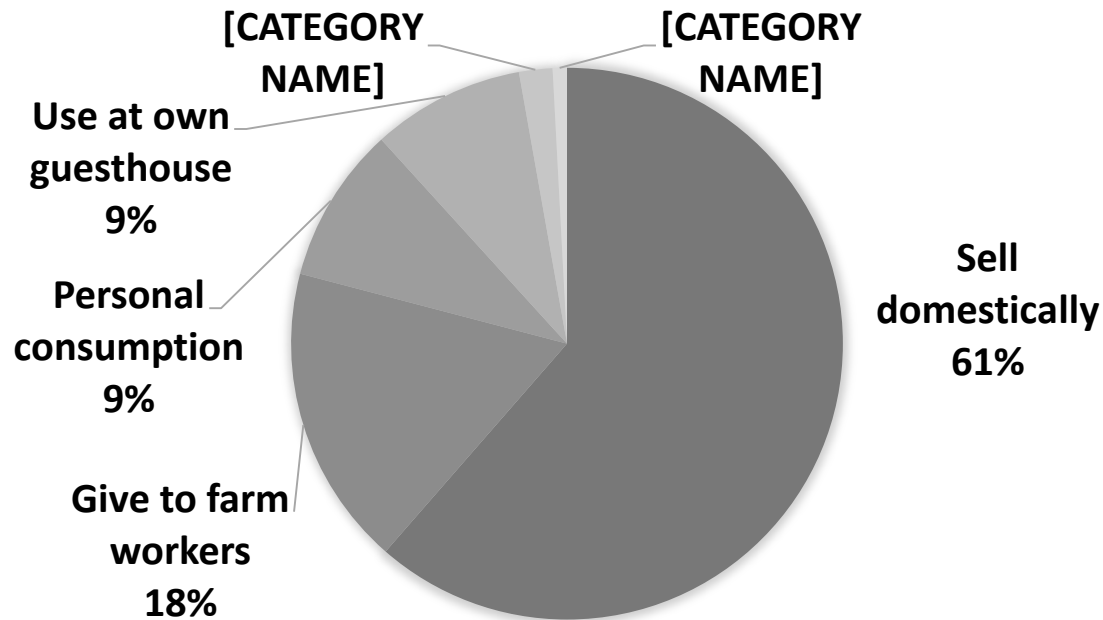
Survey results

Culling offtakes (n=34)	
Total number of species culled	21
Median number species per property	2
Median offtake density per hectare	0.024
Median offtake biomass per hectare (kg)	1.5 (1.2–3.4)



Survey results

Uses of game meat from trophy hunted and culled animals



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Survey results

	Median offtake biomass per ha	Median biomass offtake %
Biltong hunting	4.5 kg	16.2%
Trophy hunting	3.0 kg	7.8%
Culling	1.5 kg	8.2%
Live sales	4.8 kg	9.8%
Combined offtakes (n=141)	6.9 kg (5.1–9.4)	23.2%



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Potential future production

What do we need to know to estimate this?

1. How many land owners will contribute to game meat production and over what area?
2. What kind of contribution will they make? Will they produce game meat through trophy hunting, biltong hunting, culling, or a combination of the three?
3. What offtake densities will they use?



Potential future production

The answers to these questions will depend on the management strategies of individual land owners, and these will be affected by trends in wildlife ranching practices.



Potential future production

Some of the issues that will affect land owner decisions include:

1. To what extent will the new regulatory framework encourage game meat production?
2. How will live sale prices affect biltong game prices?



Potential future production

3. How will international opinion affect trophy hunting?
4. How will profits from game meat production compare to other land uses?
5. To what extent will intensive breeding be practiced?



Animals numbers on private land in SA?

Important considerations:

- Estimate is a work in progress – getting new data, adjusting the calculations (kudu, duiker)
- Estimates exclude warthogs, bushpigs and rare small antelope species
- Estimate includes kudu, which are hard to count accurately
- Estimate includes common duiker, based on density estimates
- Area estimate is of uncertain accuracy



Animals numbers on private land in SA

	17 million ha	20.5 million ha	25 million ha
Estimate based on farm size	5 987 000 (4.4 – 7.3 mill)	6 666 400 (5.0 – 8.1 mill)	7 550 500 (5.8 – 9.1 mill)
Estimate based on province	6 119 700	7 361 506	8 977 446



Extrapolated meat production

- Based on estimated animal numbers taken from provinces
- Assuming 70% of properties will participate

	17 million ha	20.5 million	25 million ha
20% offtake (tonnes)	54 522	65 585	79 982
30% offtake (tonnes)	81 783	98 378	119 973



Acknowledgements

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