

CASE STUDY: *HOODIA GORDONII*

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INTRODUCTION

- *Hoodia gordonii*
(Apocynaceae, 14 species)
- Perennial succulent
- Finger-like stems branching
at ground level
- Biological information,
population trends and
resource availability estimates
lack



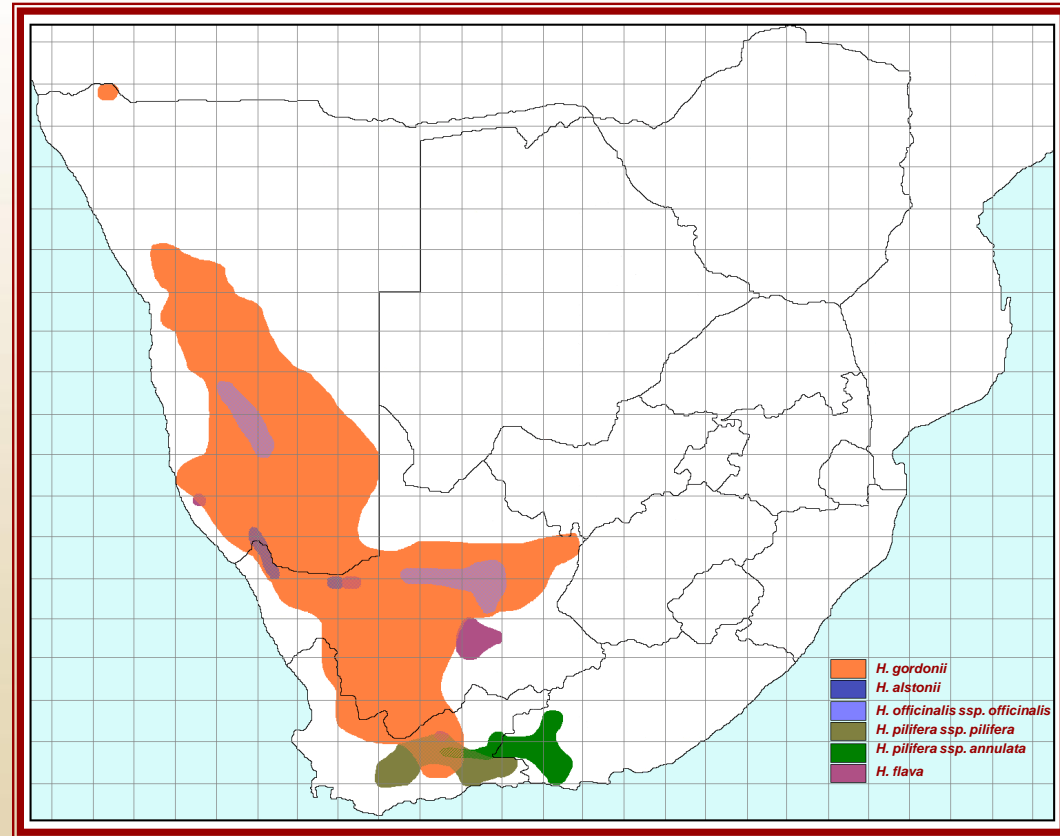
HOODIA GORDONII

- 15-20 year life span
- 3-6 years before flower
- Protracted flowering
- 250 seeds / follicle
- Weedy character
- Natural die-back events



HOODIA GORDONII

- Southern African distribution range
- Diverse habitats
- Patchy spatial distribution
- Role in ecosystem is unknown
- Appetite suppressant (P57)



TRADE

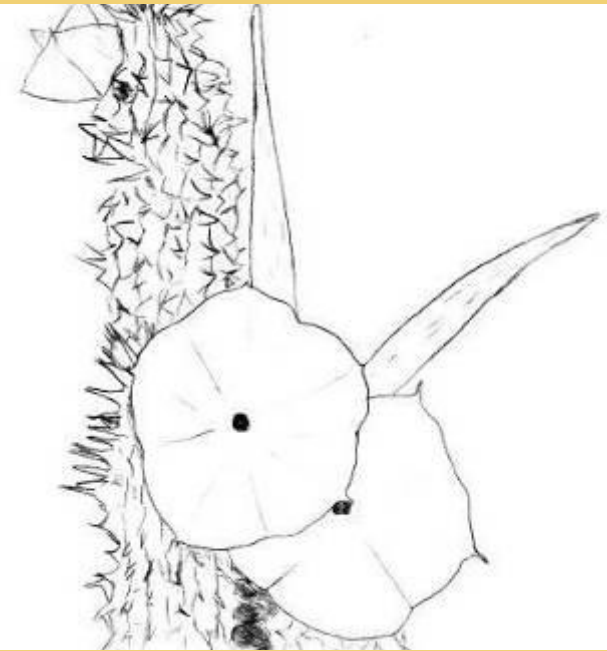
- Export dry material / extracts / seeds / seedlings (no live exports outside natural range)
- Cultivated & wild crafted material traded
- Wild crafted include dead material collected (52.4% dead)
- Export primarily within South Africa (UK, Spain)
- Illegal harvesting (15.7t)
- Decline in wild demand



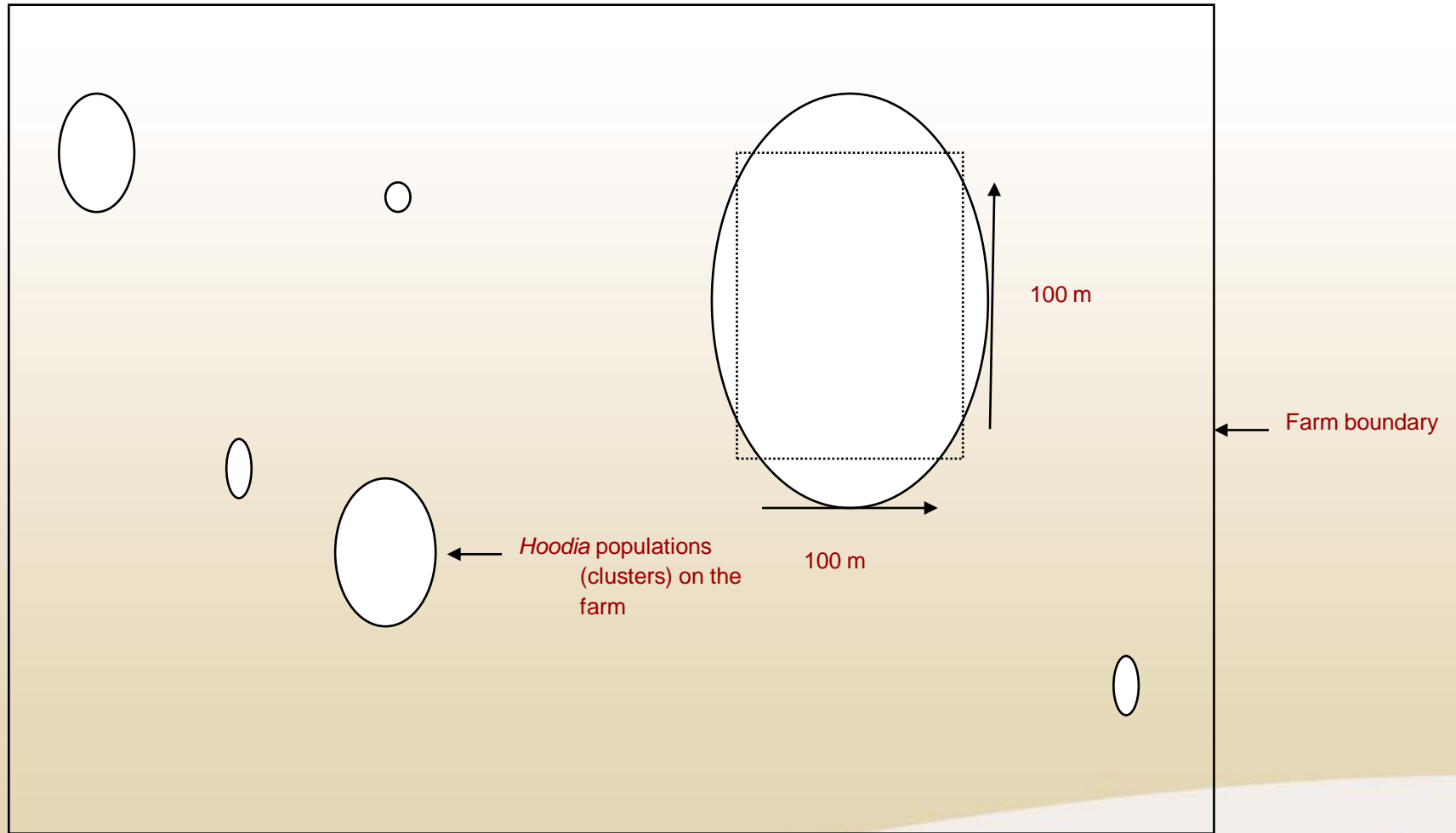
NDF ASSESSMENTS

- Literature, anecdotal information (experts, industry, etc.), RAMR information
- RAMR
 - Demographic information via quadrant method
 - Health
 - Density information via line transect method
 - Quota

HOODIA GORDONII



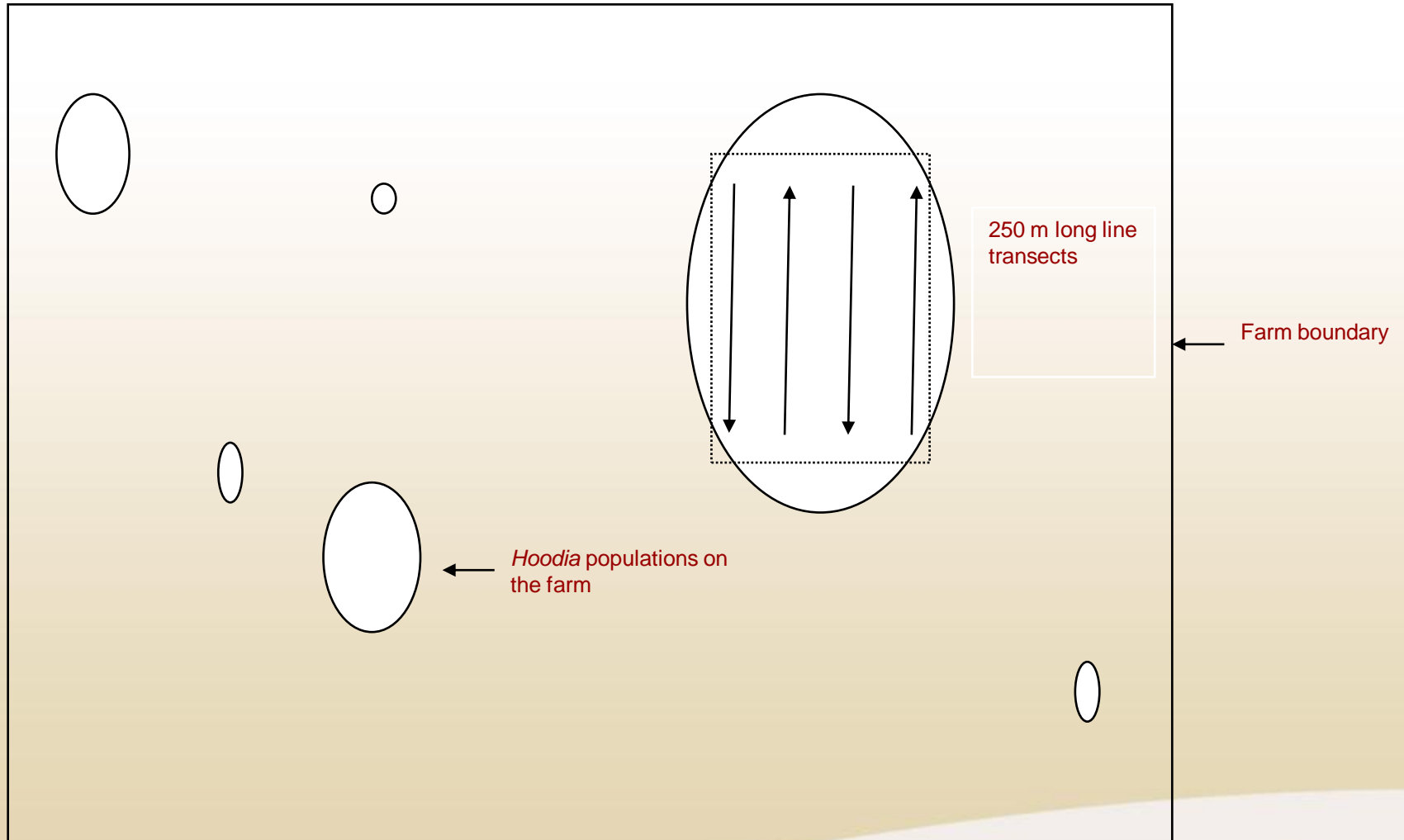
GUIDELINES FOR HARVESTING



Demographic information

Rating: 0 (healthy plant)	Rating: 2 (infested plant)	Rating: 3 (dying plant)
		

- Visual health rating
- L : D ratio
- Adult : Juvenile/seedling



Density information

NDF guidelines

- Landowner harvest own property
- Property having excess of 2500 plants of optimum size, good health
- Size >40cm diameter
- Harvest every 2nd to 4th plant (5cm above ground level)
- 25% of canopy (fingers) / 20% of seed harvest
- Southern side (down wind)

NDF guidelines

- Disinfect cutting blade after each plant (3% chlorine, Jik)
- Lime sulphur powder on scars
- Harvest when not in flower (April – August, summer rainfall areas)
- Record wet mass vs dry mass



NDF CRITERIA / PARAMETERS

- Applications evaluated individually
- Surface area surveyed in relation to farm size / clusters occurrence on property (1%)
- Population health
 - D:L, infections, seedling: adult, associated environmental threats, health ratings (guide)



NDF CRITERIA / PARAMETERS

- Extrapolate population size (plants/ha for quota)
 - 4 x 250m / 1km line transect (optimum potential resource)
 - Line transect vs plot data (should be comparative)
- Harvesting history
 - No harvesting same site / rested / re-evaluation
- Harvesting method prescribed
- Precautionary principle
 - Quality of data



DATA QUANTITY / QUALITY

- Data = site specific, extrapolated
- Granted for 1.34% of potential distribution area in NC (SA), **not** cluster distribution
- Non-destructive harvesting
- Concern: harvesting concentrated in S ranges (alter distribution pattern)



DATA QUANTITY / QUALITY

- Guideline booklets – constant methods, but surveyors implemented differently
- Concern: parallel line transect method overestimation
- RAMR enable basic resource assessment
- Provincial resource lack, thus no comparison can be made
- Regeneration and survival info lack, limiting predictive impacts of harvests – infer protracted seed production would ensure resettlement



DATA QUANTITY / QUALITY

- Tolerance to harvesting unknown - inferred as it is browsed
- Conversion estimates (wet:dry ratio etc.) not quantified and scientifically verified
- 2002 - March 2008 harvested wild material relates to ca. 0.25 mil. plants
 - conversions lack statistical analysis (variation)



KEY LESSONS

- A review on species by person who attend to NDF
- RAMR & harvesting facilitated obtainment of information
- RAMR information should be augmented by research and provincial (global) resource assessments
- Client cooperation is vital
- Spatial analysis of area being harvested vs distribution might be useful



KEY LESSONS

- Training videos if clients need to do surveys / consultant
- Initially thought wild harvesting to be an interim arrangement (thereafter Moratorium) – impact on community applications?
- Authority cooperation in permit monitoring
- Checklists / guidelines to calculate quotas could address personnel turnover
- No management on internet trade

THANK YOU

