



Western Cape
Government

Agriculture



South African AHS update

Progress towards export

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Evaluations influencing South African exports

PVS assessment 2012

FVO (AHS control) audit in 2013

OIE AHS freedom application in 2012/2013

Internal workshops

- export strategy (2014)
- laboratories (2015, 2013)
- passports (2014)
- OIE PVS gap analysis (2014)
- vaccine (2015)
- data management (AusVet 2014)

IMHC/OIE AHS meeting – December 2014 Hong Kong

IMHC meeting – December 2015 Hong Kong

Deficiencies identified

Organisational structure

Legislation

Contingency planning (post outbreak) and outbreak analysis

Surveillance

- AHS, Dourine

Laboratory network and workflow

- Diagnostic tests (serology and PCR)

Movement of horses between AHS control zones

2 year period of freedom (OIE and EU)

Vaccine development



Progress: Organisational Structure

Government

- Release of PVS (assessment and gap analysis)
- Development of Strategic plan
 - Jan and Feb 2016 workshops after public comment
- Implementation of CCS (compulsory community service for newly graduated vets) – 1 Jan 2016

Industry

- Formation of EHF (Prof Ian Sanne) – consolidation of industry funding
- Authorised dedicated epidemiology unit in the AHS control zone for movement, surveillance and census compliance
- Industry export task team



Progress: Legislation

Government and Industry

- Drafting of an AHS Veterinary Procedural Notice (VPN)
 - Consolidation of National and Provincial SOP's



Progress: Surveillance

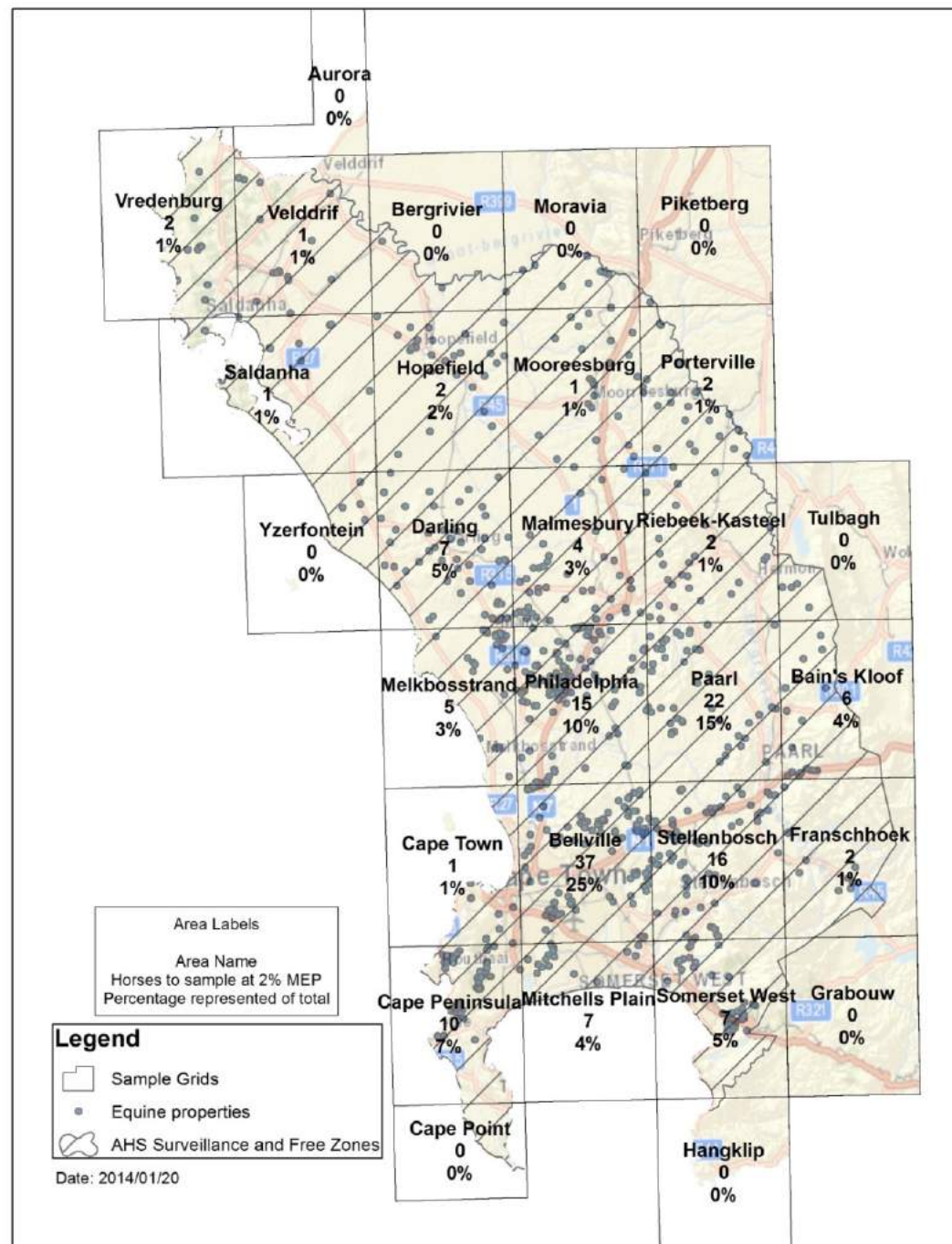
Industry

- AusVet consultation to develop a surveillance plan with focus on OIE requirements
 - includes RNA detection (PCR) to improve sensitivity
 - Overall target of 2% MEP
 - AHS free and surveillance zone
- SAEVA reporting: AHS negative reporting (Jan 2016)
 - Potential to quantify passive surveillance within the AHS control zones

Progress: Surveillance

Formalised monthly sentinel surveillance

- Improved data management
- 2014-15 report imminent





Progress: Contingency planning (post outbreak) and outbreak analysis

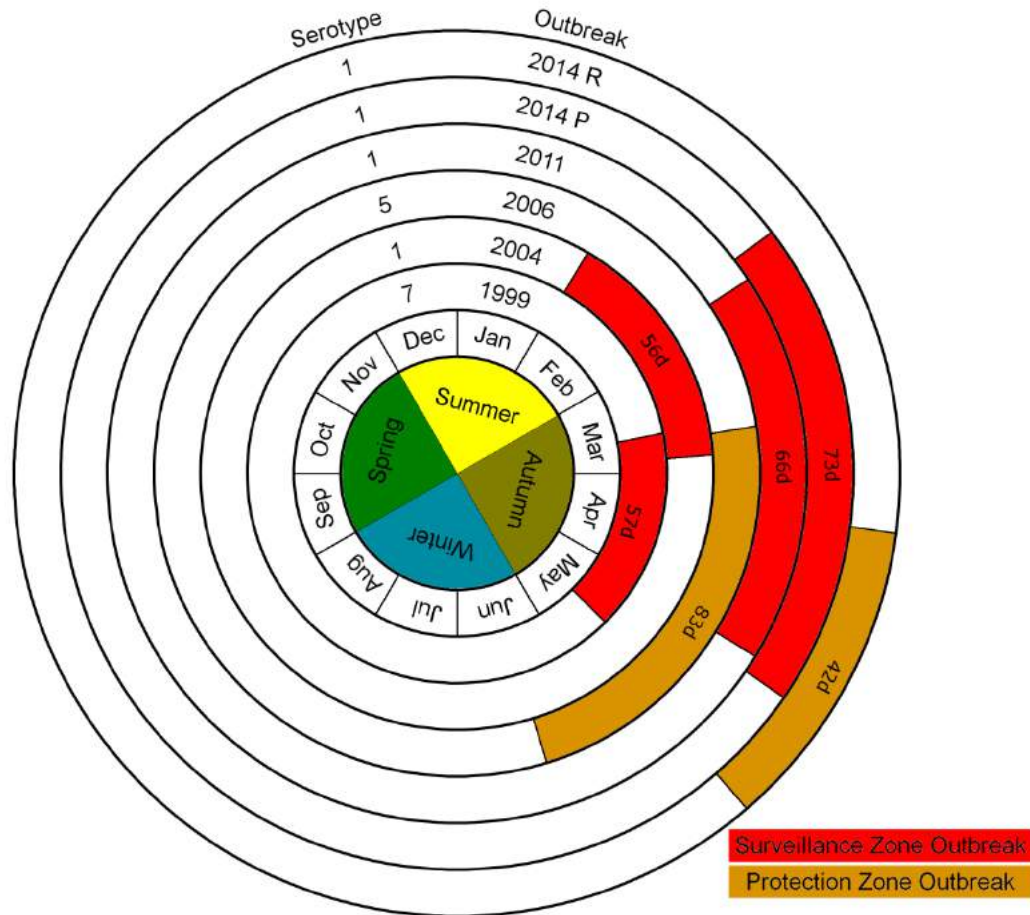
Outbreak analysis

- Publication of 2011 outbreak (2004 previously published)
- Current write up of AHSV 1 outbreak summaries 2004– 2014 (C. Weyer PhD)

Post Outbreak

- Jan 2016 – 2014 outbreak: CZ targeted surveillance for AHS freedom in addition to the current sentinel surveillance which includes the outbreak CZ


Progress: Outbreak analysis controlled area



Progress: Outbreak analysis

	1999	2004	2006 (PZ)	2011	2014
Detection	PV	PV	PV	PV	PV
Surveillance Strategy	Passive	Passive	Passive	Passive	Passive
Case def.	Death	Death, Serology, VI	Cx, PM, Death, PCR, VI	Cx, PM, Death, RT qPCR, VI	Cx, PM, Death, RT qPCR, VI, Sequencing
Control	Movement, Vaccination, Education				NO VACC

Progress: Outbreak analysis – Role of vaccine

	1999	2004	2006 (PZ)	2011	2014 
Detection	PV	PV	PV	PV	PV
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iatrogenic source – vaccine virus reassortment

Progress: Outbreak analysis – Role of vaccine

Change in vaccination policy in the AHS controlled zone (March 2015)

- Also recommended for infected zone

Seasonal use of vaccine limited to low vector activity periods – 1 June through 31 October

This single decision reduces the risk significantly of future control zone outbreaks



Progress: Laboratory diagnostic tests (serology and PCR)

OIE ring trial - 3 PCR's selected as the most promising tests for further validation (Agüero, Guthrie, Deltamune)

- Agüero test accepted by OIE BSC – Sept 2015

Guthrie qRT-RTPCR to be submitted to OIE Biological Standards Commission – Jan 2016

Earliest full ratification 2017 OIE General Assembly



Progress: Movement of horses

Private – public partnership between industry and Government

- (refer: organisational improvements – formation of epidemiology unit)
- improved record keeping and traceability

Import permit formalisation enforcing no direct imports from neighbouring countries into AHS controlled area



Progress: 2 year freedom periods (OIE and EU)

Date of resolution 2014 outbreak: 17 June 2014

2014 outbreak: CZ targeted surveillance for AHS freedom in addition to the current sentinel surveillance which includes the outbreak CZ – Jan 2016



Progress: Vaccine development

OIE commissioned projects include 2 funded AHS vaccine projects

- estimation of the impact of a new AHS DIVA vaccine on the equine sector, which focusses on the economics and viability of such a commercial vaccine and includes defined equine populations at risk
- evaluation on the availability and efficacy of AHS vaccines and vaccine candidates, which is based on a review of the current research and development activities



Further progress

- Page, Patrick, et al. "Field and in vitro insecticidal efficacy of alphacypermethrin-treated high density polyethylene mesh against *Culicoides* biting midges in South Africa." *Veterinary Parasitology* 203.1 (2014): 184-188.
- Weyer, Camilla T., et al. "Development of three triplex real-time reverse transcription PCR assays for the qualitative molecular typing of the nine serotypes of African horse sickness virus." *Journal of virological methods* 223 (2015): 69-74.

AusVet Export Risk Analysis 2015

Model the probability of undetected AHS infection in horses exported from an infected zone/country

Assuming:

- OIE recommended vector-protected pre-export quarantine (PEQ)
- PCR prior to and during PEQ period
- Quarantine within either low-risk (free zone) or endemic area
- +/- post-arrival vector-protected quarantine (PAQ) and PCR for additional risk mitigation

AusVet Export Risk Analysis 2015

For a low risk area with no PAQ:

Probability of an exported horse being infected & not detected equivalent to 1 undetected infected horse : 187 000 horses exported

Adding PAQ + one PCR test reduced this probability by approximately 12-fold.

For an endemic higher risk area with no PAQ:

Probability of an exported horse being infected & not detected equivalent to 1 undetected infected horse : 11 000 horses exported

Further progress

AusVet Export Risk Analysis 2015

Risk could be further reduced by:

- Additional PCR testing
- Longer quarantine period
- Exporting only during low-risk period
- Suspending exports while outbreaks occurring

Conclusions

Intensified surveillance with comprehensive plan

Limit vaccine derived outbreaks

If no further outbreaks in surveillance and free zones then will qualify to apply to EU for re-instatement of direct exports on 17 June 2016

If no further outbreaks in surveillance and free zones then will qualify to submit a dossier to OIE for consideration of official AHS zonal freedom in Nov 2016

Conclusions

The South African Government would like to negotiate direct export protocols with other trade partners (supported by the South African Export Task Team and the South African Equine Trade Council)

Thank you

