

Biosecurity: the key of ASF control

生物安全：非洲猪瘟（ASF）控制的关键点



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March 26th, 2019
Beijing

2019-03-26
北京

Biosecurity

生物安全

the most effective control tool for ASF
控制ASF最有效的工具

The only potent tool we have...
我们所拥有的唯一强力工具.....

1st step: collecting our thoughts

第1步：整理我们的思绪

What do we think of, when we see the word

BIOSECURITY?

当我们看到“生物安全”这个词时，我们会想到什么？

Biosecurity: EU Animal Health Law

生物安全：欧盟动物保健法

‘Biosecurity’ means the

sum of **management** and **physical** measures designed to reduce the risk of the introduction, development and spread of diseases to, from and within:

(a) an animal population, or

(b) an establishment, zone, compartment, means of transport or any other facilities, premises or location

“生物安全”是指在以下事物进出通道上或在其内部，用于降低疾病引入、演化和传播风险的所有**物理性**和**管理性**措施：

(a) 动物群体或

(b) 组织机构、地区、隔间、运输工具或其它任何设施、场所和位点

More definitions

其它定义

OIE, Terrestrial Animal Health Code – Glossary

国际兽医局，陆生动物卫生法典--术语汇编

Biosecurity means a set of management and physical measures designed to reduce the risk of introduction, establishment and spread of animal diseases, infections or infestations to, from and within an animal population.

生物安全是指在进出动物群体的通道上或在其内部，用于降低动物疾病、传染病或虫害引入、发生和传播风险的一系列物理性和管理性措施。

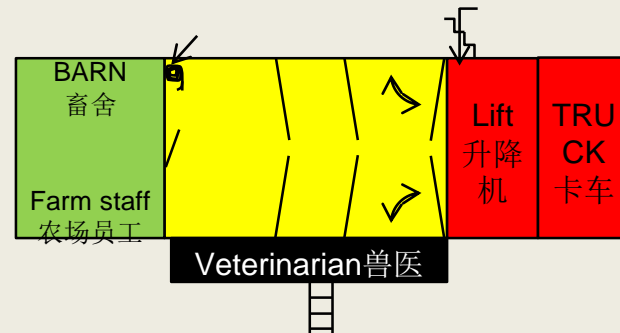
Biosecurity生物安全

Hardware 硬件



J. Westergaard
(韦斯特加德)

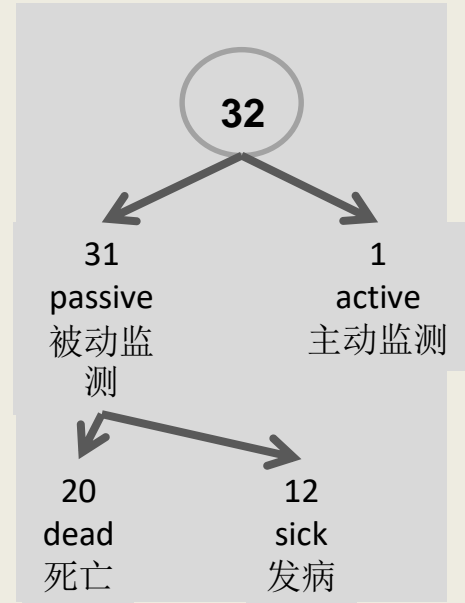
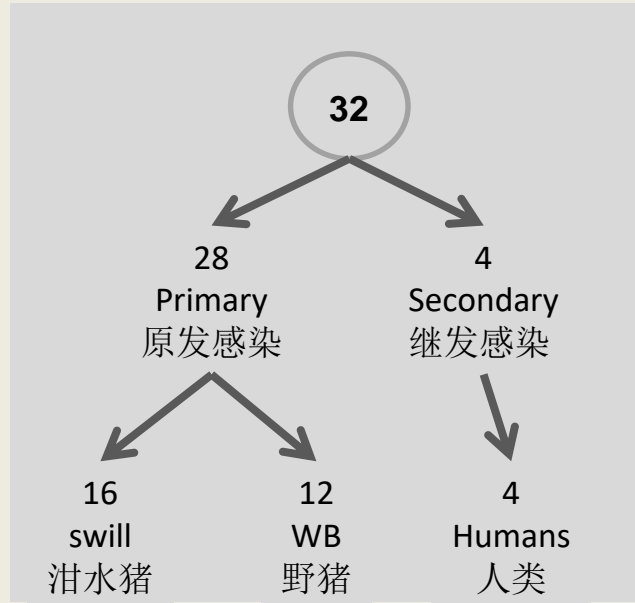
Software软件 (Mindset/Philosophy) (思维模式/思想体系)



Back to ASF Prevention

回到ASF的预防

More a hardware or a software problem?
更多的是一个硬件问题还是软件问题?



ASF outbreaks in Latvia in 2014, field observations (Oļševskis et al., 2015)
2014年拉脱维亚ASF疫情实地观察 (Oļševskis等, 2015)

How to implement specific biosecurity plans?

如何实施特定的生物安全计划？

1. Know the production systems you want to address
(«know your friends»)

了解你要面对的生产系统（“了解你的朋友”）

2. Know the disease and its spreading pathways (know your enemy»)

了解疾病及其传播途径（“了解你的敌人”）

3. Be pragmatic and reasonable

实用、合理

4. Be strict in the implementation

严格执行

Production systems

生产系统

There are a number of different animal production systems to take into account when biosecurity measures are reviewed. These include:

在谈论生物安全措施时，需要顾及一些不同的动物生产系统，包括：

- **Large size commercial farms** where production is professionalized
大规模商业化养殖场：专业化生产
- **Family farms** – backyard farms or hobby farms - having one or a few pigs and perhaps some other animals
家庭农场-农家后院或休闲农场：有一头或几头猪，可能还有其它动物
- **Organic farms** with less intensive production systems and partly based on free range of animals
有机农场：非集约化生产系统，部分为自由放养牧场

Farmed pigs

农场猪

- no swill feeding
不喂泔水
- no outdoor keeping
非户外喂养
- good veterinary service
良好的兽医服务
- registered holdings
登记在案
- movement control
流转控制
- good bio-security
良好的生物安全
- controlled trade
贸易管制
- professional management
专业化管理

Back yard pigs

农家后院猪

- swill feeding
饲喂泔水
- outdoor keeping
户外喂养
- poor veterinary service
兽医护理差
- inadequate registration
登记不全
- home slaughtering
自宰
- inadequate movement control
流转控制不充分
- bad bio-security
生物安全性差
- uncontrolled markets
市场不受控制
- tradition, etc.
传统习俗 等

Backyard farming: A biosecurity challenge

庭院养殖：生物安全存疑

Backyard pig farming apart from tradition

除是传统习俗外，庭院养猪：

- plays an integral role in recycling of food
在食物循环利用中起着不可或缺的作用
- plays an important role for meat supply in rural areas
对农村地区的肉类供应发挥重要作用
- is a valuable cash income
是一项重要的现金收入源



What do we need to prevent ASF?

为防ASF，我们需要做什么？



No contact with wild boar

不与野猪接触

No contact with pigs of other farms

不与其它农场的猪接触

No access to animals for visitors

访客没有接触过动物

No swill feeding

不饲喂泔水

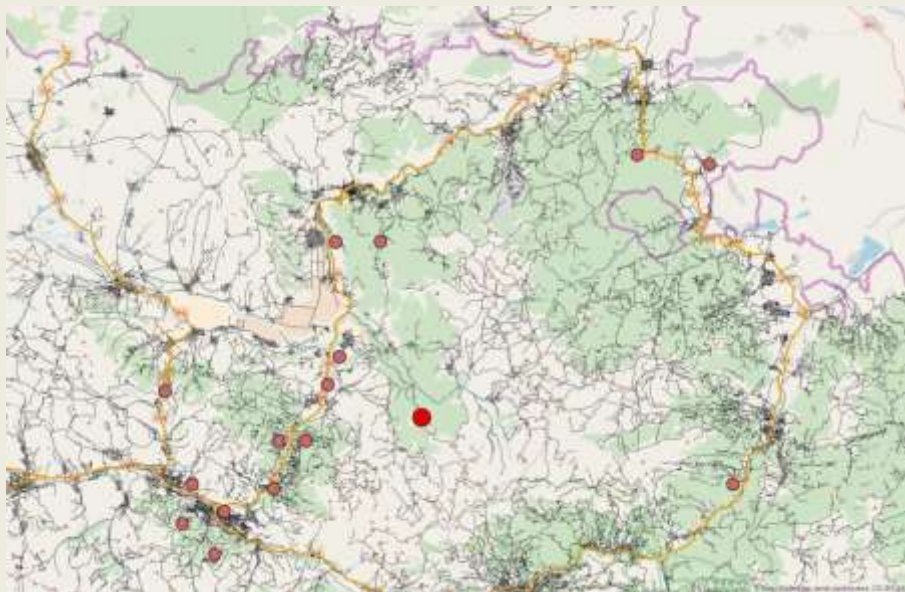
No roughage feed or bedding harvested
in areas with infected wild boar

粗饲料或垫草不得来自患病野猪的活动区域

Backyard farming 庭院养殖

Three basic biosecurity rules 3项基本的生物安全准则

1. No swill feeding
不饲喂泔水
2. No contact between the pig(s) on the farm and susceptible animals
农场内的猪与易感动物无接触
3. The owner/keeper change clothes on entering the stable and leaving the stable
在进出猪舍时，业主/饲养员更换衣物

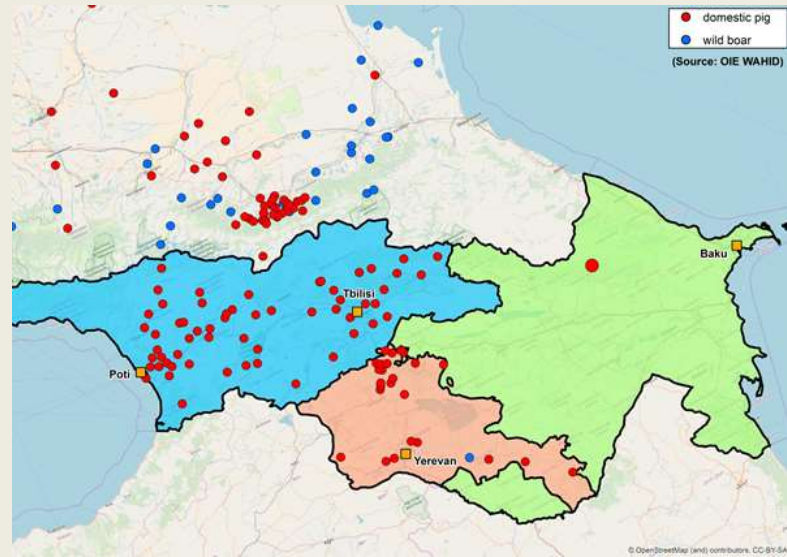


TRADITION

传统习俗

Home slaughtering
at Christmas

在圣诞节自宰



Segregation 隔离



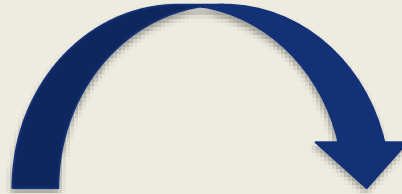
This can not be enough!
这还不够！



Improving Biosecurity 提高生物安全

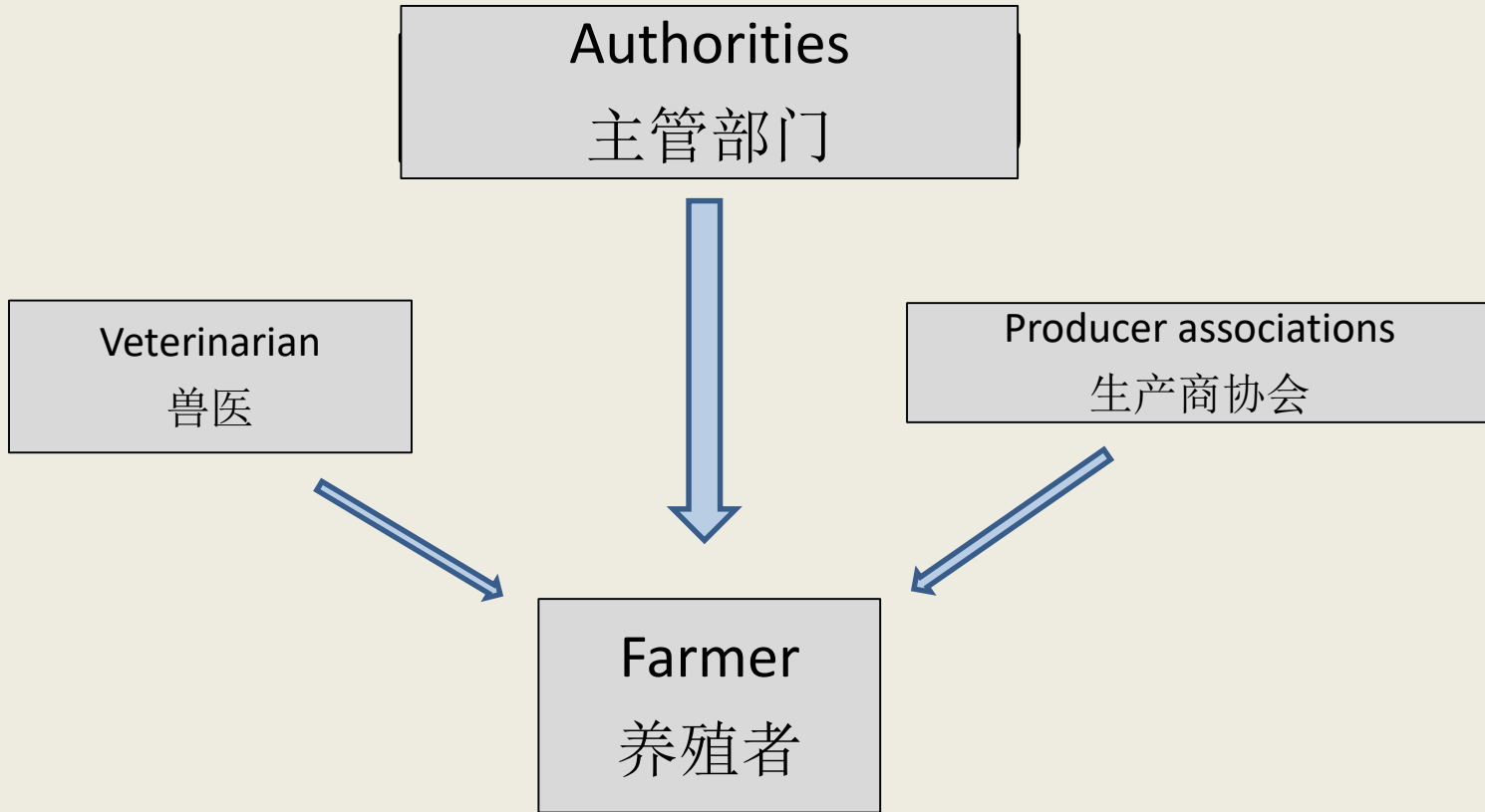
What can we expect?
我们能期待什么？

Are we realistic?
我们现实吗？



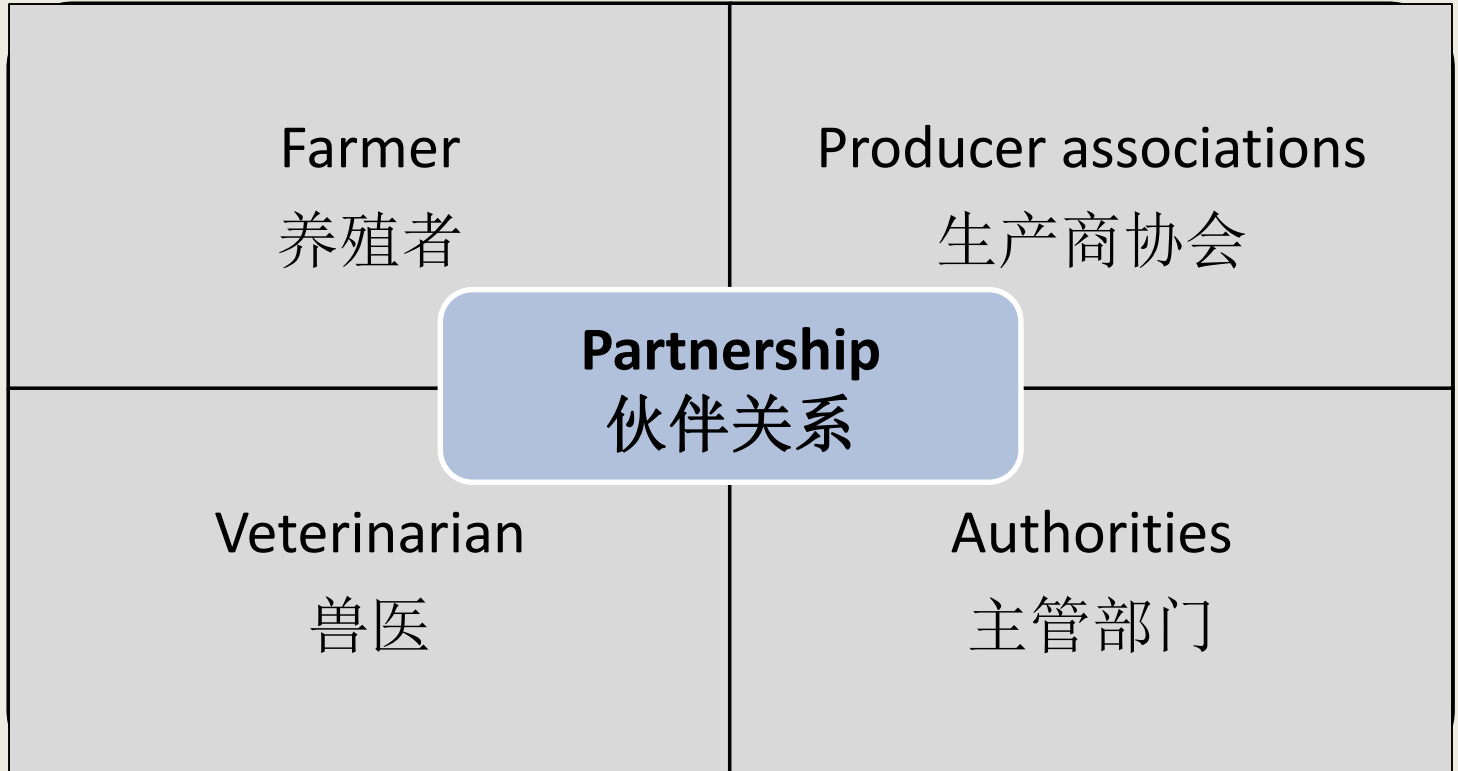
How do we get there

我们怎样才能做到这些？



How do we get there

我们怎样才能做到这些？



More than anything 最重要的是

Biosecurity is a "mindset" or "philosophy" that must be developed by producers

生物安全是一种生产者必须建立的“思维模式”或“思想体系”

- It requires the adoption of a **set of attitudes** and behaviors by people to reduce risk in all activities
它需要人们在所有活动中采取一系列态度和行为，以降低风险
- There is no **“one fits all”** solution – biosecurity should be adapted to present risks
没有“放之四海而皆准”的解决方案，生物安全应与当前风险匹配

Put the producer in the center 以生产者为中心



Tell me, I will forget!
告诉我，我会忘记！

Show me, I may remember!
展示给我看，我可能会记住！

Involve me, I will understand!
让我参与，我可以弄明白！

Chinese proverb
中国谚语

Biosecurity is Risk Management

生物安全即风险管理

Risk is never = 0
风险永远不会为零

Perception of risk is “personalized”
风险认知 “仁者见仁，智者见智”

- Do we always put the seatbelt on?
坐在车上时，我们总会系好安全带吗？
- Do we always respect the speed limit?
我们总会遵守限速规定吗？
- Do we never touch the mobile while driving?
在开车时，我们从不触碰手机吗？
- Do we immediately change oil when reaching certain km?
当达到特定公里数时，我们会立即更换机油吗？

Biosecurity in a context

生物安全情景

“Peace time” Biosecurity “平时”的生物安全

- Routine work on farm 农场内日常工作
- No specific target 没有明确目标

“Crisis-oriented” Biosecurity “面向危机”的生物安全

- Goes beyond the normal routine 超出日常工作范畴
- Has a specific target 具有明确目标
- Additional efforts – (ideally) with a time horizon
付出额外的努力-（在理想情况下）有时间范围或期限

Both follow the same principles but have different main concerns and dimensions

两种情景遵循相同的原则，但关注焦点和工作范畴不同

Biosecurity – Conclusions

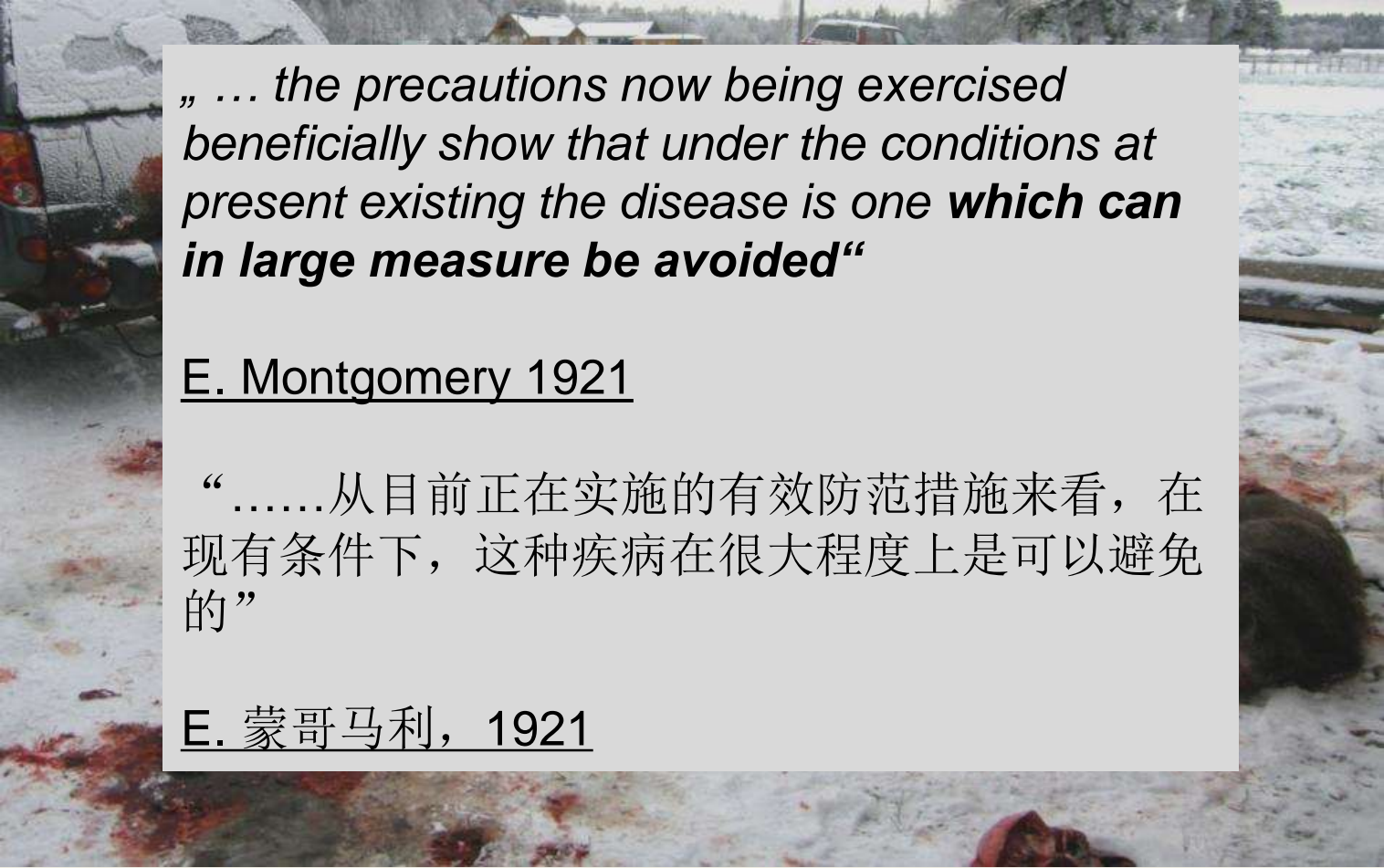
生物安全 – 结论

- Good biosecurity is a vital part of keeping new diseases away from animals.
良好的生物安全是让动物远离新发疾病的关键。
- A good biosecurity is always essential- diseases may not always be apparent, especially in the early stages.
良好的生物安全总是必需的--疾病并不总是显而易见，尤其是在早期阶段。
- A good biosecurity is based on a partnership involving livestock producers, veterinarians and official authorities.
良好的生物安全基于畜禽生产商、兽医和主管机构的合作。

Biosecurity in the forest...

森林生物安全.....





*„ ... the precautions now being exercised
beneficially show that under the conditions at
present existing the disease is one **which can
in large measure be avoided**“*

E. Montgomery 1921

“.....从目前正在实施的有效防范措施来看，在
现有条件下，这种疾病在很大程度上是可以避免
的”

E. 蒙哥马利，1921

Biosecurity during hunting!!!
狩猎期生物安全！！！！

Photo: V. Guberti
照片来源：V. 古贝蒂