



HOW SMALL SCALE LOW BIOSECURITY PIG SECTOR COULD BE TRANSFORMED INTO MORE BIOSECURE SUSTAINED SYSTEMS

DR. SHARON TSIGADI

FARMERS CHOICE LTD – KENYA

African swine fever: Call for action | Series of webinars | 26-30 October 2020



OUTLINE

- Global pig industry & ASF
 - Definitions
 - Challenges faced in implementing effective biosecurity measures in the small scale pig sector
 - Proposals on how to transform biosecurity in the small scale pig sector
 - Conclusions
-

THE GLOBAL PIG INDUSTRY & ASF

- ASF present in Asia, Europe and Africa.
- Predicted that ASF will decrease the pig population by one third in the next one year if not brought under control.
- Global pig population estimated at 677.6 million pigs as at January 2020. China home to more than half of the global population (310 million) followed by the EU (148 million) and the USA (78 million).
- Global pork production 2019 – 118 million metric tons. Consumption projected to increase by approximately 35% by 2030
- Increase in pig numbers will not spread evenly round the globe: Asia leads the increase, numbers in North America and Europe are increasing more slowly or holding steady whilst numbers in Africa are growing more rapidly.


❖ Source – Statista



BIOSECURITY

Introduction and Definitions

- A set of preventative measures to prevent the introduction of disease in to a herd (external biosecurity) or spread of a disease within a herd (internal biosecurity).
- First line of defense against disease.
- Key in maintaining the health of your pig unit, reduces the costs of disease and maintains productivity.
- Effective only when applied/implemented throughout the entire supply chain.
- Entails minimizing or diluting risk - hygiene/cleaning, segregation and disinfection.
- Part of a herd health plan and include a routine for reassessing the risks at regular intervals.
- Should cover all possible routes of disease transmission hence encompass guidelines for;

- 
- Farm staff
 - Visitors
 - When selling pigs
 - Going off farm to buy supplies/receiving supplies
 - Replacement breeding stock
 - Introduction of new animals
 - On farm Pig flow management

- practices (all-in-all-out)
- Control of rodents, birds, wildlife and other pests
 - Manure management
 - Dead stock disposal

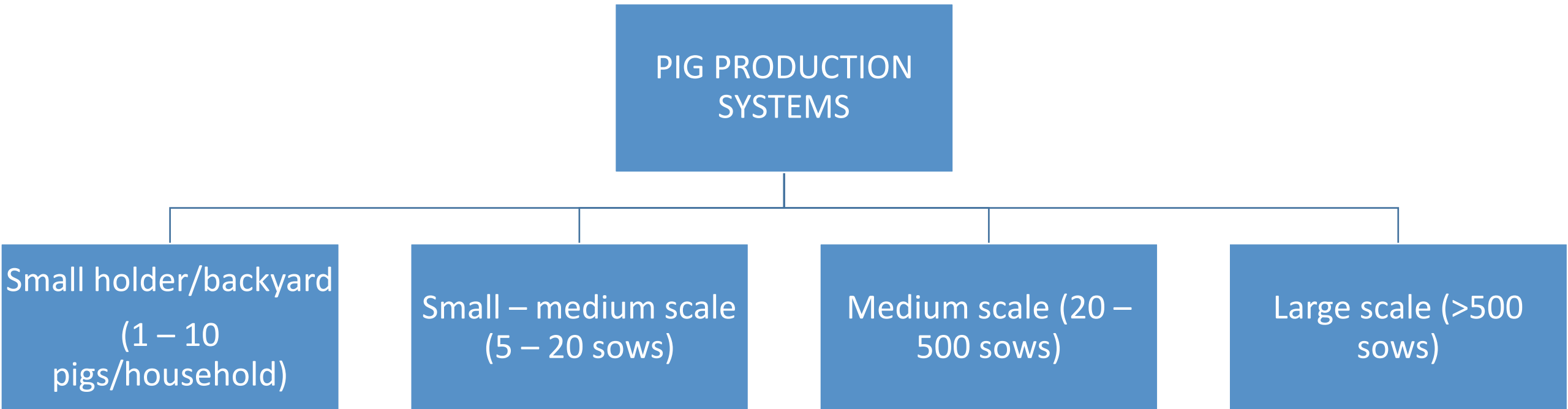


WHY IS BIOSECURITY IMPORTANT?

- A biosecurity programme is a high yielding investment – individual, country, global levels
 - ✓ Increased productivity
 - ✓ Reduced production costs
 - ✓ Market access
 - ✓ Incomes/Contribution to economies

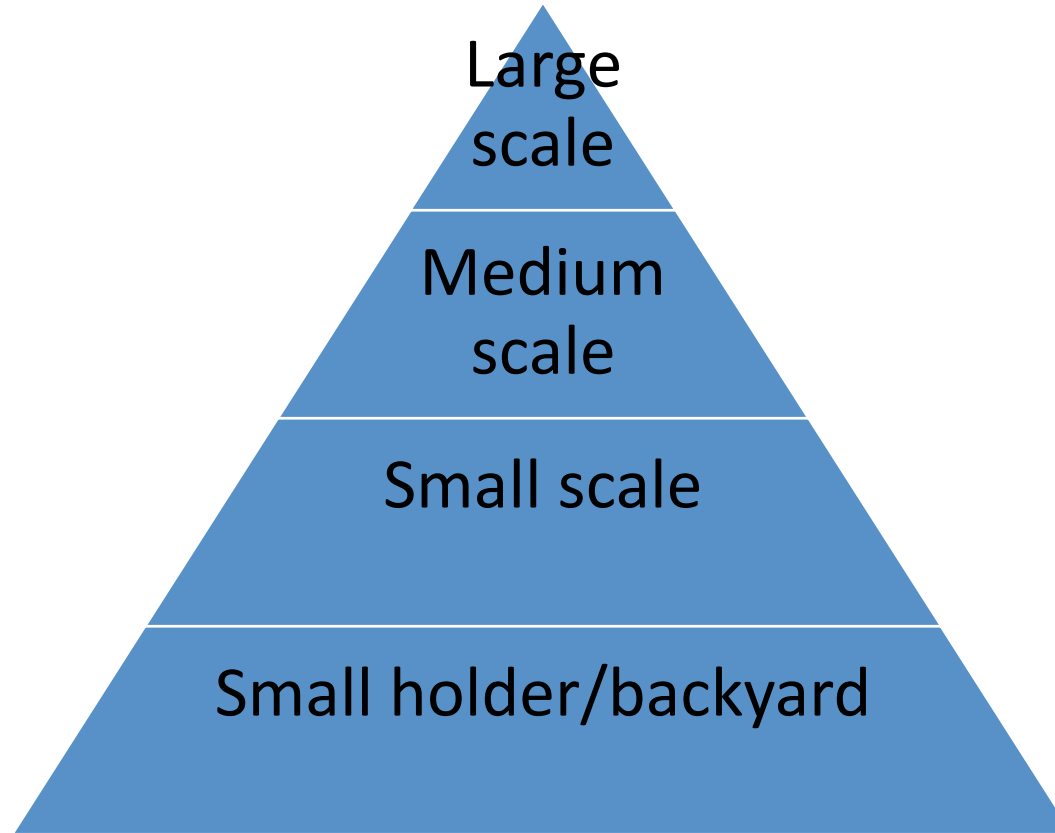
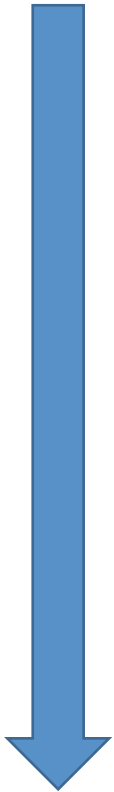
- ✓ Employment
 - ✓ Food security
-

PIG PRODUCTION SYSTEMS



■ Highest

■ lowest



SMALL HOLDER PRODUCTION



LARGE SCALE PRODUCTION





CONSTRAINTS TO IMPLEMENTATION OF EFFECTIVE BIOSECURITY BY SMALL SCALE PRODUCERS

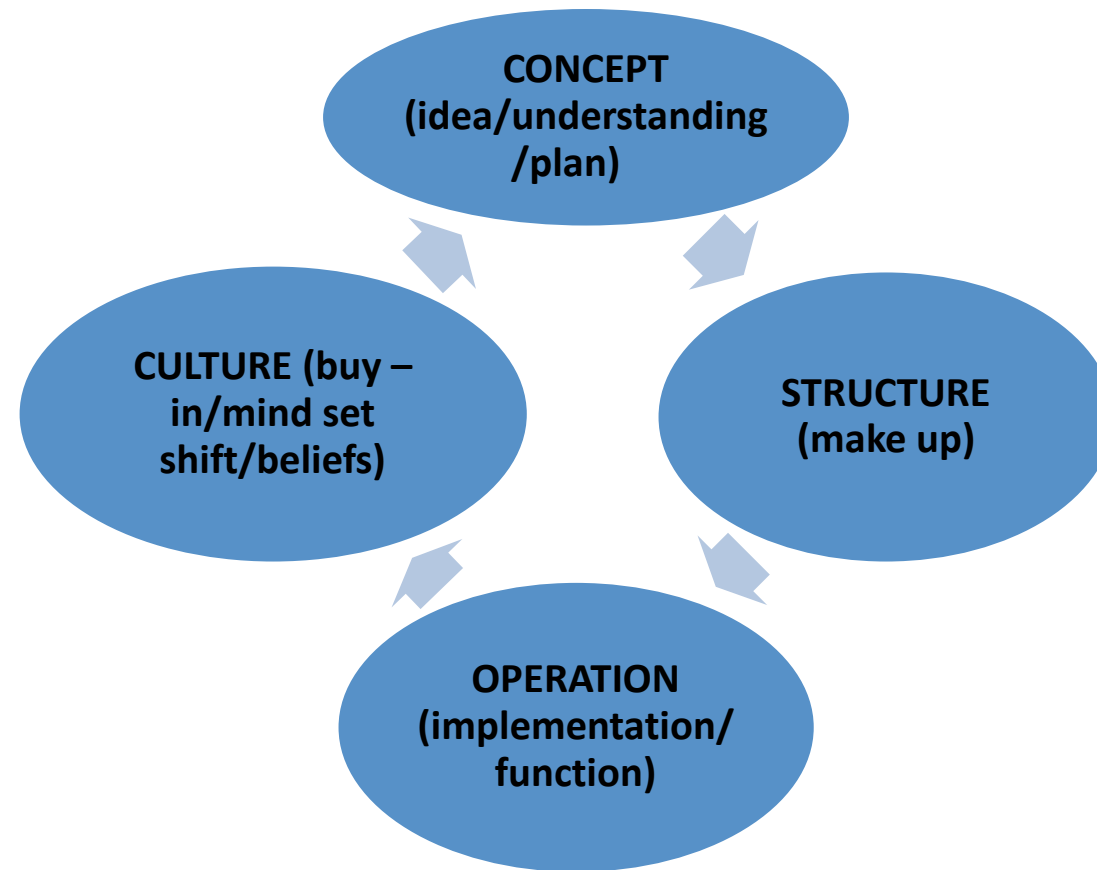
- Lack of awareness
 - Lack of inputs - disinfectants, implements, technical personnel
 - Fragmented systems/stakeholders
 - Production systems – multiple species, communal boars,
 - Costs involved – veterinary and implementation
 - Lack of technology
 - Water availability and quality
 - Feed sources/types
 - Poor manure and carcass disposal
 - Lack of Govt. policies/implementation and or participation
-



HOW TO TRANSFORM THE SMALL SCALE SECTOR TO MORE BIOSECURE SYSTEMS

- Each producer, value chain, locality, region and country is unique – no one size fits all.
- Important to evaluate each level of the value chain individually and customize approach/proposals to fit each unique situation.
- Participatory approach rather than dictatorial – all stakeholders should be involved and their views included. This will build trust
- Develop local solutions that resonate with all stakeholders
- A continuous process that should rest on four main pillars
 - ✓ Concept
 - ✓ Structure
 - ✓ Operations/processes & governance
 - ✓ Culture

BIOSECURITY PILLARS





1. CONCEPT

- Create awareness/understanding

- Develop an understanding of;

- Stakeholders and role played by each
 - stakeholder asset base and perceptions of risk
 - The animal density – farm registries, census, animal ID
 - Health status – facilitates

zoning

- Disease spreading pathways
 - Resource availability
 - Feed types & availability
 - Water availability and quality
 - Training & extension education needs



2. STRUCTURE

- The make up of a biosecurity program
 - Identify all stake holders and role played by each
 - Identify existing/encourage formation of producer co-operatives
 - Identify stakeholder asset base and perceptions of risk
 - Identify stakeholder interactions within the community
 - Identify stake holder issues/concerns regarding biosecurity and their influence and interest in each of the issues
- Policies
- Subsidies



3. OPERATION

- Implementation of a biosecurity programme
- Key stakeholders – producer, transporter, feed source and slaughter houses
 - Development of industry/small holder standards
 - Define role played by each stakeholder - Co – management of risks
- Subsidize input costs to Co-ops so as to facilitate access to quality inputs and services.
- Producer engagement – communication
- Compliance and legislation
- Surveillance and reporting
- Personnel

OPERATION contd.

PRODUCER

- Empower to ID animals not suitable for slaughter i.e. sick animals... incentivize
- Educate on importance of cleaning and disinfection.
- Use of communal boars
- A.I training

TRANSPORTER

- Centralize collection points
- Educate on and facilitate cleaning and disinfection of vehicles
- Train on ID of sick animals not ideal for slaughter Incentivize

CO-OPERATIVES

- Set minimum joining standards
- Champion producer issues to relevant bodies
- Source for funding
- Regular member trainings (CPDs?)
- Regular audits
- Subsidize input costs for members

SLAUGHTER HOUSES

- Source of information
- Set standards for both producers and transporters
- Provide cleaning and disinfection points
- Slaughter house staff training

FEED SOURCES

- Raw material quality check lists developed in conjunction with animal health practitioners
- Centralized drop off points
- Swill quality

GOVERNMENTS

- Policy development
- Co – ordination
- Compliance and legislation
- Surveillance & monitoring
- Laboratory services
- Technical services/personnel

4. CULTURE

- Targets the human factor, key if programme is to succeed (Mind set shift/buy – in/beliefs/attitudes)
- Producers, service providers etc
- Requires
 - Good communication
 - Continuous education/training
 - Regular audits
 - Incentivization
 - ✓ Introduce bonuses for pigs originating from biosecure farms



CONCLUSION

- Small holder pig producers face unique challenges that should be acknowledged to develop sustainable solutions.
- Important to strengthen biosecurity in all systems of pig production and throughout the value chain.
- Biosecurity should be given priority in training institutions.
- Governments should set aside adequate resources for disease control/preparedness in the pig industry due to the livelihoods it supports and contribution to food security.
- Both the private and public sector have a key role to play.
- Measures should be continuously evaluated and adjusted to ensure effectiveness and conformity to changing situations and times.

THANK YOU

