



# Living with African Swine Fever In Nigeria

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# A little about us.....

**Pig Farmer**

**Consultant**

**Retail of all Pig solutions In Nigeria**

**Extension Services**

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# ASF In The Past

**ASF is not a new occurrence in Nigeria, its been on many individual farms over the years especially since the last reported outbreak in 2009, but it never makes the news since it didn't affect the settlements nor escalate.**

**The severity and devastation has always been the same and unfortunately despite past experiences we are still repeating mistakes that sustain the spread of the infection. This is because of poor documentation and also because majority of the victims quit the business hence the historical lessons are not passed on to new farmers**

# ASF In The Past

## • **Impact**

- **reversed gains in pork processing.**
- **reversed past gains in genetic improvements when it eliminated most imported breeds**
- **eliminated local skills and know how on feed and management.**

## **Past Solutions that Failed**

- **antibiotics**
- **All herbs and remedies already explored without success**
- **wishing the virus will just go away**

# ASF Today

**Reported confirmed cases in Abuja, Middle belt and South East since early 2019. outbreak in Southwest since December-January 2020. Devastating all pig settlements in Lagos, Ogun and also affected many private farms and still spreading fast so its better to assume its at your backyard already.**

# Why We are In the Mess

- **Failure of Federal and state ministry of agriculture to enlighten pig farmers.**
- **Failure of farm settlement executives to enlighten members and disclose outbreaks**
- **Concealment of information regarding outbreaks by farm settlement executives and farmers.**
- **Unhealthy rivalry amongst pig farmers.**
- **Reckless disposal of carcasses**
- **Movement of infected pigs**
- **Failure of farmers to use WhatsApp and other technology apps to inform and educate themselves on ASF.**
- **Poor or non-existent biosecurity practices.**
- **Thinking its another farmers problem.**
- **Farmers repeating failed past remedies as highlighted previously**
- **Poor control protocol( use of ineffective disinfectants, disinfecting while still having infected animals onsite etc)**

# How ASF Spreads

- **Pig Buyers**
- **Farm Attendants, Farm Owner and Visitors**
- **Feed vehicles**
- **Feed raw material**
- **Water**
- **Mechanical Vectors(Flies, Rats, Lizards, Birds)**
- **Vets**
- **Borrowing of Boars**
- **contact with infected pigs.**

# Early Signs of ASF

- **Inappetence/drop in feed intake**
- **high body temperature (over 41 celcius)**
- **Depressed look**
- **Lack of enthusiasm to stand**
- **Swollen joints**
- **Swollen neck**
- **Sudden death**
- **Shivering**
- **Lying with legs and knees under the body**
- **Internal haemorrhage (bleeding from inside)**
- **vomiting**



# Early Signs of ASF

Necropsy findings:

- **Dark and enlarged spleen**
- **Excessive internal fluids**
- **Foaming and fluids in lungs and thorax**
- **Internal bleeding**

# How To Avoid ASF On Your Farm...Farm Is not a Zoo

- **Feed Hygiene and Water Hygiene**
- **Eliminate all disease Vectors(rats, flies, lizards) periodically**
- **Compulsory use of Overboots, Gloves, Hair covering**
- **PPE clothing**
- **Netting of pen(bokoharam net + mosquito nets)**
- **drainages should have filters to prevent entrance of vectors**
- **All visitors(including attendants and owner) must shower before entering the pen**
- **No vehicles(including owner) to enter site, exception for feed delivery vehicle and frequency of feed purchases should be reduced.**
- **Ensure to purchase new syringes and injection always. Don't share**
- **Don't share or borrow boars adopt Artificial Insemination**
- **Always have a checklist of your vulnerabilities and plan to eliminate them fast**
- **Use Feeders- reduces role of attendants and reduces need to enter (contaminate) pen after cleaning.**
- **Use Proper Disinfectant and follow usage Instructions**

# Common Effective Disinfectants

- Digestal(1%)
- Sodium Dichloroisocyanurate or Troclosene Sodium (Sanitab)
- Caustic soda(2% surfaces, 1% hand)
- Formalin(1%)- carcinogenic
- Sodium Hypochlorite(Bleach) - useful but its disinfectant properties are **diminished by organic material(faeces, blood, urine. Saliva, semen etc), alkaline surfaces, moisture. It also lacks the ability to penetrate porous surfaces.**
- Citiric Acid(2%)
- Calcium oxide 1%
- Glutaraldehydes etc

**Good disinfectant must quickly inactivate ASF and penetrate porous surfaces like floors, wood etc**

# How to Clean and Disinfect

- 1) Remove organic matter (faeces, blood, urine, saliva, semen etc) using broom, shovel and scrapers.**
- 2) Use a quality Detergent to soak the room.**
- 3) Clean the room**
- 4) Allow to Dry**
- 5) Then Use the right Disinfectant**

# Outdoor Disinfection

- **Manure Pit**
- **Contaminated soil**

**Digestal: 1-2 Litres per 100 Litres of Water**

**Calcium Oxide: 30 kg / 100m<sup>2</sup>**

# How To Get the right Disinfectant

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# Insurance

- **Insurance Policy.** -read to understand what they cover
- **Multi-site operation.** Its better to spread your risks across different pens in the same compound or across a state or states.

# Restarting After ASF

- **List all production challenges you faced Pre-ASF and define solutions**
- **Identify how you got ASF, have you blocked the vulnerability?**
- **Adopt Prevention strategies mentioned previously**
- **Create a check list of all biosecurity challenges you are going to face and solutions. Any risk can affect you make no assumptions**
- **Don't retain any single pig, clothing, broom etc. Destroy all.**
- **Proper Disinfection.**
- **Manure Pits should be cordoned off and disinfected with Digestal or Calcium Oxide.**
- **Follow standard production practices. So many credible information resources online.**
- **Plan to have minimal contact with the Pigs pen, feed once if possible and from outside the room into the feeder.**
- **Purge yourself off the concept of a pig can eat anything.**
- **Adopt Artificial insemination**
- **Reduce the role of farm attendants**
- **Develop a healthy appetite for scientific information related to piggery. You don't always want the cost of a practical experience.**
- **Conduct ASF risk analysis with us.**



## What Else can be done?

- Stakeholders(Government, Cooperatives, Allied services and Farmers)to increase awareness on ASF and commit resources towards disinfection.
- Transparency among Farmers
- Deployment of Disease surveillance and reporting tools
- Quarantine measures

## **Take-home Message**

**Biosecurity is not where you want to apply economics**

**It's better to Overdo Biosecurity than to Underdo biosecurity.**

**Any vulnerability can wipe out the herd.**

# Biosecurity

## Biosecurity = 3 Major Components

- **Bioexclusion**
- **Biomangement**
- **Biocontainment**

# Bioexclusion

**keeping the bad guys (bacteria, viruses, fungi etc) out.....**

- Foot dip
- disinfection
- feed and water hygiene
- vaccines
- visitor restrictions

**Our present focus but implementation is poor and the bad guys often get in**

# Biomangement

**Managing the harmless(economically insignificant) bad guys...**

- **Vaccines**
- **Antibiotics**

**We seem to be experts here but ASF has no vaccines or treatment so approach can't be considered**

# Biocontainment

**means very bad guys(economically significant infections)  
finally got in despite bioexclusion**

# Bio-containment

## What Can We do?

- **Detection of early disease signs**
- **Removal and isolation of sick or healthy pigs**
- **Drastic culls of infected or suspected healthy pigs**
- **Thorough external and internal disinfection of the whole facility**
- **Rapid tests to confirm spread of infection**
- **Use the farm diary to replay steps that may have allowed the bad guys in. This a detailed record of daily activities on the farm: visitors, purchases, any changes etc**
- **Complete replacement of all potentially contaminated materials**
- **Effective on a multisite**
- **Different employee and materials for each building/ isolation site**

## Mental Challenge

**Will you cull 4 infected Purebreed Durocs to save 50 cross breeds?**



# Tips

- **each house to have unique coloured farm tools to avoid mistakes and prevent spreading of diseases between buildings or zones.**
- **Also each house to have it's own worker**
- **ASF is a slow moving disease so early identification allows time for a rapid and diligent bio-containment procedure to save majority of the herd.**
- **If you're in okearo, you can have one pen in old farm and another pen in new farm. Unlikely for disease outbreak to simultaneously affect both farms at d same time.**
- **It took about 2 months for ASF to move across new farm to old farm a distance of 300m +/- . More than sufficient time to consider new options.**
- **Not the best time to engage in conflict with employee/change employees/recruit new workers. Most workers on the market recently left ASF farms.**
- **A disgruntled employee can deliberately introduce it into the herd.**

## **Take-home Message**

**Biosecurity is a lifestyle and Practice makes Perfect.**

**Get Back To Business Quickly.**

# Hygiene

- Poor Feed and Water Hygiene is a major reason Nigeria is behind in global livestock production.
- Poor hygiene leads to reduced production performance and makes us reliant on Antibiotics.
- By the time you identify a pig needs antibiotics its probably been suffering(slow growth, reduced litter etc) for long

# Feed Hygiene Solutions

- Formalin previously used to disinfect feed in western countries but now banned due to Carcinogen.
- Current option is Organic acids which destroys all the bad guys in the feed using **Acidification**.

# What Is Acidification

- **Acidification** is a method of food preservation that relies on pH adjustment.
- All microorganisms have a pH at which they grow best, and range of pH above or below which they will not grow.
- pH is a measure of the degree of acidity or alkalinity of a solution (water, feed, blood, surfaces etc).
- pH Values between 0 and 7 indicate acidity; values between 7 and 14 indicate alkalinity.
- Distilled water, which is neutral, has a pH of 7.
- Foods tend to be either neutral or acidic.
- real life example of acidification technology include biscuits, fruit drinks, canned food which usually contain citric or acetic acid or else processed food will go bad

# How It Works

- **Microorganisms have pH limits below which they will not grow.**
- **All microorganisms prefer a neutral pH for optimum growth**
- **Most of them stop growing at a pH of 5.0.**
- **ASF is destroyed below pH 3.9**

# How Pigs benefit from Acidification

- Water pH can be adjusted to kill bacteria, fungi and viruses present in Water and Digestive system.
- Feed pH can be adjusted to kill bacteria, fungi and viruses (Including ASF) present in Feed.
- Feed can be preserved from Spoiling by adjusting pH.
- Pen surfaces can be disinfected by adjusting pH.

# Acidification Solution

## Digestal

**Digestal able to do a wide spectrum of functions using Acidification and pH adjustment.**



# Examples Using Digestal

**Drinking Water Disinfection:** 300ml Digestal to 1000 litres of Water

**Surface Disinfection:** 1 Litre to 100 Litres of water.

**ASF Feed Disinfection:** 40 ml per 100 Litres of Soup Feed

# Thank You

**To Order Digestal:**

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**Follow our conversations on Pig Farming:**

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