



INTERNATIONAL

The key to your profit!



How to apply biosecurity in practice

Dr. Fernando Carrasquer

Everyone is speaking about biosecurity



World Health Organization



Food and Agriculture Organization of the United Nations



International Food Safety Authorities Network (INFOSAN)

3 March 2010
INFOSAN Information Note No. 1/2010 - Biosecurity

Biosecurity: An integrated approach to manage risk to human, animal and plant life and health



Poultry Digital Events Shop



Home | Genetics & breeding | Meat poultry | Egg layers | Health & disease | Processing | Equipment & innovation

Biosecurity: Protecting our flocks to sustain the supply



BIOSECURITY | TREATMENTS AND PREVENTION | HEALTH & DISEASE

12 poultry farm biosecurity principles you should know

Penn State's Dr. Gregory Martin offers tips on drafting a biosecurity plan and ensuring it will work during a crisis.



BIOSECURITY BASICS FOR POULTRY GROWERS



Events

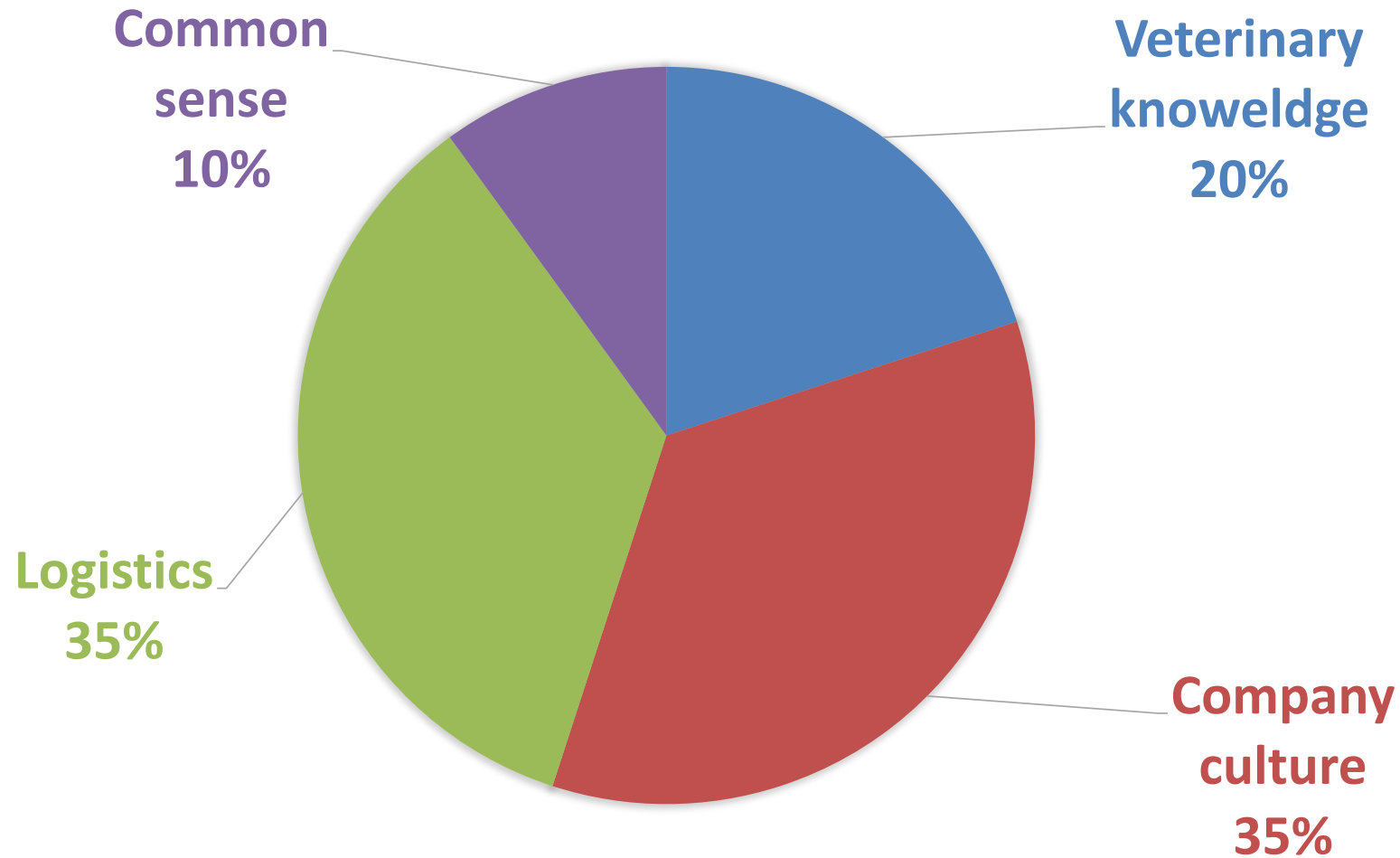
Home | Disease & welfare | Farm economics | Genetics & reproduction | Husbandry | Anatomy & physiology

Veterinarians serve as biosecurity champions

BIOSECURITY AND HYGIENE | MANAGING DISEASE | DISEASE AND WELFARE



But biosecurity is about acts not about words



Biosecurity



Country level



County level



Farm level



Design

Structures

Operations

Conceptual biosecurity



Farms



Slaughter house



Roads



Live birds markets



Lakes

Farm DESIGN and its' location and surroundings

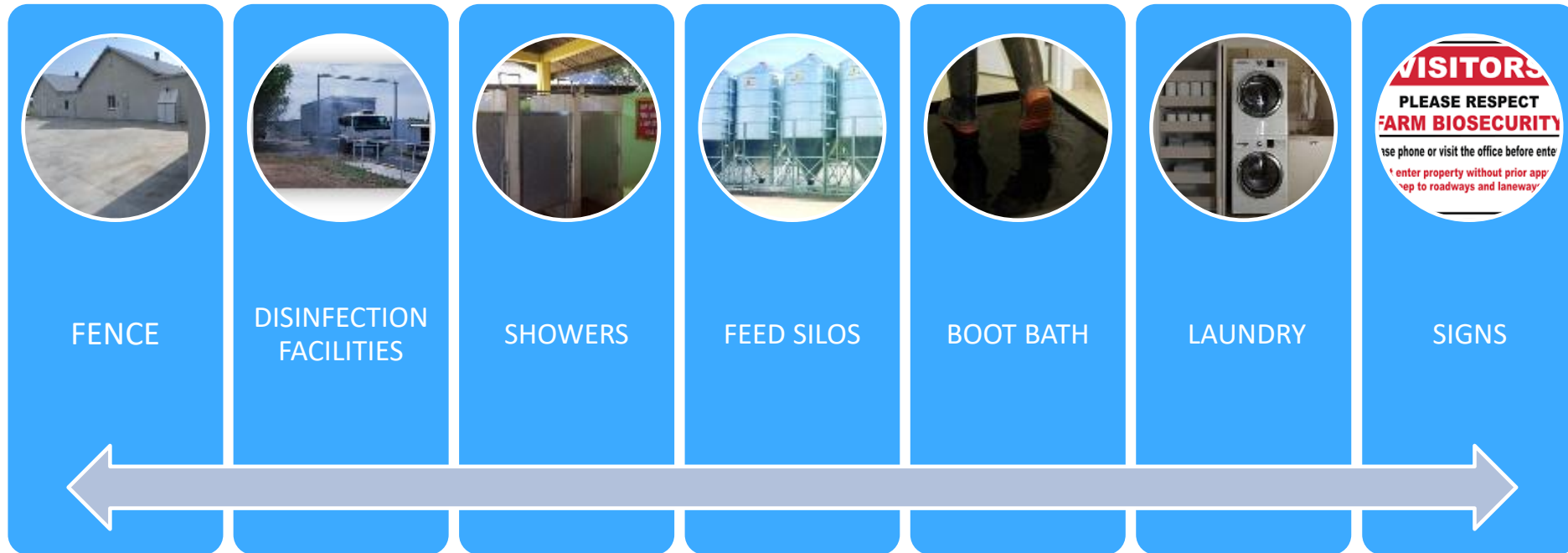


A nice place for a new farm?

Prevent Multi-Age Farms if possible



Structural biosecurity



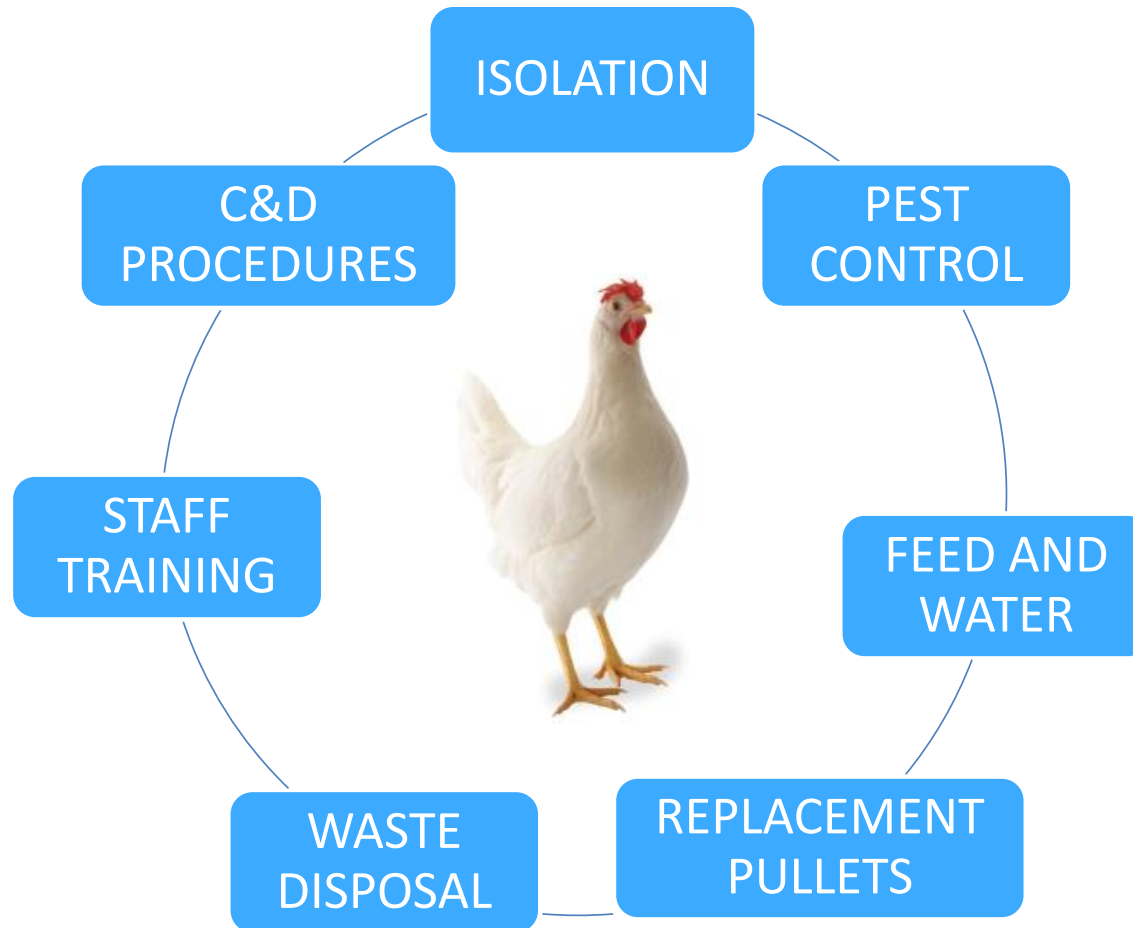
Structures in the farm dedicated to avoid the introduction or spreading of diseases

Operational biosecurity

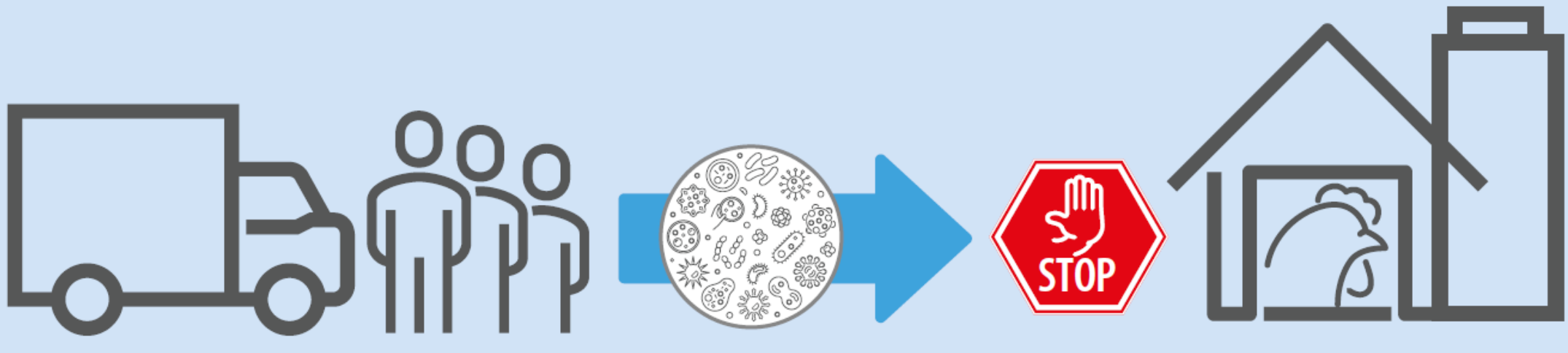


HOW to work avoiding the introduction or spreading of diseases.

Biosecurity programs



Isolation



Avoid the introduction of diseases through people or equipment



Visits

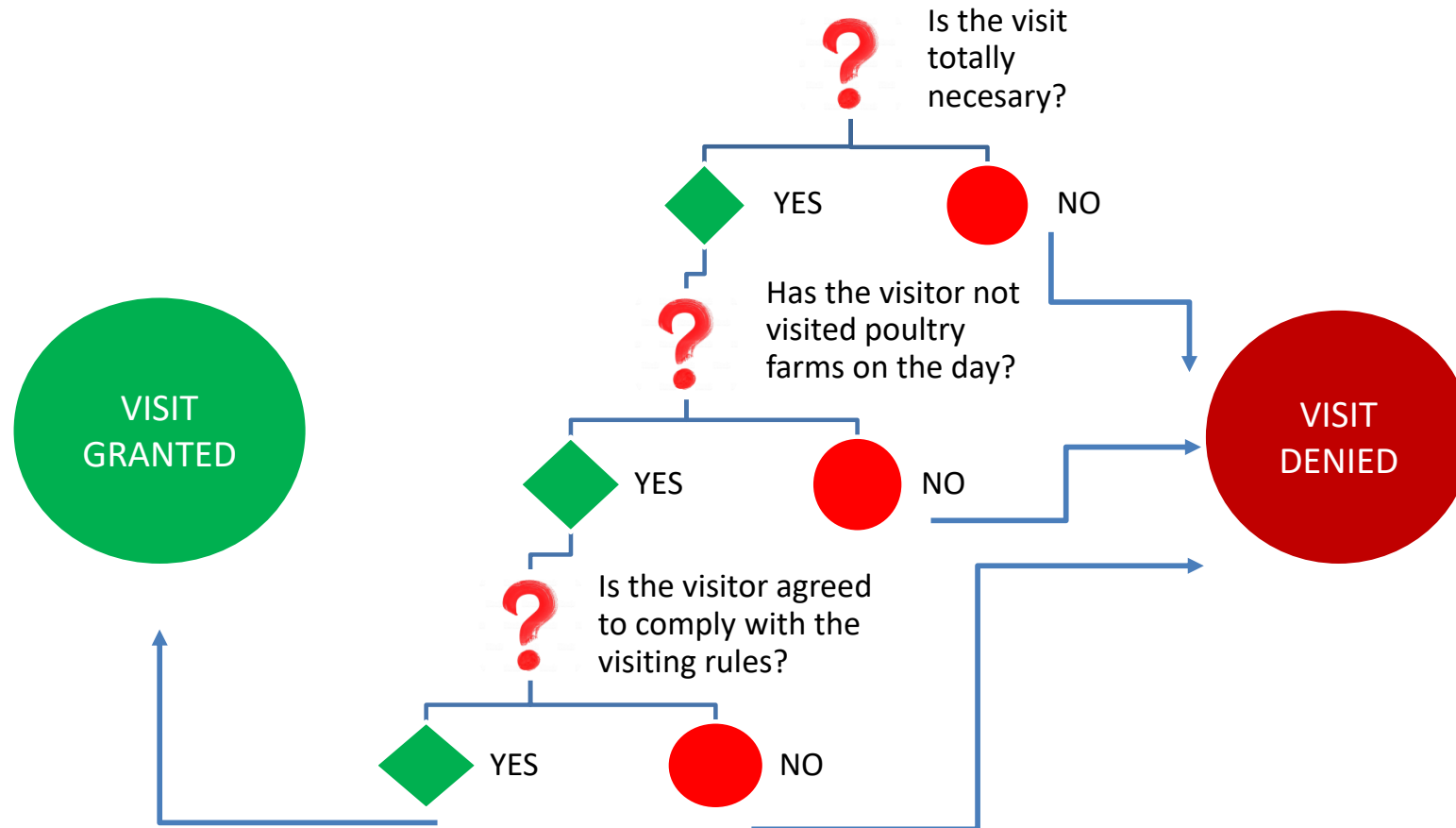


Equipment

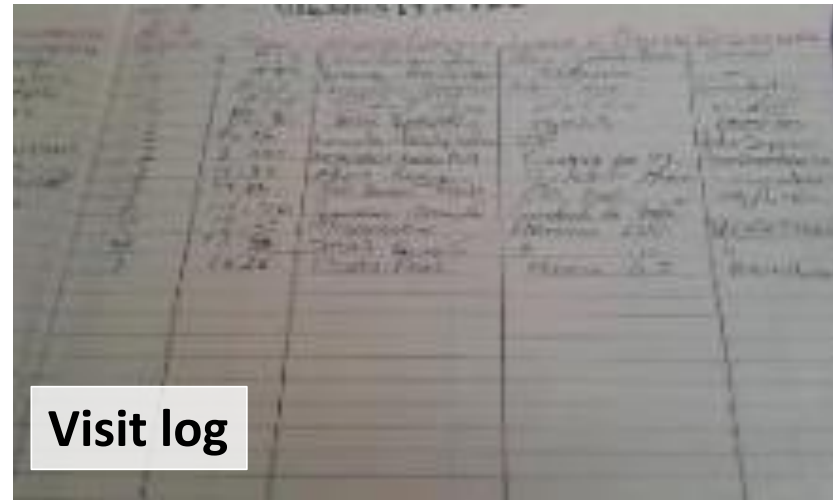
Visits are:



Visiting decision tree



Visiting rules



MG survival in different materials

4 DAYS	COTTON	FEATHER
3 DAYS	HAIR	
2 DAYS	STRAW	RUBBER
1 DAY	WOOD	NOSE

Andersen 1998

Vehicles

External matrix



Complete disinfection
for all entering vehicles

No entrance to all avoidable vehicles

Equipment

Leave your personal belongings outside...



Or disinfect them before entering



Stuff coming from other farms **MUST** be rejected

Who is consider a farm visit?

1. Everyone entering in the farm including farmers
2. Only people working for other companies
3. Only those coming from other country or region
4. Everyone visiting more farms in his/her daily work
5. Everyone visiting for first time the facilities

**After going through this foot bath
my boots will be:**

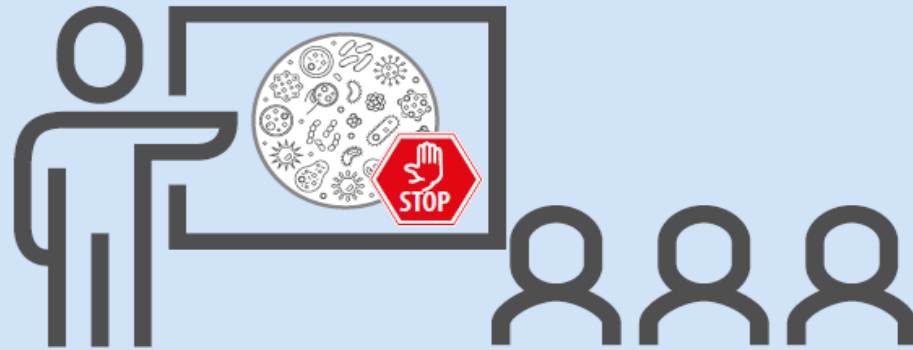


A) More contaminated?

B) less contaminated?

(Hint: It's Answer A!)

Staff training



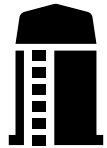
Avoid the introduction of diseases through workers or their actions



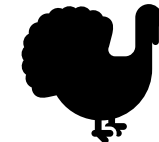
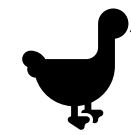
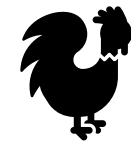
workers

Restrictions on Workers

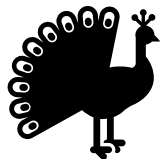
No visit to other farms!



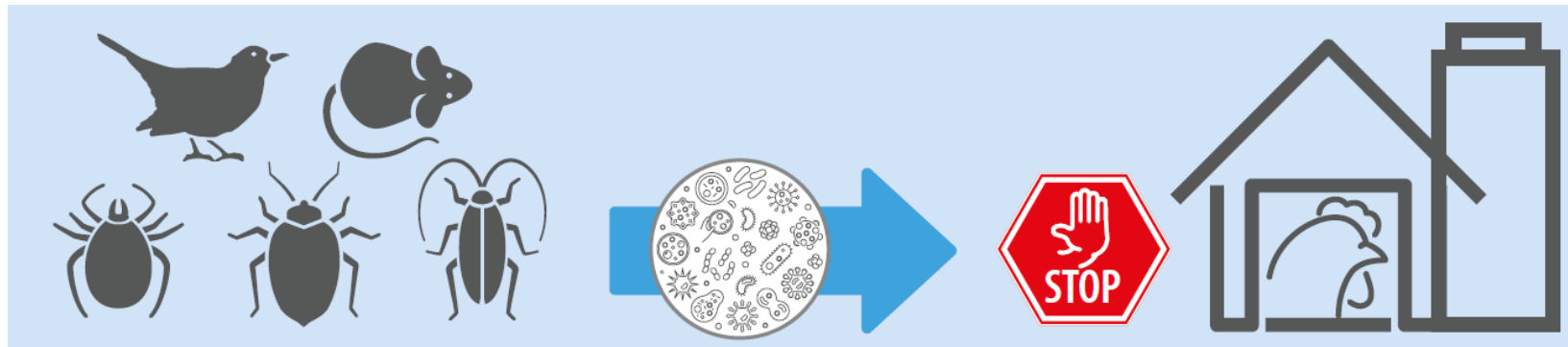
No keeping backyard poultry at home!



No bird related hobbies!



Pest control



Avoid the introduction of diseases through rodents, birds or insects



Rodents



Insects



Birds



We cannot coexist!

Getting rid of rodents

Passive control



Active control



Source: MAGRAMA

Passive control



Cemented walkabouts,
No abandoned stuff



Partially Cemented walkabouts,
no weed, no abandoned stuff

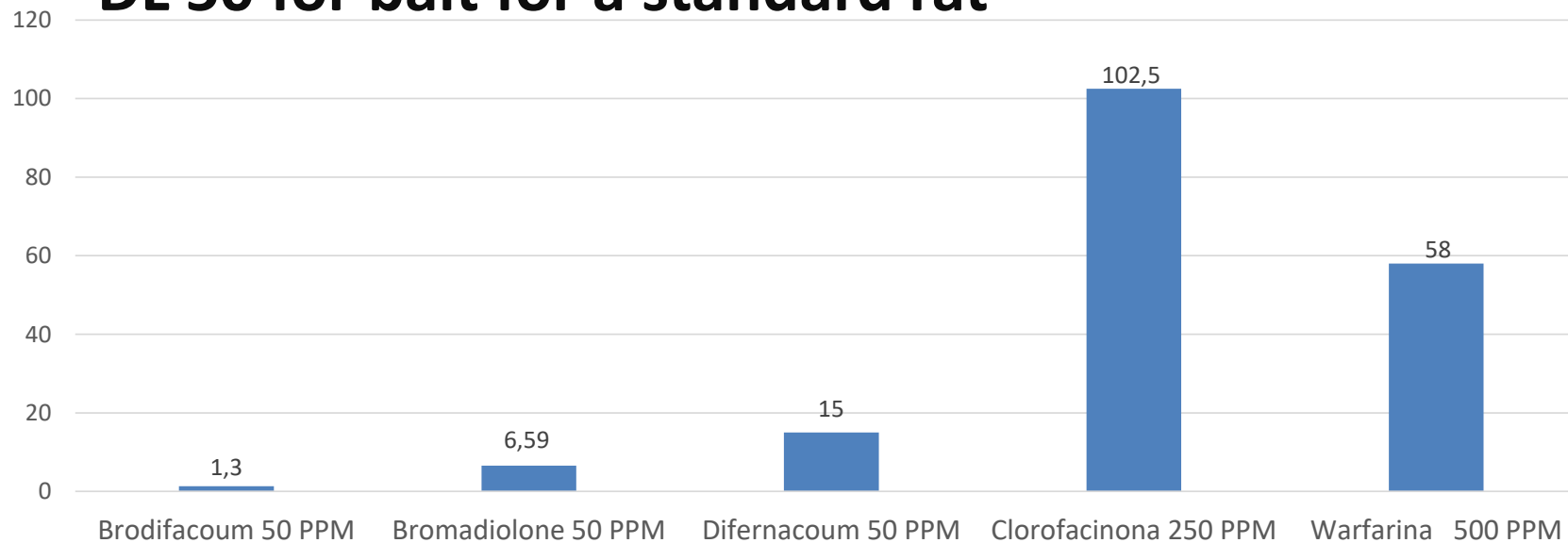


@#\$%*@??!!!



Active control

DL 50 for bait for a standard rat

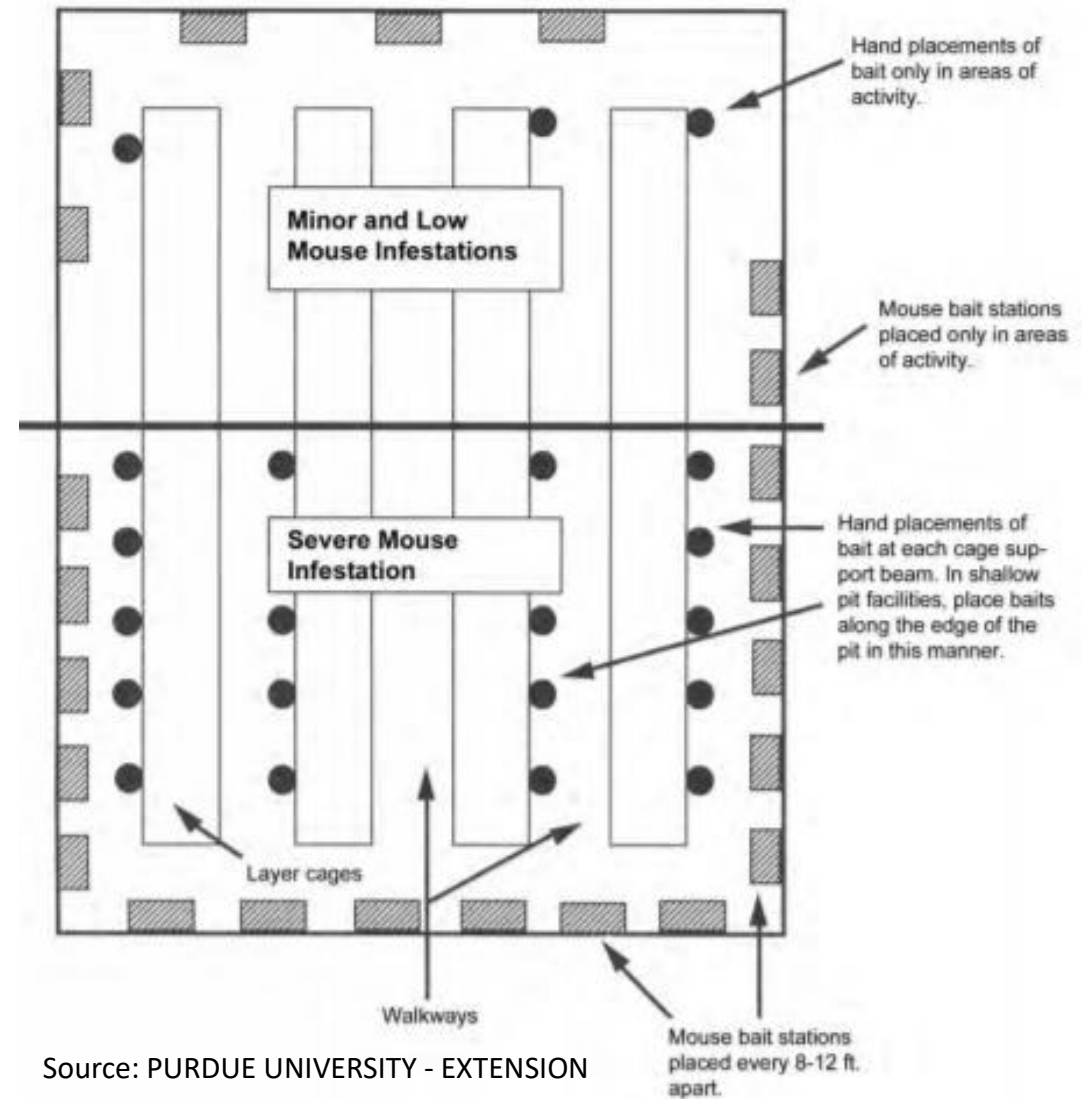


Source: MAGRAMA

Poison really kills rodents but they need to eat enough of it ... and they rather prefer to eat the feed instead



Master & Commander



Source: PURDUE UNIVERSITY - EXTENSION

Wild bird

House MUST be bird-proof

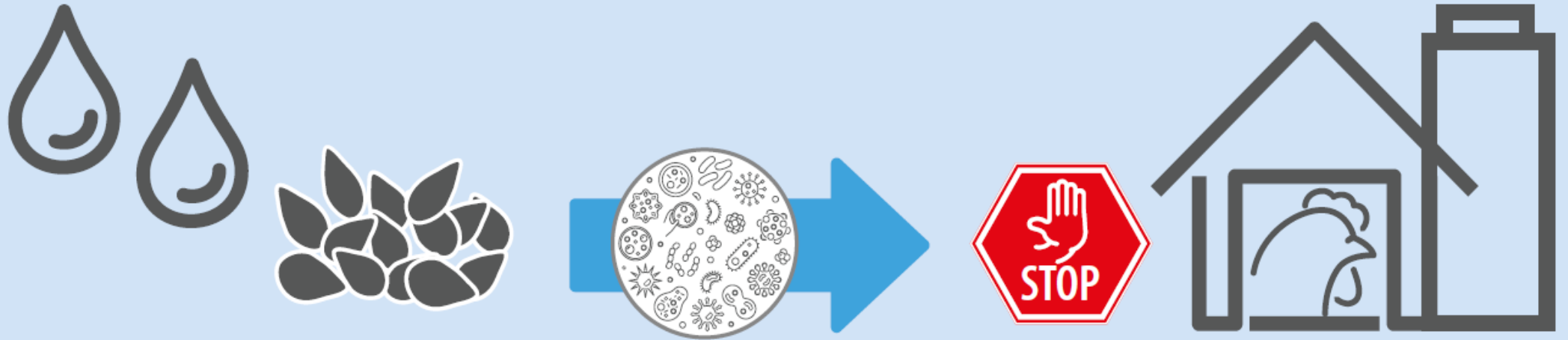


Avoid birds nesting



AVOID CONTACT
TO DEAD BIRDS

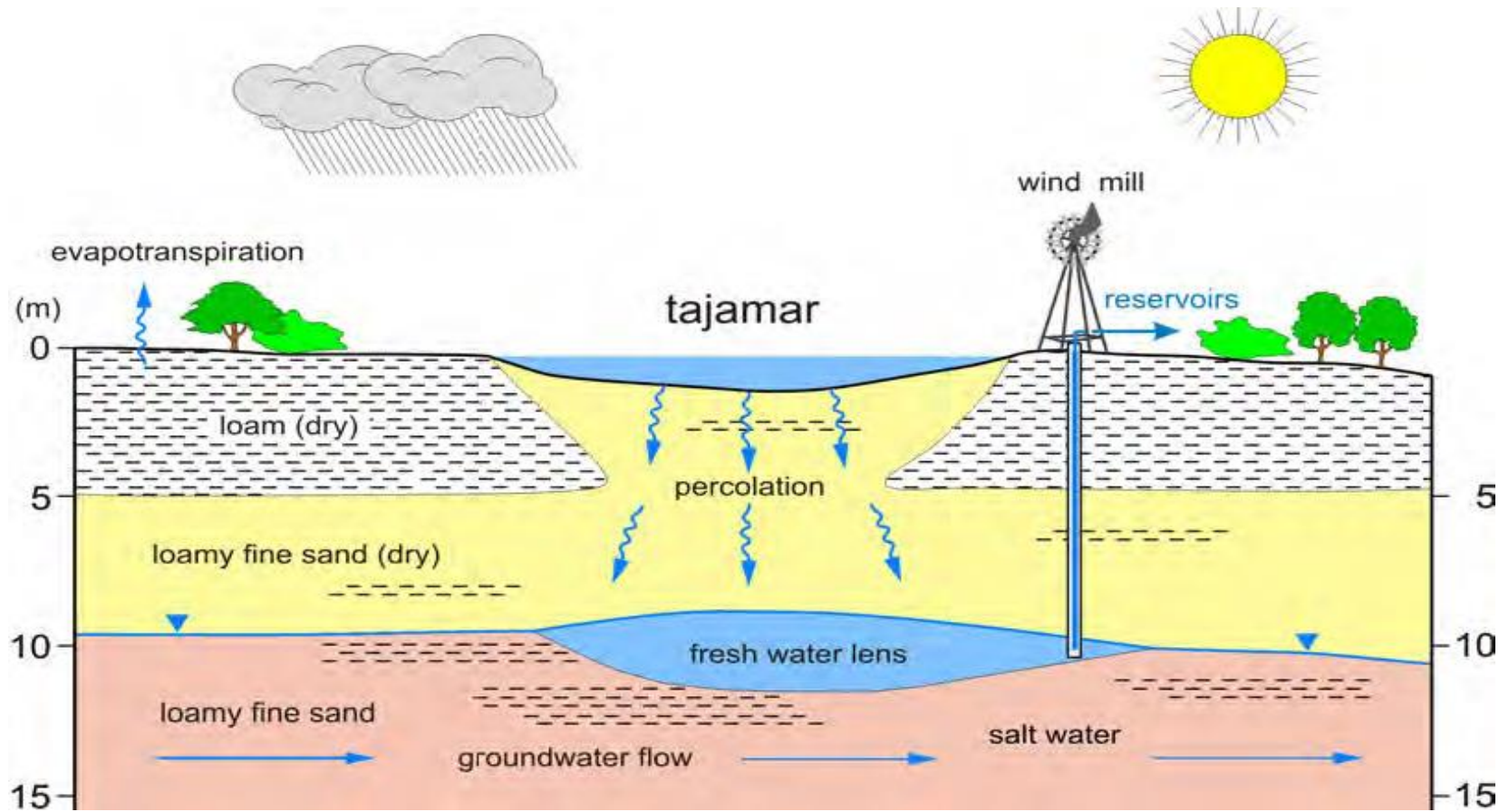
Feed & Water



Avoid the introduction of diseases through feed and water



Water sources



Source: FAO

Water: the forgotten nutrient

Ph

Turbidity



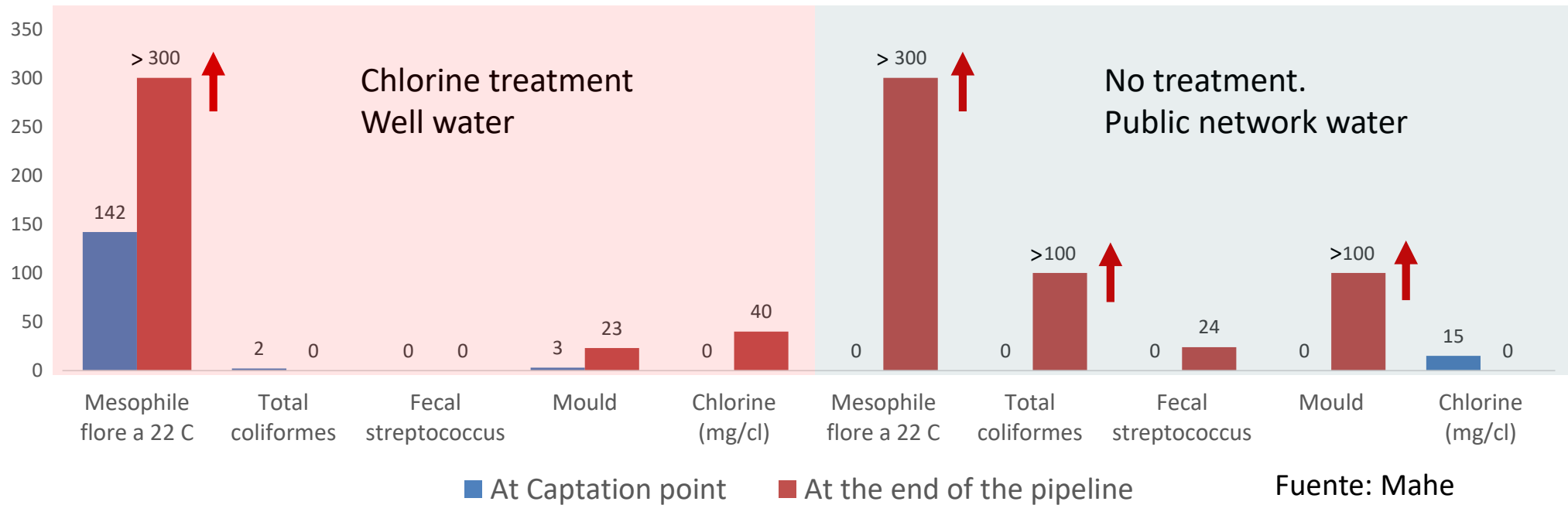
- Leach toxic minerals ?
- Corrosive



- Hardness
- Carbonates content
- Sulfates Nitrates
- Manganese

Water sanitization

Water quality in two farms according to water source and treatment

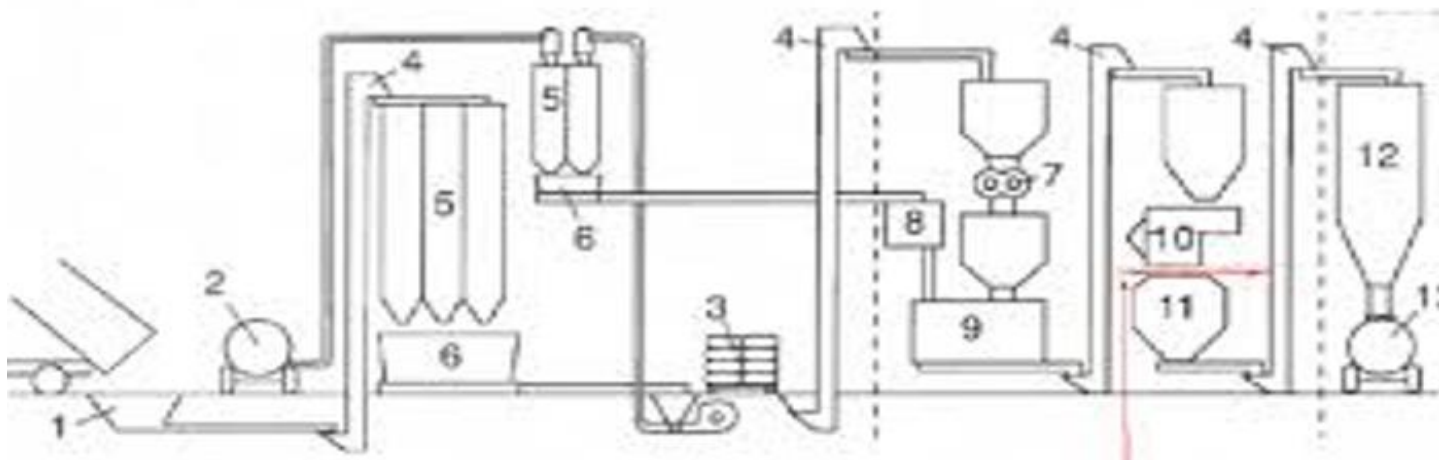


Whatever is the water source, the use of sanitizer is strongly recommended

Feed

Storage of ingredients

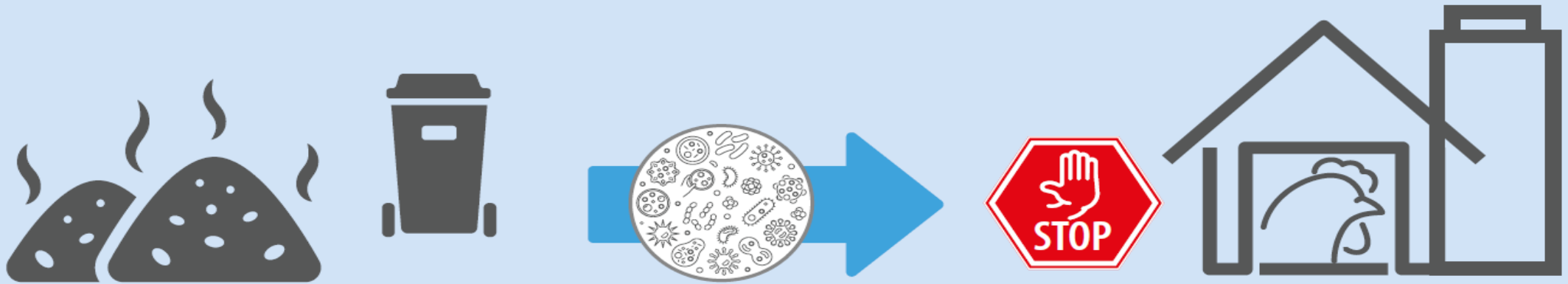
Production



Sample your raw material (50%), hotspot in the feed mill (25%) and feed (25%)

	Mash CFU log/gr	Pellet/ crumble CFU log/gr
Enterobacteria	< 3	< 1.5
Escherichia coli	< 1	< 1
Anaerobic sulfite reducers at 46 °C	< 1	< 1
Salmonella	0	0
Molds	< 3	< 1.5
Yeast	< 3	< 1.5

Waste disposal



Avoid the introduction of diseases during the processes of elimination of waste



Waste disposal



Dead birds are highly infectious stuff



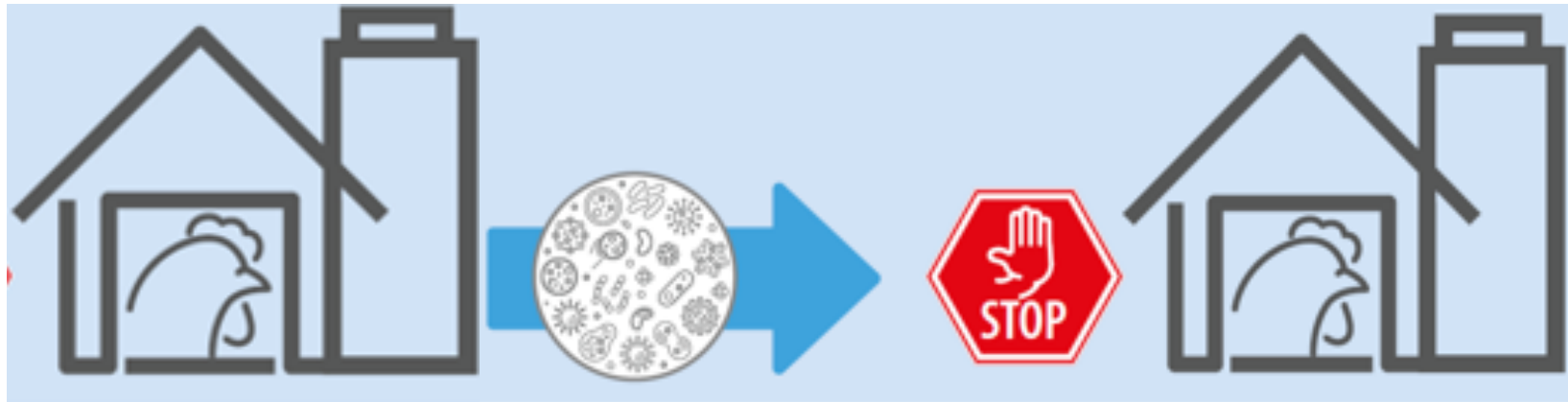
They should be destroyed correctly



Manure is also highly infectious

And so are slaughterhouse chariots!

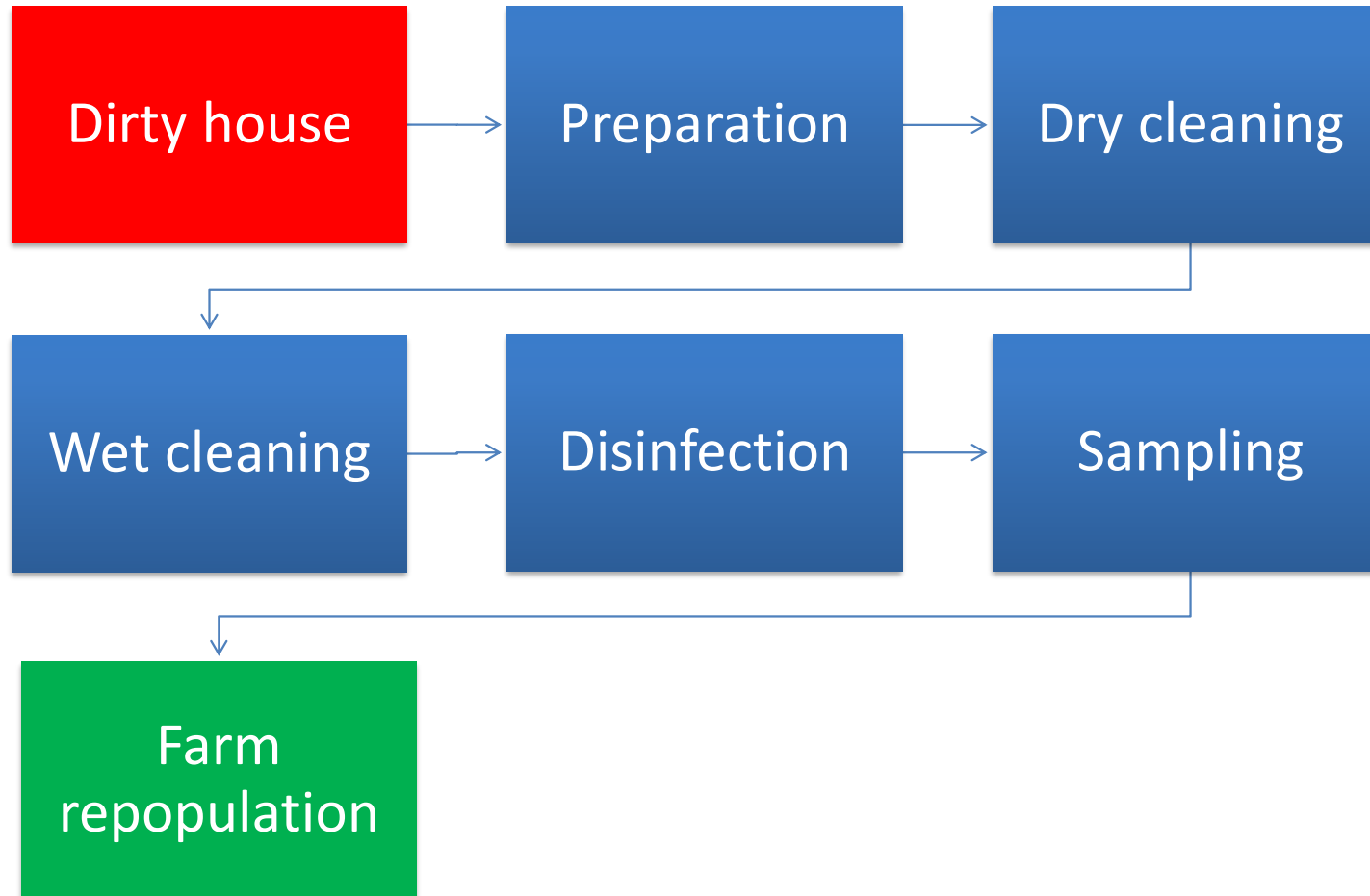
Clean & Disinfection procedures



Avoid the transmission of diseases from one flock of birds to the next



Cleaning & Disinfection procedures



Disinfection

Disinfection is not magic

Disinfection do not make things sterile

Chemical
Substance



Temperature



Contact
Time



Organic
Material



Thank you for your attention!

