# Biosecurity on Pasture Poultry Farms

Myrna Cadena Junior Specialist UC Davis Cooperative Extension



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### CA BYP Census

- •Survey is designed to help us understand the poultry community
- •All backyard poultry owners encouraged to participate in this short survey (~3)
- •Good tool to keep in mind to understand your surroundings and the potential risks tied to them
- •Keep in mind it's fairly new, activated in September

http://ucanr.edu/sites/poultry/California\_Poultry\_Census/



### **Poultry Ponderings Newsletter**

•To keep up-to-date on poultry related work at the University of California, please email Dr. Maurice Pitesky at mepitesky@ucdavis.edu to subscribe

 Visit our website to access past newsletters at http://ucanr.edu/sites/poultry/PP/ Sittersity of



fiatomaceous earth (DE), kaolin clay, and sulfur. We are following up the earlier work with more studies on the DE and sulfur, which is especially active on mites.





### **Biosecurity:**

A set of management practices designed to help reduce the introduction and spread of disease-causing organisms onto and between farms.

### There is no silver bullet...

- •Need to use a **combination** of management practices to maximize efforts
- •Disease in a flock can affect livability, decrease productivity, and increase costs (ie. medications, vaccinations) that result in economic loss
- •Many poultry diseases do not have a cure making prevention key!
- •But keep in mind that it is impossible to eliminate risk completely





# Wildlife Control

### Shade/Shelter Structure

•Birds can go underneath and escape predators

- •Makes it harder for the predators and discourages them from trying again
- •Anything that can make the farm less attractive overall will help keep carriers of disease away



### Wildlife on Our Pasture

- •Geese on our pasture are very concerning because of the potential of disease transmission
- •Even after they leave, the fomites they leave behind are still capable of spreading disease (ie. feathers, droppings)
- •Examples include Avian Influenza and Salmonella
- •Can persist up to months in the environment depending on the environmental conditions



### What footprint is this???

- •In any case, not a good sign
- •Close to our eggmobile and pasture
- •Can carry disease
- Important to remember zoonotic diseases
- •Want to protect our birds and ourselves
- •Can act as a predator as well
- •Good habit to walk around farm and learn about the wildlife in your area





## Predator Repellent Tape

- •Relatively inexpensive from \$7 (150ft) to \$27 (100ft)
- •Easy to use/install
- •attach to 6-8in. string and hang around farm
- •Hang strategically in trees, at eye level for ground predators and around enclosures
- •Can potentially scare your birds so they should placed farther away from flock
- •Humane; flashes in all directions in the sun and makes a noise as it flaps in the wind
- Need to move it to different locations regularly so wildlife wont get acclimated
- •Currently testing on our farm



### Terror Eyes Balloon

•\$9-\$25

•Covers about 1,000 sq. ft.

•Easy to use/install

- •Hang strategically in trees, at eye level for ground predators and around enclosures
- •Humane; eyes are holographic
- •Need to move it around as often as you can to prevent birds from acclimating



Coyote/Fox Decoy

•\$30-\$67

•Also, easy to use/install

•Humane

- •Must moved around to be effective (consider changing position daily); birds can start to catch on
- •May be why some reviews are poor, not being used properly.
- •Need about one decoy per ¼ acre
- •Currently testing this on our farm





### Propane Cannon

•\$300-\$600

- Propane tank ~\$20
- •Produces loud bangs, frequency depends on the model
- •Need to consider neighbors before buying, noise could be too loud
- •Most effective when wildlife such as geese, deer and coyotes have other places to go
- •One person should be responsible for maintaining it and should follow strict biosecurity protocol
- •Wear PPE and boots specifically for that task



## Electronic Bird Repellents

#### •\$55-\$3,500

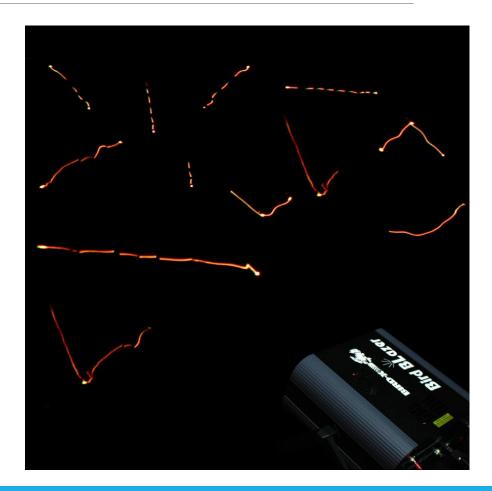
- •Uses combinations of sounds to repel them
- •Distress and alarm calls made by common problem birds
- •Natural predator sounds
- •Noises that are irritating to birds
- •Some models let you customize the sounds for your specific problem birds, more expensive though



### Bird-X Lasers

#### •~\$1,200-\$1,400

- •Covers up to ~10,000 sq. ft.
- •Multi-colored and changes patterns to prevent the birds from acclimating
- Need to make sure it is allowed on property; Federal Aviation Administration regulations may not allow if too close to airport
- •Our farm is close to an airport so we decided against it
- •But it is a humane and easy to install tool





### Structural Features that Deter Wildlife from Entering our Eggmobile

### Wire Mesh

•Recommended because it is thick and wildlife (ie. mice, rats, skunks, opossums) cannot break through

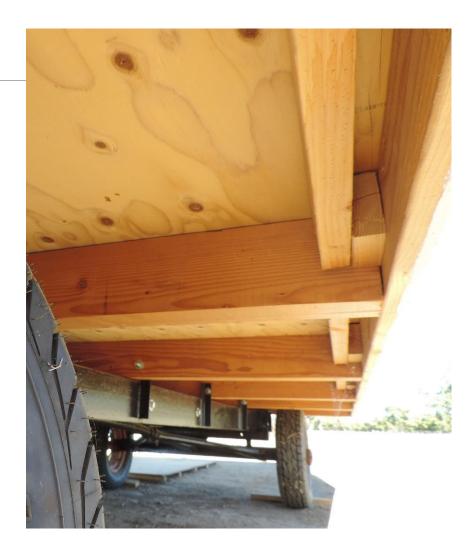
- Size of squares should be no bigger than <sup>3</sup>/<sub>4</sub> in. sq.
- •The thicker and closer together the squares are, the better
- •Our eggmobile has thick wire mesh that overlaps well with the frame
- •Hard to get in through the layers





## Eggmobile Floor

- •Solid bottom floor helps keep wildlife out
- •Want to make it hard for them to get in so they get discouraged
- •Once they get in, they will keep trying to come back



### Important Differences

#### MICE

- Mainly vegetarian
- •Shy; tend to avoid contact with humans
- •Not adequate swimmers
- Can drink water less frequently
- •Nest site ~10ft. to 30ft. from food source
- •Conservative behavior; tend to follow the same tendencies (ie. same feeding routes)

#### RATS

- •Eat a wider range of foods, such as eggs, birds, small animals
- •Curious, less shy
- •Good swimmers; willing to swim in order to reach food or harborage
- •Require water daily
- •Nest site ~50ft. to 100ft. from food source
- •Will change behavior if find better food or shelter





### Traps

- •Place every 25ft. along the high-traffic spots and along potential runways (ie. walls, beams)
- •Should also move some around since rats can change routes regularly
- •Rats tend to avoid traps with another rat inside so need to clean them out after one capture
- •Mouse traps can be checked every two-weeks; can capture multiple with one trap
- •Check them regularly and keep good records of how many rodents have been captured to make sure they are working and to assess how severe the infestation is
- •Rat infestation trickier to asses since they are harder to trap
- •So need to actively look for signs of them (ie. feces, chewing marks, burrows, fur, tracks)





### Restrict Access to Feed

•If they can't access feed, they will nest somewhere else

- •Like to nest near food and shelter
- •Make sure to clean up spilled feed as it can attract them and then they will keep coming back
- Mice in particular don't like to change diet and will keep coming back
- •Rats more willing to look for other food sources



### Buffer Zone around Pasture Fence

•Buffer zone between fencing and pasture can help make weak spots/signs of entries more visible

- •Rodents dislike digging through gravel
- •So under gaps/weak spots in our fence, we will add gravel to discourage them from digging

•Our buffer zone is 20ft. long



## **Electrical Fence**

- Coyotes and foxes are around our area
- •So installing an electrical fence is really important
- •Will help deter other wildlife like raccoons, possums from entering as well
- •Will have to make sure it has good charge and that it is working regularly
- •Make sure grass is not close to the fence as it can affect the charge circulation
- •Walk along the fence once a week





Lethal Control

Rodenticides can be tricky to use

- •Restrictions and limitations can apply (ie. Vitamin D3 can only be used for mouse control)
- •Anticoagulants not associated with bait shyness
- •Toxicants (ie. zinc phosphide) are associated with bait shyness
- •Non-anticoagulants (ie. zinc phosphide, bromethalin and Vit. D3) recommended for big clean outs

•Motomco has really good resources on rodent control

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## Planning Ahead for Extreme Cases

- •Coming up with a plan for the worst case scenario (ie. Coyote, fox problem) beforehand can go a long way
- •Contact wildlife services or a wildlife specialist to come up with an appropriate protocol
- •Knowing what to do in a timely manner can be difference between saving a few birds and saving most of your flock
- •Prevention and preparedness is key!





### Questions?

