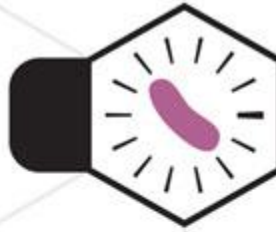




# FOULBROOD & ANTIBIOTICS

November 30<sup>th</sup>, 2017



## How Antibiotic Resistance Happens

**1.**

Lots of germs.  
A few are drug resistant.



**2.**

Antibiotics kill  
bacteria causing the illness,  
as well as good bacteria  
protecting the body from  
infection.



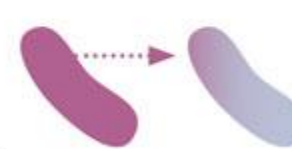
**3.**

The drug-resistant  
bacteria are now allowed to  
grow and take over.



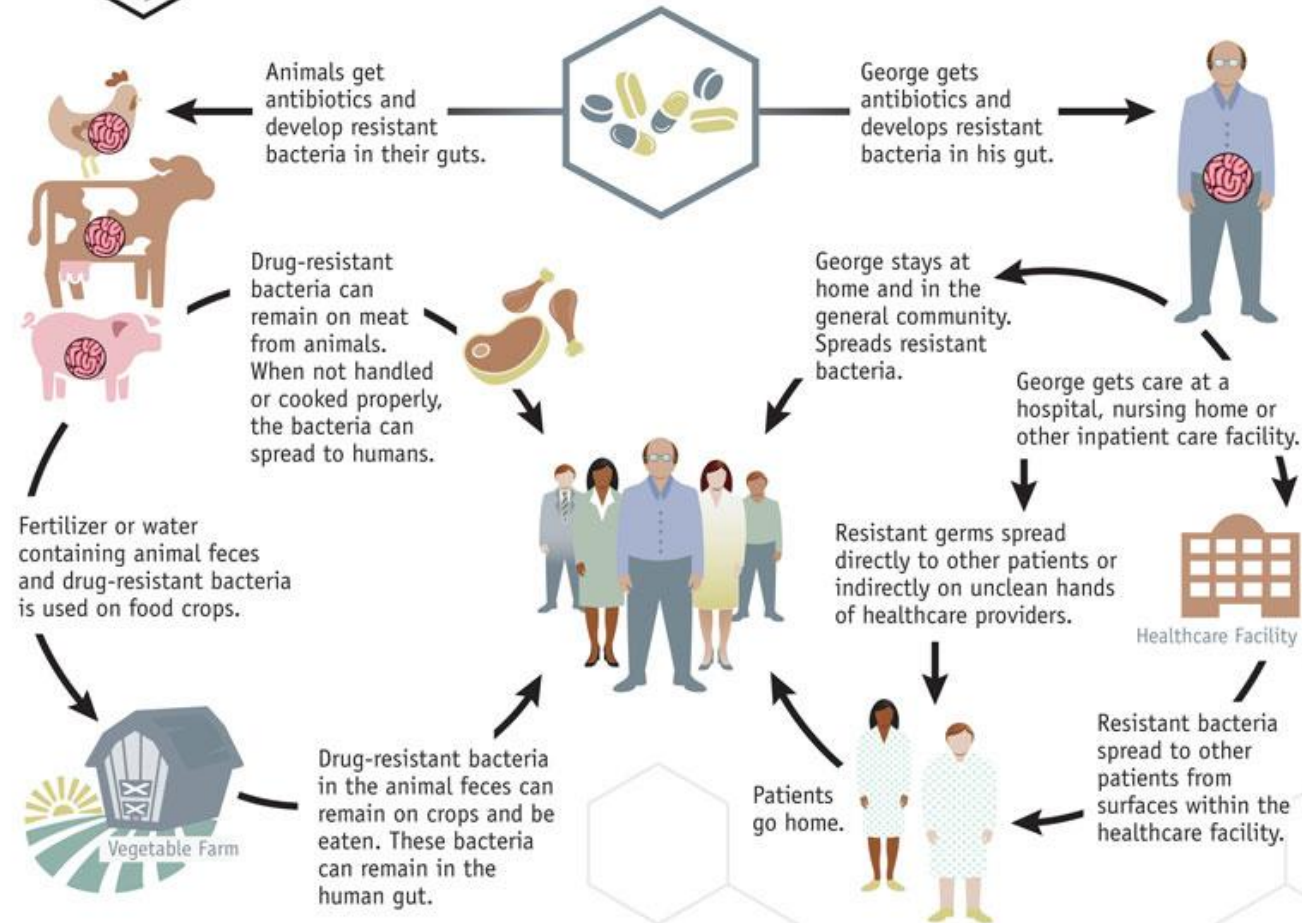
**4.**

Some bacteria give  
their drug-resistance to  
other bacteria, causing  
more problems.





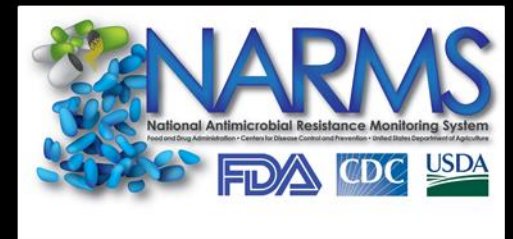
## Examples of How Antibiotic Resistance Spreads



Simply using antibiotics creates resistance. These drugs should only be used to treat infections.

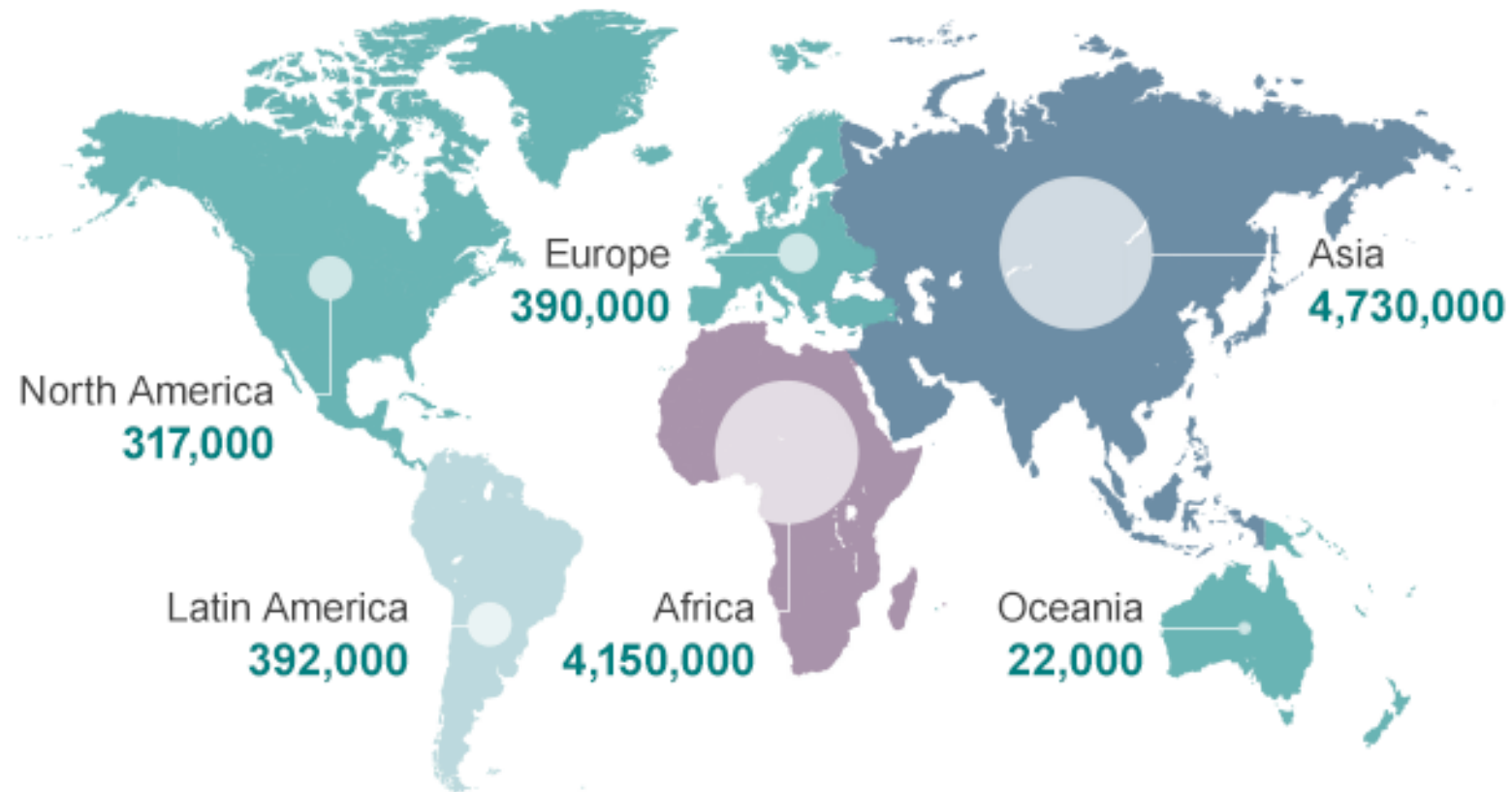
# WHY IS ACCESS TO ANTIBIOTICS BEING LIMITED?

- The CDC estimates that annually, at least 2 million illnesses and 23,000 deaths are caused by antibiotic-resistant bacteria in the United States.
- Once resistance develops it will take 500-1000 years for resistance to subside once the antibiotic is no longer in use.
- Resistant bacteria will kill more in the US than cancer by the 2030s if aggressive steps are not taken.





## Deaths attributable to antimicrobial resistance every year by 2050



Source: Review on Antimicrobial Resistance 2014

A photograph of two beekeepers in white protective suits and veils working with a beehive in a field. One beekeeper is holding a large, dark, rectangular object, likely a beehive or a frame of honeycomb, while the other stands nearby. The background shows a wire fence and some vegetation. The image is framed by a colorful, abstract border at the top.

# **Veterinary Feed Directive For Veterinarians**



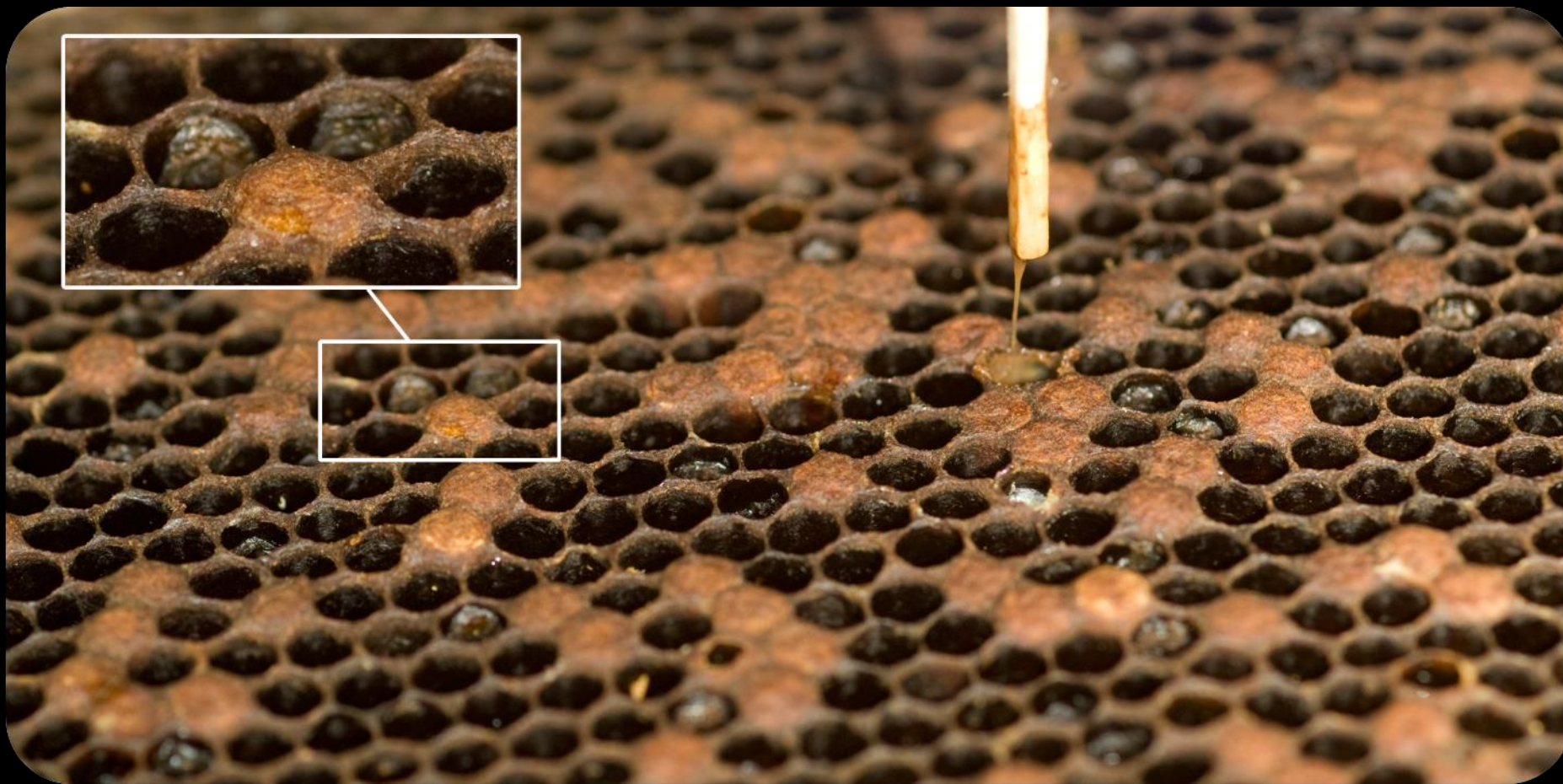


Photo Credit: Michael E. Wilson







Utah Department of Agriculture & Food

Secure | https://ag.utah.gov/plants-pests/beekeeping/37-plants-and-pests/639-foulbrood-information.html

Apps | Utah-ID | Employee Gateway | UDAF Bees | USU Pests | YouTube | CDC - Chagas Disease | vassarstats | PCR | COLOSS | Sequence | Other bookmarks

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FOULBROOD INFORMATION

BEEKEEPING HOMEPAGE

INFO FOR VETERINARIANS


FIND A VETERINARIAN

VETERINARY FEED DIRECTIVE FAQs

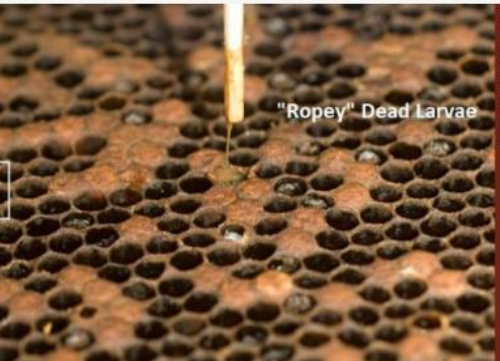
Foulbrood disease comes in two varieties European Foulbrood (EFB) and American Foulbrood (AFB). While both are rare in the State of Utah, American Foulbrood is of particular concern to beekeepers. Please consult the information provided below and contact UDAF with any questions or concerns you may have.

### AMERICAN FOULBROOD

Every beekeeper should be familiar with the signs and symptoms of American foulbrood (AFB). AFB is the most serious of the brood diseases and often results in the death of infected colonies. AFB is highly contagious and can quickly infect many beehives in an area. Please contact UDAF to schedule an inspection if you suspect one of your hives is showing signs of AFB or submit a sample.



Black Scale



"Ropey" Dead Larvae

(VIDEO) WINTER HONEY BEE INSPECTION

MENU

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About UDAF

Animals

Conservation & Environmental

Food Safety & Consumer Protection

Licensing, Regulation & Product Registration

Markets & Finance

Pesticides