Ultraviolet Germicidal Chamber Best Practices

Ultraviolet (UV) germicidal chambers, also known as UV boxes, are used in farm biosecurity programs to decontaminate objects entering farms. In these chambers, UV light is used to inactivate pathogens by destroying or disrupting the pathogen’s nucleic acid. This results in a reduction in the number of viable organisms on surfaces.

**Time and intensity**

Research has found that the effectiveness of the UVC light depends mostly on the length of time of UVC exposure and UVC light intensity.

![Diagram of UV rays attacking microorganisms](image)

To be effective, UVC rays must directly strike the microorganisms. If organisms are shielded by a coating of organic material, the UV light will be ineffective.

UVC is the portion of the UV light that has germicidal effect and ranges from 200 to 280 nm wavelength.

**Best practices for use: NO PRRS**

- New bulbs regularly
- Organize routine cleanings of UV chamber
- Place items in direct exposure to the UVC light
- Rotate objects based on bulb placement
- Reflective side walls
- Safety first

For more information, contact Montse Torremorell, DVM, PhD: torr0033@umn.edu
Swine Disease Eradication Center, z.umn.edu/UVbox | Center for Animal Health and Food Safety, cahfs.umn.edu