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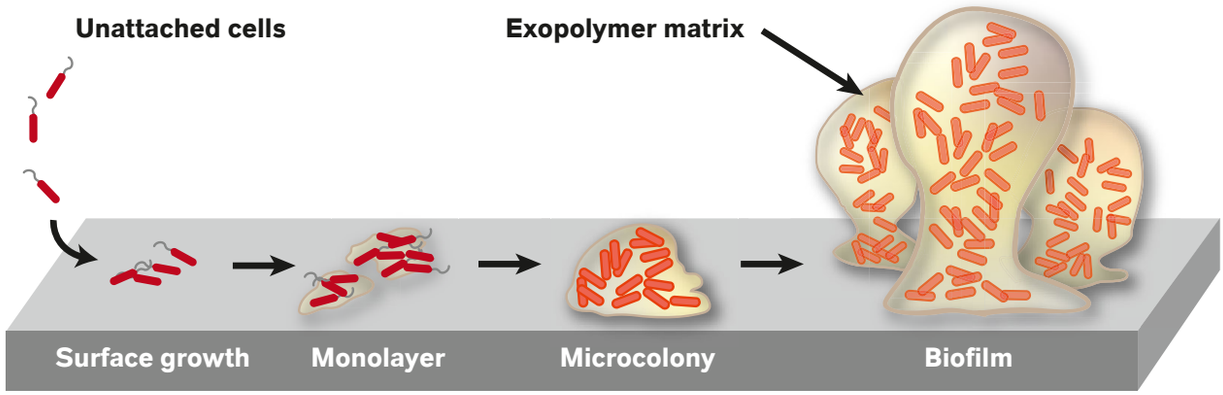
Biofilm 101:
The Science Behind Cleaning Before You Disinfect



Biofilm (Definition):

A layer of microorganisms contained in a matrix (slime layer), which forms on surfaces often contacted with water or moisture. Formation of a biofilm begins with the attachment of free-floating microorganisms to a surface – creating a monolayer first then developing into a microcolony. If the colonies are not separated or removed from the surface they anchor themselves more permanently to the surface and continue to grow.

Can you see biofilm on a surface?

No, when it first forms you cannot see it. However, as it grows and becomes larger a brown, yellow or pink discoloration will occur on the surface.

Is it hard to remove?

Yes, as the individual cells of bacteria continue to grow they interconnect. This connection creates a “sticky” matter that develops on the surface and bonds to any surface. Additional dust, organic material, or pathogens will continue to adhere to this surface. The sticky matter coats and surrounds the bacteria and pathogens which makes it very hard to penetrate through the surface for removal. Biofilm can not be penetrated by water alone - high pressure water can not break the surface tension of the biofilm that forms. The surface needs to be prepared by utilizing a formulated detergent to enable surface disinfection.

Options when dealing with biofilm:

The first option and practical option is to keep all surfaces as clean and dry as possible – making this a common practice. Biofilms tend to form on surfaces that are not maintained or cleaned regularly. Keeping surfaces as dry as possible will also help to keep the bacteria levels lower.

Important properties of a good detergent:

Good degreasing activity is vital. Just because a surface looks clean, it does not mean it is clean of all pathogens. Cleaning is a critical aspect of Biosecurity, selecting the RIGHT cleaner for the task will help break through adherent films associated with scale and mineral deposits from iron and hard water and help to reduce costs on labor and water usage. In doing so this will allow the registered disinfectant to work more effectively.

http://cleancoretech.com/biofilm-what-it-is-why-we-need-to-know-and-how-to-remove-it/
Biofilm: What It Is, Why We Need to Know, and How to Remove It
September 29, 2016 | cleancore | Filed Under: Aqueous Ozone information, Blog, Trade Magazine stories

You Can't Just Disinfect Muck!

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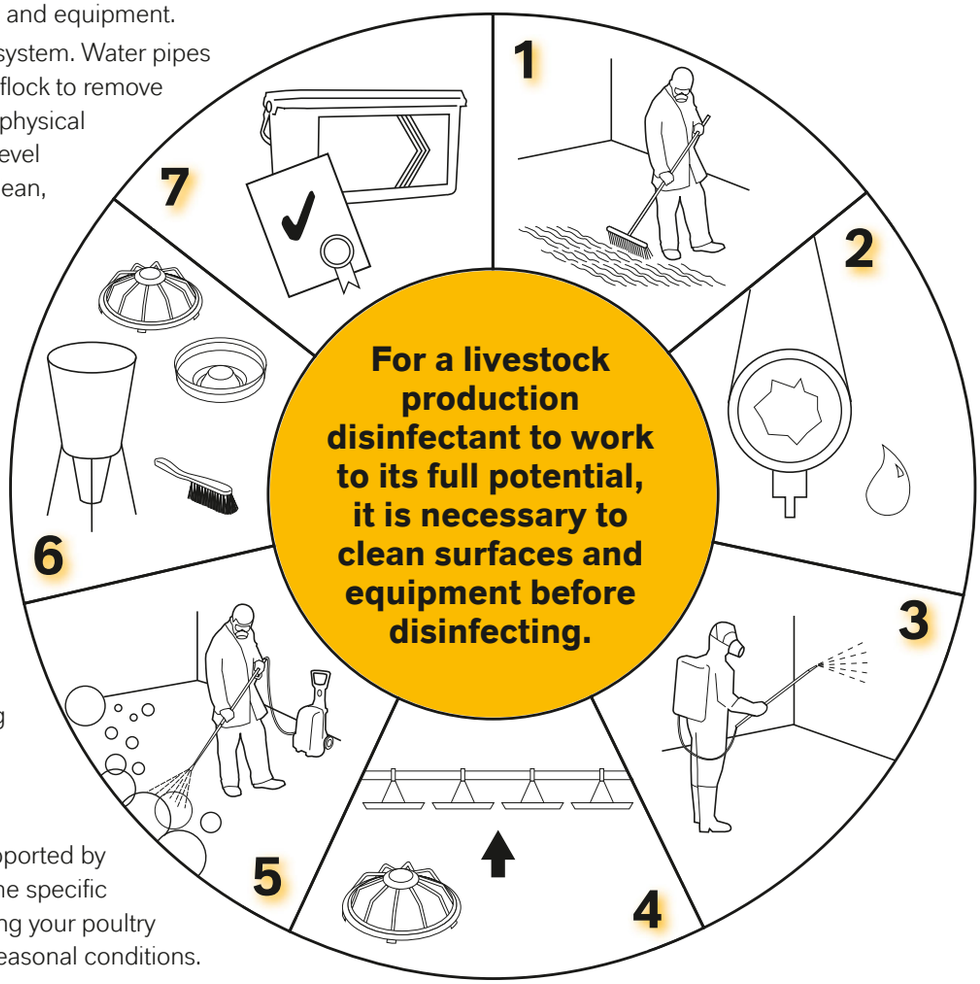
1. Dry clean by removing all dust, dry matter, organic waste & feed residue from interior surfaces and equipment.
2. Drain, clean and disinfect the water system. Water pipes should be cleaned at least once per flock to remove any biofilm that may have built up. If physical cleaning is not possible, use a high level disinfectant. Flush water lines with clean, fresh water prior to flock placement.
3. Wearing appropriate protective equipment, spray detergent solution throughout the broiler house to dampen any remaining dust. Close the curtains in open-sided poultry houses first.
4. Remove all equipment from the house and raise automatic feeders and drinkers.
5. Use a pressure washer with a formulated detergent. Make sure to reach all nooks and crevices. Rinse with hot water.
6. Empty, wash and disinfect all feeding equipment. Empty bulk bins and connecting pipes and brush out. Clean out and seal all openings.
7. Choose a registered disinfectant supported by independent data effective against the specific bacteria, viruses and fungi challenging your poultry or turkey farm, with the associated seasonal conditions.



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Note: The information contained in this publication is current as of July, 2022. Please contact LANXESS Corporation to determine if this publication has been revised.