

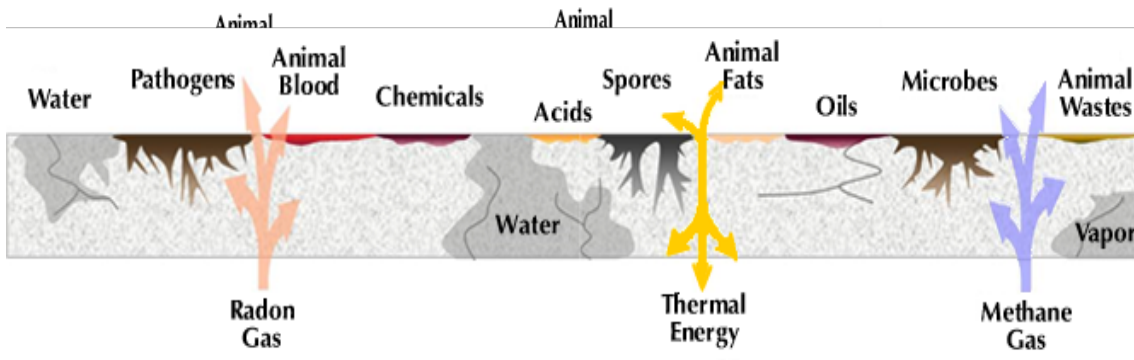


Worthwhile Operational Guidelines & Suggestions

BROILER PROCESSING TIMELY INFORMATION – FEBRUARY 2011

Concrete in processing plants an important hideaway for pathogens?

Concrete is present in poultry processing plants especially in flooring, walls, and ceilings. During processing, these surfaces receive a great amount of organic matter. This organic matter then has the potential to serve as an initial source of nutrients to microorganisms, allowing them to colonize on and/or in concrete structures. Concrete is a microporous, microstructure-sensitive construction material, and the pores in concrete are randomly sized, arranged, and connected. These pores form capillary systems in concrete allowing water and other substances to traffic freely in concrete structures. When liquids flow freely on concrete, they may serve as carriers in the transport of microorganisms such as



bacteria. Knowledge of the characteristics of concrete is necessary as disintegration of concrete due to cycles of wetting, freezing, thawing, drying, application of chemicals and the propagation of resulting cracks is a matter of great importance to the poultry industry. The disintegration of concrete serves as a great attachment sites for bacteria to form niches and become permanent sources of contamination for in processing environments. Research at AU Food Safety Research Laboratory has shown that concrete sealants with antimicrobial activity can be successfully used to eliminate important spore forming and non-spore forming pathogens from such environments in addition to sealing pores and avoiding further percolation of contaminants.



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