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Comparison in the Recovery of *Salmonella* from Poultry Slaughter Establishments using Buffered Peptone Water With and Without Neutralizers to Address Antimicrobial Carryover

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International Association for Food Protection
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Background: FSIS Carcass Rinse Sampling

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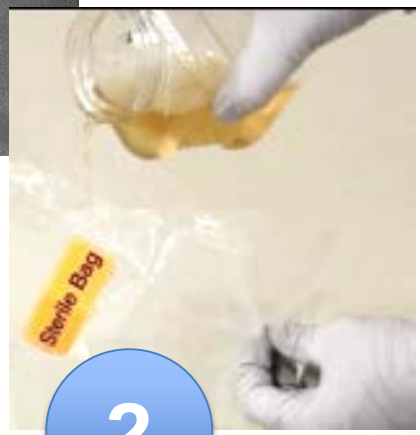

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Background: Concern From Stakeholders

Antimicrobials concealing Salmonella debate reignited

Does Antimicrobial Spray Used by Poultry Industry Kill Salmonella or Just Hide It?

May 18, 2016 by Carla Gillespie

Home » News

NEWS | July 1, 2016

Poultry Carcass Treatment Can Cause False-Negatives in Salmonella Testing: USDA Institutes "Fix"

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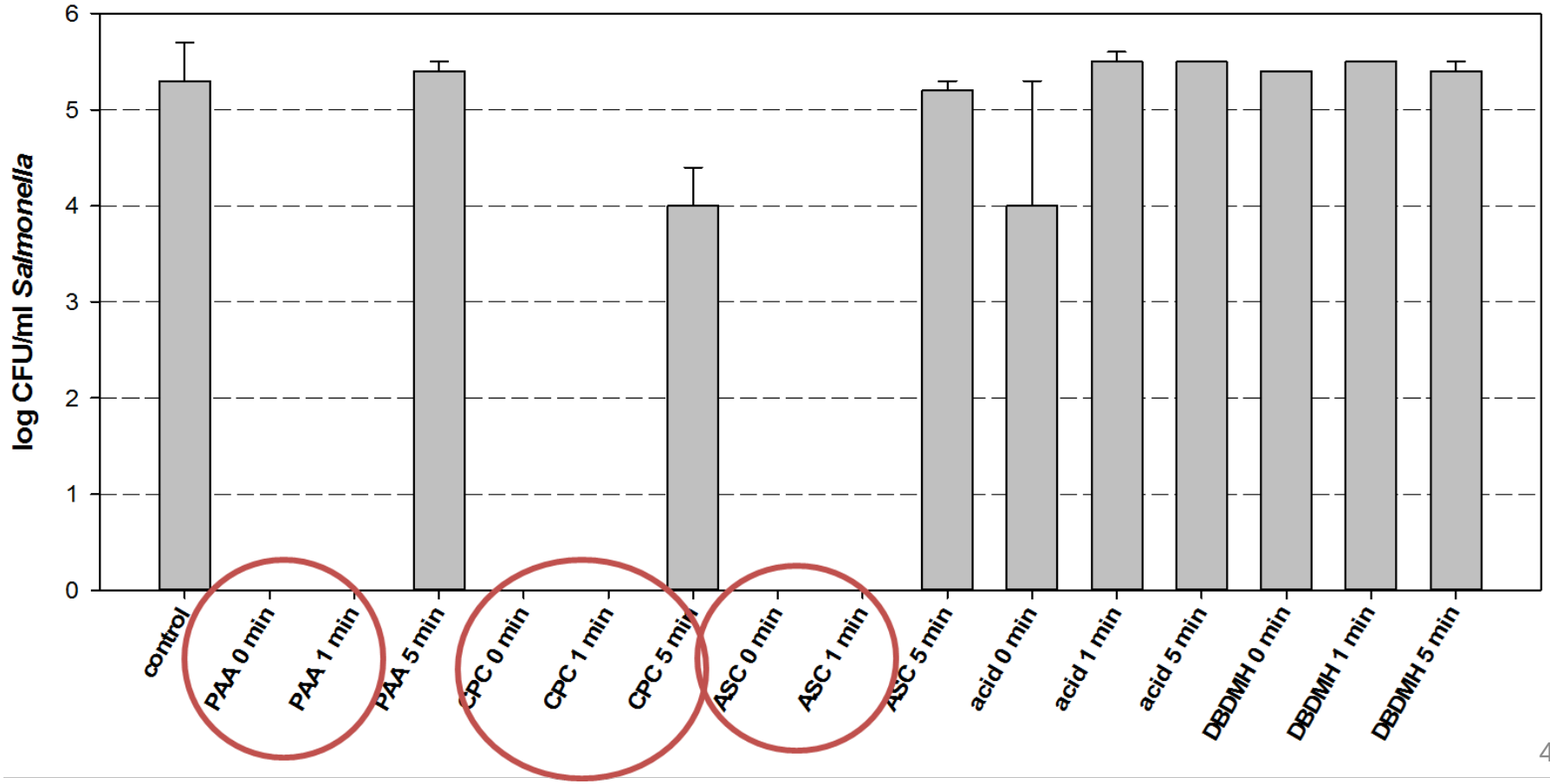
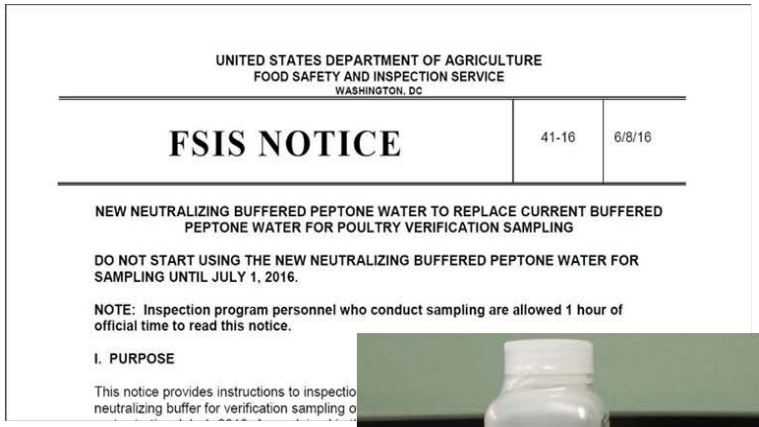
USDA Agricultural Research Service models carry-over impact on *Salmonella* Sampling



Preventing the Issue: ARS designs nBPW

- ARS developed and finalized a BPW formula with three added neutralizers (lecithin, thiosulfate and sodium bicarbonate) in order to address multiple classes of antimicrobial processing aids



UNITED STATES DEPARTMENT OF AGRICULTURE
FOOD SAFETY AND INSPECTION SERVICE
WASHINGTON, DC

FSIS NOTICE | 41-16 | 6/8/16

NEW NEUTRALIZING BUFFERED PEPTONE WATER TO REPLACE CURRENT BUFFERED PEPTONE WATER FOR POULTRY VERIFICATION SAMPLING

DO NOT START USING THE NEW NEUTRALIZING BUFFERED PEPTONE WATER FOR SAMPLING UNTIL JULY 1, 2016.

NOTE: Inspection program personnel who conduct sampling are allowed 1 hour of official time to read this notice.

I. PURPOSE

This notice provides instructions to inspectio
neutralizing buffer for verification sampling o

- FSIS Notice 41-16 introduced nBPW for implementation in all projects previously using BPW for sampling as of July 1, 2016

What the n?

- 210 carcass establishments
- 9,447 samples before nBPW
- 9,108 samples after nBPW

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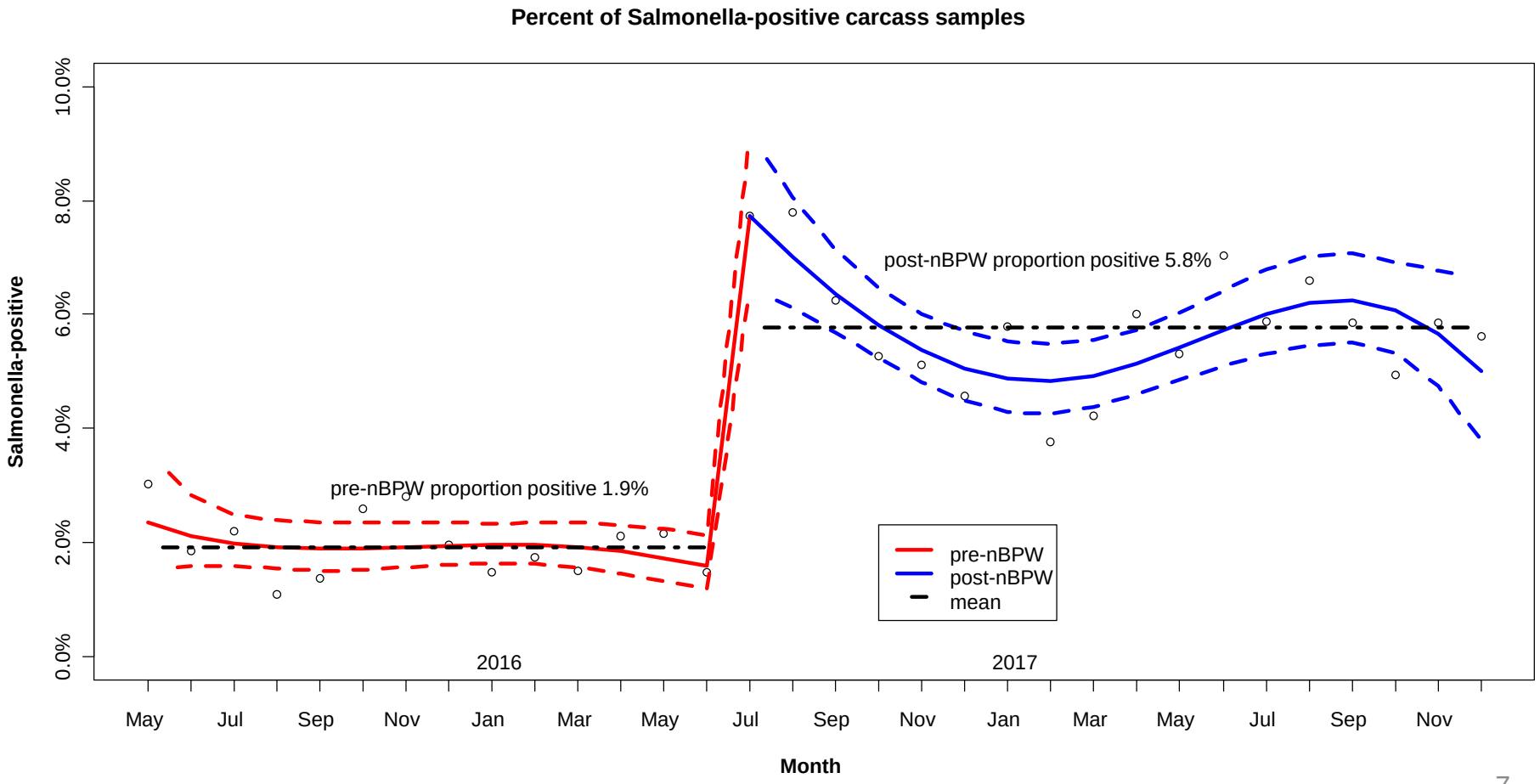
Observed Increase: *Salmonella* in Carcass Sampling



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Change Point Detection

	Penalized B-spline model		Change Point Model (change detected=T/F)		
Pathogen-product	Monthly trend	BPW versus nBPW indicator	Mann-Whitney (location test)	Mood (scale-test)	Kolmogorov-Smirnov (change in distribution)
Salmonella-carcasses	p=0.0145	$p=1.8x10^{-6}$	True	False	True

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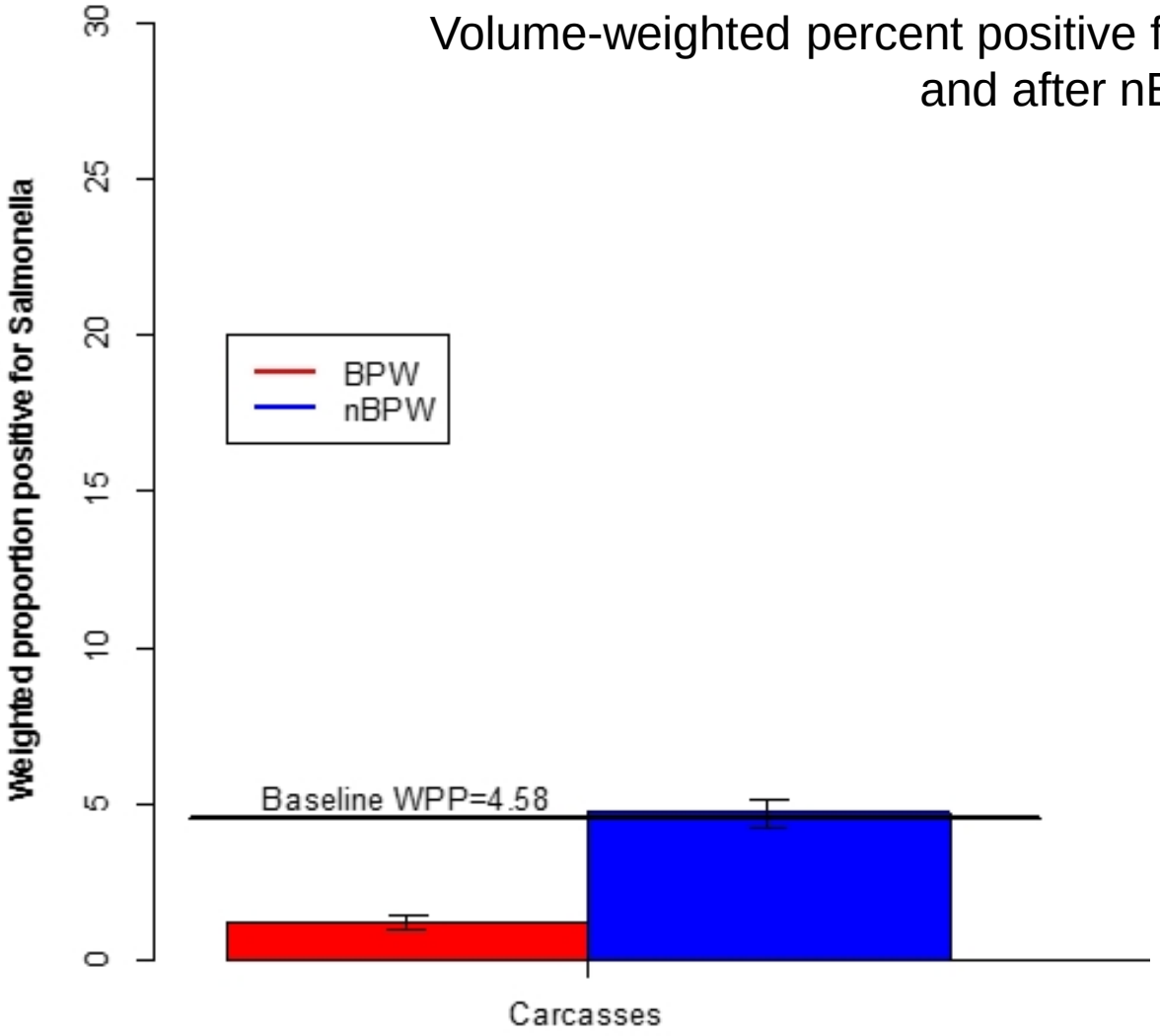
Volume-weighted percent positive for 12 months before and after nBPW implementation



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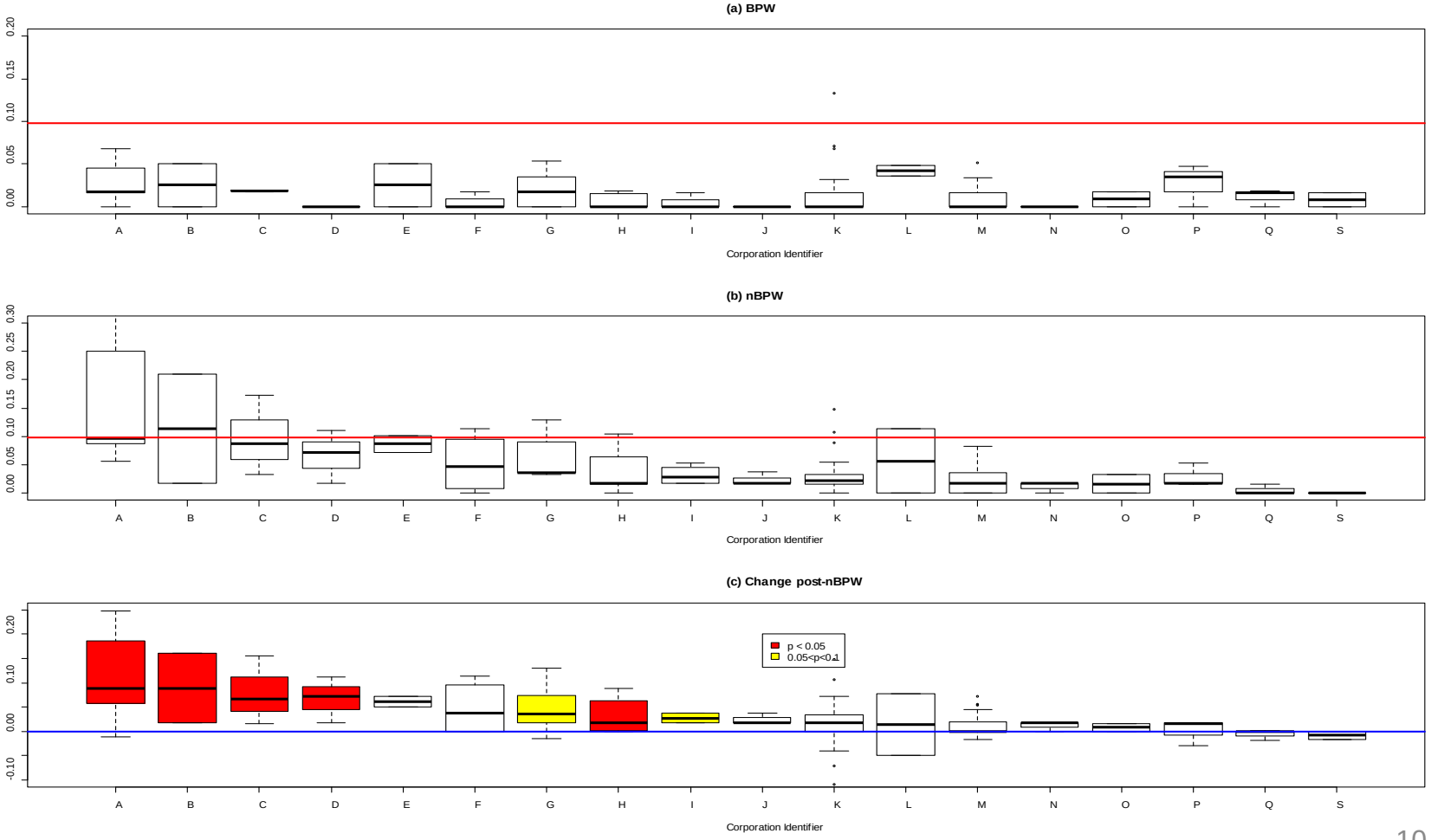
An Asymmetrical Impact on Corporations that Produce Chicken



Potential Effects on Carcass Performance Standard

- The volume-weighted average used to calculate the carcass performance standard in 2011 was **4.58%**
- The volume-weighted average from the first 12 months of nBPW was **4.74%**
- Using the new nBPW data in the Performance Standard Model with the same predicted reduction in illnesses, the standard would result in the same 5 positives allowed out of the set of 51

Questions?

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