

**Elanco**

*Salmonella* **360°**



# **AviPro® Megan® Vac 1 and Megan® Egg**

AAAP 2019

# History

- Two complexes, A and B
  - Breeder, grow-out and feedmill operations separate
- A Complex
  - Breeder
    - Megan Vac DOH, Megan Egg 6 WOA, Commercial SE 10 WOA and Autogenous multivalent 20 WOA
  - No broiler program
- B Complex
  - Breeder
    - Live ST DOH, Live ST 7 WOA, Autogenous multivalent 11 WOA and Commercial SE 18 WOA
    - Transitioned to A complex program based on results with Megan Egg DOH
  - No broiler program



# Changes to program

- A Complex - Broilers
  - 7 ml per chick box Megan Vac 1
    - 40% uptake
  - 20 ml per chick box Megan Vac 1
    - 80+% uptake
- B Complex– Broilers
  - 20 ml per chick box Megan Vac 1
    - 80+% uptake
- Both complexes conducted field boost as per label instructions



# Results: 2017-2018 as measured by rinse sampling at rehang



# A Complex Salmonella Serogroups B, D and C1, Infantis, Pre-Vaccinates and Vaccinates

Serogroup	A - Rinse Samples Only		
	Pre-Vax n=256	VAX n=1225	% Change
Negative	1.4%	1.3%	-0.1%
B <sup>1</sup>	40.8%	14.8%	-26.0%
D <sup>2</sup>	0.8%	0.4%	-0.4%
B & D	41.6%	15.3%	-26.3%
C1, Infantis*	23.3%	14.6%	-8.8%
All Other <sup>3</sup>	33.7%	68.9%	35.2%

<sup>1</sup>Group B, Heidelberg\*, Schwarzengrund, Typhimurium\*, Untypeable

<sup>2</sup>Group D, Berta\*, Ouakam

<sup>3</sup>All Other, A-I-Untypeable, C1 Mbandaka, C1 Montevideo\*, C1 Ohio, C1 Tennessee, C1 Thompson\*, C1 Untypeable, C2 Hadar, C2 Kentucky, C2 Untypeable, E1 Anatum\*, E4 Liverpool, E4 Senftenberg, E4 Taksony, G Cubana, G Untypeable, G Worthington, Rough (R) Untypeable

\*Top 20 Serotypes from CDC, National Enteric Disease Surveillance: Salmonella Annual Report, 2018



# A Complex

## Salmonella Serogroups B & D and C1, Infantis, Pre-Vaccinates and Vaccinates by Quarter

Serogroup	A - Rinse Samples Only						
	Pre-Vax		Q3-2017	Q4-2017	Q1-2018	Q2-2018	Q3-2018
Negative	1.4%		3.2%	1.0%	0.0%	0.0%	2.8%
B <sup>1</sup>	40.8%		10.1%	18.3%	21.2%	13.2%	11.7%
D <sup>2</sup>	0.8%		0.0%	0.0%	0.0%	0.0%	2.8%
B & D	41.6%		10.1%	18.3%	21.2%	13.2%	14.5%
C1, Infantis*	23.3%		15.9%	14.1%	9.8%	12.5%	22.0%
All Other <sup>3</sup>	33.7%		70.9%	66.7%	69.0%	74.3%	60.7%

<sup>1</sup>Group B, Heidelberg\*, Schwarzengrund, Typhimurium\*, Untypeable

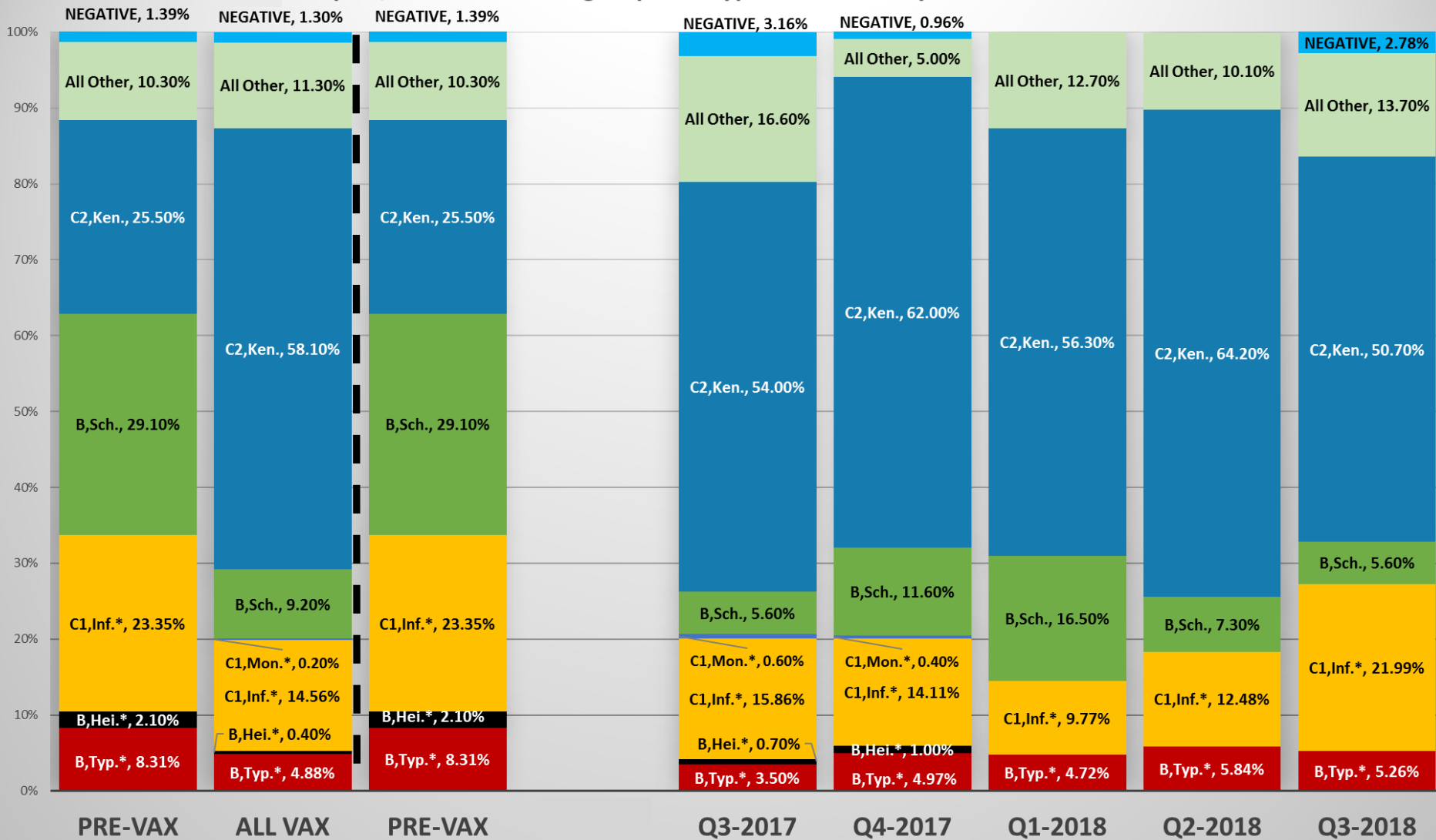
<sup>2</sup>Group D, Berta\*, Ouakam

<sup>3</sup>All Other, A-I-Untypeable, C1 Mbandaka, C1 Montevideo\*, C1 Ohio, C1 Tennessee, C1 Thompson\*, C1 Untypeable, C2 Hadar, C2 Kentucky, C2 Untypeable, E1 Anatum\*, E4 Liverpool, E4 Senftenberg, E4 Taksony, G Cubana, G Untypeable, G Worthington, Rough (R) Untypeable

\*Top 20 Serotypes from CDC, National Enteric Disease Surveillance: Salmonella Annual Report, 2018



# A Complex, *Salmonella* Serogroup-Serotype Prevalence by Treatment Round and Quarter



\*Top 20 Serotypes from CDC



# B Complex

## Salmonella Serogroups B & D and C1, Infantis, Pre-Vaccinates and Vaccinates

Serogroup	B - Parts Only				
	Pre-Vax n=306	VAX n=870	Transition# n=582	Total VAX n=374	Change Pre- Vax to Total VAX
Negative	16.0%	11.3%	51.1%	77.6%	61.6%
B <sup>1</sup>	31.6%	24.4%	10.5%	5.6%	-26.0%
D <sup>2</sup>	1.4%	0.1%	0.5%	0.0%	-1.4%
B & D	32.9%	24.5%	11.0%	5.6%	-27.4%
C1, Infantis*	23.7%	31.7%	23.7%	12.8%	-10.8%
All Other <sup>3</sup>	27.4%	32.2%	14.2%	4.0%	-23.4%

<sup>1</sup>Group B, Agona\*, Heidelberg\*, Schwarzengrund, Typhimurium\*

<sup>2</sup>Group D, Enteritidis\*, Ouakam

<sup>3</sup>All Other, A-I-Untypeable, A-1+Untypeable, C1 Braenderup\*, C1 Mbandaka, C1 Montevideo\*, C1 Ohio, C1 Tennessee, C2 Kentucky, C2 Untypeable, G Havana, Rough (R) Untypeable

\*Top 20 Serotypes from CDC, National Enteric Disease Surveillance: Salmonella Annual Report, 2018

#Transition between programs in breeders





# B Complex

## Salmonella Serogroups B & D and C1, Infantis, Pre-Vaccinates and Vaccinates by Quarter<sup>†</sup>

Serogroup	B - Parts Only							
	Pre-Vax	Q2-2017	Q3-2017	Q4-2017	Q1-2018	Q2-2018	Q3-2018	Q4-2018
Negative	16.0%	17.8%	10.4%	7.7%	52.6%	88.4%	79.5%	69.4%
B <sup>1</sup>	31.6%	20.7%	23.5%	27.0%	8.4%	0.5%	1.0%	16.7%
D <sup>2</sup>	1.4%	0.0%	0.3%	1.0%	0.0%	0.0%	0.0%	0.0%
B & D	32.9%	20.7%	23.8%	28.1%	8.4%	0.5%	1.0%	16.7%
C1, Infantis*	23.7%	27.0%	33.6%	37.8%	23.4%	7.1%	13.9%	13.0%
All Other <sup>3</sup>	27.4%	34.4%	31.8%	26.3%	15.7%	4.0%	5.6%	0.9%

<sup>1</sup> Group B, Agona\*, Heidelberg\*, Schwarzengrund, Typhimurium\*

<sup>2</sup> Group D, Enteritidis\*, Ouakam

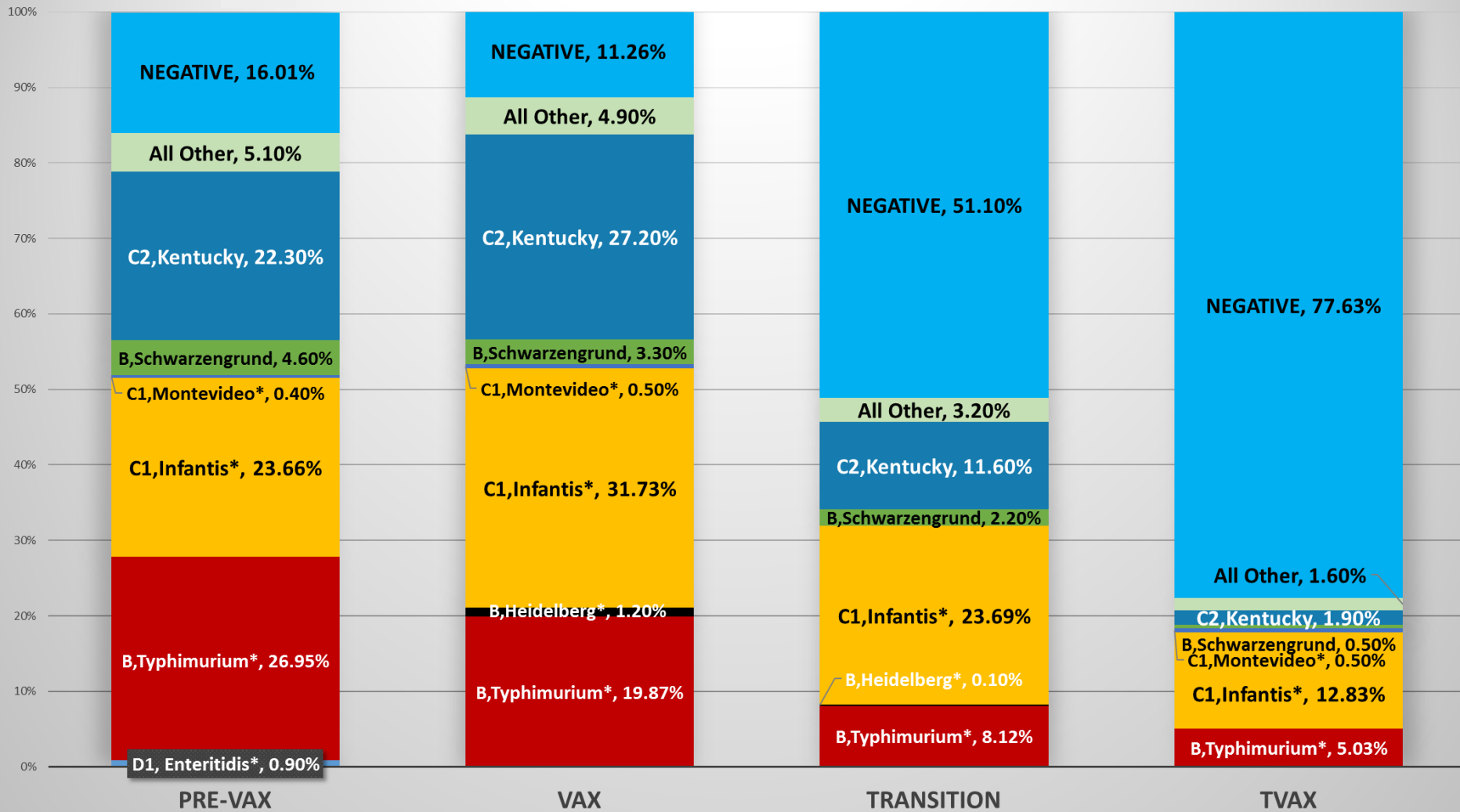
<sup>3</sup> All Other, A-I-Untypeable, A-1+Untypeable, C1 Braenderup\*, C1 Mbandaka, C1 Montevideo\*, C1 Ohio, C1 Tennessee, C2 Kentucky, C2 Untypeable, G Havana, Rough (R) Untypeable

\*Top 20 Serotypes from CDC, National Enteric Disease Surveillance: Salmonella Annual Report, 2018

<sup>†</sup> to 11/20/18



## B : Complex, *Salmonella* Serogroup-Serotype Prevalence by Treatment Round



\*Top 20 Serotypes from CDC



# Conclusions

- Seasonality may impact the prevalence of *Salmonella*
- A coordinated program of multiple doses of live vaccine, commercial SE and autogenous multivalent *Salmonella* was the most effective at reducing the prevalence of groups B and D as well as overall prevalence



# Questions



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