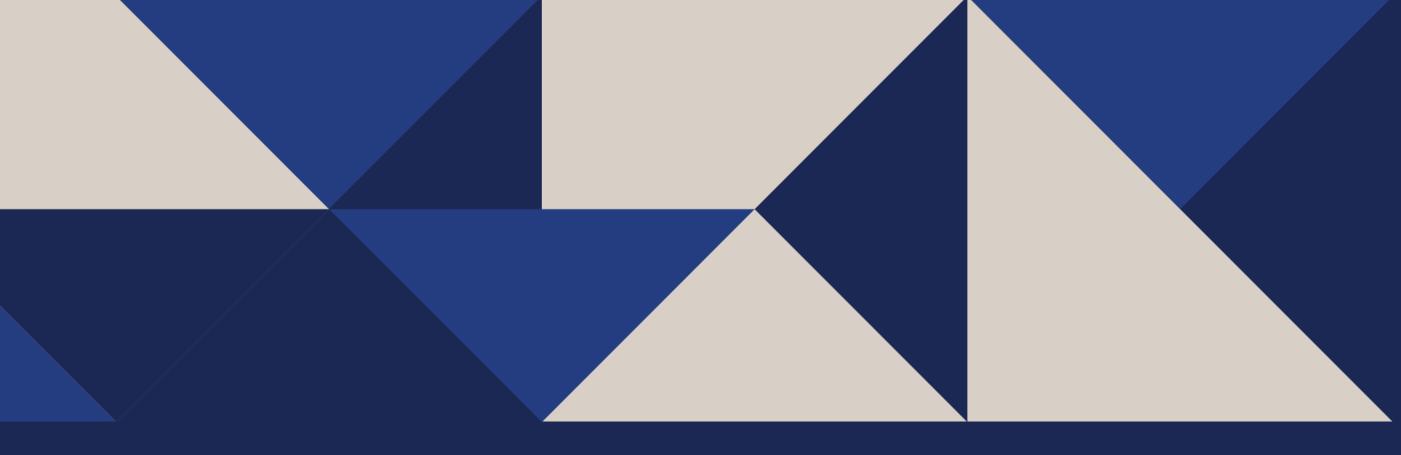
Designing Assembly Modifications to Reduce Disease Transmission

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A Swine Health Ontario Project

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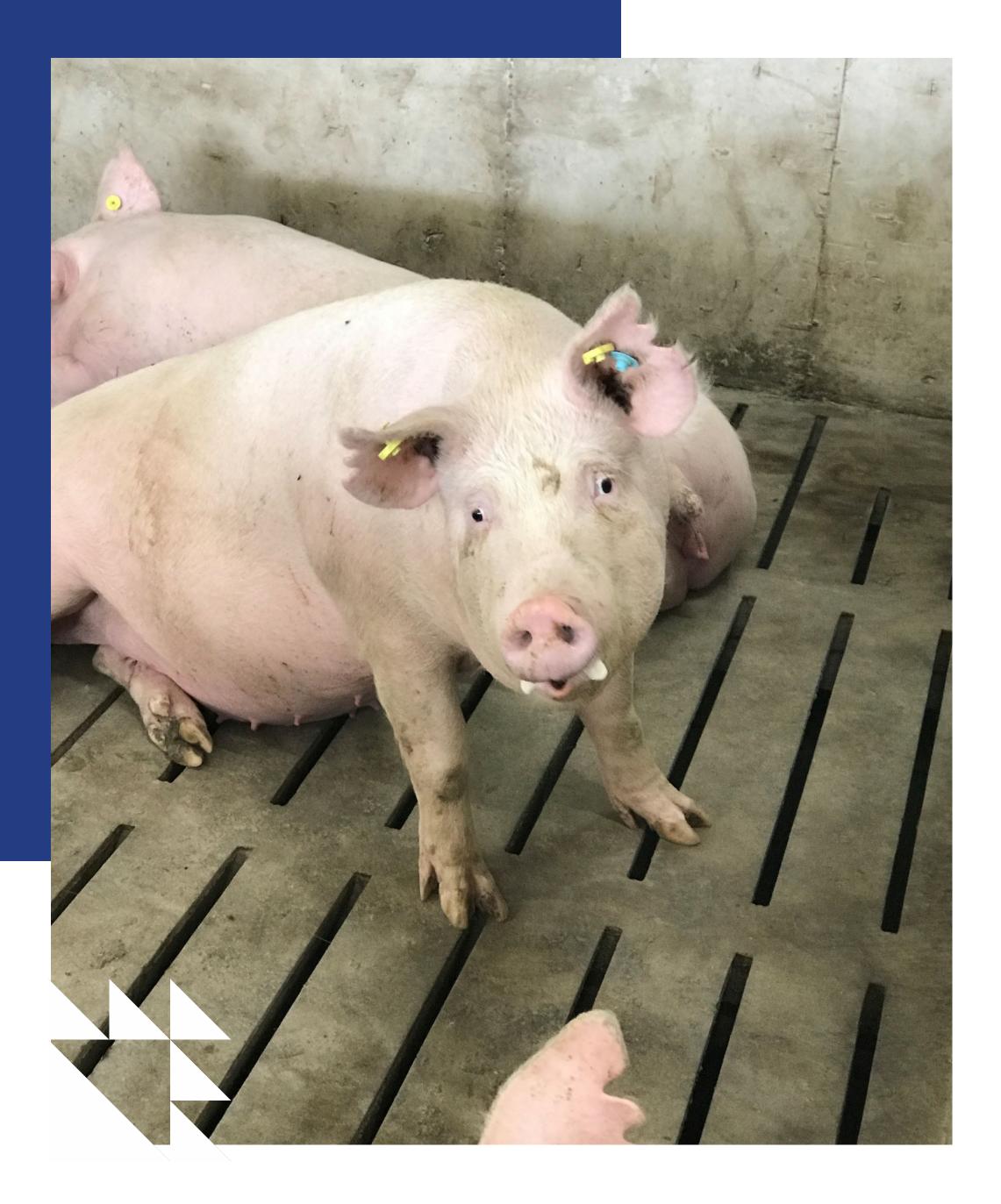
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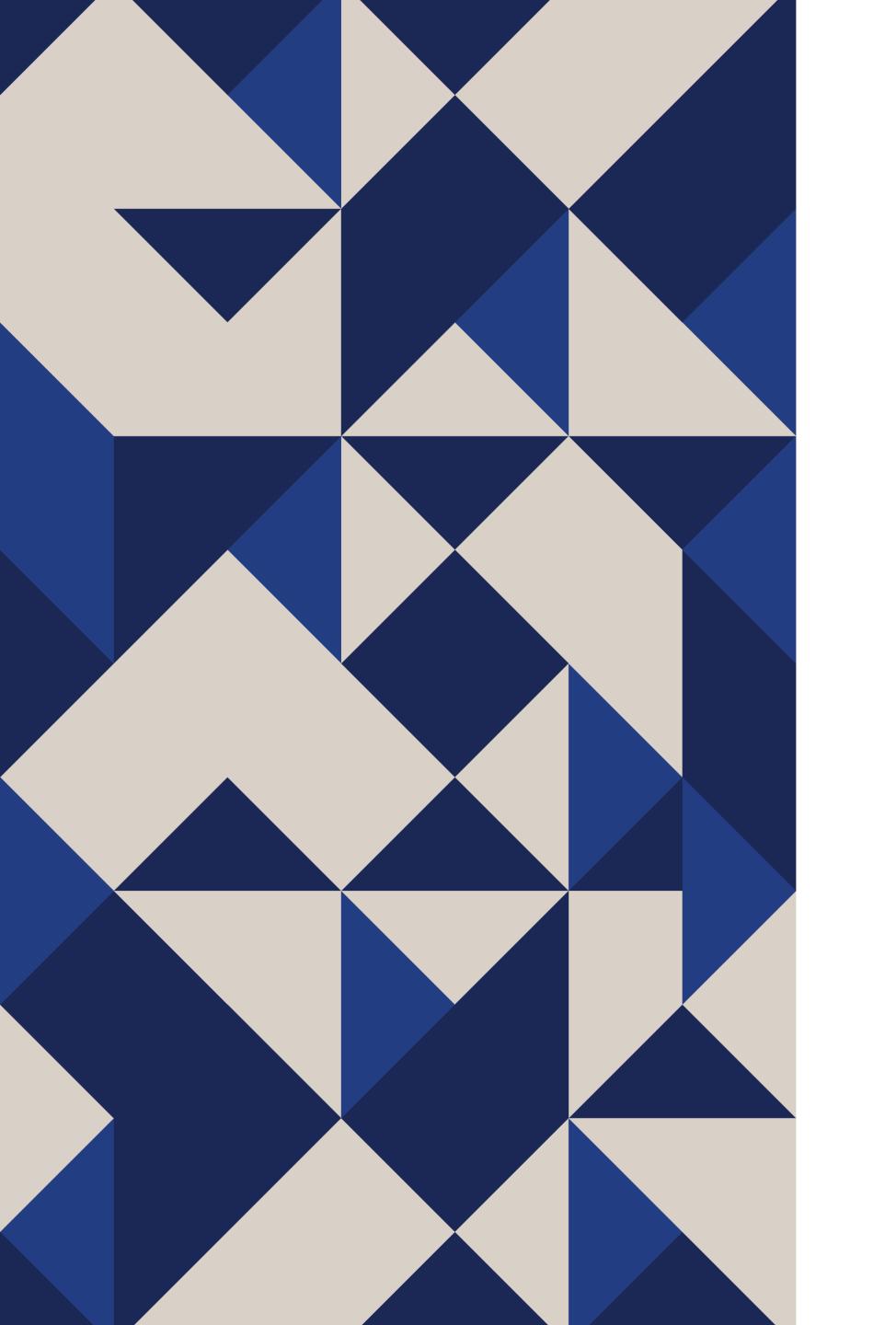


Canadian Stats

The Canadian pork sector generates \$24B

- 1 ASF case in Canada would stop exports.
- According to the October 2024 edition of Canadian Pork Marketing Report by Kevin Grier;
- Canada exports approximately 6.6 million live hogs annually.
- 4.7 million weaners and feeders,
- 1.5 million market hogs
- 340,000 cull sows and boars





Setting the Stage

•The majority of the 340,000 Canadian cull animals pass through assembly yards for sorting before slaughter in the U.S. (approx. 4,250 truck loads)

• Most Eastern Canadian culls are assembled in Ontario.

 Ontario to U.S. weekly exports also include weaners and finishers, totalling approx. 50,000 hd.

 Manitoba also has two large assembly sites which operate in a similar function.

 This cross-border transport increases the risk of disease movement between the two countries and cross contamination of Canadian facilities upon return of trailers following contact with U.S. packers.

Project Focus

- •Assess assembly biosecurity risk points and develop drawings that address these risks.
- •The first phase of this project included site assessments focused on the **inbound, internal** (campground) and outbound aspects of the major Ontario and Western Canadian cull assembly.
- •Three assembly sites were visited in Ontario and two assembly sites were visited in Manitoba.



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Assembly Assessment Key Points

General Operations and Site Access

- Single species focus and avoid alternative services
- •Designated inbound and outbound traffic flow with a solid divider between flows
- •Yard grade, drainage and driveway material to reduce mud and water accumulation
- Waste/manure management
- •Reduce foot traffic cross-contamination risks through use of electronic paperwork and consideration of the location if a public bathroom is provided for drivers.
- "Clean" activities such as feed delivery located on the inbound side of assembly, "Contaminated" activities such as deadstock located on the outbound side of assembly.

Assembly Assessment Key Points Inbound

- •Inbound is a critically important point for assembly as this is the point where further contact back to Canadian farms is most likely.
 - Designated inbound chutes, physically separated from outbound
 - Multiple chutes depending on inbound volume to allow for C/D between loads**
 - Delivery by appointment with details on disease status
 - Roof extension
 - •Slated walkways and back of truck area, attention to grade
 - Protocol to remove deadstock from trailers

Assembly Assessment Key Points Campground

- Consider contaminated, clear separation from inbound.
- One-way gates between inbound and campground.
- Inclusion of slatted areas to the inbound area and the sorting area would facilitate effective cleaning and disinfection and construction must accommodate a skid steer or alternative.
- Staff with campground contact should not enter trailers (inbound or outbound) no inbound trailers to reduce the risk of contaminating those trailers with diseases endemic to the campground and no outbound trailers to avoid bringing any potential new diseases into the campground.
- Drivers from both areas should not enter the campground.
- Rest pen for compromised animals.
- •Alleyways should accommodate a slid steer.



Assembly Assessment Key Points Outbound

- •Area with the highest amount of contact with trucks returning from the U.S.
- Deadstock holding and pick-up should be located on the outbound side of the assembly with consideration of traffic flow to minimize cross-contamination from vehicles collecting deadstock.
- •The workgroup recommends a requirement for high-volume wash and disinfection** (or alternate technology to C/D) of trailers returning from the U.S.

****PED and PDCoV PCR Results - Trailers Moved Known Infected Pigs Followed by Firehose Wash and Disinfection with Synergize**

LEGEND	F	PREWASH		CLEAN TRAILER SAMPLES			
 1 Nose deck and bottom area 	<u>Date</u>	<u>#1 PEDV</u>	<u>#2PEDV</u>	<u>#1 PEDV</u>	<u>#2 PEDV</u>	<u>#3 PEDV</u>	<u>#4 PEDV</u>
 2 Middle deck near swing gate 	19-Nov	30.84	27.82	ND	ND	ND	ND
 3 Main ramp and back door area 	12-Jan	ND	ND	ND	ND	ND	ND
 4 Lower ramp and gate to bottom deck 	13-Jan	31.54	28.96	ND	ND	ND	ND
 ND = Not Detected 	15-Jan	27.32	28.92	ND	ND	ND	ND
	21-Jan	26.58	27.31	ND	ND	37.37	36.53
	29-Jan	31.97	30.09	32.83	ND	ND	ND

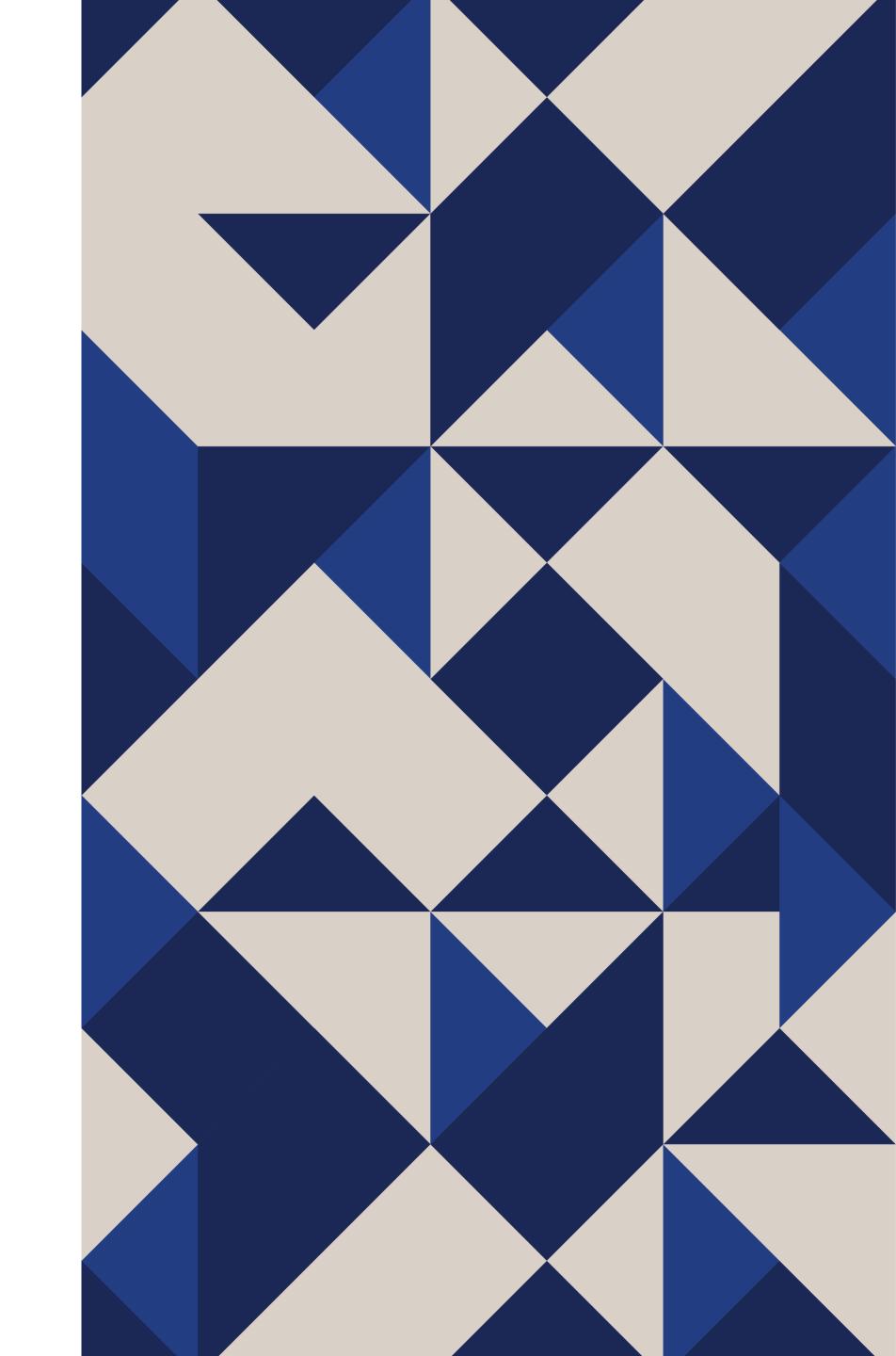
	PREWASH		CLEAN TRAILER	SAMPLES		
<u>Date</u>	<u>#1 PDCov</u>	<u>#2PDCoV</u>	<u>#1 PDCoV</u>	<u>#2 PDCoV</u>	<u>#3 PDCoV</u>	<u># 4PDCoV</u>
19-Nov	33.89	31.42	ND	ND	ND	ND
12-Jan	38.55	37.49	ND	ND	ND	ND
13-Jan	28.96	36.15	ND	ND	ND	ND
15-Jan	28.92	26.96	ND	ND	ND	ND
21-Jan	27.31	29.18	ND	ND	ND	39.36
29-Jan	30.09	31.81	34.00	ND	ND	ND

PEDV CT Values

DCoV CT Values

Next Steps

- Engineered drawings highlighting key points
- Application to on farm biosecurity
- Further industry consultation
- Communications Better Pork article
- Final report



Thank You



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