



Rayner Dairy Research and Teaching Facility

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General Update

- ▶ ~110 milking
- ▶ Production
 - ▶ 41 kg/day
 - ▶ 4.1 fat
- ▶ Finishing up multiple research projects this spring
- ▶ Ongoing Salmonella testing (cont. later)

Review of goals for 2019

- ▶ Keep production consistent
 - ▶ Especially during summer months ❌
 - ▶ Silage quality
- ▶ Facilities
 - ▶ Replace stall matts IP



Research: Deep bedding

Review of goals for 2019

- ▶ Keep production consistent
 - ▶ Especially during summer months ❌
 - ▶ Silage quality
- ▶ Facilities
 - ▶ Replace stall mats IP
 - ▶ Ventilation ✓
- ▶ Management
 - ▶ Salmonella Dublin ✓
 - ▶ Develop protocol for control ✓



Salmonella
dublin at the
Rayner Center

First detected fall 2018

- ▶ S. dublin was found when doing postmortem on pneumonia cases
- ▶ Dams of positive postmortem calves were immediately isolated and bled for testing
- ▶ Realized there were likely more undetected cases in the milking herd

Salmonella plan for Rayner

- ▶ All positive animals are isolated
 - ▶ Testing antibody every 3-5 months
- ▶ Developed ELISA cutoffs
 - ▶ Any cows testing over 35% were positive
 - ▶ Cows with an ELISA over 20% were considered "suspects"
- ▶ All cows that had positive calves were culled immediately
 - ▶ Shedding
- ▶ Every animal euthanized or died received postmortem exam

Accelerated culling for cows that consistently tested positive

- ▶ If a cow tested positive and had other issues she was culled
 - ▶ Mastitis
 - ▶ Lameness
 - ▶ Cows that are repeat breeders with high production were culled at the end of lactation
- ▶ Cows that tested positive close to dry off
 - ▶ Isolated at the time of calving
 - ▶ Fecal cultured 3 times post calving
 - ▶ If negative on both fecal and blood test returned to herd



Biosecurity Changes

Calf barn

- ▶ After initial diagnosis, calf barn was depopulated
 - ▶ Sanitized area using new SOPs
- ▶ Was an open facility with many access points
 - ▶ Now only one locked access point
- ▶ New rules for calf barn
 - ▶ No entering unless needed
 - ▶ New boots/new coveralls
 - ▶ Addition of foot baths



Bull calves

- ▶ Raise bulls same as our heifers
- ▶ Bulls shipped weekly
- ▶ Have a separate area from the calf barn



The Dairy

- ▶ Created one point of entry
- ▶ Staff use different footwear in main dairy
- ▶ Added footbaths
- ▶ Positive cows were dealt with last



Visitors, students, service providers



Sterilization

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Update on current cows

- ▶ Remaining S. dublin
 - ▶ 1 suspect
 - ▶ 1 dry
- ▶ In the last few tests
 - ▶ One new positive "suspect"
- ▶ Broke the transmission cycle



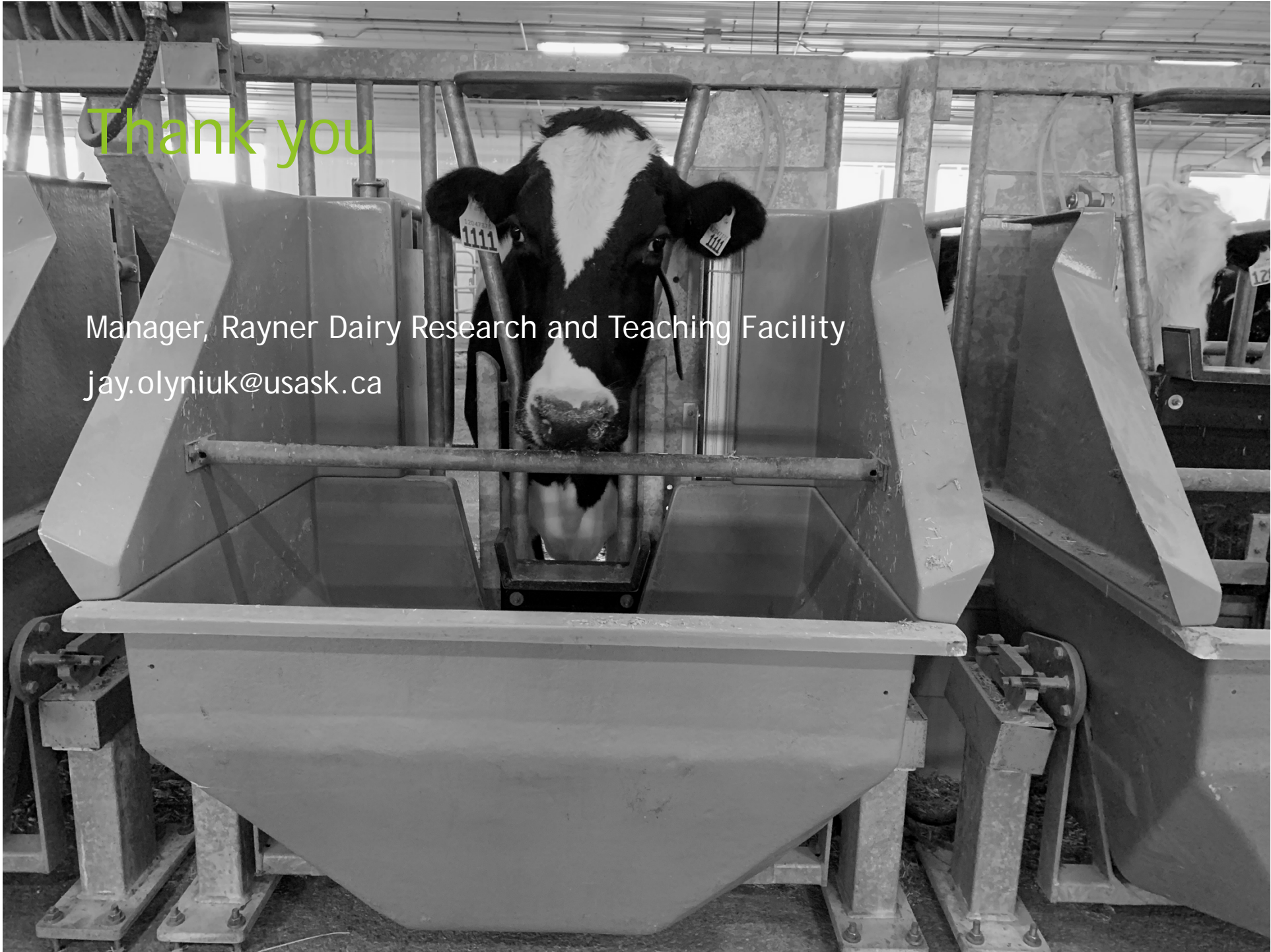
Other conclusions

- ▶ Bulk tank never tested positive
- ▶ Suspect animals returned to the herd
 - ▶ Not all positive tested were shedding
- ▶ Common sense
- ▶ Processing the situation before acting

Goals for 2020

- ▶ Increase exposure to the urban population
- ▶ Improve cow comfort
- ▶ Update how smaller piles work for silage quality
- ▶ Present more





Thank you

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