

What's living in that Drain



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Farming, Food and Health. **First**

Te Ahuwhenua, Te Kai me te Whai Ora. Tuatahi

Resistance to Sanitizers

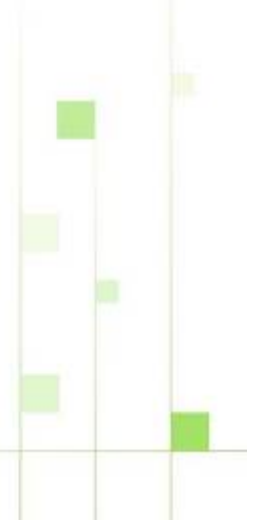


-Industry Good FRST Funded Project

Contributes to:

Shelf-life extension

Target Outcome: 20% reduction in microbial downgraded meat and +14d storage plus +2d display by 2012 (FRST-Value from Quality)



The Issue



Bacteria can become resistant to stresses such as antibiotics, organic acids and chemical cleaners.

What risk, if any, does this pose to the NZ meat processing industry?



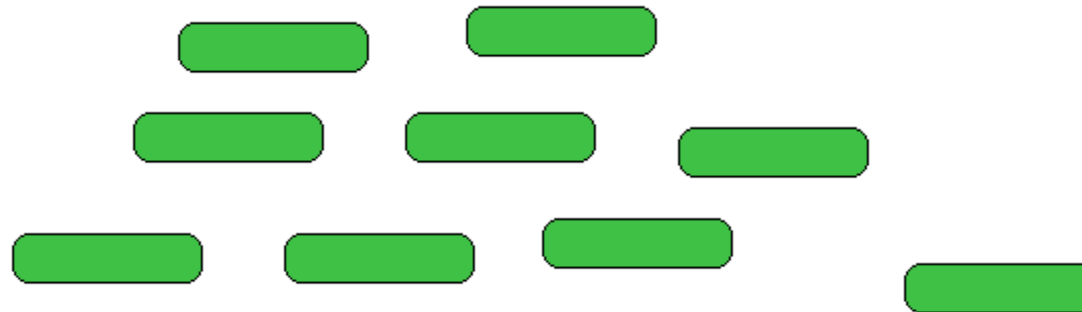
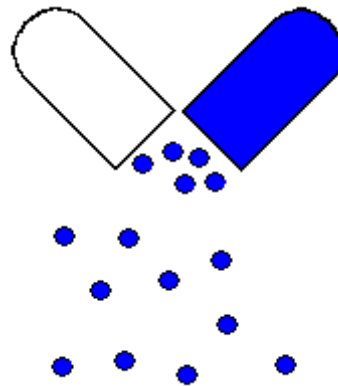
The Results of Resistance



- Resistance to antibiotics has resulted in problems such as MRSA
- Resistance to sanitizers in meat plants could result in increased risk of spoilage and meat-borne illness



Resistance: Build up in the environment



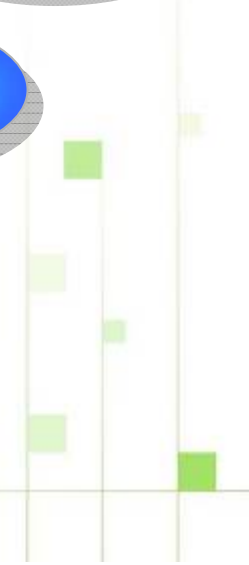
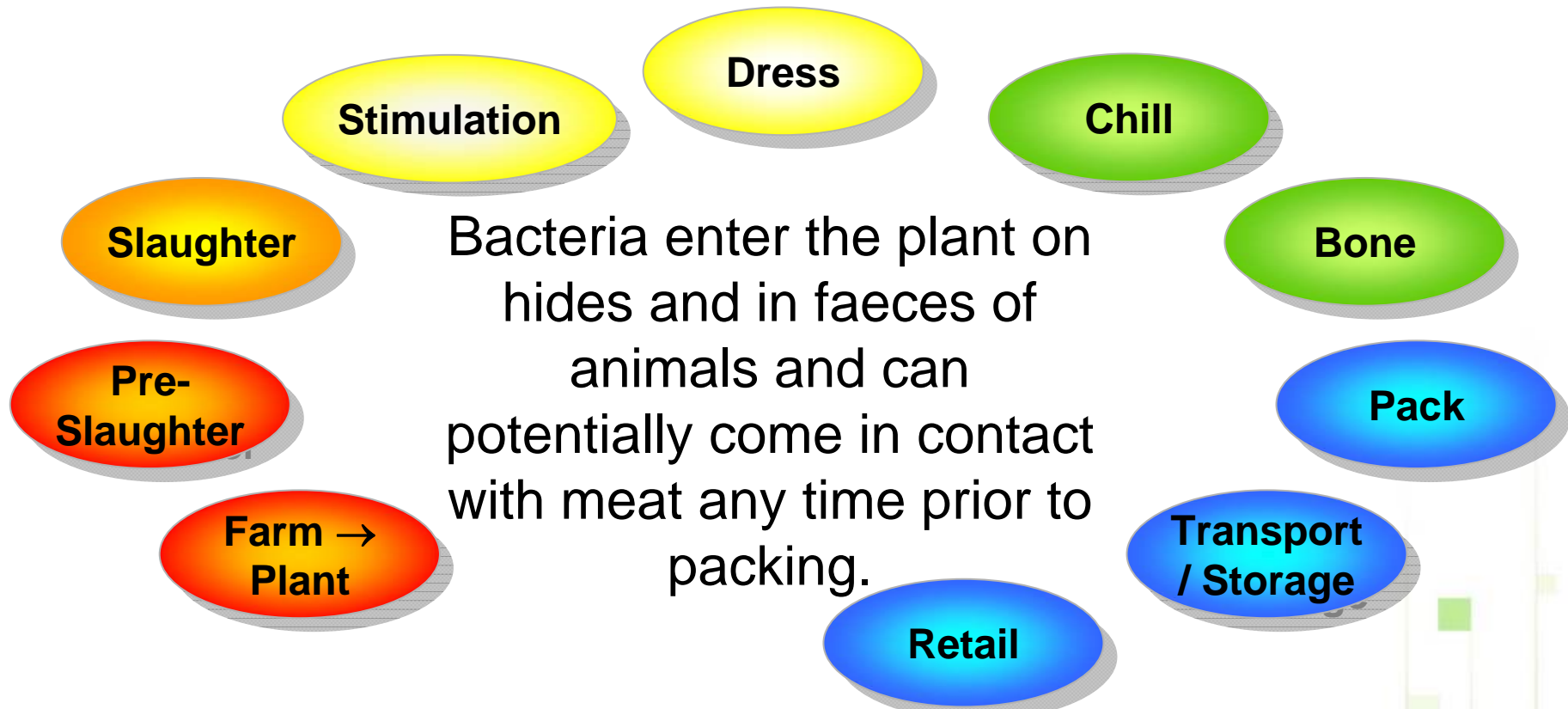
Resistance: Where does it come from?



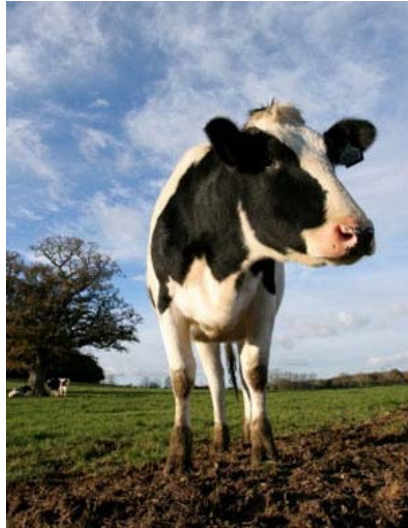
- Bacteria are naturally resistant.
- Or bacteria can acquire it.



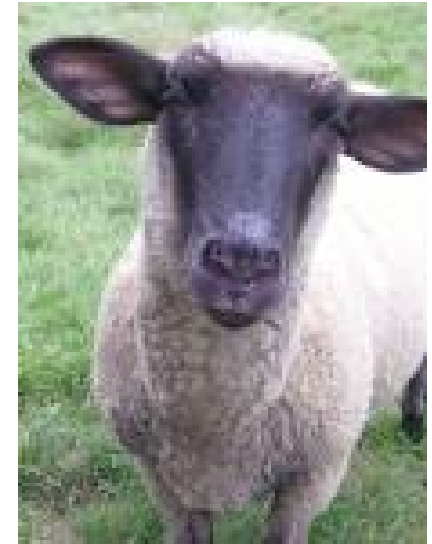
Resistance in the meat processing plant



Our Methods



Samples will be collected from two geographical locations from plants processing Beef, Bobby Calf and Lamb.



The samples were processed to select for bacteria resistant to the main sanitizer used on plant.

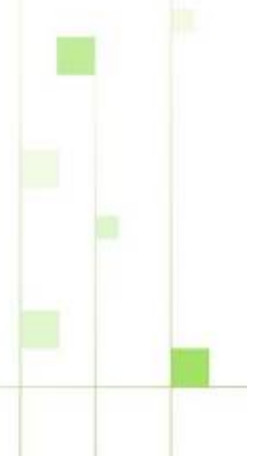


Have we found resistance?



Yes!

79% of samples contained resistant bacteria



The Collection



- We have a 700 strong collection of isolates.
- We have started to characterise the identity of the resistant isolates



Where to Now?



How much of a problem are the bacteria we have isolated?

Good news:

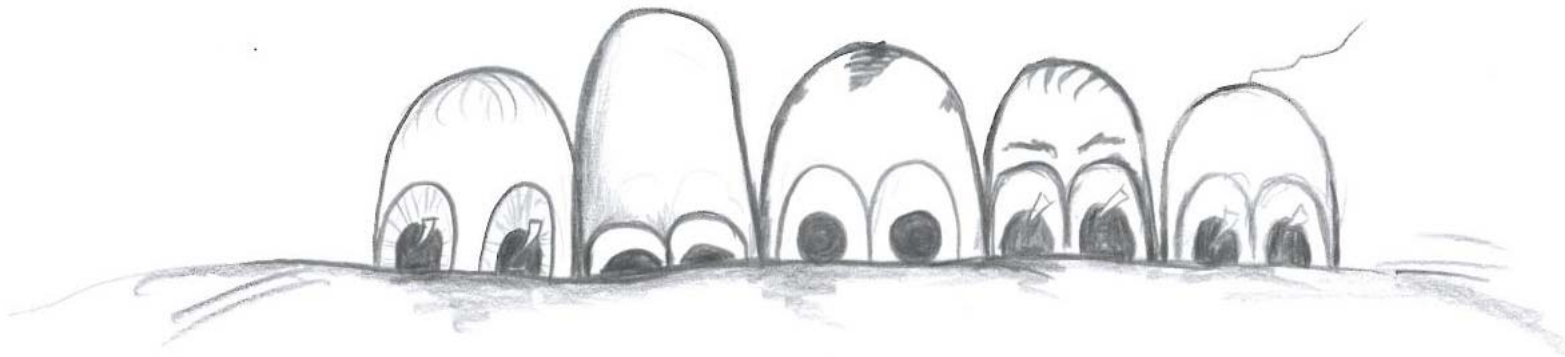
As yet no pathogens have been identified



Specific outcome



Suggest a best practice regime for reducing build up of resistance in meat processing plants.





Thanks



Thanks to those meat plant operators who have allowed us to take samples.

Any offers to allow samples to be collected from South Island processing plants gratefully received.

