



Microbial prevalence found in sheep fecal samples from the Lubbock, Texas area



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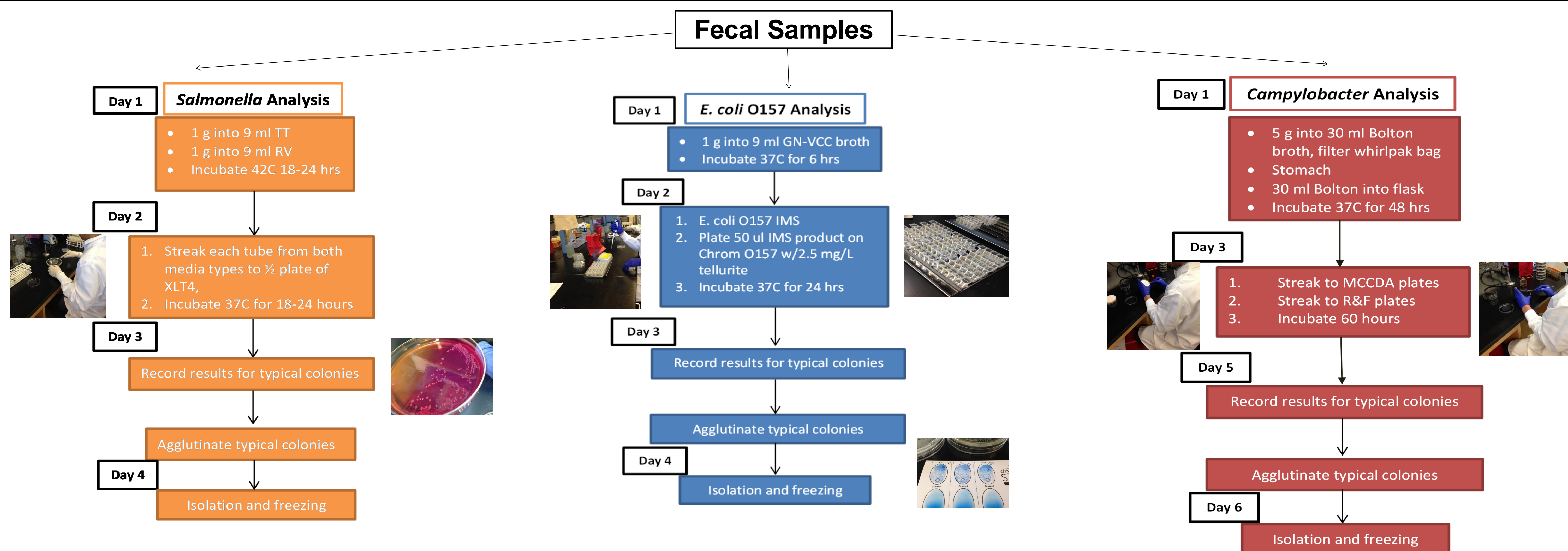
INTRODUCTION

- Information is known about pathogens present in ruminant livestock, mainly cattle, such as *Salmonella*, *Escherichia coli*, and *Campylobacter*. But less is known about the prevalence of these organisms in small-ruminants such as sheep.
- Pathogenic *Salmonella*, *Campylobacter* and *E. coli* O157 all have the potential to cause serious human illness if introduced into the food supply.

OBJECTIVE

- The objective of this study is determine the prevalence of *Salmonella*, *Escherichia coli* O157 and *Campylobacter* in sheep fecal samples from the Lubbock, Texas area.

Materials and Methods



RESULTS

- Salmonella* was detected in 8.19% (5/61) of fecal samples.
- E. coli* O157:H7 was detected in 9.84% (6/61) of fecal samples.
- Campylobacter* was detected in 73.77% (45/61) of fecal samples.
- Overall prevalence was highest with *Campylobacter* indicating a need for further research to determine the pathogenicity of these identified samples.

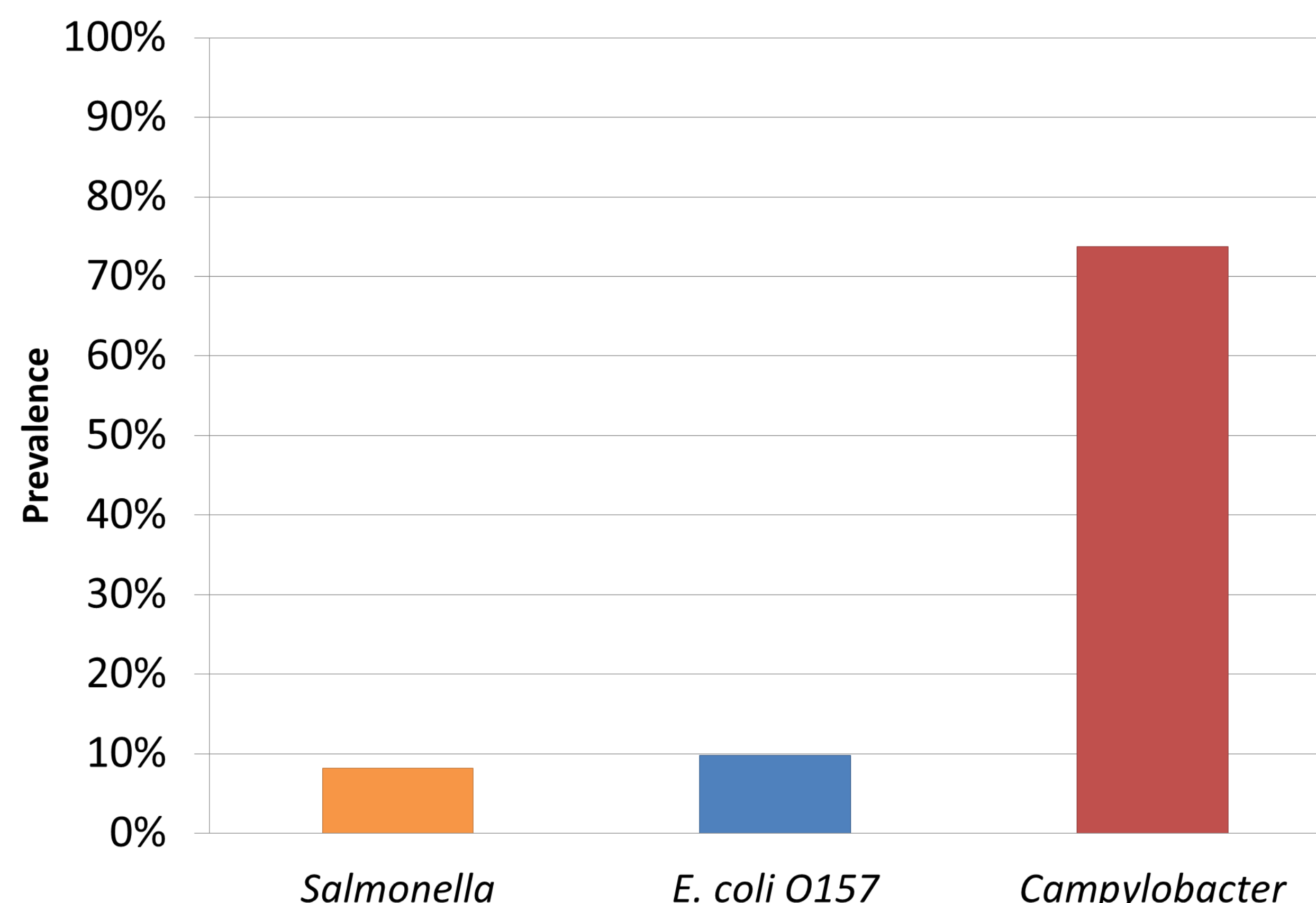
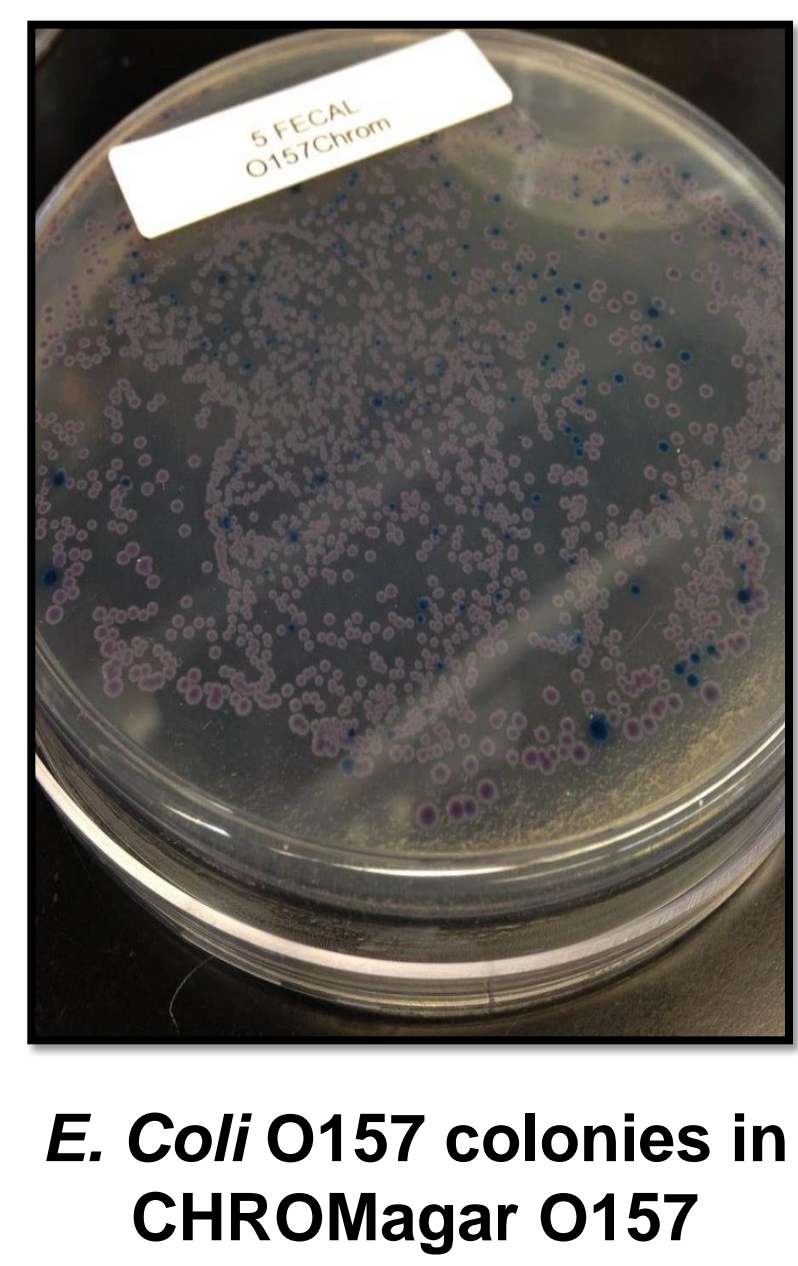
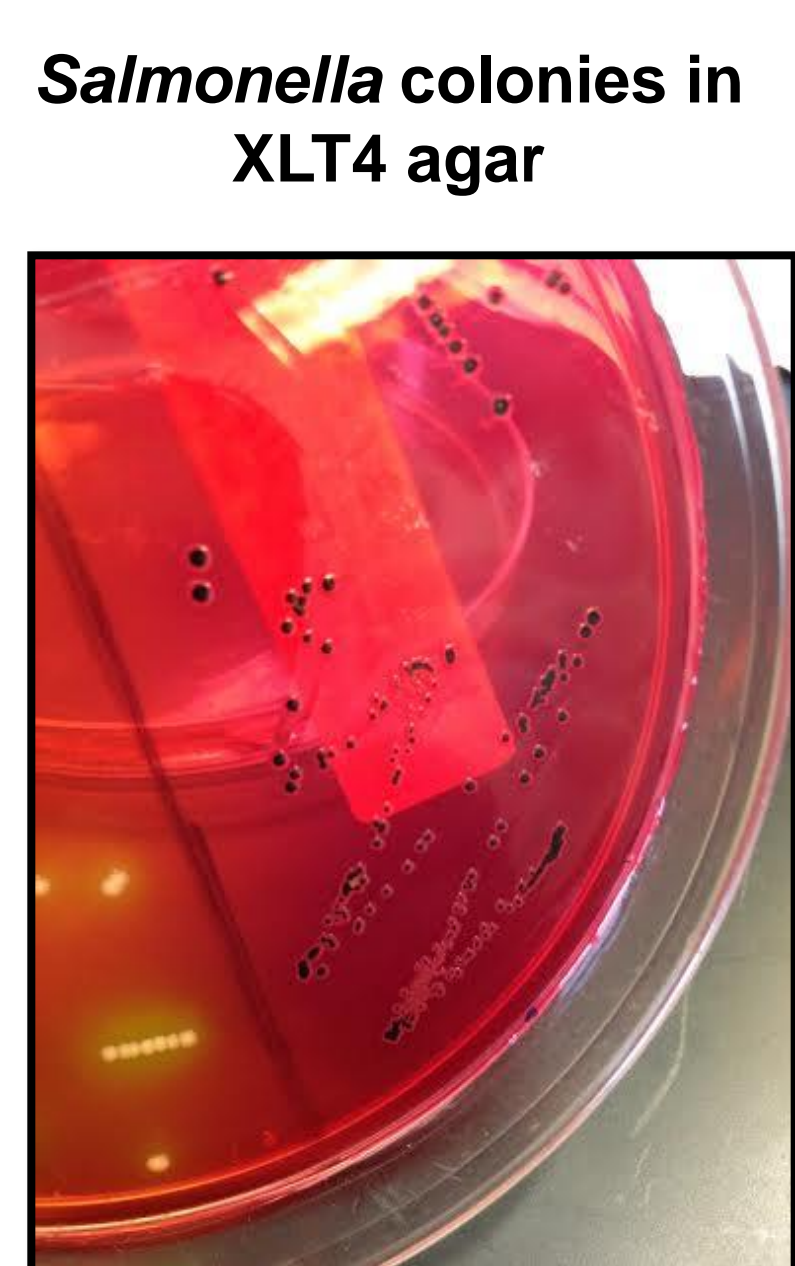


Figure 1: *Salmonella*, *E. coli* O157 and *Campylobacter* prevalence in sheep fecal samples.

CONCLUSION

E. coli O157, *Salmonella* and *Campylobacter* were all detected in these sheep fecal samples. Previous studies have shown *Campylobacter* to be present in sheep fecals at a higher rate than *Salmonella*, but only at a prevalence of 17.5%, which is lower than the prevalence found in this study (Zweifel et al., 2003). The shedding of *Campylobacter*, from sheep fecals collected at pasture averages between 24% and 51%, with significant variation by season and feed source (Jones et al., 1999). These samples were collected over a two day period in late winter. A subsequent study should look at sheep fecals collected over time in this area to see how prevalence of each of these organisms is impacted by season. Further work should be done to characterize and identify the isolates collected from these samples in order to determine their speciation and characteristics. Understanding the prevalence of these organisms in sheep fecal samples is important to understand potential food safety problems if these pathogens are not controlled properly during slaughter.

REFERENCES

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