

# Changing Practices on Cattle Farms to Control Disease Reported and Observed Drivers

Johanne Ellis-Iversen & Richard Smith

## Introduction

Particular biosecurity practices can reduce VTEC O157 in cattle, but the reduction is dependent on implementation and continued compliance by the farmer.



## Objective

Identify motivational 'drivers', which will ensure practice change and compliance, when introducing control measures against VTEC O157.

## Methods

### Observed practices changes

Farming practices were observed before, during and 1.5 years after participating in a randomised controlled trial (RCT) running for 4.5 months. Three groups of farms were enrolled (A, B, C) and asked to maintain different sets of control measures, which would be compared against a 'control' group of farms.

During the study financial incentives and monthly monitoring visits were used to persuade the farmer to comply with the control measures.

After the trial the farmers were informed of effective practices to reduce VTEC O157.

### Reported practice changes

1.5 year later the farmers were asked to rank the importance and effectiveness of drivers to motivate practice changes to reduce VTEC O157

## Reported results



### Does this driver influence your decision and to what degree?

Driver	YES	p50	p75	Range
Improved animal welfare	85.1 %	2	4	1-10
Production increase	78.7%	3	6	1-8
Increased safety for staff & family	74.5%	3	5	1-11
Increased quality of produce	72.3%	4	5	1-11
Proof of effect	70.2%	2	3	1-9
Recommendations from PVP	63.8%	3	9	1-11
Legislation	59.6%	5	8	1-11
Lump sum of money to cover changes	57.4%	3	6	1-13
Economic penalty	55.3%	3	9	1-13
Audits/control visits	51.1%	4	7	1-11
Recommendation from other farmers	44.7%	8	9	1-12
Recommendation from trade organisations	40.4%	10	12	2-12

### Ranking

1= most important in decision making, 2= 2nd most important etc.

Farmers could rank as many or few as required

If no influence on decision making process, the box was left blank.

## Observed results

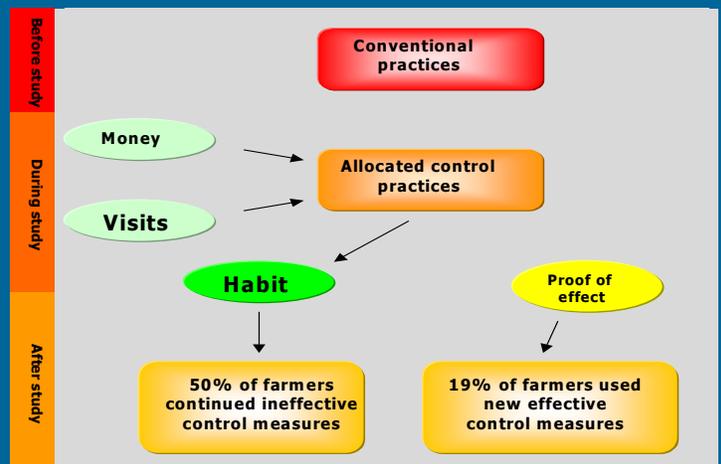
### Proportion of farms that applied practices DURING the trial:

Intervention measures	A %	B %	C %	Control %
No contact with other live-stock	86	86	65	77
No new animals bought into herd	86	93	83	92
No shared water courses with other farms	86	86	52	63
Keep young-stock in same group	100	50	83	23
Keep animals clean	57	50	65	73
Keep bedding dry	57	62	70	65
Use pen specific boot dip	71	7	87	0.0
Use pen specific over-coat	43	7	35	0.0
Empty water troughs each week	14	64	52	4
Clean water troughs each week	43	50	65	65
Raise water troughs to animal chin height	0.0	23	0.0	17

Green = required intervention; Blue = not required intervention

### Intermittent and inconsistent compliance with allocated interventions was observed

### Drivers that resulted in continued application AFTER the trial:



## Conclusions

- Payment and monitoring visits were not enough to ensure compliance during the trial.
- Proof of effect was not a strong motivator to change farm practices.
- The habit created during the study was a strong motivator.
- Intangible motivators were reported to be more important than financial drivers
- The most popular measure continued after the study, was emptying water troughs more often than before.
  - This measure did not reduce VTEC O157, but improved cattle welfare was given as main reason.



Acknowledgements: This work was funded by DEFRA under project OZ0145