

TEAT DISINFECTION: COMPARISON OF TEAT COVERAGE WITH POST MILKING TEAT DISINFECTANT USING A DIP CUP, VACUUM OPERATED HAND-HELD TEAT SPRAYER AND A PLATFORM MOUNTED AUTOMATIC TEAT DISINFECTANT SYSTEM

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INTRODUCTION

Between June 2013 and March 2018, three evaluation studies were carried out on the efficacy of teat end and teat barrel coverage by three methods of applying post-milking teat disinfectants on UK dairy farms:

a) vacuum operated hand-held spray lance systems; b) automatic platform mounted post milking teat disinfectant system; c) dipping using dip cups.

EVALUATION METHOD

Teat barrel and teat end coverage were assessed post application of the teat disinfectant product using the method described by Pocknee (1).

RESULTS

The study average results for teat coverage end and barrel are given in Table 1, for each of the three studies.

The results for the manual spraying and dipping, confirm anecdotal evidence/observations that dipping is significantly more successful in obtaining significantly better teat barrel coverage – a pre-requisite of obtaining good udder health. The teat dipping results show a very narrow range in efficiency of teat dipping between farms, with an average of 95.3% of all teat barrels being coated in the post milking teat disinfectant. This is in contrast to manual spraying, where there was a range between 19.8 and 83.4% of barrels being covered, with an average of just 50.3%. The platform mounted automatic spray system was significantly better than manual spraying and approaching the success of teat dipping, which provided equal coverage of all four teats and the front and rear planes of each teat. Front teats were often missed with hand held teat spraying.

CONCLUSION

Based on these evaluation studies, teat dipping can rightly be described as the “Gold” Standard against which automatic systems should be compared.

The platform mounted automatic teat spray system provided a much greater degree of consistency in applying teat disinfectant than hand held, vacuum operated teat sprayers. Additional benefits of an automatic teat disinfection system include time saving in the parlour allowing better targeting of labour, with consequential benefits for udder health and milking management. However, the advantages are partly offset by higher chemical consumption.

Table 1. Teat end and teat barrel coverage with disinfectant applied post-milking

	Teat end coverage – score out of 4	Average cover (%) for Left Teats	Average cover (%) for Right Teats	Average cover (%) for Rear Teats	Average cover (%) for Front Teats	Average cover (%) for All Teats
Hand Operated Teat Spraying						
Study Average	3.77	50.06	50.54	52.41	48.19	50.30
Minimum	3.20	18.67	20.96	20.67	18.93	19.80
Maximum	4.00	82.23	85.01	86.19	80.55	83.37
Locate'n'Spray						
Study Average	3.91	81.78	80.90	80.84	81.03	81.34
Minimum	3.84	60.55	63.13	64.48	59.15	61.83
Maximum	4.00	91.05	90.58	90.60	91.03	90.81
Teat Dipping						
Study Average	3.96	95.07	95.29	95.07	95.62	95.28
Minimum	3.92	88.30	90.26	90.63	87.93	89.21
Maximum	3.98	98.45	97.76	98.45	97.86	97.94

REFERENCE

Pocknee, B.R., Thornber N., Kingston C., Hiley R., May R., Cinderey M. and Carlsson A. (2013). Effectiveness of teat coverage with post milking teat disinfectant using a vacuum operated teat spray system. Proceedings of the British Mastitis Conference, Worcester, 2013, pp 45-46.