

THE JOURNAL OF DAIRY RESEARCH

EDITED FOR

The Committee of Management

BY

A. T. R. MATTICK,
B.Sc., Ph.D.

The National Institute for Research in Dairying,
University of Reading

and

N. C. WRIGHT,
M.A., D.Sc., Ph.D.

The Hannah Dairy Research Institute
Kirkhill, Ayr

ASSISTED IN THE

SELECTION OF PAPERS FOR PUBLICATION

BY

DR L. BULL (Australia)

PROF. E. L. CROSSLEY (Reading)

PROF. D. B. CUTHBERTSON (Aberdeen)

PROF. I. DE BURGH DALY, F.R.S. (Cambridge)

DR H. P. DONALD (Edinburgh)

DR PAUL FILDES, F.R.S. (London)

PROF. P. J. J. FOURIE (South Africa)

PROF. R. C. GARRY, F.R.S. (Glasgow)

DR T. GIBSON (Edinburgh)

DR J. HAMMOND, F.R.S. (Cambridge)

DR J. O. IRWIN (London)

DR A. G. LOCHHEAD, F.R.S. (C.) (Canada)

PROF. F. C. MINETT (Pakistan)

PROF. W. RIDDET (New Zealand)

SIR JAMES A. SCOTT WATSON (London)

VOLUME 16

CAMBRIDGE
AT THE UNIVERSITY PRESS

1949

Committee of Management

PROF. H. D. KAY, C.B.E., F.R.S. (*Chairman*)

MR J. HOLMES

PROF. R. C. GARRY, F.R.S.

MR W. H. SENIOR

DR J. A. B. SMITH

DR E. MARSDEN

SIR HERBERT HOWARD

DR A. T. R. MATTICK } *Editors*

DR N. C. WRIGHT }

MR H. F. BURGESS (*Secretary*)

Librarian and Editorial Assistant

MISS D. KNIGHT, B.A., F.L.A. Dip.Lib.

*Printed in Great Britain at the University Press, Cambridge
(Brooke Crutchley, University Printer)
and published by the Cambridge University Press
Cambridge, and Bentley House, London
Agents for Canada and India: Macmillan*

C O N T E N T S

NO. 1 (JANUARY 1949)

Original Articles:	PAGE
375. The seasonal distribution of calf and milk sales in west Wales and the probable influence of climatic conditions on the rate of calving during the autumn months and on the consequent milk production. R. PHILLIPS and J. L. DAVIES	1
376. Experiments on milking technique. 3. Combined effect of reducing the milking time and washing the udder with hot water. 4. Effect of increasing milk time. F. H. DODD and A. S. FOOT	14
377. Corrosion by commercial sodium hypochlorites and its inhibition. G. H. BOTHAM and G. A. DUMMETT	23
378. The effect of penicillin on lactic streptococci. G. J. E. HUNTER	39
379. The nature and quantity of fatty acids produced in butterfat by the action of micro-organisms. T. RICHARDS and G. M. EL-SADER	46
380. The effect on the biological value of bread nitrogen of additions of dried skim milk and of soya flour. K. M. HENRY and S. K. KON	53
381. A rapid and simple phosphatase test for milk. R. ASCHAFFENBURG and J. E. C. MULLEN	58
Reviews of the Progress of Dairy Science:	
Section D. Nutritive value of milk and milk products. S. K. KON and K. M. HENRY	68

NO. 2 (OCTOBER 1949)

382. The seasonal distribution of calf and milk sales in north Wales and the probable influence of climatic conditions on the monthly rate of calving and consequent milk production. R. PHILLIPS, J. L. DAVIES and E. H. BROWN	129
383. Investigations on bovine mastitis. 4. The association of new infections caused by <i>Streptococcus agalactiae</i> with (a) season and (b) stage of lactation. P. JUNE INESON and A. CUNNINGHAM	139
384. A note on the effect of penicillin in the reductase test for milk quality. G. J. E. HUNTER	149
385. Growth requirements of lactic streptococci. Differences within the group. G. J. E. HUNTER	152
386. Variations in morphology of <i>Streptococcus lactis</i> when grown in raw and heated milk. C. S. MORRIS and M. A. EDWARDS	161
387. Bacteriophage in typing lactic streptococci. AGNES A. NICHOLS and MARGERY HOYLE	167
388. The colorimetric determination of lactic acid in milk and milk products. J. DAVIDSON	209

Original Articles:	PAGE
389. The composition of the milk of Egyptian cows and buffaloes. A. M. EL-SOKKARY and H. A. HASSAN	217
390. The estimation of losses of butterfat in churning. F. H. McDOWALL and A. K. R. McDOWELL	227
391. The effect of penicillin in milk on the manufacture of Cheddar cheese. G. J. E. HUNTER	235
Reviews of the Progress of Dairy Science:	
Section E. Diseases of dairy cattle. P. S. WATTS	242

NO. 3 (DECEMBER 1949)

392. Seasonal variations in the sale of calves in different parts of Great Britain. R. PHILLIPS, E. H. BROWN and J. L. DAVIES	283
393. Experiments on milking technique. 5. Effect of temporary changes in the interval between washing and milking. 6. Comparison of established washing and milking routines. F. H. DODD, A. S. FOOT and ETTIE HENRIQUES	301
394. The influence of time and temperature of storage on dye-reduction tests in milk. 1. Reduction of methylene blue. R. K. MORTON and J. M. VINCENT. With statistical appendix by D. B. DUNCAN	310
395. The influence of alkalinity on the germicidal action of hypochlorites. C. E. CHAPLIN and C. K. JOHNS	322
396. Chemical sterilization of dairy equipment. The bactericidal action of chlorine in the presence of protein. G. A. COX and H. R. WHITEHEAD	327
397. A burette for rapid checking of Gerber butyrometers. R. M. DOLBY	334
398. The properties of New Zealand butters and butterfats. II. The relation of hardness of New Zealand commercial butter to composition of the butterfat. R. M. DOLBY	336
399. The estimation of vitamin A in butter. A critical study of methods. A. K. R. McDOWELL	348
400. Factors influencing the keeping quality of ghee. D. P. PERSAI and C. R. BARNICOAT	356
401. Cheese grading. Mechanical properties compared with quality assessed subjectively. R. HARPER and M. BARON	363
402. Phage-carrying cultures as cheese starters. G. J. E. HUNTER and H. R. WHITEHEAD	368
403. The characteristics of streptococcal phages. Interaction between different races. G. J. E. HUNTER	374
404. Determination of the solubility of roller-dried milk powder. A. T. PARSONS	377
405. The composition of the soluble and insoluble portions of reconstituted milk powders. R. WAITE and J. C. D. WHITE	379
Reviews of the Progress of Dairy Science:	
Section C. Dairy Chemistry and Physics. Part I. Chemistry and Physical Chemistry. R. ASCHAFFENBURG and J. A. F. ROOK.	
Part II. Rheology. G. W. SCOTT BLAIR	390

ERRATA

J. Dairy Research 16 (1)

- p. 24, Table 1, col. 3, opposite sample B: *for* Clean *read* Clear.
- p. 34, footnote to Table 10: *for* production *read* protection.
- p. 35, line 9: *for* Na_2SO_3 *read* $\text{Na}_2\text{S}_2\text{O}_3$.