

THE JOURNAL OF DAIRY RESEARCH

EDITED FOR

The Committee of Management

BY

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

and

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

The National Institute for Research in Dairying,
University of Reading

The Hannah Dairy Research Institute,
Kirkhill, Ayr

ASSISTED IN THE

SELECTION OF PAPERS FOR PUBLICATION

BY

DR L. B. BULL (Australia)

DR J. O. IRWIN (London)

DR A. D. BUCHANAN SMITH (Edinburgh)

PROF. J. B. LEATHES, F.R.S. (Wantage)

PROF. E. P. CATHCART, F.R.S. (Glasgow)

PROF. F. C. MINETT (India)

DR C. CROWTHER (Newport, Salop)

PROF. H. A. D. NEVILLE (Reading)

DR A. CUNNINGHAM (Edinburgh)

PROF. W. RIDDET (New Zealand)

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

PROF. J. A. SCOTT WATSON (Oxford)

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

DR P. J. DU TOIT, F.R.S. (S.A.) (S. Africa)

DR E. G. HOOD (Canada)

VOLUME 13

CAMBRIDGE
AT THE UNIVERSITY PRESS

1944

Committee of Management

PROF. H. D. KAY, O.B.E. (*Chairman*)

MR J. HOLMES

PROF. T. J. MACKIE

MR J. M. CAIE

SIR DONALD FERGUSSON, K.C.B.

MR A. L. POOLE

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

DR N. C. WRIGHT }

SIR DAVID CHADWICK, K.C.M.G.,
C.S.I., C.I.E. (*Secretary*)

Librarian and Editorial Assistant

MISS D. KNIGHT, B.A., DIP.LIB.

Cambridge University Press

LONDON: BENTLEY HOUSE

BOMBAY • CALCUTTA • MADRAS

Macmillan

All rights reserved

PRINTED IN GREAT BRITAIN

C O N T E N T S

No. 1 (SEPTEMBER 1942)

Original Articles:	PAGE
292. The effect of a vitamin A-rich diet on the vitamin A content of the colostrum of dairy cows. J. STEWART and J. W. MCCALLUM	1
293. Bacteriological aspects of the manufacture of spray-dried milk and whey powders, including some observations concerning moisture content and solubility. E. L. CROSSLEY and W. A. JOHNSON	5
294. The estimation of solids in milk. Part I. Determination of solids-not-fat by various methods of hydrometry. S. M. BODEN and C. H. CAMPBELL	45
295. The problem of bacteriophage in cheese making. Part I. Observations and investigations on slow acid production. E. B. ANDERSON and L. J. MEANWELL	58
296. The effect of varying pitching point and rate of scald on the physical properties and general quality of cheese made from milk of varying acidity and from pasteurized milk. G. W. SCOTT BLAIR, F. M. V. COPPEN and D. V. DEARDEN	73
297. The firmness of rennet curd; its measurement and variations. S. J. ROWLAND and D. SOULIDES	85
Biennial Reviews of the Progress of Dairy Science.	
Section C. Dairy Chemistry. S. J. ROWLAND and G. W. SCOTT BLAIR	93

No. 2 (MAY 1943)

Original Articles:	
298. The occurrence of slow-reducing coliform organisms in milk. C. S. MORRIS	115
299. Further studies on bacteriophage in relation to Cheddar cheese-making. C. K. JOHNS	119
300. The influence of abnormal ('non-acid') milk on cheese starter cultures. G. J. E. HUNTER and H. R. WHITEHEAD	123
301. The effect of over-ripening upon the activity of Cheddar cheese starters. C. K. JOHNS and H. L. BÉRARD	127
302. Bacteriophages for <i>Streptococcus cremoris</i> —Phage development at various temperatures. G. J. E. HUNTER	136
303. The production of rennet from living calves. N. J. BERRIDGE, J. G. DAVIS, P. M. KON, S. K. KON and F. R. SPRATLING	145
304. The gas and vacuum storage of milk powder. C. H. LEA, T. MORAN and J. A. B. SMITH. Parts I-V	162
Reviews of the Progress of Dairy Science:	
Section D. The Nutritional Value of Milk and Milk Products. S. K. KON	216

No. 3 (MARCH 1944)

Original Articles:	PAGE
305. The excretion of borate by the dairy cow. E. C. OWEN	243
306. A study of <i>Bacillus subtilis</i> and related organisms. T. GIBSON	248
307. The occurrence in winter of milk with a low content of solids-not-fat. S. J. ROWLAND	261
308. The freezing-point of milk. II. The influence of various factors and their bearing on the detection of added water. R. ASCHAFFENBURG and B. C. VEINOGLOU	267
309. The freezing-point of milk. III. A survey of producers' milk as delivered to creameries in England and Wales. R. ASCHAFFENBURG, P. L. TEMPLE and B. C. VEINOGLOU	281
310. The influence of 'abnormal' milk upon the yield and quality of Cheddar cheese. C. K. JOHNS and C. A. GIBSON	287
311. The influence of bacteriophage on the cheese-making process. G. J. E., HUNTER	294
312. The persistence and recovery of bacteriophage in cheese. AGNES A. NICHOLS and J. Z. WOLF	302
313. Bacteriological studies of roller-dried milk powders, roller-dried buttermilk and of roller- and spray-dried whey. CONSTANCE HIGGIN- BOTTOM	308
314. The effect of storage on the plate counts of milk and whey powders. CONSTANCE HIGGINBOTTOM	324
315. The effects of commercial processing and of storage on some nutritive properties of milk. Comparison of full-cream sweetened condensed milk and of evaporated milk with the original raw milk. KATHLEEN M. HENRY, J. HOUSTON, S. K. KON and S. Y. THOMPSON	329
Reviews of the Progress of Dairy Science:	
Section E. Diseases of dairy cattle. P. S. WATTS	340