ERRATA

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A number of arithmetical errors have been found in the paper entitled:

THE INCIDENCE, REPEATABILITY AND EFFECT ON DAM PERFORMANCE OF TWINNING IN BRITISH FRIESIAN CATTLE

J. C. BOWMAN AND C. R. C. HENDY

Department of Agriculture, University of Reading, Reading, Berkshire

THE calculations for the paper have been repeated and Tables 4-8 and a revised summary are reproduced here in corrected form in full. The corrections do not affect the conclusions drawn in the original paper except that (i) repeatability is 0·028 for cows completing three calvings and 0·047 for those completing four and (ii) several of the differences in dam performance are significant particularly with regard to lactation length, butterfat percentage and calving interval, whereas they were considered only as trends in the original paper.

REVISED SUMMARY

An estimate of the frequency of twin calvings was obtained from the analysis of over 38 000 calvings of Friesian cows in M.M.B. milk-recorded herds. The incidence of twinning increased from 0·54% in the first parity to 3·37% in the fifth parity. A significant excess of cows above expected produced either more than one set of twins or no twins at all. Repeatability ranged from 0·028 for cows with three calvings to 0·063 for cows with five calvings.

Data on lactation yield and duration, butterfat percentage and calving interval showed some significant effects of twinning. Consistent trends were noted showing that dams which calve twins have longer subsequent lactations, higher whole lactation yields and lower fat percentages than contemporary dams with single calves. The possible causes for these trends are discussed and are considered to be the lower breeding efficiency and longer calving intervals of dams of twins.

TABLE 4

Observed (O) and expected (E) number of sets of twins

No. of calvings		No. of sets of twins 0	1	2	3	4	5	d.f.	χ^2†
1	O	15306	83	—	—	—	—	—	—
	E	15305·9	83·1	—	—	—	—	—	—
2	O	10524	199	5	—	—	—	1	***
	E	10517·5	209·7	0·8	—	—	—	—	21·4
3	O	6466	249	11	0	—	—	2	***
	E	6458·3	264·5	3·2	0·01	—	—	—	19·9
4	O	3543	192	15	2	0	—	3	***
	E	3528·7	218·4	4·8	0·04	0·0001	—	—	114·0
5	O	1495	108	14	3	0	0	4	***
	E	1478·6	136·6	4·8	0·08	0·0014	0·000015	—	127·2

*** $P < 0{\cdot}001$.

† The χ^2 values are biased upwards by the low values for the expected frequencies of multiple twinning.

TABLE 5

Components of variance and repeatability of twinning

No. of completed calvings	Components of variance d.f.	Between cows	d.f.	Within cows	Repeatability
2	10727	0·0003	10728	0·0092	0·032
3	6725	0·0004	13452	0·0129	0·028
4	3751	0·0007	11256	0·0142	0·047
5	1619	0·0011	6480	0·0165	0·063

TABLE 6

Mean whole lactation lengths, mean whole lactation yields and mean 305-day yields † and their respective standard errors for herd contemporaries

Parity	Result of calving	No. of lactations recorded	Mean whole lactation yields (kg)	Mean whole lactation lengths (days)	Mean 305-day lactation yields (kg)
1	No twins	281	4353 ± 71·6	313 ± 2·4	4214 ± 49·5
	Twins	43	4452 ± 219·8	318 ± 5·7	4269 ± 179·5
2	No twins at all	212	4294 ± 70·8	294 ± 2·6	4438 ± 57·9
	Twins previously	23	4641 ± 258·2	298 ± 8·7	4737 ± 210·5
	Twins in 2nd calving	86	4375 ± 115·5	307 ± 4·7	4357 ± 98·9
3	No twins at all	105	4815 ± 113·1	296 ± 3·6	4945 ± 90·2
	Twins previously	56	5119 ± 188·5	301 ± 5·2	5150 ± 142·6
	Twins in 3rd calving	59	4880 ± 185·4	306 ± 5·2	4828 ± 156·1
4	No twins at all	37	4637 ± 199·3	288 ± 6·3	4889 ± 152·1
	Twins previously	49	5056 ± 172·1	300 ± 5·4	5109 ± 171·5
	Twins in 4th calving	28	5323 ± 210·8	311 ± 6·3	5234 ± 210·1

† See text for method of calculating 305-day yield.

TABLE 7

Mean butterfat percentages

Parity	Result of calving	No. of records	Mean butterfat percentages ± SE
1	No twins	380	3·74 ± 0·02
	Twins	59	3·69 ± 0·04
2	No twins at all	261	3·74 ± 0·02
	Twins previously	23	3·70 ± 0·07
	Twins	117	3·68 ± 0·03
3	No twins at all	123	3·68 ± 0·03
	Twins previously	70	3·62 ± 0·05
	Twins	83	3·65 ± 0·04
4	No twins at all	47	3·67 ± 0·07
	Twins previously	66	3·70 ± 0·05
	Twins	39	3·61 ± 0·08

TABLE 8

Mean calving intervals

Parity	Result of calving	No. of records	Mean calving interval (days) ± SE
1	No twins	306	396 ± 3·8
	Twins	44	398 ± 9·1
2	No twins at all	142	383 ± 4·6
	Twins previously	24	375 ± 9·8
	Twins	90	399 ± 5·8
3	No twins at all	53	382 ± 7·5
	Twins previously	62	384 ± 8·5
	Twins	63	409 ± 8·7
4	No twins at all	no records available	
	Twins previously	42	377 ± 7·6
	Twins	26	409 ± 15·7

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