

DETERMINATION OF FAECAL DRY MATTER DIGESTIBILITY IN RABBITS WEANED AT 25 DAYS OF AGE (8th WRC, Puebla, 2004)

Experimental procedure.

Fifteen New Zealand × Californian rabbits weaned at 25 d of age were taken at random from five litters (3 rabbits/litter). They weighed as average 602 ± 75 (standard deviation) g. Feed intake and faeces excretion were recorded daily from day 25 to day 40 of age. Animals were housed individually in metabolism cages and they had ad libitum access to the same feed throughout the experiment. The diet contained 20.0% crude protein and 33.5% neutral detergent fibre (both on % DM). Faeces were dried at 80°C for three days and dry matter digestibility (DMd) calculated as: $(\text{dry matter intake} - \text{dry matter excretion}) \times 100 / \text{dry matter intake}$.

Figure 1. Daily dry matter intake and faeces excretion (g DM) from 26 to 40 d of age (n = 15). (bars indicate standard deviation)

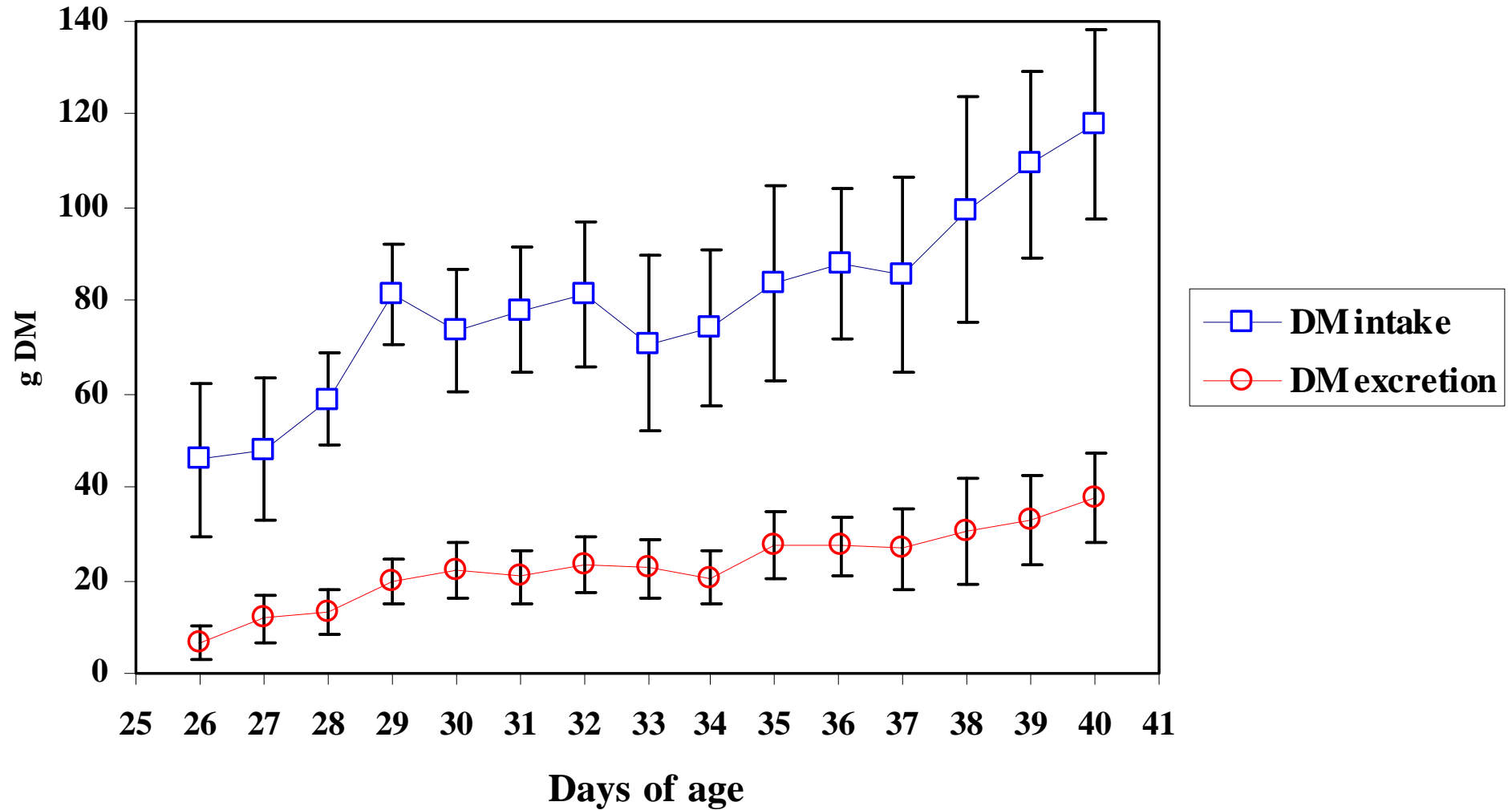


Figure 2. Dry matter digestibility (%) from 26 to 40 d of age
(n = 15). (bars indicate standard deviation)

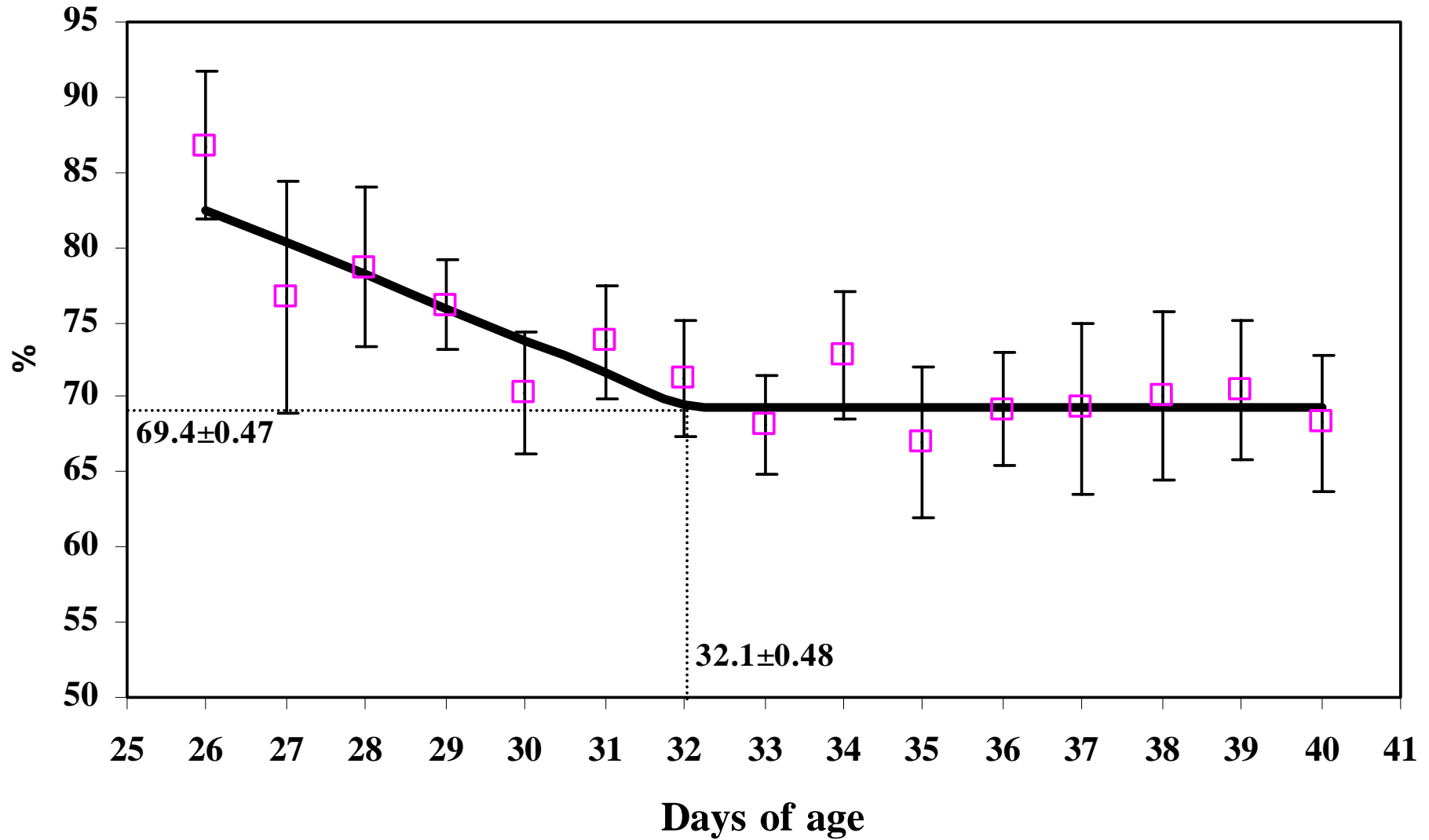


Table 1. Effect of length and day of start of collection period on mean and standard deviation of dry matter digestibility (n = 15).

| No consecutive days | Independent periods ¹ | | | | | | | Averaged standard deviation | |
|---------------------|----------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------------------|--------------------------|
| | 1 st | 2 nd | 3 rd | 4 th | 5 th | 6 th | 7 th | All periods | Only from day 32 onwards |
| 2 | 26-27 d | 28-29 d | 30-31 d | 32-33 d | 34-35 d | 36-37 d | 38-39 d | | |
| | 81.6±5.68 | 77.2±3.62 | 72.0±3.16 | 69.8±3.01 | 69.7±2.43 | 68.6±2.66 | 70.3±4.19 | 3.68 | 3.15 |
| 3 | 26-28 d | 29-31 d | 32-34 d | 35-37 d | 38-40 d | – | – | | |
| | 80.2±4.03 | 73.4±2.71 | 70.6±2.00 | 68.4±2.35 | 69.6±3.76 | – | – | 3.08 | 2.81 |
| 4 | 26-29 d | 30-33 d | 34-37 d | – | – | – | – | | |
| | 78.7±3.38 | 70.9±2.43 | 69.3±1.80 | – | – | – | – | 2.62 | 1.80 |
| 5 | 26-30 d | 31-35 d | 36-40 d | – | – | – | – | | |
| | 76.7±3.26 | 70.5±1.70 | 69.1±2.11 | – | – | – | – | 2.45 | 2.11 |
| 6 | 26-31 d | 32-37 d | – | – | – | – | – | | |
| | 76.0±2.81 | 69.5±1.45 | – | – | – | – | – | 2.24 | 1.45 |

¹ In the same raw no day is shared by two different periods.

Table 2. Number of rabbits required (n) to detect a significant difference ($P = 0.05$) between two means for dry matter digestibility.

| Difference to be detected (percentage units) | Length of collection period (days) ¹ | | | | |
|---|---|----|----|----|----|
| | 2 | 3 | 4 | 5 | 6 |
| 4 | 8 | 7 | 5 | 6 | 4 |
| 3 | 11 | 10 | 6 | 6 | 5 |
| 2 | 22 | 18 | 9 | 11 | 7 |
| 1 | 78 | 64 | 28 | 37 | 19 |

¹ The value of standard deviation used corresponds to periods from day 32 onwards