**Table 5**. Rumen metabolism in lactating Jersey dairy cows fed incremental amounts of kelp meal or monensin (MON)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Kelp meal | | | |  |  |  | Contrasts (*P*-values)1 | | | |
| Item2 | 0 g | 57 g | 113 g | 170 g |  | MON | SEM | Linear | Quadratic | Kelp vs. MON | 170 g Kelp vs. MON |
| pH | 5.98 | 6.04 | 6.03 | 6.11 |  | 5.93 | 0.10 | 0.42 | 0.94 | 0.31 | 0.25 |
| Ammonia-N, mg/dL | 6.68 | 6.70 | 6.93 | 7.09 |  | 6.72 | 0.35 | 0.36 | 0.84 | 0.65 | 0.47 |
| VFA, m*M* | 117 | 120 | 115 | 115 |  | 120.0 | 5.32 | 0.65 | 0.69 | 0.61 | 0.49 |
| Individual VFA, % |  |  |  |  |  |  |  |  |  |  |  |
| Acetate (A) | 69.3 | 68.2 | 69.6 | 68.5 |  | 68.3 | 0.68 | 0.72 | 0.99 | 0.59 | 0.86 |
| Propionate (P) | 17.1 | 18.2 | 17.1 | 17.7 |  | 18.4 | 0.59 | 0.73 | 0.63 | 0.33 | 0.45 |
| Butyrate | 11.0 | 10.8 | 10.7 | 11.1 |  | 10.7 | 0.20 | 0.78 | 0.14 | 0.45 | 0.15 |
| Valerate | 1.19 | 1.26 | 1.12 | 1.17 |  | 1.19 | 0.06 | 0.55 | 0.89 | 0.94 | 0.86 |
| Isovalerate | 0.82 | 0.85 | 0.87 | 0.86 |  | 0.82 | 0.04 | 0.55 | 0.62 | 0.44 | 0.56 |
| Isobutyrate | 0.62 | 0.62 | 0.60 | 0.63 |  | 0.58 | 0.04 | 0.96 | 0.84 | 0.48 | 0.46 |
| A:P ratio | 4.05 | 3.74 | 4.07 | 3.90 |  | 3.71 | 0.16 | 0.78 | 0.75 | 0.33 | 0.48 |

1Linear and quadratic effects of incremental amounts of kelp meal (0, 57, 113, and 170 g/d); Kelp vs. MON = mean of the 3 kelp meal treatments vs. the mean of the MON treatment; 170 g Kelp vs. MON = mean of the treatment consisting of 170 g of kelp meal vs. MON treatment.

2VFA = volatile fatty acids.