|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Fatty acids** | **Current study (South Africa)** | **USA31** | **UK29**  | **Argentina30** |
| **G1** | **G2** | **G3** | **G4** | **p-value** | **SE** | **Grass-fed****cattle** | **Grain-fed****cattle** | **Grass-fed****cattle** | **Grain-fed****cattle** | **Grass-fed****cattle** | **Grain-fed****cattle** |
| Myristic (C14:0) | 5.13 | 4.82 | 5.48 | 5.02 | 0.510 | 0.30 | 2.46 | 2.79 | 2.31 | 2.49 | 2.19 | 2.44 |
| Palmitic (C16:0) | 31.40 | 31.60 | 33.10 | 31.70 | 0.580 | 0.92 | 24.30 | 26.70 | 24.30 | 23.20 | 23.10 | 22.10 |
| Margaric (C17:0) | – | 2.03 | 1.80 | 1.69 | 0.090 | 0.09 | 1.14 | 1.34 | – | – | 1.39 | 1.69 |
| Stearic (C18:0) | 20.00 | 23.00 | 21.00 | 24.30 | 0.310 | 1.64 | 17.40 | 14.00 | 15.80 | 13.70 | 13.10 | 10.80 |
| Arachidic (C20:0) | – | 0.50a | 0.47a | 0.28b | 0.040 | 0.05 | – | – | – | – | – | – |
| Myristoleic (C14:1 n-9) | – | – | – | – | – | – | 0.38 | 0.60 | – | – | 0.48 | 0.67 |
| Palmitoleic (C16:1 n-7) | 3.38 | 3.83 | 4.38 | 3.23 | 0.060 | 0.27 | 2.72 | 3.46 | 3.65 | 3.58 | 3.35 | 3.82 |
| Heptadecenoic (C17:1) | – | 0.68a | 0.68a | 0.46b | 0.003 | 0.03 | – | – | – | – | 0.96 | 1.63 |
| Elaidic (C18:1 t-9) | 5.97a | 5.10a,b | 4.17b | 4.68a,b | 0.030 | 0.33 | 3.38 | 1.83 | 2.50 | 2.69 | 3.22 | 4.35 |
| Oleic (C18:1 n-9) | 31.50 | 26.30 | 26.90 | 26.10 | 0.100 | 1.49 | 32.00 | 39.40 | 35.90 | 31.90 | 31.20 | 32.80 |
| Eicosenoic (C20:1 n-11) | 0.14a | 0.49c | 0.40b,c | 0.31a,b | 0.010 | 0.06 | – | – | – | – | – | – |
| Linoleic (C18:2 n-6) | 2.32a | 0.91b | 0.83b | 1.21b | < 0.001 | 0.13 | 2.75 | 2.97 | 2.50 | 8.28 | 3.41 | 6.19 |
| Gamma-linolenic (C18:3 n-6) | – | 0.17 | 0.20 | 0.09 | 0.310 | 0.03 | – | – | 0.02 | 0.05 | – | – |
| Alpha-linolenic (C18:3 n-3) | 0.30a | 0.73c | 0.64b,c | 0.50b | < 0.001 | 0.04 | 1.08 | 0.37 | 1.23 | 0.52 | 1.30 | 0.28 |
| CLA (C18:2 c9, t11) | 0.36a | 0.75c | 0.73b,c | 0.54a,b | 0.002 | 0.05 | 0.78 | 0.36 | – | – | 0.72 | 0.31 |
| Total SFA | 56.50 | 61.90 | 61.90 | 62.90 | 0.080 | 1.59 | 44.20 | 43.40 | 42.40 | 39.40 | 40.40 | 37.50 |
| Total MUFA | 40.90 | 36.40 | 36.50 | 34.70 | 0.080 | 1.47 | 38.50 | 45.30 | 42.10 | 38.20 | 39.20 | 43.30 |
| Total PUFA | 2.62a | 1.69b | 1.60b | 2.42a | 0.003 | 0.15 | 6.09 | 4.50 | 6.65 | 12.90 | 8.67 | 9.62 |