***animal* journal**

**Meat and fat quality of Krškopolje pigs reared in conventional and organic production systems**

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**Supplementary Table S1*:*** *Fatty acid composition of feeds supplied to pigs*

|  |  |  |  |
| --- | --- | --- | --- |
|  | CON | ECO | Alfalfa hay |
| Fatty acid (FA) composition (g FA/100 g fat) |
| C10:0 |  / | /  | 0.24 |
| C11:0 |  / | /  | 0.51 |
| C12:0 |  / | /  | 0.22 |
| C14:0 | 0.22 | 0.18 | 0.50 |
| C15:0 iso |  / | /  | 1.5 |
| C15:0 | 0.06 | /  | 0.40 |
| C16:0 | 15.6 | 14.5 | 25.1 |
| Sum C16:1  | 0.13 | 0.15 | 0.23 |
| C17:0 iso |  / |  / | 1.98 |
| C17:0 | 0.08 | 0.08 | 0.34 |
| C17:1 n-7 |  / | /  | 0.24 |
| C18:0 | 2.3 | 2.3 | 3.1 |
| Sum C18:1 | 17.2 | 18.7 | 3.0 |
| C18:2 n-6 cc | 58.3 | 58.0 | 21.3 |
| C19:1 n-9 |  / |  / | 0.30 |
| C18:3 n-3 | 4.69 | 4.69 | 36.9 |
| C20:0 | 0.23 | 0.22 | 0.77 |
| C20:1 n-9 | 0.36 | 0.36 | /  |
| C20:2 n-6 | 0.08 | 0.07 | 0.19 |
| C22:0 | 0.30 | 0.30 | 1.10 |
| C22:1 n-11 |  / | /  | 0.14 |
| C22:1 n-9 | 0.28 | 0.31 | 0.41 |
| C23:0 |  / |  / | 0.42 |
| C24:0 | 0.16 | 0.15 | 1.21 |

CON = conventional; ECO = organic

**Supplementary Table S2*:*** *Digestible amino acid composition1 (% dry matter) of feeds supplied to pigs.*

|  |  |  |  |
| --- | --- | --- | --- |
| Amino acid | CON | ECO | Alfalfa hay |
| Lysine | 1.03 | 0.59 | 0.78 |
| Threonine | 0.59 | 0.48 | 0.67 |
| Methionine | 0.36 | 0.26 | 0.29 |
| Cysteine | 0.27 | 0.28 | 0.11 |
| Tryptophan | 0.21 | 0.17 | 0.16 |
| Isoleucine | 0.51 | 0.56 | 0.72 |
| Valine | 0.64 | 0.70 | 0.91 |
| Leucine | 0.89 | 0.98 | 1.30 |
| Phenylalanine | 0.64 | 0.70 | 0.84 |
| Tyrosine | 0.37 | 0.41 | 0.58 |
| Histidine | 0.31 | 0.34 | 0.34 |
| Arginine | 0.83 | 0.94 | 0.91 |
| Alanine | 0.51 | 0.56 | 0.93 |
| Aspartic acid | 0.98 | 1.13 | 2.05 |
| Glutamic acid | 2.98 | 3.15 | 1.64 |
| Glycine | 0.53 | 0.58 | 0.61 |
| Serine | 0.57 | 0.63 | 0.65 |
| Proline | 1.07 | 1.12 | 0.77 |

CON = conventional feed; ECO = organic feed

1Calculated on the basis of feed composition using EvaPig® software (http://www.evapig.com/x-home-en).

**Supplementary Table S3:** *Fatty acid composition of longissimus lumborum muscle of conventionally (CON) and organically (ECO) reared Krškopolje pigs*

|  | CON | ECO | RMSE | P-value |
| --- | --- | --- | --- | --- |
| Fatty acid (FA) composition (g FA/100 g fat) |
| Number of pigs | 12 | 12 |  |  |
| C10:0 | 0.140 | 0.140 | 0.0156 | 0.98 |
| C12:0 | 0.100 | 0.097 | 0.0095 | 0.41 |
| C14:0 | 1.55 | 1.53 | 0.158 | 0.71 |
| C14:1 n-5 | 0.035 | 0.036 | 0.0067 | 0.64 |
| C15:0 | 0.036 | 0.039 | 0.0085 | 0.38 |
| C15:1 n-5 | 0.122 | 0.136 | 0.0868 | 0.89 |
| C16:0 iso | 0.872 | 0.629 | 0.2513 | 0.027 |
| C16:0 | 25.2 | 25.2 | 1.31 | 0.99 |
| Sum 16:1 | 3.95 | 4.36 | 0.490 | 0.056 |
| C17:0 iso | 0.112 | 0.111 | 0.0324 | 0.96 |
| C17:0 | 0.185 | 0.207 | 0.0541 | 0.33 |
| C17:1 n-7 | 0.263 | 0.260 | 0.0603 | 0.90 |
| C18:0 iso | 0.513 | 0.363 | 0.1778 | 0.052 |
| C18:0 aiso | 0.273 | 0.238 | 0.0903 | 0.37 |
| C18:0 | 11.8 | 10.6 | 0.87 | 0.003 |
| Sum 18:1 | 42.5 | 45.0 | 2.02 | 0.006 |
| C18:2 n-6 | 8.43 | 7.44 | 1.612 | 0.15 |
| C19:1 n-9 | 0.054 | 0.052 | 0.0142 | 0.70 |
| C18:3 n-3 | 0.335 | 0.332 | 0.0447 | 0.89 |
| c9, t11 CLA | 0.063 | 0.064 | 0.0077 | 0.72 |
| C20:0 | 0.142 | 0.131 | 0.0127 | 0.053 |
| C20:1 n-9 | 0.628 | 0.772 | 0.0817 | 0.0003 |
| C20:2 n-6 | 0.253 | 0.243 | 0.0402 | 0.54 |
| C20:3 n-6 | 0.230 | 0.191 | 0.0615 | 0.13 |
| C20:4 n-6 | 1.64 | 1.29 | 0.496 | 0.096 |
| C20:3 n-3 | 0.055 | 0.072 | 0.0225 | 0.095 |
| C20:5 n-3 | 0.059 | 0.049 | 0.0195 | 0.22 |
| C22:4 n-6 | 0.267 | 0.264 | 0.0720 | 0.93 |
| C22:5 n-3 | 0.200 | 0.163 | 0.0531 | 0.099 |
| C22:6 n-3 | 0.049 | 0.037 | 0.0203 | 0.16 |

CLA = conjugated linoleic acid

**Supplementary Table S4:** *Fatty acid composition of backfat tissue of conventionally (CON) and organically (ECO) reared Krškopolje pigs*

|  | CON | ECO | RMSE | P-value |
| --- | --- | --- | --- | --- |
| Fatty acid (FA) composition (g FA/100 g fat) |
| Number of pigs | 12 | 12 |  |  |
| C10:0 | 0.068 | 0.078 | 0.0068 | 0.001 |
| C12:0 | 0.072 | 0.081 | 0.0059 | 0.001 |
| C14:0 | 1.31 | 1.46 | 0.098 | 0.002 |
| C14:1 n-5 | 0.017 | 0.021 | 0.0041 | 0.13 |
| C15:0 | 0.050 | 0.059 | 0.0102 | 0.041 |
| C16:0 | 25.0 | 24.9 | 0.89 | 0.67 |
| Sum C16:1 | 2.03 | 2.27 | 0.261 | 0.035 |
| C17:0 iso | 0.018 | 0.020 | 0.0027 | 0.19 |
| C17:0 aiso | 0.017 | 0.021 | 0.0037 | 0.22 |
| C17:0 | 0.370 | 0.424 | 0.0811 | 0.12 |
| C17:1 n-7 | 0.337 | 0.381 | 0.0819 | 0.20 |
| C18:0 | 15.0 | 14.1 | 1.13 | 0.091 |
| Sum C18:1 | 40.0 | 38.9 | 1.35 | 0.079 |
| C18:2 n-6 | 12.1 | 13.6 | 1.15 | 0.005 |
| C19:1 n-9 | 0.104 | 0.096 | 0.0230 | 0.38 |
| C18:3 n-3 | 0.768 | 0.985 | 0.0871 | <.0001 |
| c9, t11 CLA | 0.065 | 0.055 | 0.0138 | 0.080 |
| C20:0 | 0.238 | 0.200 | 0.0141 | <.0001 |
| C20:1 n-9 | 1.091 | 0.913 | 0.1008 | 0.0003 |
| C20:2 n-6 | 0.691 | 0.682 | 0.0740 | 0.77 |
| C20:3 n-6 | 0.088 | 0.090 | 0.0105 | 0.65 |
| C20:4 n-6 | 0.192 | 0.218 | 0.0308 | 0.047 |
| C20:3 n-3 | 0.159 | 0.176 | 0.0183 | 0.031 |
| C22:1 n-9 | 0.019 | 0.018 | 0.0018 | 0.79 |
| C22:4 n-6 | 0.093 | 0.098 | 0.0078 | 0.11 |
| C22:5 n-3 | 0.076 | 0.082 | 0.0119 | 0.17 |
| C22:6 n-3 | 0.019 | 0.021 | 0.0046 | 0.49 |
| C23:0 | 0.033 | 0.029 | 0.0110 | 0.51 |

CLA = conjugated linoleic acid