**Supplemental Table** **1**. *Pearson correlation coefficients for Flock 1 muscle pH (pH17, pHu, ΔpH) and colour (L\*, a\*, b\*) variables*

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | pH17 *vs* pHu | pH17 *vs* L\* | pHu *vs* L\* | ΔpH *vs* L\* | pH17 *vs* a\* | pHu *vs* a\* | ΔpH *vs* a\* | pH17 *vs* b\* | pHu *vs* b\* | ΔpH *vs* b\* |
| CC LB | -0.405ǂ | -0.111 | 0.128 | -0.143 | -0.073 | 0.040 | -0.067 | -0.185 | 0.085 | -0.159 |
| FC LB | 0.098 | -0.053 | 0.202 | -0.191 | -0.079 | -0.083 | 0.004 | 0.068 | 0.052 | 0.011 |
| CC LL | 0.052 | -0.140 | 0.223 | -0.270 | 0.041 | -0.051 | 0.067 | -0.188 | 0.177 | -0.258 |
| FC LL | 0.371ǂ | 0.127 | 0.094 | -0.010 | 0.042 | 0.037 | -0.011 | 0.020 | 0.002 | 0.026 |
| CC SH | -0.143 | -0.151 | 0.268 | -0.280 | 0.172 | -0.046 | 0.141 | -0.048 | 0.156 | -0.137 |
| FC SH | 0.081 | 0.157 | 0.138 | -0.031 | -0.096 | 0.082 | -0.125 | 0.150 | -0.135 | 0.203 |
| CC | -0.053 | -0.144 | 0.207ǂ | -0.245ǂ | 0.194ǂ | 0.080 | 0.059 | -0.121 | 0.148 | -0.186ǂ |
| FC | 0.240ǂ | 0.038 | 0.115 | -0.082 | -0.011 | -0.031 | 0.025 | 0.059 | -0.046 | 0.084 |
| Overall | 0.115 | -0.042 | 0.153ǂ | -0.156ǂ | 0.099 | 0.034 | 0.035 | -0.032 | 0.049 | -0.061 |

ǂ *P* < 0.05

**Supplemental Table 2**. *Pearson correlation coefficients for Flock 2 muscle pH (pH17, pHu, ΔpH) and colour (L\*, a\*, b\*) variables*

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | pH17 *vs* pHu | pH17 *vs* L\* | pHu *vs* L\* | ΔpH *vs* L\* | pH17 *vs* a\* | pHu *vs* a\* | ΔpH *vs* a\* | pH17 *vs* b\* | pHu *vs* b\* | ΔpH *vs* b\* |
| CC LB | -0.240 | 0.320ǂ | -0.153 | 0.309ǂ | 0.031 | 0.253 | -0.122 | 0.149 | -0.135 | 0.181 |
| FC LB | -0.139 | 0.216 | -0.372ǂ | 0.364ǂ | -0.221 | 0.227 | -0.291 | 0.051 | 0.191 | -0.060 |
| CC LL | -0.163 | -0.067 | 0.023 | -0.081 | -0.127 | -0.142 | -0.077 | 0.007 | -0.112 | 0.033 |
| FC LL | 0.256 | 0.107 | 0.212 | -0.040 | -0.139 | -0.201 | 0.001 | 0.064 | 0.018 | -0.010 |
| CC SH | 0.025 | -0.018 | 0.122 | -0.081 | 0.195 | 0.099 | 0.114 | 0.308ǂ | 0.163 | 0.176 |
| FC SH | 0.080 | 0.089 | 0.055 | 0.059 | 0.131 | 0.115 | 0.068 | 0.414ǂ | 0.144 | 0.319ǂ |
| CC | -0.143 | 0.127 | -0.005 | 0.090 | -0.075 | 0.187ǂ | -0.162 | 0.148 | -0.012 | 0.105 |
| FC | 0.075 | 0.146 | 0.020 | 0.112 | -0.006 | -0.070 | 0.031 | 0.183ǂ | 0.080 | 0.097 |
| Overall | -0.058 | 0.123 | 0.022 | 0.080 | -0.021 | 0.027 | -0.032 | 0.173ǂ | 0.011 | 0.122 |

ǂ *P* < 0.05

**Supplemental Table 3**. *Pearson correlation coefficients for Flock 1 muscle shear force (SF) and muscle pH (pH17, pHu, ΔpH) and colour (L\*, a\*, b\*) variables*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | pH17 *vs* SF | pHu *vs* SF | ΔpH *vs* SF | L\* *vs* SF | a\* *vs* SF | b\* *vs* SF |
| CC LB | -0.021 | -0.276 | 0.158 | -0.116 | -0.383ǂ | -0.315 |
| FC LB | -0.098 | -0.115 | 0.015 | -0.087 | 0.145 | -0.017 |
| CC LL | 0.036 | -0.084 | 0.092 | -0.224 | 0.050 | 0.049 |
| FC LL | 0.179 | 0.045 | 0.069 | 0.261 | -0.091 | 0.057 |
| CC SH | -0.019 | 0.008 | -0.018 | 0.345ǂ | 0.059 | -0.064 |
| FC SH | 0.247 | 0.306 | -0.126 | 0.270 | -0.074 | 0.151 |
| CC | 0.037 | 0.003 | 0.021 | 0.037 | -0.176ǂ | -0.058 |
| FC | 0.084 | 0.072 | -0.012 | 0.138 | -0.020 | 0.056 |
| Overall | 0.068 | 0.048 | 0.003 | 0.084 | -0.073 | -0.007 |

ǂ *P* < 0.05

**Supplemental Table 4**. *Pearson correlation coefficients for Flock 2 muscle shear force (SF) and muscle pH (pH17, pHu, ΔpH) and colour variables (L\*, a\*, b\*)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | pH17 *vs* SF | pHu *vs* SF | ΔpH *vs* SF | L\* *vs* SF | a\* *vs* SF | b\* *vs* SF |
| CC LB | -0.325ǂ | 0.175 | -0.326ǂ | -0.170 | -0.182 | -0.193 |
| FC LB | -0.346ǂ | 0.218 | -0.385ǂ | -0.002 | 0.312ǂ | 0.140 |
| CC LL | -0.068 | 0.076 | -0.081 | -0.186 | 0.182 | 0.006 |
| FC LL | -0.208 | -0.332ǂ | 0.030 | 0.034 | 0.193 | 0.141 |
| CC SH | -0.204 | -0.135 | -0.102 | 0.034 | -0.029 | -0.213 |
| FC SH | -0.006 | -0.173 | 0.035 | 0.030 | 0.266 | 0.222 |
| CC | -0.121 | 0.074 | -0.129 | -0.044 | -0.007 | -0.075 |
| FC | -0.129 | -0.024 | -0.115 | 0.047 | 0.090 | 0.177 |
| Overall | -0.132ǂ | 0.043 | -0.138ǂ | 0.006 | 0.017 | 0.022 |

ǂ *P* < 0.05

**Supplemental Table 5**. *Pearson correlation coefficients for Flock 1 muscle shear force (SF) and bone data*

|  |  |  |  |
| --- | --- | --- | --- |
|  | BBS *vs* SF | Pre-slaughter palpation (proportion of bone fractures) *vs* SF | Post-slaughter palpation (proportion of bone fractures) *vs* SF |
| CC LB | -0.123 | 0.124 | 0.059 |
| FC LB | -0.010 | -0.176 | -0.218 |
| CC LL | -0.247 | 0.219 | -0.132 |
| FC LL | 0.380ǂ | -0.126 | -0.184 |
| CC SH | -0.119 | -0.016 | -0.067 |
| FC SH | 0.266 | 0.026 | 0.293 |
| CC | -0.261ǂ | 0.016 | 0.016 |
| FC | 0.043 | -0.086 | -0.009 |
| Overall | -0.178ǂ | -0.026 | 0.027 |

ǂ *P* < 0.05

**Supplemental Table 6**. *Pearson correlation coefficients for Flock 2 muscle shear force (SF) and bone data*

|  |  |  |  |
| --- | --- | --- | --- |
|  | BBS *vs* SF | Pre-slaughter palpation (proportion of bone fractures) *vs* SF | Post-slaughter palpation (proportion of bone fractures) *vs* SF |
| CC LB | -0.098 | -0.310ǂ | -0.019 |
| FC LB | 0.200 | -0.170 | -0.008 |
| CC LL | -0.160 | 0.054 | 0.021 |
| FC LL | 0.206 | -0.031 | -0.016 |
| CC SH | 0.111 | 0.267 | -0.006 |
| FC SH | 0.132 | -0.098 | -0.092 |
| CC | -0.254ǂ | 0.019 | -0.016 |
| FC | 0.021 | -0.002 | 0.060 |
| Overall | -0.073 | 0.007 | 0.013 |

ǂ *P* < 0.05