**Supplementary table 1.** Correlation analysis between non-carcass components of the lambs of different sexual classes and crossbreeding

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Items | Tongue yield | Lung  weight | Lung  yield | Heart weight | Heart yield | Dph weight | Dph  yield | Liver weight | Liver  yield | Kidneys weight | Kidneys  yield | Spleen weight | Spleen  yield | IF weight | IF  yield | GIT weight | GIT  yield | Head weight | Head  yield | Blood  weight | Blood  yield | Skin  weight | Skin  yield | Feet  weight | Feet  yield |
| Tongue  weight | 0.9\* | -0.1 | -0.1 | -0.1 | -0.1 | 0.2 | 0.2 | 0.2 | 0.2 | -0.1 | -0.2 | 0.0 | -0.1 | 0.1 | -0.1 | 0.1 | 0.1 | 0.1 | -0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | -0.1 |
| Tongue yield |  | 0.1 | -0.1 | -0.1 | -0.1 | 0.2 | 0.2 | 0.1 | 0.2 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | 0.0 | 0.1 | 0.1 | -0.1 | -0.1 | -0.1 | 0.0 | -0.1 | 0.1 | -0.1 | 0.1 |
| Lung  weight |  |  | 0.6\* | 0.4\* | 0.1 | 0.2 | 0.1 | 0.5\* | 0.2 | 0.4\* | -0.1 | 0.3\* | 0.1 | -0.1 | -0.2 | 0.5\* | 0.1 | 0.5\* | -0.2 | 0.3\* | 0.1 | 0.4\* | 0.1 | 0.5\* | 0.1 |
| Lung  yield |  |  |  | 0.1 | 0.3\* | -0.1 | 0.1 | -0.2 | 0.1 | -0.2 | 0.1 | 0.1 | 0.2 | -0.2 | -0.1 | -0.2 | 0.2 | -0.2 | 0.2 | -0.2 | -0.1 | -0.4\* | -0.2 | -0.2 | 0.3\* |
| Heart  weight |  |  |  |  | 0.7\* | 0.3\* | 0.1 | 0.4\* | 0.1 | 0.3\* | 0.1 | 0.1 | -0.1 | 0.1 | -0.1 | -0.1 | 0.2 | 0.4\* | -0.2 | -0.1 | -0.1 | 0.3\* | 0.1 | 0.5\* | 0.1 |
| Heart  yield |  |  |  |  |  | 0.1 | 0.2 | -0.1 | 0.1 | -0.1 | 0.1 | 0.1 | 0.1 | -0.1 | -0.1 | -0.2 | 0.1 | -0.2 | 0.1 | -0.3\* | -0.2 | -0.2 | -0.1 | -0.1 | 0.4\* |
| Dph  weight |  |  |  |  |  |  | 0.8\* | 0.4\* | 0.1 | 0.5\* | 0.2 | 0.1 | -0.1 | -0.1 | -0.2 | 0.4\* | 0.1 | 0.3\* | -0.2 | 0.1 | -0.1 | 0.4\* | 0.2 | 0.4\* | 0.2 |
| Dph  yield |  |  |  |  |  |  |  | -0.1 | 0.0 | 0.1 | 0.3\* | -0.1 | -0.1 | -0.2 | -0.1 | -0.1 | 0.2 | -0.1 | 0.1 | -0.2 | -0.2 | -0.1 | -0.1 | -0.1 | 0.2 |
| Liver weight |  |  |  |  |  |  |  |  | 0.7\* | 0.7\* | 0.1 | 0.1 | -0.3\* | 0.3\* | -0.1 | 0.8\* | 0.1 | 0.5\* | -0.5\* | 0.3\* | -0.1 | 0.7\* | 0.2 | 0.7\* | -0.3\* |
| Liver  yield |  |  |  |  |  |  |  |  |  | 0.3\* | 0.4\* | -0.1 | -0.2 | 0.1 | 0.1 | 0.3\* | 0.5\* | -0.1 | -0.3\* | -0.1 | -0.2 | 0.1 | -0.1 | 0.1 | -0.1 |
| Kidneys  weight |  |  |  |  |  |  |  |  |  |  | 0.6\* | 0.0 | -0.3\* | 0.1 | -0.2 | 0.6\* | 0.1 | 0.5\* | -0.3\* | 0.2 | -0.1 | 0.6\* | 0.3\* | 0.6\* | -0.2 |
| Kidneys  Yield |  |  |  |  |  |  |  |  |  |  |  | -0.3\* | -0.2 | -0.2 | -0.2 | 0.1 | 0.3\* | -0.1 | 0.1 | -0.2 | -0.2 | -0.1 | 0.1 | -0.1 | 0.1 |
| Spleen  weight |  |  |  |  |  |  |  |  |  |  |  |  | 0.8\* | -0.1 | -0.3\* | 0.2 | -0.1 | 0.4\* | 0.1 | 0.3\* | 0.2 | 0.2 | 0.1 | 0.2 | -0.2 |
| Spleen  yield |  |  |  |  |  |  |  |  |  |  |  |  |  | -0.3\* | -0.2 | -0.2 | 0.0 | -0.1 | 0.3\* | 0.1 | 0.2 | -0.2 | -0.1 | -0.2 | -0.1 |
| IF  weight |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.8\* | 0.2 | -0.1 | -0.1 | -0.5\* | -0.1 | -0.3\* | 0.2 | 0.1 | 0.2 | -0.1 |
| IF  yield |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | -0.1 | 0.1 | -0.4\* | -0.3\* | -0.3\* | -0.3\* | -0.1 | -0.1 | -0.2 | -0.1 |
| GIT  weight |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | -0.4\* | 0.6\* | -0.5\* | 0.4\* | 0.1 | 0.6\* | 0.1 | 0.6\* | -0.3\* |
| GIT  yield |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | -0.2 | -0.1 | -0.1 | -0.1 | -0.2 | -0.3\* | -0.1 | 0.0 |
| Head  weight |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.1 | 0.6\* | 0.2 | 0.7\* | 0.2 | 0.7\* | -0.3\* |
| Head  yield |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | -0.1 | 0.2 | -0.4\* | 0.1 | -0.4\* | 0.2 |
| Blood  weight |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.8\* | 0.6\* | 0.4\* | 0.5\* | -0.1 |
| Blood  yield |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.2 | 0.3\* | 0.1 | 0.3\* |
| Skin  weight |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.8\* | 0.8\* | -0.2 |
| Skin  yield |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.3\* | -0.1 |
| Feet  weight |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.1 |

GIT = Gastrointestinal tract; IF = Internal fat; Dph = Diaphragm; \* significant at 5%.