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

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Items | Tongue yield | Lungweight | Lungyield | Heart weight | Heart yield | Dph weight | Dphyield | Liver weight | Liveryield | Kidneys weight | Kidneysyield | Spleen weight | Spleenyield | IF weight | IFyield | GIT weight | GITyield | Head weight | Headyield | Bloodweight | Bloodyield | Skinweight | Skinyield | Feetweight | Feetyield |
| Tongueweight | 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 |
| Lungweight |  |  | 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 |
| Lungyield |  |  |  | 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\* |
| Heartweight |  |  |  |  | 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 |
| Heartyield |  |  |  |  |  | 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\* |
| Dphweight |  |  |  |  |  |  | 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 |
| Dphyield |  |  |  |  |  |  |  | -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\* |
| Liveryield |  |  |  |  |  |  |  |  |  | 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 |
| Kidneysweight |  |  |  |  |  |  |  |  |  |  | 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 |
| KidneysYield |  |  |  |  |  |  |  |  |  |  |  | -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 |
| Spleenweight |  |  |  |  |  |  |  |  |  |  |  |  | 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 |
| Spleenyield |  |  |  |  |  |  |  |  |  |  |  |  |  | -0.3\* | -0.2 | -0.2 | 0.0 | -0.1 | 0.3\* | 0.1 | 0.2 | -0.2 | -0.1 | -0.2 | -0.1 |
| IFweight |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.8\* | 0.2 | -0.1 | -0.1 | -0.5\* | -0.1 | -0.3\* | 0.2 | 0.1 | 0.2 | -0.1 |
| IFyield |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | -0.1 | 0.1 | -0.4\* | -0.3\* | -0.3\* | -0.3\* | -0.1 | -0.1 | -0.2 | -0.1 |
| GITweight |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | -0.4\* | 0.6\* | -0.5\* | 0.4\* | 0.1 | 0.6\* | 0.1 | 0.6\* | -0.3\* |
| GITyield |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | -0.2 | -0.1 | -0.1 | -0.1 | -0.2 | -0.3\* | -0.1 | 0.0 |
| Headweight |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.1 | 0.6\* | 0.2 | 0.7\* | 0.2 | 0.7\* | -0.3\* |
| Headyield |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | -0.1 | 0.2 | -0.4\* | 0.1 | -0.4\* | 0.2 |
| Bloodweight |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.8\* | 0.6\* | 0.4\* | 0.5\* | -0.1 |
| Bloodyield |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.2 | 0.3\* | 0.1 | 0.3\* |
| Skinweight |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.8\* | 0.8\* | -0.2 |
| Skinyield |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.3\* | -0.1 |
| Feetweight |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.1 |

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