

Table S11: Predictive ability of Loin depth for each fold at different complexity, stage and model.

| Complexity            | Stage    | Model <sup>1</sup> | Fold1 | Fold2 | Fold3 | Fold4 | Average | SD   |
|-----------------------|----------|--------------------|-------|-------|-------|-------|---------|------|
| Full                  | Wean     | M1                 | 0.17  | 0.06  | 0.14  | 0.21  | 0.15    | 0.06 |
| Full                  | Mid-test | M1                 | 0.17  | 0.06  | 0.14  | 0.21  | 0.15    | 0.06 |
| Full                  | Off-test | M1                 | 0.17  | 0.06  | 0.14  | 0.21  | 0.15    | 0.06 |
| Full                  | Wean     | M2                 | 0.15  | 0.08  | 0.12  | 0.16  | 0.13    | 0.04 |
| Full                  | Mid-test | M2                 | 0.14  | 0.04  | 0.09  | 0.17  | 0.11    | 0.06 |
| Full                  | Off-test | M2                 | 0.1   | 0.02  | 0.06  | 0.14  | 0.08    | 0.05 |
| Full                  | Wean     | M3                 | 0.18  | 0.10  | 0.13  | 0.20  | 0.15    | 0.05 |
| Full                  | Mid-test | M3                 | 0.17  | 0.07  | 0.12  | 0.21  | 0.14    | 0.06 |
| Full                  | Off-test | M3                 | 0.15  | 0.05  | 0.10  | 0.20  | 0.12    | 0.06 |
| Full                  | Wean     | M4                 | 0.18  | 0.09  | 0.13  | 0.20  | 0.15    | 0.05 |
| Full                  | Mid-test | M4                 | 0.17  | 0.07  | 0.12  | 0.21  | 0.14    | 0.06 |
| Full                  | Off-test | M4                 | 0.14  | 0.05  | 0.1   | 0.19  | 0.12    | 0.06 |
| Informatively reduced | Wean     | M1                 | 0.16  | 0.11  | 0.15  | 0.32  | 0.19    | 0.13 |
| Informatively reduced | Mid-test | M1                 | 0.16  | 0.11  | 0.15  | 0.32  | 0.19    | 0.13 |
| Informatively reduced | Off-test | M1                 | 0.16  | 0.11  | 0.15  | 0.32  | 0.19    | 0.13 |
| Informatively reduced | Wean     | M2                 | 0.12  | 0.29  | 0.06  | 0.29  | 0.19    | 0.12 |
| Informatively reduced | Mid-test | M2                 | 0.07  | 0.32  | 0.00  | 0.27  | 0.17    | 0.15 |
| Informatively reduced | Off-test | M2                 | 0.07  | 0.29  | 0.07  | 0.30  | 0.18    | 0.16 |
| Informatively reduced | Wean     | M3                 | 0.10  | 0.08  | 0.10  | 0.13  | 0.10    | 0.02 |
| Informatively reduced | Mid-test | M3                 | 0.09  | 0.09  | 0.07  | 0.13  | 0.10    | 0.03 |
| Informatively reduced | Off-test | M3                 | 0.07  | 0.07  | 0.10  | 0.11  | 0.09    | 0.02 |
| Informatively reduced | Wean     | M4                 | 0.10  | 0.06  | 0.10  | 0.14  | 0.10    | 0.03 |
| Informatively reduced | Mid-test | M4                 | 0.09  | 0.07  | 0.07  | 0.14  | 0.09    | 0.03 |
| Informatively reduced | Off-test | M4                 | 0.07  | 0.06  | 0.09  | 0.11  | 0.08    | 0.02 |
| Randomly reduced      | Wean     | M1                 | 0.18  | 0.07  | 0.13  | 0.21  | 0.15    | 0.04 |
| Randomly reduced      | Mid-test | M1                 | 0.18  | 0.07  | 0.13  | 0.21  | 0.15    | 0.04 |
| Randomly reduced      | Off-test | M1                 | 0.18  | 0.07  | 0.13  | 0.21  | 0.15    | 0.04 |
| Randomly reduced      | Wean     | M2                 | 0.14  | 0.06  | 0.11  | 0.16  | 0.12    | 0.03 |
| Randomly reduced      | Mid-test | M2                 | 0.13  | 0.04  | 0.11  | 0.15  | 0.11    | 0.04 |
| Randomly reduced      | Off-test | M2                 | 0.10  | 0.04  | 0.09  | 0.14  | 0.09    | 0.03 |
| Randomly reduced      | Wean     | M3                 | 0.19  | 0.08  | 0.13  | 0.21  | 0.15    | 0.04 |
| Randomly reduced      | Mid-test | M3                 | 0.17  | 0.08  | 0.13  | 0.21  | 0.15    | 0.04 |
| Randomly reduced      | Off-test | M3                 | 0.16  | 0.07  | 0.12  | 0.20  | 0.14    | 0.04 |
| Randomly reduced      | Wean     | M4                 | 0.19  | 0.08  | 0.12  | 0.22  | 0.15    | 0.04 |
| Randomly reduced      | Mid-test | M4                 | 0.17  | 0.07  | 0.13  | 0.21  | 0.15    | 0.04 |
| Randomly reduced      | Off-test | M4                 | 0.16  | 0.06  | 0.12  | 0.19  | 0.13    | 0.03 |

Table S12: Predictive ability of Fat depth for each fold at different complexity, stage and model.

| Complexity            | Stage    | Model | Fold1 | Fold2 | Fold3 | Fold4 | Average | SD   |
|-----------------------|----------|-------|-------|-------|-------|-------|---------|------|
| Full                  | Wean     | M1    | 0.55  | 0.51  | 0.47  | 0.57  | 0.53    | 0.06 |
| Full                  | Mid-test | M1    | 0.55  | 0.51  | 0.47  | 0.57  | 0.53    | 0.06 |
| Full                  | Off-test | M1    | 0.55  | 0.51  | 0.47  | 0.57  | 0.53    | 0.06 |
| Full                  | Wean     | M2    | 0.46  | 0.42  | 0.37  | 0.50  | 0.44    | 0.06 |
| Full                  | Mid-test | M2    | 0.56  | 0.44  | 0.41  | 0.55  | 0.49    | 0.08 |
| Full                  | Off-test | M2    | 0.58  | 0.52  | 0.48  | 0.51  | 0.52    | 0.04 |
| Full                  | Wean     | M3    | 0.61  | 0.52  | 0.43  | 0.57  | 0.52    | 0.06 |
| Full                  | Mid-test | M3    | 0.61  | 0.54  | 0.46  | 0.60  | 0.56    | 0.07 |
| Full                  | Off-test | M3    | 0.63  | 0.58  | 0.5   | 0.58  | 0.57    | 0.05 |
| Full                  | Wean     | M4    | 0.61  | 0.52  | 0.43  | 0.57  | 0.52    | 0.06 |
| Full                  | Mid-test | M4    | 0.61  | 0.54  | 0.46  | 0.61  | 0.56    | 0.07 |
| Full                  | Off-test | M4    | 0.61  | 0.58  | 0.49  | 0.61  | 0.584   | 0.06 |
| Informatively reduced | Wean     | M1    | 0.61  | 0.56  | 0.44  | 0.64  | 0.55    | 0.08 |
| Informatively reduced | Mid-test | M1    | 0.61  | 0.56  | 0.44  | 0.64  | 0.55    | 0.08 |
| Informatively reduced | Off-test | M1    | 0.61  | 0.56  | 0.44  | 0.64  | 0.55    | 0.08 |
| Informatively reduced | Wean     | M2    | 0.52  | 0.5   | 0.39  | 0.46  | 0.47    | 0.06 |
| Informatively reduced | Mid-test | M2    | 0.58  | 0.52  | 0.42  | 0.48  | 0.5     | 0.06 |
| Informatively reduced | Off-test | M2    | 0.61  | 0.59  | 0.51  | 0.59  | 0.55    | 0.04 |
| Informatively reduced | Wean     | M3    | 0.46  | 0.53  | 0.41  | 0.51  | 0.48    | 0.05 |
| Informatively reduced | Mid-test | M3    | 0.52  | 0.55  | 0.44  | 0.56  | 0.52    | 0.05 |
| Informatively reduced | Off-test | M3    | 0.54  | 0.58  | 0.45  | 0.55  | 0.53    | 0.06 |
| Informatively reduced | Wean     | M4    | 0.47  | 0.52  | 0.41  | 0.52  | 0.48    | 0.05 |
| Informatively reduced | Mid-test | M4    | 0.52  | 0.55  | 0.43  | 0.56  | 0.52    | 0.06 |
| Informatively reduced | Off-test | M4    | 0.55  | 0.58  | 0.45  | 0.56  | 0.54    | 0.06 |
| Randomly reduced      | Wean     | M1    | 0.55  | 0.50  | 0.42  | 0.54  | 0.50    | 0.07 |
| Randomly reduced      | Mid-test | M1    | 0.55  | 0.50  | 0.42  | 0.54  | 0.50    | 0.07 |
| Randomly reduced      | Off-test | M1    | 0.55  | 0.50  | 0.42  | 0.54  | 0.50    | 0.07 |
| Randomly reduced      | Wean     | M2    | 0.48  | 0.41  | 0.36  | 0.50  | 0.44    | 0.05 |
| Randomly reduced      | Mid-test | M2    | 0.54  | 0.43  | 0.39  | 0.53  | 0.45    | 0.06 |
| Randomly reduced      | Off-test | M2    | 0.53  | 0.45  | 0.42  | 0.50  | 0.48    | 0.06 |
| Randomly reduced      | Wean     | M3    | 0.55  | 0.51  | 0.42  | 0.55  | 0.51    | 0.06 |
| Randomly reduced      | Mid-test | M3    | 0.58  | 0.52  | 0.45  | 0.57  | 0.53    | 0.07 |
| Randomly reduced      | Off-test | M3    | 0.57  | 0.53  | 0.46  | 0.56  | 0.53    | 0.06 |
| Randomly reduced      | Wean     | M4    | 0.55  | 0.51  | 0.42  | 0.55  | 0.51    | 0.06 |
| Randomly reduced      | Mid-test | M4    | 0.58  | 0.52  | 0.45  | 0.57  | 0.51    | 0.07 |
| Randomly reduced      | Off-test | M4    | 0.56  | 0.53  | 0.45  | 0.56  | 0.53    | 0.06 |

Table S13: Predictive ability of Carcass average daily gain for each fold at different complexity, stage and model.

| Complexity            | Stage    | Model | Fold1 | Fold2 | Fold3 | Fold4 | Average | SD   |
|-----------------------|----------|-------|-------|-------|-------|-------|---------|------|
| Full                  | Wean     | M1    | 0.26  | 0.27  | 0.24  | 0.25  | 0.26    | 0.01 |
| Full                  | Off-test | M1    | 0.26  | 0.27  | 0.24  | 0.25  | 0.26    | 0.01 |
| Full                  | Mid-test | M1    | 0.26  | 0.27  | 0.24  | 0.25  | 0.26    | 0.01 |
| Full                  | Wean     | M2    | 0.27  | 0.24  | 0.24  | 0.28  | 0.26    | 0.02 |
| Full                  | Mid-test | M2    | 0.35  | 0.22  | 0.28  | 0.32  | 0.29    | 0.06 |
| Full                  | Off-test | M2    | 0.37  | 0.31  | 0.3   | 0.31  | 0.32    | 0.03 |
| Full                  | Wean     | M3    | 0.28  | 0.29  | 0.26  | 0.29  | 0.28    | 0.01 |
| Full                  | Mid-test | M3    | 0.34  | 0.28  | 0.3   | 0.32  | 0.31    | 0.03 |
| Full                  | Off-test | M3    | 0.36  | 0.35  | 0.3   | 0.33  | 0.34    | 0.03 |
| Full                  | Wean     | M4    | 0.28  | 0.29  | 0.26  | 0.29  | 0.28    | 0.01 |
| Full                  | Mid-test | M4    | 0.34  | 0.28  | 0.29  | 0.32  | 0.31    | 0.03 |
| Full                  | Off-test | M4    | 0.35  | 0.34  | 0.3   | 0.33  | 0.33    | 0.02 |
| Informatively reduced | Wean     | M1    | 0.21  | 0.29  | 0.22  | 0.52  | 0.31    | 0.14 |
| Informatively reduced | Mid-test | M1    | 0.21  | 0.29  | 0.22  | 0.52  | 0.31    | 0.14 |
| Informatively reduced | Off-test | M1    | 0.21  | 0.29  | 0.22  | 0.52  | 0.31    | 0.14 |
| Informatively reduced | Wean     | M2    | 0.20  | 0.40  | 0.18  | 0.41  | 0.3     | 0.12 |
| Informatively reduced | Mid-test | M2    | 0.28  | 0.49  | 0.3   | 0.53  | 0.4     | 0.13 |
| Informatively reduced | Off-test | M2    | 0.34  | 0.42  | 0.36  | 0.45  | 0.39    | 0.05 |
| Informatively reduced | Wean     | M3    | 0.23  | 0.35  | 0.21  | 0.29  | 0.27    | 0.06 |
| Informatively reduced | Mid-test | M3    | 0.29  | 0.43  | 0.27  | 0.34  | 0.33    | 0.07 |
| Informatively reduced | Off-test | M3    | 0.28  | 0.39  | 0.28  | 0.31  | 0.32    | 0.05 |
| Informatively reduced | Wean     | M4    | 0.23  | 0.34  | 0.21  | 0.29  | 0.27    | 0.06 |
| Informatively reduced | Mid-test | M4    | 0.29  | 0.43  | 0.27  | 0.34  | 0.33    | 0.07 |
| Informatively reduced | Off-test | M4    | 0.28  | 0.39  | 0.28  | 0.30  | 0.31    | 0.05 |
| Randomly reduced      | Wean     | M1    | 0.27  | 0.27  | 0.24  | 0.24  | 0.26    | 0.02 |
| Randomly reduced      | Mid-test | M1    | 0.27  | 0.27  | 0.24  | 0.24  | 0.26    | 0.02 |
| Randomly reduced      | Off-test | M1    | 0.27  | 0.27  | 0.24  | 0.24  | 0.26    | 0.02 |
| Randomly reduced      | Wean     | M2    | 0.27  | 0.22  | 0.23  | 0.25  | 0.24    | 0.02 |
| Randomly reduced      | Mid-test | M2    | 0.29  | 0.21  | 0.23  | 0.25  | 0.25    | 0.03 |
| Randomly reduced      | Off-test | M2    | 0.29  | 0.21  | 0.23  | 0.24  | 0.24    | 0.03 |
| Randomly reduced      | Wean     | M3    | 0.28  | 0.27  | 0.25  | 0.26  | 0.27    | 0.01 |
| Randomly reduced      | Mid-test | M3    | 0.29  | 0.27  | 0.26  | 0.26  | 0.27    | 0.01 |
| Randomly reduced      | Off-test | M3    | 0.29  | 0.27  | 0.25  | 0.26  | 0.27    | 0.02 |
| Randomly reduced      | Wean     | M4    | 0.28  | 0.27  | 0.25  | 0.26  | 0.27    | 0.02 |
| Randomly reduced      | Mid-test | M4    | 0.29  | 0.26  | 0.26  | 0.26  | 0.27    | 0.01 |
| Randomly reduced      | Off-test | M4    | 0.28  | 0.27  | 0.25  | 0.26  | 0.27    | 0.02 |

Table S14: Predictive ability of Ham weight for each fold at different complexity, stage and model.

| Complexity            | Stage    | Model | Fold1 | Fold2 | Fold3 | Fold4 | Average | SD   |
|-----------------------|----------|-------|-------|-------|-------|-------|---------|------|
| Full                  | Wean     | M1    | 0.13  | 0.13  | 0.1   | 0.12  | 0.12    | 0.01 |
| Full                  | Mid-test | M1    | 0.13  | 0.13  | 0.1   | 0.12  | 0.12    | 0.01 |
| Full                  | Off-test | M1    | 0.13  | 0.13  | 0.1   | 0.12  | 0.12    | 0.01 |
| Full                  | Wean     | M2    | 0.09  | 0.10  | 0.10  | 0.19  | 0.12    | 0.05 |
| Full                  | Mid-test | M2    | 0.18  | 0.09  | 0.14  | 0.22  | 0.16    | 0.06 |
| Full                  | Off-test | M2    | 0.19  | 0.19  | 0.13  | 0.23  | 0.18    | 0.04 |
| Full                  | Wean     | M3    | 0.13  | 0.15  | 0.1   | 0.16  | 0.14    | 0.03 |
| Full                  | Mid-test | M3    | 0.20  | 0.14  | 0.16  | 0.21  | 0.18    | 0.03 |
| Full                  | Off-test | M3    | 0.21  | 0.22  | 0.13  | 0.23  | 0.20    | 0.05 |
| Full                  | Wean     | M4    | 0.12  | 0.15  | 0.11  | 0.17  | 0.14    | 0.03 |
| Full                  | Mid-test | M4    | 0.19  | 0.14  | 0.15  | 0.20  | 0.17    | 0.03 |
| Full                  | Off-test | M4    | 0.20  | 0.21  | 0.14  | 0.22  | 0.19    | 0.04 |
| Informatively reduced | Wean     | M1    | 0.16  | 0.18  | 0.09  | 0.58  | 0.25    | 0.22 |
| Informatively reduced | Mid-test | M1    | 0.16  | 0.18  | 0.09  | 0.58  | 0.25    | 0.22 |
| Informatively reduced | Off-test | M1    | 0.16  | 0.18  | 0.09  | 0.58  | 0.25    | 0.22 |
| Informatively reduced | Wean     | M2    | 0.02  | 0.27  | 0.04  | 0.38  | 0.18    | 0.18 |
| Informatively reduced | Mid-test | M2    | 0.09  | 0.37  | 0.14  | 0.38  | 0.24    | 0.15 |
| Informatively reduced | Off-test | M2    | 0.16  | 0.35  | 0.19  | 0.3   | 0.25    | 0.09 |
| Informatively reduced | Wean     | M3    | 0.16  | 0.22  | 0.1   | 0.17  | 0.16    | 0.05 |
| Informatively reduced | Mid-test | M3    | 0.17  | 0.33  | 0.13  | 0.17  | 0.2     | 0.09 |
| Informatively reduced | Off-test | M3    | 0.20  | 0.27  | 0.14  | 0.19  | 0.2     | 0.05 |
| Informatively reduced | Wean     | M4    | 0.16  | 0.21  | 0.10  | 0.16  | 0.16    | 0.04 |
| Informatively reduced | Mid-test | M4    | 0.18  | 0.31  | 0.13  | 0.17  | 0.2     | 0.08 |
| Informatively reduced | Off-test | M4    | 0.20  | 0.27  | 0.14  | 0.19  | 0.2     | 0.05 |
| Randomly reduced      | Wean     | M1    | 0.14  | 0.12  | 0.1   | 0.12  | 0.12    | 0.02 |
| Randomly reduced      | Mid-test | M1    | 0.14  | 0.12  | 0.1   | 0.12  | 0.12    | 0.02 |
| Randomly reduced      | Off-test | M1    | 0.14  | 0.12  | 0.1   | 0.12  | 0.12    | 0.02 |
| Randomly reduced      | Wean     | M2    | 0.1   | 0.08  | 0.09  | 0.15  | 0.11    | 0.00 |
| Randomly reduced      | Mid-test | M2    | 0.12  | 0.08  | 0.09  | 0.16  | 0.11    | 0.01 |
| Randomly reduced      | Off-test | M2    | 0.12  | 0.08  | 0.08  | 0.15  | 0.11    | 0.02 |
| Randomly reduced      | Wean     | M3    | 0.14  | 0.12  | 0.09  | 0.14  | 0.12    | 0.02 |
| Randomly reduced      | Mid-test | M3    | 0.16  | 0.12  | 0.1   | 0.15  | 0.13    | 0.02 |
| Randomly reduced      | Off-test | M3    | 0.17  | 0.12  | 0.09  | 0.15  | 0.13    | 0.03 |
| Randomly reduced      | Wean     | M4    | 0.14  | 0.12  | 0.09  | 0.13  | 0.12    | 0.02 |
| Randomly reduced      | Mid-test | M4    | 0.16  | 0.13  | 0.1   | 0.14  | 0.13    | 0.02 |
| Randomly reduced      | Off-test | M4    | 0.16  | 0.13  | 0.1   | 0.15  | 0.14    | 0.16 |

Table S15: Predictive ability of Loin weight for each fold at different complexity, stage and model.

| Complexity            | Stage    | Model | Fold1 | Fold2 | Fold3 | Fold4 | Average | SD   |
|-----------------------|----------|-------|-------|-------|-------|-------|---------|------|
| Full                  | Wean     | M1    | 0.16  | 0.16  | 0.15  | 0.14  | 0.15    | 0.01 |
| Full                  | Mid-test | M1    | 0.16  | 0.16  | 0.15  | 0.14  | 0.15    | 0.01 |
| Full                  | Off-test | M1    | 0.16  | 0.16  | 0.15  | 0.14  | 0.15    | 0.01 |
| Full                  | Wean     | M2    | 0.19  | 0.14  | 0.14  | 0.19  | 0.15    | 0.03 |
| Full                  | Mid-test | M2    | 0.24  | 0.07  | 0.15  | 0.22  | 0.17    | 0.08 |
| Full                  | Off-test | M2    | 0.20  | 0.17  | 0.16  | 0.21  | 0.18    | 0.02 |
| Full                  | Wean     | M3    | 0.18  | 0.18  | 0.16  | 0.17  | 0.17    | 0.01 |
| Full                  | Mid-test | M3    | 0.23  | 0.13  | 0.19  | 0.19  | 0.18    | 0.04 |
| Full                  | Off-test | M3    | 0.20  | 0.22  | 0.20  | 0.20  | 0.20    | 0.01 |
| Full                  | Wean     | M4    | 0.18  | 0.18  | 0.16  | 0.17  | 0.17    | 0.01 |
| Full                  | Mid-test | M4    | 0.23  | 0.14  | 0.19  | 0.19  | 0.19    | 0.04 |
| Full                  | Off-test | M4    | 0.20  | 0.21  | 0.20  | 0.19  | 0.20    | 0.01 |
| Informatively reduced | Wean     | M1    | 0.11  | 0.16  | 0.12  | 0.60  | 0.25    | 0.24 |
| Informatively reduced | Mid-test | M1    | 0.11  | 0.16  | 0.12  | 0.6   | 0.25    | 0.24 |
| Informatively reduced | Off-test | M1    | 0.11  | 0.16  | 0.12  | 0.6   | 0.25    | 0.24 |
| Informatively reduced | Wean     | M2    | 0.10  | 0.27  | 0.08  | 0.40  | 0.21    | 0.15 |
| Informatively reduced | Mid-test | M2    | 0.23  | 0.46  | 0.15  | 0.50  | 0.34    | 0.17 |
| Informatively reduced | Off-test | M2    | 0.17  | 0.32  | 0.2   | 0.34  | 0.26    | 0.08 |
| Informatively reduced | Wean     | M3    | 0.13  | 0.21  | 0.14  | 0.11  | 0.15    | 0.04 |
| Informatively reduced | Mid-test | M3    | 0.25  | 0.33  | 0.17  | 0.13  | 0.22    | 0.09 |
| Informatively reduced | Off-test | M3    | 0.15  | 0.24  | 0.18  | 0.14  | 0.18    | 0.04 |
| Informatively reduced | Wean     | M4    | 0.13  | 0.19  | 0.14  | 0.12  | 0.15    | 0.03 |
| Informatively reduced | Mid-test | M4    | 0.25  | 0.31  | 0.18  | 0.12  | 0.22    | 0.08 |
| Informatively reduced | Off-test | M4    | 0.15  | 0.24  | 0.18  | 0.14  | 0.18    | 0.04 |
| Randomly reduced      | Wean     | M1    | 0.19  | 0.17  | 0.13  | 0.11  | 0.15    | 0.02 |
| Randomly reduced      | Mid-test | M1    | 0.19  | 0.17  | 0.13  | 0.11  | 0.15    | 0.02 |
| Randomly reduced      | Off-test | M1    | 0.19  | 0.17  | 0.13  | 0.11  | 0.15    | 0.02 |
| Randomly reduced      | Wean     | M2    | 0.18  | 0.11  | 0.13  | 0.18  | 0.15    | 0.02 |
| Randomly reduced      | Mid-test | M2    | 0.17  | 0.08  | 0.1   | 0.15  | 0.13    | 0.04 |
| Randomly reduced      | Off-test | M2    | 0.16  | 0.1   | 0.09  | 0.15  | 0.13    | 0.04 |
| Randomly reduced      | Wean     | M3    | 0.2   | 0.17  | 0.15  | 0.14  | 0.17    | 0.01 |
| Randomly reduced      | Mid-test | M3    | 0.19  | 0.15  | 0.13  | 0.12  | 0.15    | 0.02 |
| Randomly reduced      | Off-test | M3    | 0.19  | 0.17  | 0.13  | 0.12  | 0.15    | 0.02 |
| Randomly reduced      | Wean     | M4    | 0.19  | 0.17  | 0.15  | 0.13  | 0.16    | 0.01 |
| Randomly reduced      | Mid-test | M4    | 0.19  | 0.15  | 0.13  | 0.12  | 0.15    | 0.02 |
| Randomly reduced      | Off-test | M4    | 0.19  | 0.17  | 0.13  | 0.12  | 0.15    | 0.02 |

Table S16: Predictive ability of Belly weight for each fold at different complexity, stage and model.

| Complexity            | Stage    | Model | Fold1 | Fold2 | Fold3 | Fold4 | Average | SD   |
|-----------------------|----------|-------|-------|-------|-------|-------|---------|------|
| Full                  | Wean     | M1    | 0.23  | 0.31  | 0.16  | 0.18  | 0.22    | 0.07 |
| Full                  | Mid-test | M1    | 0.23  | 0.31  | 0.16  | 0.18  | 0.22    | 0.07 |
| Full                  | Off-test | M1    | 0.23  | 0.31  | 0.16  | 0.18  | 0.22    | 0.07 |
| Full                  | Wean     | M2    | 0.19  | 0.21  | 0.19  | 0.18  | 0.19    | 0.01 |
| Full                  | Mid-test | M2    | 0.33  | 0.2   | 0.22  | 0.28  | 0.26    | 0.06 |
| Full                  | Off-test | M2    | 0.35  | 0.31  | 0.30  | 0.22  | 0.30    | 0.05 |
| Full                  | Wean     | M3    | 0.24  | 0.31  | 0.18  | 0.22  | 0.24    | 0.05 |
| Full                  | Mid-test | M3    | 0.36  | 0.30  | 0.23  | 0.30  | 0.30    | 0.05 |
| Full                  | Off-test | M3    | 0.37  | 0.38  | 0.27  | 0.26  | 0.30    | 0.06 |
| Full                  | Wean     | M4    | 0.24  | 0.31  | 0.19  | 0.22  | 0.24    | 0.05 |
| Full                  | Mid-test | M4    | 0.36  | 0.3   | 0.23  | 0.29  | 0.30    | 0.05 |
| Full                  | Off-test | M4    | 0.37  | 0.37  | 0.27  | 0.26  | 0.32    | 0.06 |
| Informatively reduced | Wean     | M1    | 0.22  | 0.35  | 0.18  | 0.53  | 0.32    | 0.16 |
| Informatively reduced | Mid-test | M1    | 0.22  | 0.35  | 0.18  | 0.53  | 0.32    | 0.16 |
| Informatively reduced | Off-test | M1    | 0.22  | 0.35  | 0.18  | 0.53  | 0.32    | 0.16 |
| Informatively reduced | Wean     | M2    | 0.18  | 0.43  | 0.17  | 0.41  | 0.30    | 0.14 |
| Informatively reduced | Mid-test | M2    | 0.39  | 0.47  | 0.25  | 0.47  | 0.40    | 0.10 |
| Informatively reduced | Off-test | M2    | 0.36  | 0.49  | 0.35  | 0.44  | 0.41    | 0.07 |
| Informatively reduced | Wean     | M3    | 0.24  | 0.41  | 0.17  | 0.25  | 0.27    | 0.10 |
| Informatively reduced | Mid-test | M3    | 0.36  | 0.5   | 0.23  | 0.35  | 0.36    | 0.11 |
| Informatively reduced | Off-test | M3    | 0.34  | 0.49  | 0.22  | 0.32  | 0.34    | 0.11 |
| Informatively reduced | Wean     | M4    | 0.24  | 0.41  | 0.17  | 0.25  | 0.27    | 0.10 |
| Informatively reduced | Mid-test | M4    | 0.35  | 0.51  | 0.23  | 0.35  | 0.37    | 0.11 |
| Informatively reduced | Off-test | M4    | 0.33  | 0.49  | 0.22  | 0.32  | 0.35    | 0.11 |
| Randomly reduced      | Mid-test | M1    | 0.23  | 0.31  | 0.15  | 0.17  | 0.22    | 0.08 |
| Randomly reduced      | Off-test | M1    | 0.23  | 0.31  | 0.15  | 0.17  | 0.22    | 0.08 |
| Randomly reduced      | Wean     | M1    | 0.23  | 0.31  | 0.15  | 0.17  | 0.22    | 0.08 |
| Randomly reduced      | Wean     | M2    | 0.17  | 0.19  | 0.18  | 0.14  | 0.17    | 0.02 |
| Randomly reduced      | Mid-test | M2    | 0.19  | 0.16  | 0.14  | 0.17  | 0.17    | 0.03 |
| Randomly reduced      | Off-test | M2    | 0.22  | 0.18  | 0.19  | 0.14  | 0.18    | 0.02 |
| Randomly reduced      | Wean     | M3    | 0.24  | 0.32  | 0.16  | 0.19  | 0.23    | 0.07 |
| Randomly reduced      | Mid-test | M3    | 0.25  | 0.30  | 0.17  | 0.20  | 0.23    | 0.07 |
| Randomly reduced      | Off-test | M3    | 0.27  | 0.30  | 0.18  | 0.20  | 0.24    | 0.06 |
| Randomly reduced      | Wean     | M4    | 0.24  | 0.31  | 0.16  | 0.18  | 0.22    | 0.06 |
| Randomly reduced      | Mid-test | M4    | 0.25  | 0.29  | 0.17  | 0.19  | 0.23    | 0.06 |
| Randomly reduced      | Off-test | M4    | 0.26  | 0.30  | 0.18  | 0.20  | 0.24    | 0.06 |

Table S17: Predictive ability of Intramuscular fat (%) for each fold at different complexity, stage and model.

| Complexity            | Stage    | Model | Fold1 | Fold2 | Fold3 | Fold4 | Average | SD   |
|-----------------------|----------|-------|-------|-------|-------|-------|---------|------|
| Full                  | Wean     | M1    | 0.45  | 0.31  | 0.43  | 0.37  | 0.39    | 0.06 |
| Full                  | Off-test | M1    | 0.45  | 0.31  | 0.43  | 0.37  | 0.39    | 0.06 |
| Full                  | Mid-test | M1    | 0.45  | 0.31  | 0.43  | 0.37  | 0.39    | 0.06 |
| Full                  | Wean     | M2    | 0.25  | 0.24  | 0.26  | 0.27  | 0.26    | 0.01 |
| Full                  | Mid-test | M2    | 0.31  | 0.23  | 0.28  | 0.32  | 0.29    | 0.04 |
| Full                  | Off-test | M2    | 0.31  | 0.24  | 0.32  | 0.29  | 0.29    | 0.06 |
| Full                  | Wean     | M3    | 0.45  | 0.33  | 0.43  | 0.38  | 0.40    | 0.05 |
| Full                  | Mid-test | M3    | 0.45  | 0.31  | 0.42  | 0.39  | 0.39    | 0.06 |
| Full                  | Off-test | M3    | 0.48  | 0.29  | 0.45  | 0.38  | 0.40    | 0.08 |
| Full                  | Wean     | M4    | 0.44  | 0.32  | 0.43  | 0.38  | 0.39    | 0.06 |
| Full                  | Mid-test | M4    | 0.45  | 0.31  | 0.42  | 0.39  | 0.39    | 0.06 |
| Full                  | Off-test | M4    | 0.47  | 0.29  | 0.45  | 0.38  | 0.40    | 0.08 |
| Informatively reduced | Wean     | M1    | 0.47  | 0.38  | 0.43  | 0.65  | 0.48    | 0.12 |
| Informatively reduced | Mid-test | M1    | 0.47  | 0.38  | 0.43  | 0.65  | 0.48    | 0.12 |
| Informatively reduced | Off-test | M1    | 0.47  | 0.38  | 0.43  | 0.65  | 0.48    | 0.12 |
| Informatively reduced | Wean     | M2    | 0.23  | 0.37  | 0.17  | 0.39  | 0.29    | 0.11 |
| Informatively reduced | Mid-test | M2    | 0.29  | 0.33  | 0.19  | 0.42  | 0.31    | 0.1  |
| Informatively reduced | Off-test | M2    | 0.23  | 0.31  | 0.31  | 0.43  | 0.32    | 0.08 |
| Informatively reduced | Wean     | M3    | 0.46  | 0.42  | 0.43  | 0.26  | 0.39    | 0.09 |
| Informatively reduced | Mid-test | M3    | 0.48  | 0.41  | 0.41  | 0.29  | 0.4     | 0.08 |
| Informatively reduced | Off-test | M3    | 0.47  | 0.4   | 0.43  | 0.27  | 0.39    | 0.09 |
| Informatively reduced | Wean     | M4    | 0.46  | 0.41  | 0.43  | 0.27  | 0.39    | 0.08 |
| Informatively reduced | Mid-test | M4    | 0.47  | 0.4   | 0.41  | 0.29  | 0.39    | 0.08 |
| Informatively reduced | Off-test | M4    | 0.47  | 0.39  | 0.43  | 0.27  | 0.39    | 0.09 |
| Randomly reduced      | Wean     | M1    | 0.47  | 0.33  | 0.4   | 0.38  | 0.4     | 0.05 |
| Randomly reduced      | Mid-test | M1    | 0.47  | 0.33  | 0.4   | 0.38  | 0.4     | 0.05 |
| Randomly reduced      | Off-test | M1    | 0.47  | 0.33  | 0.4   | 0.38  | 0.4     | 0.05 |
| Randomly reduced      | Wean     | M2    | 0.26  | 0.23  | 0.27  | 0.28  | 0.26    | 0.02 |
| Randomly reduced      | Mid-test | M2    | 0.28  | 0.22  | 0.28  | 0.29  | 0.27    | 0.04 |
| Randomly reduced      | Off-test | M2    | 0.28  | 0.24  | 0.32  | 0.28  | 0.28    | 0.04 |
| Randomly reduced      | Wean     | M3    | 0.47  | 0.34  | 0.41  | 0.39  | 0.4     | 0.06 |
| Randomly reduced      | Mid-test | M3    | 0.47  | 0.34  | 0.4   | 0.39  | 0.4     | 0.06 |
| Randomly reduced      | Off-test | M3    | 0.47  | 0.34  | 0.43  | 0.38  | 0.41    | 0.06 |
| Randomly reduced      | Wean     | M4    | 0.47  | 0.34  | 0.41  | 0.38  | 0.4     | 0.05 |
| Randomly reduced      | Mid-test | M4    | 0.46  | 0.34  | 0.4   | 0.39  | 0.4     | 0.05 |
| Randomly reduced      | Off-test | M4    | 0.47  | 0.34  | 0.42  | 0.38  | 0.4     | 0.06 |

Table S18: Predictive ability of Minolta a\* for each fold at different complexity, stage and model.

| Complexity            | Stage    | Model | Fold1 | Fold2 | Fold3 | Fold4 | Average | SD   |
|-----------------------|----------|-------|-------|-------|-------|-------|---------|------|
| Full                  | Wean     | M1    | 0.27  | 0.24  | 0.27  | 0.32  | 0.28    | 0.03 |
| Full                  | Mid-test | M1    | 0.27  | 0.24  | 0.27  | 0.32  | 0.28    | 0.03 |
| Full                  | Off-test | M1    | 0.27  | 0.24  | 0.27  | 0.32  | 0.28    | 0.03 |
| Full                  | Wean     | M2    | 0.22  | 0.22  | 0.22  | 0.26  | 0.23    | 0.02 |
| Full                  | Mid-test | M2    | 0.26  | 0.25  | 0.24  | 0.28  | 0.26    | 0.02 |
| Full                  | Off-test | M2    | 0.27  | 0.26  | 0.29  | 0.31  | 0.28    | 0.02 |
| Full                  | Wean     | M3    | 0.25  | 0.23  | 0.26  | 0.31  | 0.26    | 0.03 |
| Full                  | Mid-test | M3    | 0.28  | 0.25  | 0.27  | 0.32  | 0.28    | 0.03 |
| Full                  | Off-test | M3    | 0.28  | 0.27  | 0.31  | 0.33  | 0.30    | 0.03 |
| Full                  | Wean     | M4    | 0.25  | 0.24  | 0.26  | 0.31  | 0.27    | 0.03 |
| Full                  | Mid-test | M4    | 0.28  | 0.25  | 0.27  | 0.32  | 0.28    | 0.03 |
| Full                  | Off-test | M4    | 0.29  | 0.27  | 0.31  | 0.33  | 0.30    | 0.03 |
| Informatively reduced | Wean     | M1    | 0.21  | 0.23  | 0.22  | 0.62  | 0.32    | 0.20 |
| Informatively reduced | Mid-test | M1    | 0.21  | 0.23  | 0.22  | 0.62  | 0.32    | 0.20 |
| Informatively reduced | Off-test | M1    | 0.21  | 0.23  | 0.22  | 0.62  | 0.32    | 0.20 |
| Informatively reduced | Wean     | M2    | 0.13  | 0.41  | 0.12  | 0.29  | 0.24    | 0.14 |
| Informatively reduced | Mid-test | M2    | 0.21  | 0.4   | 0.13  | 0.44  | 0.3     | 0.15 |
| Informatively reduced | Off-test | M2    | 0.20  | 0.44  | 0.32  | 0.47  | 0.36    | 0.12 |
| Informatively reduced | Wean     | M3    | 0.17  | 0.18  | 0.20  | 0.26  | 0.20    | 0.04 |
| Informatively reduced | Mid-test | M3    | 0.25  | 0.24  | 0.2   | 0.31  | 0.25    | 0.05 |
| Informatively reduced | Off-test | M3    | 0.22  | 0.25  | 0.26  | 0.28  | 0.25    | 0.03 |
| Informatively reduced | Wean     | M4    | 0.18  | 0.16  | 0.21  | 0.28  | 0.21    | 0.05 |
| Informatively reduced | Mid-test | M4    | 0.25  | 0.23  | 0.21  | 0.30  | 0.25    | 0.04 |
| Informatively reduced | Off-test | M4    | 0.22  | 0.22  | 0.26  | 0.29  | 0.25    | 0.03 |
| Randomly reduced      | Wean     | M1    | 0.26  | 0.25  | 0.26  | 0.32  | 0.27    | 0.01 |
| Randomly reduced      | Mid-test | M1    | 0.26  | 0.25  | 0.26  | 0.32  | 0.27    | 0.01 |
| Randomly reduced      | Off-test | M1    | 0.26  | 0.25  | 0.26  | 0.32  | 0.27    | 0.01 |
| Randomly reduced      | Wean     | M2    | 0.24  | 0.24  | 0.24  | 0.28  | 0.25    | 0.00 |
| Randomly reduced      | Mid-test | M2    | 0.25  | 0.25  | 0.23  | 0.28  | 0.25    | 0.01 |
| Randomly reduced      | Off-test | M2    | 0.24  | 0.25  | 0.25  | 0.27  | 0.25    | 0.01 |
| Randomly reduced      | Wean     | M3    | 0.26  | 0.24  | 0.26  | 0.32  | 0.27    | 0.01 |
| Randomly reduced      | Mid-test | M3    | 0.26  | 0.25  | 0.25  | 0.32  | 0.27    | 0.01 |
| Randomly reduced      | Off-test | M3    | 0.26  | 0.26  | 0.26  | 0.31  | 0.27    | 0.01 |
| Randomly reduced      | Wean     | M4    | 0.26  | 0.24  | 0.26  | 0.32  | 0.27    | 0.02 |
| Randomly reduced      | Mid-test | M4    | 0.26  | 0.25  | 0.26  | 0.32  | 0.27    | 0.01 |
| Randomly reduced      | Off-test | M4    | 0.26  | 0.26  | 0.26  | 0.31  | 0.27    | 0.01 |

Table S19: Predictive ability of Minolta b\* for each fold at different complexity, stage and model.

| Complexity            | Stage    | Model | Fold1 | Fold2 | Fold3 | Fold4 | Average | SD   |
|-----------------------|----------|-------|-------|-------|-------|-------|---------|------|
| Full                  | Wean     | M1    | 0.28  | 0.42  | 0.27  | 0.32  | 0.32    | 0.07 |
| Full                  | Mid-test | M1    | 0.28  | 0.42  | 0.27  | 0.32  | 0.32    | 0.07 |
| Full                  | Off-test | M1    | 0.28  | 0.42  | 0.27  | 0.32  | 0.32    | 0.07 |
| Full                  | Wean     | M2    | 0.26  | 0.39  | 0.26  | 0.30  | 0.30    | 0.06 |
| Full                  | Mid-test | M2    | 0.26  | 0.39  | 0.28  | 0.28  | 0.30    | 0.06 |
| Full                  | Off-test | M2    | 0.26  | 0.43  | 0.29  | 0.33  | 0.33    | 0.07 |
| Full                  | Wean     | M3    | 0.27  | 0.41  | 0.26  | 0.32  | 0.32    | 0.07 |
| Full                  | Mid-test | M3    | 0.27  | 0.41  | 0.27  | 0.3   | 0.31    | 0.07 |
| Full                  | Off-test | M3    | 0.28  | 0.45  | 0.29  | 0.35  | 0.34    | 0.08 |
| Full                  | Wean     | M4    | 0.28  | 0.41  | 0.26  | 0.32  | 0.32    | 0.07 |
| Full                  | Mid-test | M4    | 0.28  | 0.41  | 0.28  | 0.30  | 0.32    | 0.06 |
| Full                  | Off-test | M4    | 0.28  | 0.46  | 0.28  | 0.35  | 0.34    | 0.09 |
| Informatively reduced | Wean     | M1    | 0.32  | 0.36  | 0.35  | 0.51  | 0.39    | 0.09 |
| Informatively reduced | Mid-test | M1    | 0.32  | 0.36  | 0.35  | 0.51  | 0.39    | 0.09 |
| Informatively reduced | Off-test | M1    | 0.32  | 0.36  | 0.35  | 0.51  | 0.39    | 0.09 |
| Informatively reduced | Wean     | M2    | 0.1   | 0.47  | 0.12  | 0.34  | 0.26    | 0.18 |
| Informatively reduced | Mid-test | M2    | 0.19  | 0.5   | 0.22  | 0.4   | 0.33    | 0.15 |
| Informatively reduced | Off-test | M2    | 0.12  | 0.57  | 0.19  | 0.46  | 0.34    | 0.21 |
| Informatively reduced | Wean     | M3    | 0.19  | 0.34  | 0.14  | 0.26  | 0.23    | 0.09 |
| Informatively reduced | Mid-test | M3    | 0.23  | 0.36  | 0.2   | 0.23  | 0.26    | 0.07 |
| Informatively reduced | Off-test | M3    | 0.18  | 0.42  | 0.15  | 0.28  | 0.26    | 0.12 |
| Informatively reduced | Wean     | M4    | 0.17  | 0.31  | 0.12  | 0.24  | 0.21    | 0.08 |
| Informatively reduced | Mid-test | M4    | 0.21  | 0.34  | 0.18  | 0.21  | 0.24    | 0.07 |
| Informatively reduced | Off-test | M4    | 0.19  | 0.41  | 0.16  | 0.28  | 0.26    | 0.11 |
| Randomly reduced      | Wean     | M1    | 0.32  | 0.42  | 0.24  | 0.32  | 0.33    | 0.08 |
| Randomly reduced      | Mid-test | M1    | 0.32  | 0.42  | 0.24  | 0.32  | 0.33    | 0.08 |
| Randomly reduced      | Off-test | M1    | 0.32  | 0.42  | 0.24  | 0.32  | 0.33    | 0.08 |
| Randomly reduced      | Wean     | M2    | 0.31  | 0.39  | 0.27  | 0.31  | 0.32    | 0.06 |
| Randomly reduced      | Mid-test | M2    | 0.3   | 0.39  | 0.27  | 0.3   | 0.32    | 0.06 |
| Randomly reduced      | Off-test | M2    | 0.32  | 0.4   | 0.28  | 0.32  | 0.33    | 0.07 |
| Randomly reduced      | Wean     | M3    | 0.32  | 0.4   | 0.28  | 0.32  | 0.31    | 0.07 |
| Randomly reduced      | Mid-test | M3    | 0.31  | 0.42  | 0.24  | 0.31  | 0.31    | 0.07 |
| Randomly reduced      | Off-test | M3    | 0.33  | 0.43  | 0.26  | 0.33  | 0.32    | 0.08 |
| Randomly reduced      | Wean     | M4    | 0.32  | 0.41  | 0.26  | 0.32  | 0.32    | 0.07 |
| Randomly reduced      | Mid-test | M4    | 0.31  | 0.42  | 0.25  | 0.31  | 0.31    | 0.07 |
| Randomly reduced      | Off-test | M4    | 0.33  | 0.42  | 0.26  | 0.33  | 0.33    | 0.08 |

Table S20: Predictive ability of Minolta L\* for each fold at different complexity, stage and model.

| Complexity            | Stage    | Model | Fold1 | Fold2 | Fold3 | Fold4 | Average | SD   |
|-----------------------|----------|-------|-------|-------|-------|-------|---------|------|
| Full                  | Wean     | M1    | 0.21  | 0.16  | 0.08  | 0.23  | 0.17    | 0.07 |
| Full                  | Mid-test | M1    | 0.21  | 0.16  | 0.08  | 0.23  | 0.17    | 0.07 |
| Full                  | Off-test | M1    | 0.21  | 0.16  | 0.08  | 0.23  | 0.17    | 0.07 |
| Full                  | Wean     | M2    | 0.12  | 0.16  | 0.00  | 0.07  | 0.09    | 0.07 |
| Full                  | Mid-test | M2    | 0.21  | 0.14  | 0.01  | 0.08  | 0.11    | 0.09 |
| Full                  | Off-test | M2    | 0.17  | 0.17  | 0.05  | 0.1   | 0.12    | 0.06 |
| Full                  | Wean     | M3    | 0.17  | 0.16  | 0.07  | 0.22  | 0.16    | 0.06 |
| Full                  | Mid-test | M3    | 0.22  | 0.15  | 0.08  | 0.20  | 0.16    | 0.06 |
| Full                  | Off-test | M3    | 0.20  | 0.17  | 0.1   | 0.21  | 0.17    | 0.05 |
| Full                  | Wean     | M4    | 0.16  | 0.16  | 0.07  | 0.22  | 0.15    | 0.06 |
| Full                  | Mid-test | M4    | 0.22  | 0.16  | 0.07  | 0.21  | 0.17    | 0.07 |
| Full                  | Off-test | M4    | 0.20  | 0.17  | 0.10  | 0.21  | 0.17    | 0.05 |
| Informatively reduced | Wean     | M1    | 0.21  | 0.13  | 0.11  | 0.54  | 0.25    | 0.20 |
| Informatively reduced | Mid-test | M1    | 0.21  | 0.13  | 0.11  | 0.54  | 0.25    | 0.20 |
| Informatively reduced | Off-test | M1    | 0.21  | 0.13  | 0.11  | 0.54  | 0.25    | 0.20 |
| Informatively reduced | Wean     | M2    | -0.01 | 0.33  | -0.01 | 0.22  | 0.13    | 0.17 |
| Informatively reduced | Mid-test | M2    | 0.20  | 0.33  | 0.01  | 0.27  | 0.20    | 0.14 |
| Informatively reduced | Off-test | M2    | 0.03  | 0.38  | 0.04  | 0.28  | 0.18    | 0.18 |
| Informatively reduced | Wean     | M3    | 0.16  | 0.15  | 0.10  | 0.05  | 0.12    | 0.05 |
| Informatively reduced | Mid-test | M3    | 0.24  | 0.16  | 0.10  | 0.08  | 0.14    | 0.07 |
| Informatively reduced | Off-test | M3    | 0.16  | 0.2   | 0.12  | 0.07  | 0.14    | 0.06 |
| Informatively reduced | Wean     | M4    | 0.16  | 0.14  | 0.10  | 0.06  | 0.12    | 0.04 |
| Informatively reduced | Mid-test | M4    | 0.23  | 0.15  | 0.10  | 0.09  | 0.14    | 0.06 |
| Informatively reduced | Off-test | M4    | 0.16  | 0.19  | 0.12  | 0.07  | 0.14    | 0.05 |
| Randomly reduced      | Wean     | M1    | 0.16  | 0.14  | 0.07  | 0.2   | 0.14    | 0.04 |
| Randomly reduced      | Mid-test | M1    | 0.16  | 0.14  | 0.07  | 0.2   | 0.14    | 0.04 |
| Randomly reduced      | Off-test | M1    | 0.16  | 0.14  | 0.07  | 0.2   | 0.14    | 0.04 |
| Randomly reduced      | Wean     | M2    | 0.15  | 0.15  | -0.01 | 0.09  | 0.1     | 0.08 |
| Randomly reduced      | Mid-test | M2    | 0.17  | 0.15  | 0     | 0.09  | 0.1     | 0.10 |
| Randomly reduced      | Off-test | M2    | 0.18  | 0.19  | 0.01  | 0.08  | 0.12    | 0.10 |
| Randomly reduced      | Wean     | M3    | 0.15  | 0.12  | 0.06  | 0.19  | 0.13    | 0.04 |
| Randomly reduced      | Mid-test | M3    | 0.15  | 0.13  | 0.06  | 0.19  | 0.13    | 0.05 |
| Randomly reduced      | Off-test | M3    | 0.16  | 0.15  | 0.07  | 0.19  | 0.14    | 0.05 |
| Randomly reduced      | Wean     | M4    | 0.15  | 0.13  | 0.06  | 0.19  | 0.13    | 0.04 |
| Randomly reduced      | Mid-test | M4    | 0.16  | 0.12  | 0.06  | 0.19  | 0.13    | 0.05 |
| Randomly reduced      | Off-test | M4    | 0.16  | 0.13  | 0.07  | 0.19  | 0.14    | 0.06 |

Table S21: Predictive ability of pH for each fold at different complexity, stage and model.

| Complexity            | Stage    | Model | Fold1 | Fold2 | Fold3 | Fold4 | Average | SD   |
|-----------------------|----------|-------|-------|-------|-------|-------|---------|------|
| Full                  | Wean     | M1    | 0.22  | 0.1   | 0.14  | 0.14  | 0.15    | 0.05 |
| Full                  | Mid-test | M1    | 0.22  | 0.1   | 0.14  | 0.14  | 0.15    | 0.05 |
| Full                  | Off-test | M1    | 0.22  | 0.1   | 0.14  | 0.14  | 0.15    | 0.05 |
| Full                  | Wean     | M2    | 0.13  | 0.13  | 0.15  | 0.1   | 0.13    | 0.02 |
| Full                  | Mid-test | M2    | 0.14  | 0.12  | 0.17  | 0.11  | 0.14    | 0.03 |
| Full                  | Off-test | M2    | 0.19  | 0.12  | 0.15  | 0.09  | 0.14    | 0.04 |
| Full                  | Wean     | M3    | 0.17  | 0.1   | 0.15  | 0.12  | 0.14    | 0.03 |
| Full                  | Mid-test | M3    | 0.18  | 0.11  | 0.16  | 0.14  | 0.15    | 0.03 |
| Full                  | Off-test | M3    | 0.23  | 0.11  | 0.15  | 0.12  | 0.15    | 0.05 |
| Full                  | Wean     | M4    | 0.19  | 0.1   | 0.15  | 0.12  | 0.14    | 0.04 |
| Full                  | Mid-test | M4    | 0.17  | 0.11  | 0.16  | 0.13  | 0.14    | 0.03 |
| Full                  | Off-test | M4    | 0.22  | 0.11  | 0.16  | 0.12  | 0.15    | 0.05 |
| Informatively reduced | Wean     | M1    | 0.17  | 0.05  | 0.04  | 0.52  | 0.20    | 0.22 |
| Informatively reduced | Mid-test | M1    | 0.17  | 0.05  | 0.04  | 0.52  | 0.20    | 0.22 |
| Informatively reduced | Off-test | M1    | 0.17  | 0.05  | 0.04  | 0.52  | 0.20    | 0.22 |
| Informatively reduced | Wean     | M2    | 0.09  | 0.30  | 0.05  | 0.25  | 0.17    | 0.12 |
| Informatively reduced | Mid-test | M2    | 0.11  | 0.29  | 0.13  | 0.27  | 0.20    | 0.09 |
| Informatively reduced | Off-test | M2    | 0.15  | 0.29  | 0.06  | 0.26  | 0.19    | 0.11 |
| Informatively reduced | Wean     | M3    | 0.16  | 0.10  | 0.03  | 0.08  | 0.09    | 0.05 |
| Informatively reduced | Mid-test | M3    | 0.17  | 0.10  | 0.06  | 0.18  | 0.13    | 0.06 |
| Informatively reduced | Off-test | M3    | 0.20  | 0.14  | 0.05  | 0.12  | 0.13    | 0.06 |
| Informatively reduced | Wean     | M4    | 0.16  | 0.07  | 0.03  | 0.08  | 0.08    | 0.05 |
| Informatively reduced | Mid-test | M4    | 0.17  | 0.08  | 0.06  | 0.18  | 0.12    | 0.06 |
| Informatively reduced | Off-test | M4    | 0.21  | 0.10  | 0.06  | 0.12  | 0.12    | 0.06 |
| Randomly reduced      | Wean     | M1    | 0.19  | 0.11  | 0.16  | 0.13  | 0.15    | 0.05 |
| Randomly reduced      | Mid-test | M1    | 0.19  | 0.11  | 0.16  | 0.13  | 0.15    | 0.05 |
| Randomly reduced      | Off-test | M1    | 0.19  | 0.11  | 0.16  | 0.13  | 0.15    | 0.05 |
| Randomly reduced      | Wean     | M2    | 0.16  | 0.11  | 0.14  | 0.11  | 0.13    | 0.03 |
| Randomly reduced      | Mid-test | M2    | 0.15  | 0.11  | 0.16  | 0.13  | 0.14    | 0.02 |
| Randomly reduced      | Off-test | M2    | 0.18  | 0.12  | 0.14  | 0.12  | 0.14    | 0.03 |
| Randomly reduced      | Wean     | M3    | 0.17  | 0.11  | 0.15  | 0.13  | 0.14    | 0.04 |
| Randomly reduced      | Mid-test | M3    | 0.17  | 0.09  | 0.16  | 0.14  | 0.14    | 0.04 |
| Randomly reduced      | Off-test | M3    | 0.2   | 0.11  | 0.15  | 0.13  | 0.15    | 0.04 |
| Randomly reduced      | Wean     | M4    | 0.16  | 0.11  | 0.15  | 0.13  | 0.14    | 0.04 |
| Randomly reduced      | Mid-test | M4    | 0.17  | 0.11  | 0.17  | 0.14  | 0.15    | 0.04 |
| Randomly reduced      | Off-test | M4    | 0.19  | 0.1   | 0.14  | 0.14  | 0.14    | 0.04 |

Table S22: Predictive ability of Subjective color score for each fold at different complexity, stage and model.

| Complexity            | Stage    | Model | Fold1 | Fold2 | Fold3 | Fold4 | Average | SD   |
|-----------------------|----------|-------|-------|-------|-------|-------|---------|------|
| Full                  | Wean     | M1    | 0.11  | 0.19  | 0.18  | 0.24  | 0.18    | 0.05 |
| Full                  | Mid-test | M1    | 0.11  | 0.19  | 0.18  | 0.24  | 0.18    | 0.05 |
| Full                  | Off-test | M1    | 0.11  | 0.19  | 0.18  | 0.24  | 0.18    | 0.05 |
| Full                  | Wean     | M2    | 0.06  | 0.11  | 0.00  | 0.00  | 0.04    | 0.05 |
| Full                  | Mid-test | M2    | 0.02  | 0.06  | 0.05  | 0.04  | 0.02    | 0.03 |
| Full                  | Off-test | M2    | 0.04  | 0.14  | 0.04  | 0.06  | 0.06    | 0.06 |
| Full                  | Wean     | M3    | 0.13  | 0.19  | 0.18  | 0.23  | 0.18    | 0.04 |
| Full                  | Mid-test | M3    | 0.11  | 0.19  | 0.17  | 0.24  | 0.18    | 0.05 |
| Full                  | Off-test | M3    | 0.13  | 0.21  | 0.16  | 0.24  | 0.18    | 0.05 |
| Full                  | Wean     | M4    | 0.12  | 0.2   | 0.19  | 0.23  | 0.19    | 0.05 |
| Full                  | Mid-test | M4    | 0.11  | 0.18  | 0.16  | 0.24  | 0.17    | 0.05 |
| Full                  | Off-test | M4    | 0.12  | 0.21  | 0.16  | 0.24  | 0.18    | 0.05 |
| Informatively reduced | Wean     | M1    | 0.17  | 0.15  | 0.18  | 0.58  | 0.27    | 0.21 |
| Informatively reduced | Mid-test | M1    | 0.17  | 0.15  | 0.18  | 0.58  | 0.27    | 0.21 |
| Informatively reduced | Off-test | M1    | 0.17  | 0.15  | 0.18  | 0.58  | 0.27    | 0.21 |
| Informatively reduced | Wean     | M2    | 0.01  | 0.42  | 0.05  | 0.2   | 0.16    | 0.19 |
| Informatively reduced | Mid-test | M2    | 0.01  | 0.33  | 0.06  | 0.24  | 0.16    | 0.16 |
| Informatively reduced | Off-test | M2    | 0.07  | 0.36  | 0.02  | 0.34  | 0.2     | 0.18 |
| Informatively reduced | Wean     | M3    | 0.17  | 0.19  | 0.19  | 0.17  | 0.18    | 0.01 |
| Informatively reduced | Mid-test | M3    | 0.17  | 0.20  | 0.18  | 0.21  | 0.19    | 0.02 |
| Informatively reduced | Off-test | M3    | 0.17  | 0.24  | 0.19  | 0.17  | 0.19    | 0.03 |
| Informatively reduced | Wean     | M4    | 0.17  | 0.17  | 0.19  | 0.17  | 0.18    | 0.01 |
| Informatively reduced | Mid-test | M4    | 0.17  | 0.19  | 0.18  | 0.21  | 0.19    | 0.02 |
| Informatively reduced | Off-test | M4    | 0.17  | 0.23  | 0.19  | 0.17  | 0.19    | 0.03 |
| Randomly reduced      | Wean     | M1    | 0.14  | 0.17  | 0.21  | 0.25  | 0.19    | 0.02 |
| Randomly reduced      | Mid-test | M1    | 0.14  | 0.17  | 0.21  | 0.25  | 0.19    | 0.02 |
| Randomly reduced      | Off-test | M1    | 0.14  | 0.17  | 0.21  | 0.25  | 0.19    | 0.02 |
| Randomly reduced      | Wean     | M2    | 0.02  | 0.09  | 0     | 0     | 0.03    | 0.05 |
| Randomly reduced      | Mid-test | M2    | 0.01  | 0.12  | -0.01 | 0.03  | 0.04    | 0.03 |
| Randomly reduced      | Off-test | M2    | 0.02  | 0.13  | 0     | 0.01  | 0.04    | 0.07 |
| Randomly reduced      | Wean     | M3    | 0.15  | 0.16  | 0.22  | 0.23  | 0.19    | 0.03 |
| Randomly reduced      | Mid-test | M3    | 0.14  | 0.17  | 0.21  | 0.25  | 0.19    | 0.03 |
| Randomly reduced      | Off-test | M3    | 0.14  | 0.18  | 0.22  | 0.24  | 0.2     | 0.02 |
| Randomly reduced      | Wean     | M4    | 0.14  | 0.17  | 0.21  | 0.24  | 0.19    | 0.03 |
| Randomly reduced      | Mid-test | M4    | 0.13  | 0.17  | 0.2   | 0.25  | 0.19    | 0.02 |
| Randomly reduced      | Off-test | M4    | 0.14  | 0.18  | 0.22  | 0.24  | 0.2     | 0.03 |

Table S23: Predictive ability of Subjective marbling score for each fold at different complexity, stage and model.

| Complexity            | Stage    | Model | Fold1 | Fold2 | Fold3 | Fold4 | Average | SD   |
|-----------------------|----------|-------|-------|-------|-------|-------|---------|------|
| Full                  | Wean     | M1    | 0.23  | 0.36  | 0.17  | 0.35  | 0.28    | 0.09 |
| Full                  | Mid-test | M1    | 0.23  | 0.36  | 0.17  | 0.35  | 0.28    | 0.09 |
| Full                  | Off-test | M1    | 0.23  | 0.36  | 0.17  | 0.35  | 0.28    | 0.09 |
| Full                  | Wean     | M2    | 0.15  | 0.26  | 0.14  | 0.22  | 0.17    | 0.09 |
| Full                  | Mid-test | M2    | 0.14  | 0.25  | 0.13  | 0.20  | 0.18    | 0.07 |
| Full                  | Off-test | M2    | 0.18  | 0.25  | 0.15  | 0.16  | 0.19    | 0.08 |
| Full                  | Wean     | M3    | 0.23  | 0.35  | 0.19  | 0.35  | 0.28    | 0.08 |
| Full                  | Mid-test | M3    | 0.26  | 0.32  | 0.17  | 0.32  | 0.27    | 0.07 |
| Full                  | Off-test | M3    | 0.21  | 0.34  | 0.17  | 0.3   | 0.26    | 0.08 |
| Full                  | Wean     | M4    | 0.23  | 0.36  | 0.19  | 0.35  | 0.28    | 0.09 |
| Full                  | Mid-test | M4    | 0.25  | 0.33  | 0.17  | 0.33  | 0.27    | 0.08 |
| Full                  | Off-test | M4    | 0.21  | 0.34  | 0.17  | 0.3   | 0.26    | 0.08 |
| Informatively reduced | Wean     | M1    | 0.23  | 0.26  | 0.19  | 0.52  | 0.30    | 0.30 |
| Informatively reduced | Mid-test | M1    | 0.23  | 0.26  | 0.19  | 0.52  | 0.30    | 0.30 |
| Informatively reduced | Off-test | M1    | 0.23  | 0.26  | 0.19  | 0.52  | 0.30    | 0.30 |
| Informatively reduced | Wean     | M2    | 0.09  | 0.32  | 0.08  | 0.32  | 0.2     | 0.14 |
| Informatively reduced | Mid-test | M2    | 0.16  | 0.44  | 0.12  | 0.25  | 0.24    | 0.14 |
| Informatively reduced | Off-test | M2    | 0.13  | 0.43  | 0.07  | 0.24  | 0.22    | 0.16 |
| Informatively reduced | Wean     | M3    | 0.25  | 0.32  | 0.16  | 0.23  | 0.24    | 0.07 |
| Informatively reduced | Mid-test | M3    | 0.24  | 0.35  | 0.18  | 0.23  | 0.25    | 0.07 |
| Informatively reduced | Off-test | M3    | 0.24  | 0.33  | 0.18  | 0.23  | 0.24    | 0.06 |
| Informatively reduced | Wean     | M4    | 0.25  | 0.32  | 0.17  | 0.24  | 0.24    | 0.06 |
| Informatively reduced | Mid-test | M4    | 0.23  | 0.34  | 0.18  | 0.23  | 0.25    | 0.07 |
| Informatively reduced | Off-test | M4    | 0.24  | 0.33  | 0.19  | 0.24  | 0.25    | 0.06 |
| Randomly reduced      | Wean     | M1    | 0.23  | 0.36  | 0.17  | 0.31  | 0.27    | 0.08 |
| Randomly reduced      | Mid-test | M1    | 0.23  | 0.36  | 0.17  | 0.31  | 0.27    | 0.08 |
| Randomly reduced      | Off-test | M1    | 0.23  | 0.36  | 0.17  | 0.31  | 0.27    | 0.08 |
| Randomly reduced      | Wean     | M2    | 0.07  | 0.28  | 0.08  | 0.21  | 0.16    | 0.08 |
| Randomly reduced      | Mid-test | M2    | 0.08  | 0.27  | 0.07  | 0.2   | 0.16    | 0.07 |
| Randomly reduced      | Off-test | M2    | 0.08  | 0.29  | 0.09  | 0.2   | 0.17    | 0.10 |
| Randomly reduced      | Wean     | M3    | 0.22  | 0.36  | 0.18  | 0.31  | 0.27    | 0.07 |
| Randomly reduced      | Mid-test | M3    | 0.23  | 0.35  | 0.17  | 0.3   | 0.26    | 0.07 |
| Randomly reduced      | Off-test | M3    | 0.23  | 0.36  | 0.17  | 0.31  | 0.27    | 0.08 |
| Randomly reduced      | Wean     | M4    | 0.23  | 0.36  | 0.17  | 0.31  | 0.27    | 0.08 |
| Randomly reduced      | Mid-test | M4    | 0.22  | 0.36  | 0.17  | 0.3   | 0.26    | 0.08 |
| Randomly reduced      | Off-test | M4    | 0.23  | 0.36  | 0.17  | 0.3   | 0.27    | 0.09 |

Table S24: Predictive ability of Subjective firmness score for each fold at different complexity, stage and model.

| Complexity            | Stage    | Model | Fold1 | Fold2 | Fold3 | Fold4 | Average | SD   |
|-----------------------|----------|-------|-------|-------|-------|-------|---------|------|
| Full                  | Wean     | M1    | 0.16  | 0.25  | 0.10  | 0.13  | 0.16    | 0.06 |
| Full                  | Mid-test | M1    | 0.16  | 0.25  | 0.10  | 0.13  | 0.16    | 0.06 |
| Full                  | Off-test | M1    | 0.16  | 0.25  | 0.10  | 0.13  | 0.16    | 0.06 |
| Full                  | Wean     | M2    | 0.08  | 0.18  | 0.02  | 0.08  | 0.09    | 0.07 |
| Full                  | Mid-test | M2    | 0.11  | 0.17  | 0.12  | 0.17  | 0.14    | 0.03 |
| Full                  | Off-test | M2    | 0.11  | 0.23  | 0.15  | 0.15  | 0.16    | 0.05 |
| Full                  | Wean     | M3    | 0.13  | 0.21  | 0.08  | 0.11  | 0.13    | 0.06 |
| Full                  | Mid-test | M3    | 0.15  | 0.20  | 0.15  | 0.18  | 0.17    | 0.02 |
| Full                  | Off-test | M3    | 0.14  | 0.24  | 0.17  | 0.16  | 0.18    | 0.04 |
| Full                  | Wean     | M4    | 0.14  | 0.22  | 0.08  | 0.11  | 0.14    | 0.06 |
| Full                  | Mid-test | M4    | 0.15  | 0.20  | 0.15  | 0.17  | 0.17    | 0.02 |
| Full                  | Off-test | M4    | 0.15  | 0.26  | 0.17  | 0.16  | 0.19    | 0.05 |
| Informatively reduced | Wean     | M1    | 0.11  | 0.13  | 0.10  | 0.58  | 0.23    | 0.23 |
| Informatively reduced | Mid-test | M1    | 0.11  | 0.13  | 0.10  | 0.58  | 0.23    | 0.23 |
| Informatively reduced | Off-test | M1    | 0.11  | 0.13  | 0.10  | 0.58  | 0.23    | 0.23 |
| Informatively reduced | Wean     | M2    | -0.05 | 0.33  | -0.02 | 0.26  | 0.13    | 0.19 |
| Informatively reduced | Mid-test | M2    | 0.05  | 0.35  | 0.06  | 0.26  | 0.18    | 0.15 |
| Informatively reduced | Off-test | M2    | 0.10  | 0.41  | 0.18  | 0.37  | 0.26    | 0.15 |
| Informatively reduced | Wean     | M3    | 0.06  | 0.18  | 0.08  | 0.03  | 0.09    | 0.06 |
| Informatively reduced | Mid-test | M3    | 0.1   | 0.19  | 0.12  | 0.12  | 0.13    | 0.04 |
| Informatively reduced | Off-test | M3    | 0.13  | 0.21  | 0.13  | 0.08  | 0.14    | 0.05 |
| Informatively reduced | Wean     | M4    | 0.06  | 0.16  | 0.09  | 0.03  | 0.08    | 0.06 |
| Informatively reduced | Mid-test | M4    | 0.11  | 0.18  | 0.12  | 0.11  | 0.13    | 0.03 |
| Informatively reduced | Off-test | M4    | 0.13  | 0.20  | 0.13  | 0.08  | 0.14    | 0.05 |
| Randomly reduced      | Wean     | M1    | 0.18  | 0.25  | 0.11  | 0.16  | 0.18    | 0.07 |
| Randomly reduced      | Mid-test | M1    | 0.18  | 0.25  | 0.11  | 0.16  | 0.18    | 0.07 |
| Randomly reduced      | Off-test | M1    | 0.18  | 0.25  | 0.11  | 0.16  | 0.18    | 0.07 |
| Randomly reduced      | Wean     | M2    | 0.11  | 0.21  | 0.03  | 0.11  | 0.12    | 0.10 |
| Randomly reduced      | Mid-test | M2    | 0.08  | 0.18  | 0.08  | 0.14  | 0.12    | 0.05 |
| Randomly reduced      | Off-test | M2    | 0.1   | 0.25  | 0.09  | 0.17  | 0.15    | 0.08 |
| Randomly reduced      | Wean     | M3    | 0.18  | 0.24  | 0.1   | 0.15  | 0.17    | 0.09 |
| Randomly reduced      | Mid-test | M3    | 0.14  | 0.21  | 0.13  | 0.18  | 0.17    | 0.05 |
| Randomly reduced      | Off-test | M3    | 0.16  | 0.27  | 0.14  | 0.2   | 0.19    | 0.07 |
| Randomly reduced      | Wean     | M4    | 0.17  | 0.25  | 0.1   | 0.15  | 0.17    | 0.09 |
| Randomly reduced      | Mid-test | M4    | 0.15  | 0.22  | 0.13  | 0.17  | 0.17    | 0.06 |
| Randomly reduced      | Off-test | M4    | 0.16  | 0.28  | 0.13  | 0.19  | 0.19    | 0.07 |

Table S25: Predictive ability of Slice shear force for each fold at different complexity, stage and model.

| Complexity            | Stage    | Model | Fold1 | Fold2 | Fold3 | Fold4 | Average | SD   |
|-----------------------|----------|-------|-------|-------|-------|-------|---------|------|
| Full                  | Wean     | M1    | 0.22  | 0.15  | 0.16  | 0.20  | 0.18    | 0.03 |
| Full                  | Mid-test | M1    | 0.22  | 0.15  | 0.16  | 0.20  | 0.18    | 0.03 |
| Full                  | Off-test | M1    | 0.22  | 0.15  | 0.16  | 0.20  | 0.18    | 0.03 |
| Full                  | Wean     | M2    | 0.10  | 0.13  | 0.14  | 0.20  | 0.14    | 0.04 |
| Full                  | Mid-test | M2    | 0.15  | 0.18  | 0.16  | 0.20  | 0.17    | 0.02 |
| Full                  | Off-test | M2    | 0.16  | 0.14  | 0.16  | 0.17  | 0.16    | 0.01 |
| Full                  | Wean     | M3    | 0.21  | 0.16  | 0.16  | 0.21  | 0.18    | 0.03 |
| Full                  | Mid-test | M3    | 0.24  | 0.2   | 0.17  | 0.22  | 0.21    | 0.03 |
| Full                  | Off-test | M3    | 0.25  | 0.17  | 0.17  | 0.20  | 0.20    | 0.04 |
| Full                  | Wean     | M4    | 0.21  | 0.16  | 0.17  | 0.20  | 0.19    | 0.02 |
| Full                  | Mid-test | M4    | 0.24  | 0.19  | 0.17  | 0.22  | 0.21    | 0.03 |
| Full                  | Off-test | M4    | 0.24  | 0.16  | 0.17  | 0.20  | 0.19    | 0.04 |
| Informatively reduced | Wean     | M1    | 0.20  | 0.15  | 0.17  | 0.56  | 0.27    | 0.19 |
| Informatively reduced | Mid-test | M1    | 0.20  | 0.15  | 0.17  | 0.56  | 0.27    | 0.19 |
| Informatively reduced | Off-test | M1    | 0.20  | 0.15  | 0.17  | 0.56  | 0.27    | 0.19 |
| Informatively reduced | Wean     | M2    | 0.02  | 0.17  | 0.02  | 0.21  | 0.10    | 0.10 |
| Informatively reduced | Mid-test | M2    | 0.10  | 0.34  | -0.01 | 0.41  | 0.21    | 0.20 |
| Informatively reduced | Off-test | M2    | 0.13  | 0.36  | 0.05  | 0.28  | 0.20    | 0.14 |
| Informatively reduced | Wean     | M3    | 0.15  | 0.16  | 0.14  | 0.10  | 0.14    | 0.03 |
| Informatively reduced | Mid-test | M3    | 0.23  | 0.24  | 0.14  | 0.10  | 0.18    | 0.07 |
| Informatively reduced | Off-test | M3    | 0.22  | 0.19  | 0.16  | 0.10  | 0.17    | 0.05 |
| Informatively reduced | Wean     | M4    | 0.19  | 0.17  | 0.14  | 0.12  | 0.16    | 0.03 |
| Informatively reduced | Mid-test | M4    | 0.24  | 0.22  | 0.14  | 0.10  | 0.18    | 0.07 |
| Informatively reduced | Off-test | M4    | 0.22  | 0.18  | 0.16  | 0.10  | 0.165   | 0.05 |
| Randomly reduced      | Wean     | M1    | 0.22  | 0.14  | 0.16  | 0.21  | 0.18    | 0.03 |
| Randomly reduced      | Mid-test | M1    | 0.22  | 0.14  | 0.16  | 0.21  | 0.18    | 0.03 |
| Randomly reduced      | Off-test | M1    | 0.22  | 0.14  | 0.16  | 0.21  | 0.18    | 0.03 |
| Randomly reduced      | Wean     | M2    | 0.08  | 0.11  | 0.11  | 0.17  | 0.12    | 0.02 |
| Randomly reduced      | Mid-test | M2    | 0.12  | 0.16  | 0.17  | 0.15  | 0.15    | 0.02 |
| Randomly reduced      | Off-test | M2    | 0.15  | 0.11  | 0.12  | 0.18  | 0.14    | 0.01 |
| Randomly reduced      | Wean     | M3    | 0.2   | 0.14  | 0.14  | 0.2   | 0.17    | 0.03 |
| Randomly reduced      | Mid-test | M3    | 0.22  | 0.17  | 0.18  | 0.2   | 0.19    | 0.03 |
| Randomly reduced      | Off-test | M3    | 0.24  | 0.15  | 0.15  | 0.22  | 0.19    | 0.04 |
| Randomly reduced      | Wean     | M4    | 0.2   | 0.15  | 0.15  | 0.2   | 0.18    | 0.03 |
| Randomly reduced      | Mid-test | M4    | 0.22  | 0.16  | 0.17  | 0.2   | 0.19    | 0.03 |
| Randomly reduced      | Off-test | M4    | 0.24  | 0.15  | 0.15  | 0.22  | 0.19    | 0.04 |

<sup>1</sup>M1 = Model containing genomic information only

M2 = Model containing microbiome information only

M3 = Model containing microbiome and genomic information

M4 = Model containing microbiome, genome and microbiome-by-genome information