**Table S6: Summary of the Red Fife and Stettler integrated physical and genetic maps**. Summary genetic and physical distances between markers are given. The 1D, 5A, 5D and 7A chromosomes are represented by two linkage groups.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Genetic map** | | | |  | **Physical map** | | |
| Linkage group | Number of genetic positions | Total length (cM) | Mean distance between two consecutive positions (cM) |  | Chr | Length of regions covered by the genetic map (base) | Length of regions that are not covered by the genetic map (%) |
| 1A | 95 | 139.89 | 1.49 |  | 1A | 583,480,666 | 1.79 |
| 1B | 65 | 138.40 | 2.16 |  | 1B | 685,594,696 | 0.62 |
| 1D.1 | 7 | 10.97 | 3.57 |  | 1D | 493,027,730 | 0.49 |
| 1D.2 | 29 | 100.03 | 1.83 |  | - | - | - |
| 2A | 94 | 198.82 | 2.14 |  | 2A | 777,547,434 | 0.42 |
| 2B | 108 | 215.89 | 2.02 |  | 2B | 796,440,710 | 0.60 |
| 2D | 41 | 177.37 | 4.43 |  | 2D | 639,757,798 | 1.86 |
| 3A | 93 | 220.78 | 2.40 |  | 3A | 747,951,518 | 0.39 |
| 3B | 87 | 230.77 | 2.68 |  | 3B | 828,796,725 | 0.24 |
| 3D | 49 | 190.53 | 3.97 |  | 3D | 582,337,167 | 5.40 |
| 4A | 85 | 187.90 | 2.24 |  | 4A | 738,288,510 | 0.85 |
| 4B | 69 | 178.69 | 2.63 |  | 4B | 672,664,510 | 0.14 |
| 4D | 27 | 120.96 | 4.65 |  | 4D | 498,329,619 | 2.26 |
| 5A.1 | 58 | 143.21 | 2.51 |  | 5A | 698,828,746 | 1.54 |
| 5A.2 | 21 | 39.25 | 1.96 |  | - | - | - |
| 5B | 117 | 267.52 | 2.31 |  | 5B | 420,703,843 | 0.20 |
| 5D.1 | 20 | 95.65 | 5.03 |  | 5D | 560,509,157 | 0.98 |
| 5D.2 | 36 | 98.76 | 2.82 |  | - | - | - |
| 6A | 65 | 150.78 | 2.36 |  | 6A | 598,927,654 | 3.10 |
| 6B | 103 | 241.81 | 2.37 |  | 6B | 715,549,671 | 0.75 |
| 6D | 32 | 149.66 | 4.83 |  | 6D | 468,059,291 | 1.17 |
| 7A.1 | 21 | 41.49 | 2.40 |  | 7A | 730,011,250 | 0.91 |
| 7A.2 | 69 | 163.32 | 2.07 |  | - | - | - |
| 7B | 80 | 200.54 | 2.54 |  | 7B | 747,806,505 | 0.37 |
| 7D | 32 | 148.25 | 4.78 |  | 7D | 574,551,860 | 10.04 |
| A genome | 601 | 1285.43 |  |  |  |  |  |
| B genome | 629 | 1473.62 |  |  |  |  |  |
| D genome | 273 | 1092.16 |  |  |  |  |  |
| Total | 1503 | 3851.21 |  |  |  |  |  |