**Supplementary Table S1.** Heritability estimates (standard error in parenthesis) for the different fertility traits1 in Holstein cows.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| AFS | AFC | CFH | CFS | NS | PFS | Preg\_period | CIV | CCI/DO | FtL Insem | NR | SR | Parity2 | Population | Reference |
|  |  |  |  |  |  |  |  | 0.03 |  |  |  | M | US | Abdallah and McDaniel (2000) |
|  |  |  | 0.02 |  |  |  |  | 0.044 | 0.013 | 0.02 |  | 1 | Canada | Bastin et al. (2010) |
|  |  |  |  |  |  |  |  | 0.05 (0.01) |  |  |  | 1 | Belgium | Bastin et al. (2012) |
|  | 0.07 |  | 0.07 (0.009) | 0.03 (0.007) | 0.01 (0.005) | 0.03 (0.007) | 0.03 (0.005) |  |  |  | 0.02 (0.006) | 1 | Ireland | Berry et al. (2013) |
|  |  |  | 0.04 (0.008) | 0.04 (0.008) | 0.01 (0.006) | 0.04 (0.008) | 0.04 (0.006) |  |  |  | 0.04 | 2 | Ireland | Berry et al. (2013) |
|  |  |  | 0.02 (0.008) | 0.02 (0.01) | 0.01 (0.007) | 0.02 (0.008) |  |  | 0.01 (0.008) |  |  | M | Irish | Berry et al. (2002) |
|  |  | 0.16 (0.044) | 0.11 (0.033) | 0.07 (0.027) | 0.03 (0.024) |  | 0.05 (0.029) |  |  |  |  | 1 | Multiple | Berry et al. (2012) |
|  |  |  | 0.05 (0.0025) | 0.02 (0.0025) | 0.04 (0.0025) |  | 0.04 (0.0025) | 0.04 (0.0025) | 0.03 (0.0025) |  |  | M | Spain | Gonzalez-Recio and Alenda (2005) |
|  | 0.19 (0.005) |  |  |  |  |  |  |  |  |  |  | M | Iran | Hadi Faraji-Arough et al (2011) |
|  |  |  |  | 0.03 (0.01) | 0.02 (0.01) | 0.04 (0.01) |  | 0.04 (0.02) |  |  | 0.06 (0.01) | M | Australia | Haile-Mariam et al. (2003) |
|  |  |  | 0.024 (0.003) |  |  |  | 0.042 (0.003) |  |  |  |  | 1 | Australia | Haile-Mariam et al. (2013) |
| 0.134 (0.013) |  |  |  | 0.029 (0.006) |  |  |  |  | 0.03 (0.006) | 0.029 (0.006) |  | 1 | Canada | Jamrozik et al. (2005) |
|  |  |  | 0.099 (0.01) | 0.069 (0.01) |  |  |  |  | 0.07 (0.009) | 0.04 (0.006) |  | >1 | Canada | Jamrozik et al. (2005) |
|  |  |  | 0.025 (0.005) | 0.016 (0.005) | 0.016 (0.004) |  | 0.024 (0.006) | 0.023 (0.005) | 0.012 (0.004) |  |  | M | UK | Kadarmideen et al. (2003) |
|  |  |  | 0.073 (0.006) |  |  |  |  |  |  | 0.029 (0.0004) |  | M | Germany | Konig et al. (2008) |
|  | 0.24 (0.02) |  |  |  |  |  | 0.03 (0.01) |  |  |  |  | M | South Africa | Makgahlela et al. (2007) |
|  |  |  | 0.05 (0.004) | 0.04 (0.003) | 0.02 (0.002) |  | 0.04 (0.004) |  | 0.03 (0.003) |  |  | 1 | Sweden | Mucha and Strandberg (2011) |
| CFH | CFS | NS | PFS | CIV | CCI/DO | FtL Insem | NR | SR | Parity | Population | Reference |
|  |  |  |  | 0.04 (0.006) |  |  |  |  | 1 | Ireland | Olori et al. (2002) |
|  | 0.04 (0.01) |  |  | 0.07 (0.013) | 0.06 (0.008) |  |  |  | M | Iran | Pozveh et al. (2009) |
|  |  |  |  | 0.022 (0.005) |  |  |  |  | 1 | UK | Pryce et al. (2000) |
|  |  |  |  | 0.025(0.005) |  |  |  |  | M | UK | Pryce et al. (2002) |
| 0.18 (0.03) | 0.06 (0.02) |  |  | 0.01 (0.02) |  |  |  |  | M | UK | Pryce et al. 2001 |
|  | 0.11 (0.05) |  | 0.14 (0.08) |  |  |  |  |  | M | UK | Royal et al. (2002) |
|  | 0.07 (0.001) |  |  |  |  | 0.049 (0.003) | 0.017 (0.003) |  | 1 | Canada | Sewalem et al. (2010) |
|  |  |  | 0.17 |  |  |  | 0.011 |  | 1 | Denmark | Sun and Su (2010) |
|  |  |  | 0.048 |  |  |  | 0.034 |  | 1 | Denmark | Sun and Su (2010) |
|  | 0.066 (0.003) | 0.018 (0.001) |  |  | 0.037 |  | 0.01 (0.004) |  | M | US | Van Raden et al. (2004) |
|  | 0.07 (0.005) | 0.034 (0.005) | 0.016 (0.005) | 0.036 (0.005) |  |  |  |  | 1 | The Netherlands | Veerkamp et al. (2001) |
|  | 0.035 (0.001) | 0.02 (0.002) |  | 0.033 (0.001) |  |  | 0.018 (0.001) |  | 1 | UK | Wall et al. (2003) |
|  | 0.05 (0.01) |  |  | 0.04 (0.01) |  |  | 0.014(0.003) |  | M | UK | Wall et al., 2005 |
|  | 0.04 (0.01) |  |  |  | 0.04 (0.01) | 0.03 (0.004) |  |  | 1 | Czech | Zink et al. (2011) |
|  | 0.04 (0.01) |  |  |  | 0.02 (0.01) | 0.03 (0.01) |  |  | 2 | Czech | Zink et al. (2011) |

**1AFS= age at first service; AFC = age at first calving; CFH=interval from calving to first heat; CFS = interval from calving to first service; NS = number of services; PFS = pregnant to first service; Preg\_period = pregnant over a given time period, CIV = calving interval; CCI/DO = calving to conception interval/days open; FtL Insem = interval from first to last service; NR = non-return; SR = Submission rate**

2M= multiple parities

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