**Supplementary Table S5.** Heritability estimates (standard error in parenthesis) for male fertility traits†.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Scrotal  Circum | Sperm conc | Sperm motility | Percent live sperm | Sperm number | | Volume | Abnormalities/  normal | | Non-return rate | | Calving rate | | Country | Reference | |
|  |  |  |  |  | |  |  | | 0.001  (0.001) | |  | | Ireland | Berry et al. (2011) | |
| 0.53 (0.06) |  |  |  |  | |  |  | |  | |  | | US | Bourdon and Brinks (1986) | |
| 0.75 (0.09) |  | 0.24 (0.07) |  |  | |  | 0.25  (0.09) | |  | |  | | Australia | Corbet et al. (2013) | |
| 0.43 (0.09) |  | 0.13 (0.05) |  |  | |  | 0.20  (0.06) | |  | |  | | Australia | Corbet et al. (2013) | |
|  | 0.37 (0.22) | 0.51 (0.26) |  |  | | 0.53 (0.27) |  | |  | |  | | Canada | Diarra et al. (1997) | |
|  | 0.37 (0.09) | 0.23 (0.08) |  |  | | 0.65 (0.09) | 0.19  (0.07) | |  | |  | | France | Ducrocq and Humblot (1995) | |
| 0.57 (0.03) |  |  |  |  | |  |  | |  | |  | | Brazil | Eler et al. (2004) | |
| 0.714 (0.132) |  |  |  |  | |  |  | |  | |  | | New Mexico | Evans et al. (1999) | |
| 0.46 (0.08) |  | 0.05 (0.03) |  |  | |  | 0.25  (0.07) | |  | |  | | US | Garmyn et al. (2011) | |
| 0.51 (0.09) | 0.2 (0.13) | 0.11 (0.12) |  | 0.19 (0.14) | |  |  | |  | |  | |  | Gipson et al. (1987) | |
|  | 0.14 (0.04) | 0.04 (0.01) | 0.1 (0.05) | 0.22 (0.02) | | 0.18 (0.02) |  | |  | |  | | Austria | Gredler et al. (2007) | |
|  | 0.26 |  |  |  | | 0.04 |  | |  | |  | |  | Kaps et al. (2000) | |
| 0.57 (0.09) | 0.16 (0.08) | 0.22 (0.09) | 0.22 (0.09) |  | | 0.09 (0.08) | 0.35  (0.10) | |  | |  | | US | Kealey et al. (2006) | |
| 0.36 (0.06) | 0.13 (0.06) | 0.13 (0.06) |  | 0.24 (0.05) | |  |  | |  | |  | | US | Knights et al. (1984) | |
|  |  |  |  |  | |  |  | | 0.0002 | |  | | US | Kuhn and Hutchison (2008) | |
|  |  |  |  |  | |  |  | |  | | 0.08 | | Australia | Mackinnon et al. (1990) | |
| 0.41 (0.05) |  |  |  |  | |  |  | |  | |  | | US | Martínez-Velázquez et al. (2003) | |
|  | 0.52 | 0.31 |  | 0.38 | | 0.24 |  | |  | |  | | Canada | Mathevon et al. (1998a) | |
|  | 0.36 | 0.01 |  | 0.54 | | 0.44 |  | |  | |  | | Canada | Mathevon et al. (1998a) | |
|  | 0.32 |  |  | 0.15 | | 0.08 |  | |  | |  | | France | Mathevon et al. (1998b) | |
| Scrotal  Circum | Sperm conc | Sperm motility | Sperm number | Volume | Abnormalities/  normal | | | Non-return rate | | Country | | Reference | | |
| 0.42 (0.0002) |  |  |  |  |  | | |  | | Brazil | | Silva et al. (2011) | | |
|  | 0.21 | 0.37 | 0.26 | 0.29 |  | | |  | | Ukraine | | Siratskii (1990) | | |
| 0.4 (0.09) |  |  |  |  | 0.07 (0.06) | | |  | | US | | Smith et al. (1989) | | |
|  |  |  |  |  |  | | | 0.002 (0.0015) | | Sweden | | Stålhammer et al. (1994) | | |
|  | 0.1 |  | 0.03 | 0.18 |  | | |  | | US | | Taylor et al. (1985) | | |

† Scrotal Circum= scrotal circumference; Sperm conc = sperm concentration

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